

**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**ARKANSAS TECH UNIVERSITY  
2010-2011 UNDERGRADUATE CATALOG**  
RUSSELLVILLE, ARKANSAS  
WWW.ATU.EDU

*Arkansas Tech University, a state-supported institution of higher education, is dedicated to nurturing scholastic development, integrity, and professionalism. The University offers a wide range of traditional and innovative programs which provide a solid educational foundation for life-long learning to a diverse community of learners.*

**Accreditation**

Arkansas Tech University is accredited by The Higher Learning Commission and is a member of the North Central Association of Colleges and Schools, 30 N. LaSalle Street, Suite 2400, Chicago, Illinois 60602. (312) 263-0456.

**Program Accreditations**

AACSB International – The Association to Advance Collegiate Schools of Business  
777 South Harbour Island Boulevard, Suite 750  
Tampa, FL 33602-5730 USA  
(813) 769-6500

The College of Education at Arkansas Tech University is accredited by the National Council for Accreditation of Teacher Education.  
2010 Massachusetts Avenue NW, Suite 500  
Washington, DC 20036  
(202) 466-7496  
This accreditation covers the institution's initial teacher preparation and advanced educator preparations programs.

National Association of Schools of Music  
11250 Roger Bacon Drive, Suite 21  
Reston, VA 20190  
(202) 466-7496

National League for Nursing Accrediting Commission  
61 Broadway-33rd Floor  
New York, NY 10006  
(703) 437-0700

Commission on Accreditation for Health Informatics and Information Management Education  
(Health Information Administrator)  
C/O AHIMA  
233 N. Michigan Avenue  
Suite 2150  
Chicago, IL 60601-5800  
(312) 233-1131

Engineering Accreditation Commission of ABET, Inc.  
111 Market Place, Suite 1050  
Baltimore, MD 21202  
(410) 347-7700

American Chemical Society  
1155 16th Street NW  
Washington, DC 20036  
(202) 872-4600

National Recreation and Park Administration Council on Accreditation  
22377 Belmont Ridge Road  
Ashburn, VA 20148  
(703) 858-2150

Accreditation Commission for Programs in Hospitality Administration  
P.O. Box 400  
Oxford, MD 21654  
(410) 226-5527

Commission on Accreditation of Allied Health Education Programs upon Recommendation by the Medical Assisting Education Review Board of the American Association of Medical Assistants  
(Medical Assistant)  
20 East Wacker Drive, Suite 1575  
Chicago, IL 60601  
(800) 228-2262 Ext. 129

Foundation of Higher Education in Emergency Management (FOHE)  
(Emergency Administration and Management)  
965 Harrison Circle  
Alexandria, VA 22304  
(703) 284-6050

Computer Accreditation Commission of ABET  
111 Market Place, Suite 1050  
Baltimore, MD 21202  
(410) 347-7700

#### National Institutional Memberships

American Association of Colleges for Teacher Education  
American Association of Collegiate Registrars and Admissions Officers  
AACSB International-The Association to Advance Collegiate Schools of Business  
American Society for Engineering Education  
American Association of State Colleges and Universities  
Conference of Southern Graduate Schools  
Council for the Advancement and Support of Education  
Council on Hotel, Restaurant and Institutional Education  
Mathematical Association of America  
NAFSA: Association of International Educators  
National Association of College Admissions Counselors  
National Association of Schools of Music  
National Association of Student Personnel Administrators  
National Collegiate Athletic Association  
National Commission on Accrediting  
National Council on Rehabilitation Education  
National League for Nursing  
National Recreation and Park Association

#### Enrolling In College

Students are urged to acquaint themselves with this catalog thoroughly. It sets forth policies and procedures for enrolling and successfully completing the various programs of study.

The basic responsibilities of selecting a major field, enrolling in the prescribed courses of study in the field, and complying with the University's requirements for graduation rest with the student; however, University personnel will assist the student with problems encountered. Further assistance is offered in the form of capable departmental advisors, a full-time guidance and counseling service, and an appropriate graduation check list to serve as a reminder of the various graduation requirements.

#### For More Information

General Information	Area Code: (479) 968-0389
Academic Advising Center	964-0843
Academic Affairs Office	968-0319
Admission Office	968-0343
Alumni Office	968-0242
Director of Athletics	968-0345
Business Office	968-0300
Continuing Education Office	498-6035
Counseling Office	968-0276
Disabilities Coordinator	968-0302
	TDD 964-0536
Financial Aid	968-0399
	TDD 968-0224
Graduate College	968-0398
Health and Wellness Center	968-0329
President's Office	968-0237
Professional Development Institute	964-0541
Public Safety	968-0222
Registrar's Office	968-0272
Student Accounts	968-0271
Student Services	968-0239
University Testing Center	968-0302
Student Housing	968-0376
Tucker Coliseum	968-0337

Arkansas Tech University will provide equal opportunity in employment to all persons. This applies to all phases of the personnel process, including recruitment, hiring, placement, promotion, demotion, separation, transfer, training, compensation, discipline, and all other employment terms, conditions, and benefits. Arkansas Tech University prohibits discrimination based on race, color, religion, national origin, sex, age, disability, or veteran status.

Arkansas Tech University will provide a copy of this policy to all applicants for employment. All faculty and staff will be notified annually of the policy. Further, Arkansas Tech University will consider through a designated grievance procedure, the complaints of any person who feels that he or she has been discriminated against on the basis of race, color, religion, national origin, sex, age, disability, or veteran status.

Arkansas Tech University will have an Affirmative Action Plan that contains a set of specific and result-orientated procedures to apply every good faith effort to achieve prompt and full utilization of minorities, women, those with disabilities or veterans at all levels and all segments of its workforce where deficiencies exist. Additionally, Arkansas Tech University will continually monitor and evaluate its employment practices to ensure that they are free of bias or discrimination based upon race, color, religion, national origin, sex, age, disability, or veteran status.

A copy of the Affirmative Action Plan, including specific responsibilities and provisions for implementation and compliance, will be made available upon request. Responsibility for implementation and compliance with this Affirmative Action policy has been delegated to the Affirmative Action officer, e-mail affirmative.action@atu.edu.

Arkansas Tech University complies with all applicable state and federal laws including, but not limited to, Title VI and Title VII of the Civil Rights Act of 1964 as amended, the Age Discrimination in Employment Act of 1967 as amended, Title IX of the Educational Amendments of 1972, Section 504 of the Rehabilitation Act Amendments of 1974, the Civil Rights Restoration Act of 1987, the Americans with Disabilities Act of 1990, and the Civil Rights Act of 1991.

It is the policy of Arkansas Tech University to maintain the University Community as a place of work and study for staff, faculty, and students free of harassment, to include sexual and gender harassment and all forms of sexual intimidation and exploitation. All students, staff, and faculty should be aware that the University is both concerned and prepared to take action to prevent and correct such behavior. The determination of what constitutes sexual harassment will vary with the particular circumstances, but it may be described generally as unwanted sexual behavior, such as physical contact and verbal comments or suggestions which adversely affect the working or learning environment of others. Anyone who is subjected to offensive sexual behavior is encouraged to pursue the matter through the established informal or formal grievance procedures. Generally, the informal procedures afford an opportunity to explore a problem and consider alternative means for its resolution.

A copy of the annual budget is available in the Ross Pendergraft Library and Technology Center. A copy of the annual financial report is available from the Office of the Vice President for Administration and Finance in Room 207 of the Administration Building.

The provisions of this catalog are subject to change without notice and do not constitute an irrevocable contract between any student and Arkansas Tech University.

## Academic Calendar 2010 - 2011

<b>Summer Session 2010</b>	Late registration for first term	June 7 - 8
<b>First Term</b>	Classes begin	June 7
	Last day to register and add courses/change sections	June 8
	Last day to officially withdraw/drop courses with 80 percent reduction of tuition	June 11
	Preregistration for freshmen for fall semester	May through August
	Last day to drop courses with a "W" or change from credit to audit	July 2
	Holiday	(Monday) July 5
	First term ends	July 9
 <b>Second Term</b>	 Late registration for second term	 July 12-13
	Classes begin	July 12
	Last day to register and add courses/change sections	July 13
	Last day to officially withdraw/drop courses with 80 percent reduction of tuition	July 16
	Last day to drop courses with a "W" or change from credit to audit	August 6
	Second term ends	August 13
	Graduation	August 14
 <b>Fall Semester 2010</b>	 Registration	 August 23 - 24
	Classes begin	August 25
	Last day to officially withdraw/drop courses with full reduction of tuition/fees	August 26
	Last day to register and add courses/change sections	August 31
	Labor Day holiday	September 6
	Last day to officially withdraw/drop courses with 80 percent reduction of tuition	September 29
	Mid-term	October 13
	Deadline for degree audit (transcript evaluation), December 2011 graduates	October 15
	Preregistration for spring semester	November
	Thanksgiving holidays	7:00 a.m., November 24 - 7:00 a.m., November 29
	Last day to drop courses with a "W" or change from credit to audit	November 29
	Reading Day	December 7
	End of course examinations	6:00 a.m., December 8 - 12:30 p.m., December 14
	Graduation	December 18
 <b>Spring Semester 2011</b>	 Registration	 January 11 - 12
	Classes begin	January 13
	Last day to officially withdraw/drop courses with full reduction of tuition/fees	January 14
	Martin Luther King Day holiday	January 17
	Last day to register and add courses/change sections	January 20

Last day to officially withdraw/drop courses with 80 percent reduction of tuition	February 17
Mid-term	March 4
Deadline for degree audit (transcript evaluation), May 2012 graduates	March 9
Spring holidays	March 28
Deadline for degree audit (transcript evaluation), summer 2012 graduates	April 1
Preregistration for fall semester	April
Last day to drop courses with a "W" or change from credit to audit	April 21
Reading Day	May 3
End of course examinations	May 10
Graduation	May 14
<b>Summer Session 2011 (tentative)</b>	
<b>First Term</b>	
Late registration for first term	June 6 - 7
Classes begin	June 6
Last day to register and add courses/change sections	June 7
Last day to officially withdraw/drop courses with 80 percent reduction of tuition	June 10
Preregistration for freshmen for fall semester	May through August
Last day to drop courses with a "W" or change from credit to audit	July 1
Holiday	(Monday) July 4
First term ends	July 8
<b>Second Term</b>	
Late registration for second term	July 11 - 12
Classes begin	July 11
Last day to register and add courses/change sections	July 12
Last day to officially withdraw/drop courses with 80 percent reduction of tuition	July 15
Last day to drop courses with a "W" or change from credit to audit	August 5
Second term ends	August 12
Graduation	August 13

NOTE: The calendar for Weekend College classes or classes with unusual terms may differ from what is printed above. Please check with the instructor and/or the Registrar's Office for more information.

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## COURSE CATALOGS

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### Administration

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<b>Administrative Officers</b>	Robert Charles Brown, 1993 .....President B.A., Northwestern State University, 1967 M.A., Louisiana State University, 1969 Ph.D., Louisiana State University, 1976
	John W. Watson, 1978 .....Vice President for Academic Affairs B.A., University of Arkansas, 1971 M.S., University of Arkansas, 1973 Ed.D., Oklahoma State University, 1978
	David C. Moseley, 1994 .....Senior Vice President for Administration and Finance B.B.A., University of Arkansas at Monticello, 1964 M.B.A., University of Central Arkansas, 1984
	Gary M. Biller, 2000 .....Vice President for Student Services B.S., Oklahoma State University, 1975 M.S., Oklahoma State University, 1976 Ph.D., University of Kansas, 1986
	Jayne W. Jones, 1976 .....Vice President for Development B.S., Arkansas Tech University, 1988 M.A., Arkansas Tech University, 2001
	Phil Jacobs, 2005 .....Vice President for Governmental Relations B.S., Arkansas Tech University, 1968
<b>Administrative Staff</b>	Carol Adkison .....Assistant Director of Computer Services for Administrative Systems Karen Alexander .....Assistant Director of Budget Jan Apple .....Academic Outreach Coordinator Jeff Aulgur .....Director of Professional Development Institute Diane Birge .....Assistant Director of International & Multicultural Student Services Michael Bogue .....Retention Counselor Rachel Bond.....Admissions Officer Angela Bonds .....Director of Alumni Relations David Boop .....Director of Career Services Kelly Bostick.....Coordinator of Alumni Communications and Activities Valerie Breashears .....Personal Counselor Marci Buhajla .....English Language Institute Instructor Tabitha Casey.....Coordinator of the ATU Degree Center at Mid South Community College Pat Chronister.....Director of Academic Services Linda Clarke .....Director of Academic Advising Center Fred W. Clayton .....Director of Administrative Services Lisa Cochran .....Director of Continuing Education Jonathan Collins .....Technology Specialist, Emergency Management Program Pam Cooper .....Development Officer - Research Will Cooper .....Academic Advisor Carolyn C. Crawford .....Director of University Testing/Disability Services

Patricia Cunningham ..... ATU Financial Analyst  
Christine Dalina.....Associate Registrar  
Kelly Davis ..... Director of Corporate and Athletic Relations  
Shawna Davis.....Target School Liaison, Upward Bound Program  
Shauna Donnell ..... Assistant Vice President for Enrollment Management  
Brent Drake ..... Director of Development Services  
Katherine Ehemann ..... Accounting Supervisor  
Diana J. Evans ..... Assistant Registrar  
Jennifer Fleming .....Affirmative Action Officer  
Rhonda Fleming ..... Assistant Registrar  
Debra Fithen .....Director of Foundation Relations  
Jerry Forbes .....Dean of Students  
Beth Foster .....Special Projects Coordinator, Purchasing  
Emily Fulmer ..... Admissions Officer  
Elizabeth Giroir .....Institutional Research Associate  
Shirley M. Goines ..... Director of Student Aid  
Ben Greenberg ..... Director of Sports Information  
Matthew Hauger .....Associate Dean for Student Success  
Luke Heffley.....Retention Counselor  
Jill Hendricks.....Director of Upward Bound Program  
Cody Hill .....Coordinator of Student Center Operations  
Dennis Hill ..... Director of Physical Plant  
Aaron Hogan ..... Assistant Director of Housing Operations  
Jeff Hudnall ..... Area Coordinator, Housing  
Lindsey Ingmire .....Academic Advisor  
Linda Johnson .....Budget and Special Programs Director  
Marilyn Johnson .....Business Manager and Director of Student Accounts  
Pete Kelly .....Associate Dean of Students/Director of Student Life  
Jessica Lambert .....Coordinator of Concurrent Enrollment Programs  
Brian Lasey.....Assistant Director of Physical Plant  
Steve Lawrence .....Associate Dean of Students/Director of Public Safety  
Jaime Martin .....Coordinator of Orientation  
Leanne McConnell.....Target School Liaison, Upward Bound Program  
Steve Milligan .....Assistant Director of Computer Services for Networked Systems  
Julie Morgan .....Assistant to the President  
Dana Moseley.....Director of Gift Planning  
Theresa Motley .....Associate Director of Computer Services for Administrative Services  
Courtney Mullen .....Admissions Officer  
Steve Mullins ..... Director of Athletics  
Kristen Musser.....English Language Institute Instructor  
Susie Nicholson .....Assistant to the President for University Relations  
Marsha Oels .....Associate Registrar  
Donna Ogle ..... English Language Institute Coordinator  
Yasushi Onodera .....Assistant Director of International & Multicultural Student Services  
Alison Parks.....Coordinator of Young Alumni  
William A. Parton .....Director of Library  
Amy Pennington .....Director of International and Multicultural Student Services  
Thomas Pennington ..... University Counsel  
Karen Pittman ..... Testing Coordinator  
Chip Porter .....Facility Manager, Lake Point Conference Center  
Richard Pyle.....Specialty Chef, Lake Point Conference Center  
Donna Rankin .....Assistant Controller  
Angela Reynolds .....Special Projects Coordinator, Human Resources  
Tammy Rhodes.....Registrar  
Karen Riddell.....Coordinator of Academic Support Services  
Marty Sabolo .....Associate Dean of Students/ Director of Housing  
Merrell E. Shoptaw ..... Director of Computer Services  
Marty Short ..... Student Health Nurse II  
Kristin Smith .....Director of the Tech Loyalty Fund  
Brandie Soar.....Admissions Officer  
Kevin Solomon .....Assistant Dean of Students/Assistant Director of Housing  
Brooke Southard..... Payroll Services Manager

Judith Stewart-Abernathy ..... Director of Arkansas Tech Museum  
 Sam Strasner..... Director of Communications  
 Javier Taylor ..... Secondary Mathematics Instructional Specialist  
 Ryan Taylor ..... Coordinator of Information Services  
 Cindy Tesch ..... Coordinator of Greek Life and Student Organizations  
 Bruce Trefney.....Executive Chef, Lake Point Conference Center  
 Brandi Tripp ..... Associate Registrar  
 Carol Trusty ..... Associate Vice President for Administration and Finance  
 David G. Underwood .....Associate Vice President for Academic Affairs  
 Gail Vaughan .....Bookstore Manager  
 Alisa Waniewski .....Coordinator of Recruitment and Academic Scholarships  
 Wyatt Watson .....Director of Institutional Research and Assessment  
 Grant Watts .....Coordinator of Intramural & Recreational Sports  
 Karron Watts .....Elementary Science Specialist  
 Kenneth D. Wester .....Associate Director of Computer Services for Networked Systems  
 Dave Wilbers .....Academic Advisor  
 Rita Woolf ..... Director of Health and Wellness Center/Registered Nurse  
 Ernest Yang .....Academic Advisor  
 Gwendolyn Young.....Area Coordinator, Housing  
 Steven W. Zimmer ..... Director of Math and Science Institute

**Academic Administration****College of Applied Sciences**

William C. Hoefler .....Dean  
 Malcolm Rainey.....Head, Agriculture Department  
 Ronald Robison .....Head, Computer & Information Science Department  
 Pat Buford..... Head, Electrical Engineering Department  
 Ed Leachman .....Interim Head, Emergency Management  
 John Krohn .....Head, Mechanical Engineering Department  
 Cathi McMahan .....Interim Head, Parks, Recreation and Hospitality Administration Department

**College of Arts and Humanities**

Micheal Tarver..... Dean  
 Cathy Caldwell.....Head, Art Department  
 W. Daniel Martin ..... Head, Behavioral Sciences Department  
 Carl W. Brucker ..... Head, English Department  
 Carl W. Brucker..... Interim Head, Foreign Languages and International Studies Department  
 Cynthia L. Hukill.....Head, Music Department  
 Jeffrey R. Woods.....Interim Head, History and Political Science Department  
 Donna Vocate .....Head, Speech, Theatre & Journalism Department

**College of Business**

Thomas P. Tyler .....Dean  
 Pamela S. Carr .....Head, Accounting and Economics Department  
 Kevin H. Mason .....Head, Management and Marketing Department

**College of Education**

Eldon Clary Jr. ....Dean  
 David Bell .....Head, Curriculum and Instruction Department  
 June Lawson .....Director, Teacher Education Student Services  
 M. Annette Holefield.....Head, Health & Physical Education Department  
 Susan Underwood ..... Director, College Student Personnel Program

**College of Natural and Health Sciences**

Richard R. Cohoon .....Dean  
 Charles Gagen .....Head, Biological Sciences Department  
 Thomas Limperis .....Head, Mathematics Department  
 Rebecca Burris .....Head, Nursing Department  
 Jeff Robertson .....Head, Physical Sciences Department

**College of Professional Studies and Community Outreach**

Mary Ann Rollans .....Dean

Annette Stuckey ..... Director, Professional Studies Department

**Graduate College**

Mary Gunter ..... Dean

**Faculty**

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

The date after each name indicates the first year of appointment to this institution.

[Top](#)

GABRIEL L. ADKINS, 2009

Assistant Professor of Speech  
B.A., Ottawa University, 1996;  
M.S., Pittsburg State University, 2002;  
M.A., Wichita State University, 2005.

SHERMAN Q. ALEXANDER, 1993

Associate Professor of Accounting  
B.S., Eastern Illinois University, 1984;  
M.B.A., Eastern Illinois University, 1985;  
Ph.D., University of Kentucky, 1995.  
C.P.A.

ROBERT W. ALLEN, 1981

Professor of Chemistry  
B.S., University of Oklahoma, 1969;  
M.S., University of Oklahoma, 1973;  
Ph.D., University of Oklahoma, 1975.

VREGE AMIRKHANIAN, 1989

Associate Professor of Mathematics  
B.S., Tehran University, 1969;  
M.S., Oklahoma State University, 1973;  
Ph.D., Oklahoma State University, 1978.

BENJAMIN F. ANDERSON, III, 2009

Assistant Professor of English  
B.A., University of North Carolina, 1999;  
M.F.A., University of South Carolina, 2005  
Ph.D., Florida State University, 2009.

STANTON C. APPLE, 1989

Instructor of Mechanical Engineering  
B.S.M.E., University of Arkansas, 1989.

CHRISTINE E. AUSTIN, 2007

Assistant Professor of College Student Personnel  
B.A., University of Denver, 1984;  
M.Ed., University of Maine, 1990;  
Ph.D., University of Denver, 2007.

CATHY BAKER, 1998

Professor of Geology  
B.S., Arkansas Tech University, 1976;  
M.S., University of Arkansas, 1978;  
Ph.D., University of Iowa, 1986.

DEBORAH L. BARBER, 2002

Associate Professor of Music  
B.S., Auburn University, 1975;  
M.Ed., Auburn University, 1989;  
Ph.D., Auburn University, 2003.

GARY W. BARROW, 1981

Professor of Music  
B.M.E., North Texas State University, 1969;  
M.M., Catholic University of America, 1973;  
Ph.D., North Texas State University, 1982.

Alice Batch, 2003

Instructor of Business  
B.A., California State University, 1978;  
M.B.A., California State University, 1984.

KRISTY BAYER, 2004

Instructor of Health and Physical Education  
Head Coach  
B.A., Grand Valley State University, 2001;  
M.Ed., Grand Valley State University, 2003.

LINDA C. BEAN, 2000

Associate Professor of Business  
B.S., Arkansas Tech University, 1973;  
M.S.E., University of Central Arkansas, 1986;  
Ed.D., Oklahoma State University, 1996.

C. DAVID BELL, 1988

Professor of Elementary Education  
Head, Department of Curriculum and Instruction  
B.S., Arkansas Tech University, 1969;  
M.Ed., University of Arkansas, 1972;  
Ed.D., University of Arkansas, 1978.

MICHAEL E. BENEFIELD, 1995

Associate Professor of Finance  
B.S., United States Military Academy, 1968;  
M.Ed., University of North Carolina, 1976;  
M.B.A., Arkansas State University, 1980;  
M.S.I.S., Arkansas State University, 1984;  
Ph.D., Purdue University, 1989.

ANWAR A. BHUIYAN, 2001

Associate Professor of Chemistry  
B.Sc., Dhaka University, 1983;  
M.Sc., Dhaka University, 1986;  
M.S., Northeast Louisiana University, 1994;  
Ph.D., Marquette University, 1999.

GLEN R. BISHOP, 2001

Assistant Professor of Recreation and Park Administration  
B.S., University of Michigan, 1979;  
M.S., Texas A & M, 1985;  
Ph.D., Michigan State University, 1994.

GENE MARIE BLACK, 1991

Professor of Management

B.S., University of Wisconsin (Oshkosh), 1981;  
M.S., University of Wisconsin (Oshkosh), 1987;  
Ph.D., Georgia Institute of Technology, 1991.

ERIC E. BOWNE, 2009  
Assistant Professor of Anthropology  
B.A., University of Georgia, 1996;  
Ph.D., University of Georgia, 2003.

JACQUELINE K. BOWMAN, 2001  
Associate Professor of Biology  
B.S., Purdue University, 1982;  
B.S., Illinois State University, 1984;  
M.S., Illinois State University, 1986;  
Ph.D., Indiana University, 1994.

LYN BRANDS, 2003  
Associate Professor of Art  
B.A., Fort Hays State University, 1984;  
M.F.A., Fort Hays State University, 1990.

MOLLY BRANT, 2005  
Assistant Professor of Agriculture  
B.S., Oklahoma State University, 2000;  
M.S., Oklahoma State University, 2002;  
Ph.D., Kansas State University, 2005.

HERBERT MATT BROWN, 2008  
Assistant Professor of Computer and Information Science  
B.A., University of Arkansas, 1998;  
M.S., University of Arkansas, 2000;  
Ph.D., Nova Southeastern University, 2007.

KRISTI M. BROWN, 2008  
Instructor of Mathematics  
B.S., University of Arkansas, 1997;  
M.S., University of Arkansas, 1999.

ROBERT CHARLES BROWN, 1993  
Professor of Economics  
President  
B.A., Northwestern State University, 1967;  
M.A., Louisiana State University, 1969;  
Ph.D., Louisiana State University, 1976.

CARL W. BRUCKER, 1984  
Professor of English  
Head, Department of English  
Interim Head, Department of Foreign Languages and International Studies  
B.A., Rutgers University 1968;  
M.A., Rutgers University, 1976;  
Ph.D., Rutgers University, 1980.

VALERIE KATE BRUGH, 1997  
Assistant Professor of Speech/Theatre  
B.A., Roanoke College, 1992;  
M.F.A., Southern Illinois University, 1998.

B. TY BRUNSON, 1999  
Associate Professor of Art  
B.F.A., Louisiana Tech University, 1979;  
M.F.A., Louisiana Tech University, 1986.

LINDA A. BUCKHOLTZ, 1998  
Assistant Professor of Nursing  
B.S.N., University of Arkansas at Pine Bluff, 1988;  
M.N.Sc., University of Arkansas for Medical Sciences, 1992.

PATRICIA S. BUFORD, 2000  
Associate Professor of Electrical Engineering  
Head, Department of Electrical Engineering  
B.S., Christian Brothers University, 1974;  
M.S., University of Arkansas, 1985;  
Ph.D., University of Arkansas at Little Rock, 2007.

DANIEL W. BULLOCK, 2003  
Associate Professor of Electrical Engineering and Physics  
B.S., Arkansas Tech University, 1997;  
M.S., University of Arkansas, 2000;  
Ph.D., University of Arkansas, 2001.

REBECCA K. BURRIS, 1991  
Professor of Nursing  
Head, Department of Nursing  
B.S.N., Northwestern State University of Louisiana, 1978;  
M.S.N., Northwestern State University of Louisiana, 1991;  
Ph.D., University of Arkansas for Medical Sciences, 2000.

CHARLES P. BUSCH, JR., 1986  
Professor of Philosophy  
B.A., Columbia University, 1971;  
M.A., University of Southern California, 1974;  
Ph.D., University of Southern California, 1977.

CATHY R. CALDWELL, 2002  
Professor of Art  
Head, Department of Art  
B.A., University of the Ozarks, 1969;  
M.Ed., North Georgia College, 1979;  
Ed.D., University of Arkansas, 1990.

REBECCA A. CALLAWAY, 2006  
Assistant Professor of Instructional Technology  
B.S., Northwestern State University, 1973;  
M.Ed., Northwestern State University, 1977;  
Ed.D., Louisiana Tech University, 2004.

ANDREW CANNON, 2004  
Assistant Professor of Marketing  
B.A., Westminster College, 1973;  
M.B.A., University of Hartford, 1988;  
Ph.D., Saint Louis University, 2000.

ALEJANDRA K. CARBALLO, 2009  
Assistant Professor of Spanish  
B.A., University of Rio Cuarto, Argentina, 1995;  
M.A., University of Pennsylvania, 2000;  
Ph.D., Florida State University, 2006.

LAURIE CARMAN, 2000  
Instructor of Mathematics  
B.S., Arkansas Tech University, 1997;  
M.Ed., Arkansas Tech University, 2003.

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DONALD A. CARNAHAN, 1985  
Professor of Mathematics  
B.A., Arkansas College, 1967;  
M.S., University of Arkansas, 1969;  
Ph.D., University of Arkansas, 1973.

PAMELA S. CARR, 1991  
Professor of Accounting  
Head, Department of Accounting and Economics  
B.S., Arkansas Tech University, 1977;  
M.A., Southwest Missouri State University 1984;  
Ph.D., Oklahoma State University, 2001;  
C.P.A.

TIM L. CARTER, 1998  
Associate Professor of Curriculum and Instruction  
B.S., Arkansas Tech University, 1989;  
M.Ed., Arkansas Tech University, 1994;  
Ph.D., University of Georgia, 1998.

CARLOS CASTILLO, 2009  
Assistant Professor of Electrical Engineering  
B.S.E.E., University of Los Andes (Venezuela) 1991;  
M.S.E.E., University of South Florida, 2003;  
Ph.D., University of South Florida, 2008.

ANTHONY A. CATON, 2004  
Assistant Professor of Journalism  
Director of Broadcasting  
A.A., University of Arkansas at Fort Smith, 1988;  
B.A., University of the Ozarks, 1990;  
M.A., University of Arkansas, 1992.

E. URSULA CHANDLER, 1981  
Professor of German  
B.S., Illinois State University, 1965; Ph.D.,  
Northwestern University, 1981.

CHERYL B. CHANEY, 1999  
Assistant Professor of Biology  
B.S., Missouri Western State College, 1990;  
M.S., Tennessee Technological University, 1997.

CHANGRYOL CHOI, 2009  
Instructor of Health and Physical Education  
Assistant Athletic Trainer  
B.S., Yeungnam University, 1997;  
B.S., Illinois State University, 2005;  
M.S., Yeungnam University, 1999;  
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B.A., University of Arizona, 1979;  
M.Ed., Wichita State University, 1987;  
M.A., Wichita State University, 1999;  
Ph.D., Wichita State University, 2000.

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JULIO CESAR PACHECO FILHO, 2008  
Instructor of Health and Physical Education  
Assistant Coach  
B.S., Federal University of Santa Catarina, 2004.

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NANCY B. PARKER, 2001  
Instructor of Computer and Information Science  
B.S., Arkansas Tech University, 1994;  
M.B.A., University of Arkansas, 1995;  
M.I.S., University of Arkansas, 1998.

PHILIP D. PARKER, 1977  
Associate Professor of Music  
B.M., Wichita State University, 1975;  
M.M., Indiana University, 1977.

WILLIAM A. PARTON, 1990  
Director of Library  
B.M., University of Houston, 1973;  
M.L., University of Washington, 1981.

JASON A. PATTON, 2008  
Assistant Professor of Geology  
B.S., Arkansas Tech University, 1996;  
M.S. Murray State University, 1998;  
Ph.D., University of Arkansas, 2008.

JACKIE L. PAXTON, 2005  
Professor of Early Childhood Education  
A.A., Westark Community College, 1976;  
B.S.E., University of Central Arkansas, 1978;  
M.S.E., University of Central Arkansas, 1979;  
Ed.D., University of Arkansas, 1990.

MARK M. PEACOCK, 2008  
Assistant Professor of Psychology  
B.A., University of Arkansas at Little Rock, 2000;  
M.A., University of Arkansas, 2004;  
Ph.D., University of Arkansas, 2007.

KATHRYN D. PEARSON, 1984  
Assistant Professor of Mathematics  
B.S., Arkansas Tech University, 1976;  
M.Ed., Arkansas Tech University, 1979;  
Ed.D., Nova Southeastern University, 2000.

THOMAS W. PENNINGTON, 1995  
Assistant Professor of Legal Studies  
Legal Counsel  
B.S., Arkansas Tech University, 1990;  
J.D., University of Arkansas, 1993.

SUSAN POZNAR, 1993  
Professor of English  
B.A., Brandeis University, 1980;  
M.A., Duke University, 1982;  
Ph.D., Duke University, 1989.

MALCOLM R. RAINHEY, 2010  
Professor of Animal Science  
Head, Department of Agriculture  
B.S., Southeastern Louisiana University, 1982;  
M.Ag., West Texas State University, 1985;  
Ph.D., Mississippi State University, 1988.

NELSON R. RAMIREZ, 2006  
Assistant Professor of Spanish  
B.A., University of California, Berkeley, 1997;  
M.A., University of California, Berkeley, 1999;  
Ph.D., University of California, Berkeley, 2005.

JAMES REASONER, 2008  
Instructor of Electrical Engineering  
B.S.E.E., U.S. Naval Academy, 1971;  
M.A., U.S. Naval War College, 1986.

CLINT REED, 2008  
Instructor of Health and Physical Education  
Assistant Coach  
B.S., Arkansas Tech University, 2002;  
M.Ed., Arkansas Tech University, 2006.

RANDELL W. RENFRO, 2003  
Assistant Professor of Agriculture  
B.S., Arkansas Tech University, 1980;  
M.S., University of Arkansas, 1982.

GILL RICHARDS, 2000  
Associate Professor of Electrical Engineering  
B.S., Swarthmore College, 1961;  
M.S., Stanford University, 1970;  
Ph.D., University of Southern California, 1984.

MICHAEL K. RITCHIE, 1989  
Professor of English  
B.A., University of Cincinnati, 1969;  
M.F.A., University of Iowa, 1975;  
M.S.L.S., University of Kentucky, 1979;  
Ph.D., Bowling Green State University, 1986.

DAVID W. ROACH, 1983  
Professor of Management  
B.A., University of Arkansas, 1982;  
M.B.A., University of Arkansas, 1983;  
Ph.D., University of Arkansas, 1991.

CAREY M. ROBERTS, 2000  
Associate Professor of History  
B.A., University of Southern Mississippi, 1993;  
M.A., University of South Carolina, 1995;  
Ph.D., University of South Carolina, 1999.

JEFF W. ROBERTSON, 1997  
Professor of Astrophysics  
Head, Department of Physical Science  
Director of Astronomical Observatory

B.S., University of Kansas, 1989;  
M.S., San Diego State University, 1991;  
Ph.D., Indiana University, 1995.

RONALD D. ROBISON, 1988  
Associate Professor of Computer and Information Science  
Head, Department of Computer and Information Science  
B.S., Iowa State University, 1970;  
M.S., University of Southern California, 1975.

SARAH H. ROBISON, 1989  
Associate Professor of Computer and Information Science  
B.S., University of Arkansas at Monticello, 1978;  
M.Ed., Southern Arkansas University, 1982;  
M.S., Nova Southeastern University, 1994.

MICHAEL T. ROGERS, 2007  
Assistant Professor of Political Science  
B.A., Wabash College, 1995;  
M.A., University at Albany-SUNY, 1999,  
Ph.D., University at Albany-SUNY, 2005.

MARY ANN ROLLANS, 1980  
Professor of Secondary Education  
Dean, College of Professional Studies and Community Outreach  
B.A., Arkansas Tech University, 1968;  
M.S.E., University of Central Arkansas, 1974;  
Ed.D., University of Arkansas, 1986.

REGINA ST. JOHN, 2006  
Assistant Professor of English  
B.A., University of Arkansas at Monticello, 1993;  
M.A., Arkansas State University, 1994;  
Ph.D., Ball State University, 2004.

JULIE M. SCHLUTERMAN, 2007  
Assistant Professor of Sociology  
B.A., Arkansas Tech University, 1997;  
M.A., University of Tennessee, 2002;  
Ph.D., University of Tennessee, 2007.

LINDA SELF, 2005  
Assistant Professor of Nursing  
B.S.N., University of Southern Maine, 1981;  
M.S., Texas Woman's University, 2000;  
M.A., Webster University, 2008.

CORY SHAMAN, 2006  
Assistant Professor of English  
B.A., Mississippi State University, 1992;  
M.A., University of Mississippi, 1997;  
Ph.D., University of Mississippi, 2007.

C. GLENN SHEETS, 1990  
Professor of Elementary Education  
B.S.E., Henderson State University, 1971;  
M.S.E., Henderson State University, 1975;  
Ed.D., University of Arkansas, 1978.

DONNA S. SHERRILL, 1992  
Instructor of Mathematics  
B.S., Arkansas Tech University, 1990;  
M.Ed., Arkansas Tech University, 1992.

SEYEDHAMED SHOJAEI, 2009  
Assistant Professor of Physics  
B.S., Sharif University of Technology (Iran), 1995;  
M.S., Sharif University of Technology (Iran) 1997;  
Ph.D., Indiana University, 2009.

REBECCA A. SHOPFNER, 2000  
Associate Professor of Teaching and Learning  
B.S.E., University of Central Arkansas, 1973;  
M.Ed., Arkansas Tech University, 1986;  
Ed.D., University of Arkansas, 1999.

KENNETH W. SHORES, 1985  
Associate Professor of Mathematics  
B.S., Arkansas Tech University, 1970;  
M.S., University of Arkansas, 1972.

CHERYL S. SMITH, 1992  
Professor of Nursing  
B.S.N., University of Southern Alabama, 1983;  
M.S., University of Southern Mississippi, 1990;  
Ph.D., University of Arkansas for Medical Sciences, 2006.

TIMOTHY E. SMITH, 1998  
Associate Professor of Music  
B.M., St. Olaf College, 1989;  
M.M., Indiana University, 1991;  
Ph.D., Indiana University, 1998.

V. CAROLE SMITH, 2004  
Associate Professor of Middle Level Education  
B.M., University of Arizona, 1969;  
M.M., University of Arizona, 1972;  
M.Ed., University of Arizona, 1980;  
Ph.D., University of Arizona, 1986.

DARLA D. SPARACINO, 1993  
Associate Professor of Health Information Management  
B.S., Arkansas Tech University, 1989;  
M.Ed., Arkansas Tech University, 1995.

SAMMIE P. STEPHENSON, 1999  
Assistant Professor of Elementary Education  
B.A., Henderson State University, 1963;  
M.S.E., University of Central Arkansas, 1969;  
Ed.D., University of Arkansas, 1995.

JAMES STEUBER, 2008  
Assistant Professor of Mechanical Engineering  
B.S., Arkansas Tech University, 2001;  
M.S., Texas A & M University, 2007;  
Ph.D., Texas A & M University, 2009.

IVAN H. STILL, 2006  
Assistant Professor of Biology  
B.S., University College London, 1988;  
Ph.D., University of Newcastle-upon-Tyne, 1992.

JOSEPH N. STOECKEL, 1992  
Professor of Fisheries Science

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Director, Fisheries and Wildlife Science Program  
B.A., Southern Illinois University at Carbondale, 1978;  
M.A., Southern Illinois University at Carbondale, 1985;  
Ph.D., Virginia Polytechnic Institute and State University, 1993.

ANNETTE B. STUCKEY, 2006  
Assistant Professor of Professional Studies  
Director, Professional Studies Department  
B.S., University of Arkansas at Pine Bluff, 1993;  
M.Ed., Arkansas Tech University, 2003.

JOSEPH SWAIN, 2009  
Assistant Professor of Geography  
B.S., Northwestern State University, 2000;  
M.A., Western Illinois University, 2003;  
Ph.D., University of Oklahoma, 2008.

H. MICHEAL TARVER, 2002  
Professor of History  
Dean, College of Arts and Humanities  
B.A., The University of Louisiana at Lafayette, 1983;  
M.A., The University of Louisiana at Lafayette, 1990;  
Ph.D., Bowling Green State University, 1995.

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TERESA TAYLOR, 2004  
Instructor of Mathematics  
B.S., Arkansas Tech University, 1990;  
M.Ed., Arkansas Tech University, 1994;  
M.Ed., Arkansas Tech University, 2005.

BRUCE L. TEDFORD, 2001  
Associate Professor of Biology  
B.S., University of Arkansas at Little Rock, 1976;  
M.A., University of California, 1980;  
Ph.D., Louisiana State University, 1995.

VINCENT P. TINERELLA, 2008  
Assistant Librarian  
B.A., Northeastern Illinois University, 1982;  
M.A., DePaul University, 1994;  
M.L.I.S., Dominican University, 1998

JULIE R. TRIVITT, 2007  
Assistant Professor of Economics  
B.S., Missouri State University, 1994;  
M.A., University of Arkansas, 1996;  
Ph.D., University of Arkansas, 2006.

L. KIM TROBOY, 2002  
Professor of Management Information Systems  
B.S., Arkansas Tech University, 1980;  
M.B.A., University of Arkansas, 1987;  
Ph.D., University of North Texas, 1997.

JASON S. ULSPERGER, 2006  
Assistant Professor of Sociology  
B.S., University of Central Arkansas, 1997;  
M.A., Arkansas State University, 1999;  
Ph.D., Oklahoma State University, 2003.

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DAVID G. UNDERWOOD, 2001  
Professor of Education  
Associate Vice President for Academic Affairs  
B.A., Western Kentucky University, 1972;  
M.P.S., Western Kentucky University, 1978;  
M.A.Ed., Western Kentucky University, 1979;  
Ph.D., Indiana University, 1985.

SUSAN J. UNDERWOOD, 2003  
Associate Professor of College Student Personnel  
Director, College Student Personnel  
B.S., Western Kentucky University, 1980;  
M.A.Ed., Western Kentucky University, 1982;  
Ph.D., New Mexico State University, 1990.

PHILIPPE VAN HOUTTE, 2007  
Assistant Librarian  
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THOMAS A. VAUGHN, 2003  
Associate Professor of Speech  
B.A., University of Arkansas, 1990;  
M.A., University of Arkansas, 1992;  
Ph.D., Indiana University, 1998.

DONNA R. VOCATE, 1998  
Professor of Speech  
Head, Department of Speech/Theatre/Journalism  
B.A., University of Colorado-Boulder, 1962;  
M.A., University of Denver, 1977;  
Ph.D., University of Denver, 1980.

RYAN WALLACE, 2005  
Instructor of Health and Physical Education  
Assistant Coach  
B.S.E., Henderson State University, 2001;  
M.S., Henderson State University, 2003.

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JAMES R. WALTON, 2006  
Associate Professor of Marketing  
B.S., Missouri Southern State College, 1979;  
M.B.A., University of Central Arkansas, 1993;  
Ph.D., Texas Tech University, 2001.

DANA D. WARD, 1988  
Professor of Spanish  
B.A., Hendrix College, 1974;  
M.A., University of Arkansas, 1977;  
Ph.D., University of Arkansas, 1987.

DAVID W. WARD, 1999  
Associate Professor of Psychology  
B.S., University of Texas, 1986;  
M.S., University of Georgia, 1990;  
Ph.D., University of Georgia, 1998.

JASON E. WARNICK, 2006  
Assistant Professor of Psychology  
B.A./B.S., Arkansas State University, 2002;  
M.A., University of Mississippi, 2004;  
Ph.D., University of Mississippi, 2006.

JOHN W. WATSON, 1978  
 Professor of Mathematics  
 Vice President for Academic Affairs  
 B.A., University of Arkansas, 1971;  
 M.S., University of Arkansas, 1973;  
 Ed.D., Oklahoma State University, 1978.

ELISABETH WEBB, 2006  
 Assistant Professor of Wildlife Science  
 B.A., Washington and Lee University, 1999;  
 M.S., Southern Illinois University at Carbondale, 2002;  
 Ph.D., Texas Tech University, 2006.

HELGA WENDELBERGER, 2008  
 Assistant Professor of English  
 B.A., University of Georgia, 2002;  
 Ph.D., University of Georgia, 2006.

SUSAN WEST, 2008  
 Assistant Professor of Hospitality Administration  
 B.A.A.S., Stephen F. Austin State University, 2000;  
 M.A., University of Arkansas, 2003.

DONNA R. WHITE, 2001  
 Associate Professor of English  
 B.A., Arkansas Tech University, 1976;  
 M.A., University of Texas, 1983;  
 Ph.D., University of Minnesota, 1991.

MARGARET G. WILKERSON, 1976  
 Associate Professor of Rehabilitation Science  
 B.A., Arkansas Tech University, 1970;  
 M.R.C., Arkansas State University, 1971.

MELINDA A. WILKINS, 1988  
 Professor of Health Information Management  
 Director of Health Information Management  
 B.S., Southwestern Oklahoma State University, 1983;  
 M.Ed., Southwestern Oklahoma State University, 1988;  
 Ph.D., Capella University, 2008.

DENNIS W. WILLIAMS, 2007  
 Assistant Professor of Sociology  
 B.A., Louisiana Tech, 1998;  
 M.A., University of Louisiana, 2001;  
 Ph.D., University of Oklahoma, 2008.

PENNY P. WILLMERING, 1999  
 Associate Professor of Rehabilitation Science  
 B.S.Ed., University of Missouri-Columbia, 1979;  
 M.A., Southern Illinois University, 1986;  
 Ph.D., University of Madison-Wisconsin, 1999.

DEBORAH WILSON, 1992  
 Professor of English  
 B.A., Louisiana Tech University, 1974;  
 M.Ed., Mississippi College, 1982;  
 Ph.D., Louisiana State University, 1991.

SID T. WOMACK, 1988  
 Professor of Secondary Education  
 B.M.E., Abilene Christian College, 1972;  
 M.Ed., Sam Houston State University, 1974;  
 Ph.D., Texas A & M University, 1979.

JEFFREY R. WOODS, 2000  
 Associate Professor of History  
 Interim Head, Department of History and Political Science  
 B.A., University of Kansas, 1992;  
 M.A., University of Arkansas, 1994;  
 Ph.D., Ohio University, 2000.

SAM M. WORLEY, 1997  
 Associate Professor of English  
 B.A., The University of Texas at Austin, 1981;  
 M.A., The University of North Carolina at Chapel Hill, 1986;  
 Ph.D., The University of North Carolina at Chapel Hill, 1991.

TSUNEMI YAMASHITA, 1998  
 Associate Professor of Biology  
 B.A., Hendrix College, 1985;  
 Ph.D., Vanderbilt University, 1993.

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ANNETTE ZAKHARIAN, 1984  
 Professor of French  
 A.B., Rutgers University, 1974;  
 M.A., Syracuse University, 1980;  
 D.A., Syracuse University, 1983.

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QING ZENG, 2007  
 Assistant Professor of Psychology  
 B.A., Hunan Agricultural University, 1982;  
 M.S., Brigham Young University, 1991;  
 Ph.D., Brigham Young University, 1998.

CONNIE W. ZIMMER, 1990  
 Associate Professor of Secondary Education  
 A.B., Western Kentucky University, 1972;  
 M.S.L.S., Western Kentucky University, 1975.

### Distinguished Professor

JACK R. HAMM, 1972  
 Distinguished Professor of Mathematics  
 B.S., Arkansas Tech University, 1964;  
 M.S., University of Missouri at Rolla, 1968;  
 Ph.D., University of Missouri at Rolla, 1972.

### Faculty Emeriti

FIRMAN W. BYNUM, 1948  
 Dean of Students Emeritus  
 B.S.E., University of Arkansas, 1944;  
 M.S., University of Arkansas, 1950.  
 ROBERT L. CASEY, 1971  
 Professor Emeritus of Music  
 B.A., Arkansas Tech University, 1954;

M.M.E., University of North Texas, 1959;  
Ed.D., Washington University, 1971.

RAYMOND E. (GENE) COLE, 1970  
Professor Emeritus of Economics  
B.S., Arkansas Tech University, 1969;  
M.A., University of Arkansas, 1970;  
Ph.D., University of Arkansas, 1976.

EDWARD J. CONNELLY, 1960  
Professor Emeritus of Music  
B.M., Dr. Paul University, 1955;  
M.M., University of Illinois, 1960;  
D.M.A., University of Colorado, 1979.

E. SUE DOSS, 1956  
Professor Emeritus of English  
B.A., University of the Ozarks, 1945;  
M.A., University of Arkansas, 1950;  
Ph.D., University of Arkansas, 1958.

ROBERT R. EDWARDS, 1989  
Professor Emeritus of Management  
B.A., Arkansas Tech University, 1960;  
M.S., American Technological University, 1981;  
Ph.D., University of Arkansas, 1988.

PATRICIA A. GORDON, 1965  
Professor Emeritus of Health and Physical Education  
B.S.E., University of Central Arkansas, 1957;  
M.Ed., University of Oklahoma, 1960;  
Ed.D., University of Arkansas, 1977.

ROYCE D. JONES, 1973  
Professor Emeritus of Accounting  
B.S., Arkansas Tech University, 1965;  
M.B.A., East Texas State University, 1971.

HARLAN L. MCMILLAN, 1969  
Professor Emeritus of Biology  
B.S., College of the Ozarks, 1950;  
M.S., University of Arkansas, 1955;  
Ph.D., Purdue University, 1960.

BOBBY MULLEN, 1956  
Professor Emeritus of Mathematics  
B.S., Arkansas Tech University, 1952;  
M.A., University of Arkansas, 1955.

AUDREY R. OWENS, 1984  
Professor Emeritus of Nursing  
B.S., Youngstown State University, 1971;  
M.S., Youngstown State University, 1978;  
M.S., Texas Woman's University, 1979;  
Ed.D., The University of Akron, 1983.

DONALD E. RICKARD, 1967  
Professor Emeritus of Physical Science  
B.S.E., University of Central Arkansas, 1960;  
M.S.E., University of Central Arkansas, 1966.

EARL F. SCHROCK, Jr., 1971  
Professor Emeritus of English  
B.A., Arkansas Tech University, 1966;  
M.A., University of Arkansas, 1968;  
Ph.D., University of Arkansas, 1980.

WILLIAM W. TRIGG, 1959  
Professor Emeritus of Chemistry  
B.S., University of Arkansas, 1956;  
M.S., University of Arkansas, 1960;  
Ph.D., Louisiana State University, 1967.

HILDA J. TURNER, 1979  
Professor Emeritus of Business  
B.S., Arkansas Tech University, 1960;  
M.Ed., University of Arkansas, 1968;  
Ed.D., University of Arkansas, 1976.

VICTOR K. VERE, 1976  
Professor Emeritus of Geology  
B.S.E., State University of New York (Cortland), 1961;  
M.S., Syracuse University, 1968;  
Ph.D., Syracuse University, 1972.

KENNETH R. WALKER, 1958  
Professor Emeritus of History  
B.A., Goshen College, 1949;  
M.A., Indiana University, 1950;  
M.Ed., University of Arkansas, 1964;  
Ph.D., Indiana University, 1952.

JAMES T. WILLCUTT, 1967  
Professor Emeritus of Physics  
B.S., Arkansas Tech University, 1965;  
M.S., University of Missouri at Rolla, 1967.

KEITH C. WILLS, 1968  
Professor Emeritus of Health and Physical Education  
B.A., Hendrix College, 1958;  
M.S.E., Arkansas State University, 1965;  
Ph.D., Texas A & M University, 1970.

CHIA CHI YANG, 1980  
Professor Emeritus of Chemistry  
B.S., National Chen Kung University, Taiwan, 1949;  
M.S., Georgia Tech, 1968;  
Ph.D., Georgia Tech, 1979.

**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**General Information****The Campus**

Arkansas Tech University, with its spacious 516-acre campus, is located on the northern edge of the city of Russellville. This growing community, with a population of approximately 24,000, is ideally situated between the mountains of the Ozark National Forest on the north and those of the Ouachita National Forest on the south. It is midway between the state's two largest population centers, Fort Smith, 85 miles to the west, and Little Rock, 75 miles to the east. Interstate Highway 40 passes just north of the campus and connects these two cities.

Arkansas Tech University's Lake Point Conference Center is located west of Russellville and is home to the College of Professional Studies and Community Outreach and offers both credit and non-credit programs. Lake Point is nestled on Lake Dardanelle in a beautiful wooded setting and offers private guest rooms, elegant and casual food service, unique amenities and spectacular views from every building. Lake Point Conference Center can accommodate a wide variety of meetings, training, conferences, retreats, as well as business and social functions.

In addition, Russellville is the crossroads of activity for State Highways 7, 22, 64, and 124. The historic natural crossing of the Arkansas River at Dardanelle is four miles to the south. The navigable river forms a 36,600 acre lake with 315 miles of shoreline behind a lock and dam located just southwest of the city. The Missouri Pacific Railroad passes through the city and parallels the river between Little Rock and Fort Smith.

Russellville is the county seat of Pope County. Historic Dwight Mission, established by the American Board of Foreign Missions among the Cherokee Indians in 1821, was located a short distance west of the campus of Arkansas Tech University on Illinois Bayou, where that stream is now crossed by Highway 64. Descendants of Cephas Washburn, the intrepid missionary who founded the mission and named it for Timothy Dwight of Yale, live in Russellville at the present time.

Arkansas Tech University is in the center of an area experiencing vigorous industrial development as evidenced by the growth of local industry and the number of national concerns locating plants in the area. Nuclear One, the first nuclear power plant completed in the Southwest, and a second nuclear power unit have been constructed near Russellville by Entergy, thus assuring continued industrial growth. Headquarters for District 9 of the Arkansas Highway Department and for the Ozark - St. Francis National Forests are located in Russellville. The McClellan - Kerr Navigation Project is having a significant effect upon the development of the area. The impoundment of the Arkansas River has formed Lake Dardanelle which borders the west edge of the campus. Poultry, cattle, soybeans, cotton, and lumber are the principal money crops in the area served by Arkansas Tech University.

**History**

Arkansas Tech University was created by an act of the Arkansas General Assembly in 1909. Under the provisions of this Act, the state was divided into four Agricultural School Districts. Boards of Trustees were appointed by the Governor with the approval of the Senate, and appropriations were made for the erection of buildings and employment of a faculty for a district agricultural school in each of the four districts.

Twenty counties of northwestern Arkansas were designated as the Second District. Governor Donaghey appointed W. U. Balkman, J. R. Williams, H. S. Mobley, A. D. Shinn, and O. P. Nixon as a Board of Trustees for the Second District Agricultural School. Several towns made efforts to have the school located in their area. After considering all proposals, the Board of Trustees decided to locate it at Russellville, which had made an offer of a tract of 400 acres of land adjoining the city limits and a cash bonus of several thousand dollars.

The school opened its doors for students in the fall of 1910. The first class to graduate from the school was the high school class of 1912. In 1921-22, a freshman year of college work was offered, in 1922-23 a second year, in 1923-24 a third year, and in 1924-25 a fourth year. The General Assembly in 1925 changed the name from the Second District Agricultural School to Arkansas Polytechnic College with power to grant degrees. The class of 1925 was graduated with the degree of bachelor of science, as was the class of 1926. The effort to maintain a four-year high school and a four-year college proved beyond the resources of the institution at that time, and it became a junior college in the fall of 1927. The four years of secondary work were dropped, one year at a time, and the last high school class was the class of 1929.

Changing and increasing demands for college education in Arkansas caused the Board of Trustees in 1948 to convert the college from a junior college to a degree-granting institution. In 1948-49 the college offered the third year of college work, and in 1949-50 the fourth year, with the first baccalaureate degrees awarded at the end of the 1949-50 spring semester. A graduate program leading to the degree of master of education was established in 1976. Graduate courses were first offered by Arkansas Tech in the summer of 1975.

In accordance with an act of the Arkansas General Assembly and by the authority of the State of Arkansas Board of Higher Education, the name of Arkansas Polytechnic College was changed to Arkansas Tech University, effective July 9, 1976.

Arkansas Tech has consistently adjusted its scope to accommodate immediate and future needs. In 1985 the institution reorganized its programs into the Schools of Business, Education, Liberal and Fine Arts, Physical and Life Sciences, and Systems Science. In 1997, the School of Community Education and Professional Development was established. As part of ongoing efforts in strategic planning and a recognition of the growth and scope of the institution and its programs, the schools were renamed in 2009: College of Business, College of Education, College of Arts and Humanities, College of Natural and Health Sciences, College of Applied Sciences, and College of Professional Studies and Community Outreach.

**Mission Statement  
(adopted February 28, 2008)**

Arkansas Tech University, a state-supported institution of higher education, is dedicated to nurturing scholastic development, integrity, and professionalism. The University offers a wide range of traditional and innovative programs which provide a solid educational foundation for life-long learning to a diverse community of learners.

**General Education Goals**

The general education curriculum is designed to provide a foundation for knowledge common to educated people and to develop the capacity for an individual to expand that knowledge over his or her lifetime. Students who have completed the general education curriculum at Arkansas Tech University will be able to:

- Communicate effectively
- Think critically
- Develop ethical perspectives
- Apply scientific and quantitative reasoning
- Demonstrate knowledge of the arts and humanities
- Understand wellness concepts

(See "[General Education Requirements](#)")

**Programs of Study**

In carrying out its mission, the University offers programs of study leading to baccalaureate degrees in the areas listed below. Programs of study leading to a master's degree are offered in Liberal Arts, English, History, Multimedia Journalism, Spanish, Teaching English to Speakers of Other Languages, Engineering, College Student Personnel, Emergency Management and Homeland Security, Fisheries and Wildlife Science, Information Technology, Nursing, Psychology, School Counseling and Leadership, Educational Leadership, Instructional Improvement, Teaching, Learning and Leadership, Elementary Education, Gifted Education, and Secondary Education with specializations in English, Instructional Technology, Mathematics, Physical Education, and Social Studies. Arkansas Tech also offers the Educational Specialist degree in Educational Leadership. (Please refer to graduate catalog for additional information.)

**College of Applied Sciences**

- Agriculture Business
- Computer Science
- Culinary Management (A.A.S.)
- Electrical Engineering
- Emergency Management (B.S.)
- Hospitality Administration
- Information Systems
- Information Technology (A.A.S. and B.S.)
- Mechanical Engineering
- Nuclear Technology (A.S.N.T.)
- Recreation and Park Administration

**College of Arts and Humanities**

- Art
- Art Education
- Creative Writing
- Criminal Justice (A.A.)
- English
- Foreign Language
- General Studies (A.A.)
- History
- International Studies
- Journalism
- Music
- Music Education
- Political Science
- Psychology
- Rehabilitation Science
- Sociology
- Speech

**College of Business**

- Accounting
- Business Education
- Economics and Finance
- Management and Marketing

**College of Education**

- Early Childhood Education
- Health and Physical Education
- Middle Level Education
- Secondary Education

**College of Natural and Health Sciences**

- Biology
- Chemistry
- Engineering Physics
- Fisheries and Wildlife Science
- Geology
- Health Information Management
- Medical Assistant (A.A.S.)
- Medical Technology
- Mathematics
- Nursing
- Physical Science

**College of Professional Studies and Community Outreach**

- Early Childhood Education (A.S.)

General Studies (B.A.)  
 Professional Studies (B.P.S.)

<b>Minors Offered</b>	<b>Minor</b>	<b>Hours</b>
	Accounting	21 hours
	Anthropology	18 hours
	Art	18 hours
	Biology	20 hours
	Business	21 hours
	Chemistry	21 hours
	Creative Writing	18 hours
	Criminal Justice	18 hours
	Economics	18 hours
	Emergency Management	18 hours
	Engineering Physics	20 hours
	English	18 hours
	French	17 hours
	Geography	18 hours
	Geology	20 hours
	German	17 hours
	History	18 hours
	Hospitality Administration	18 hours
	Japanese	17 hours
	Journalism	18 hours
	Latin/Italian	17 hours
	Latin American with language proficiency	18 hours
	Latin American without language proficiency	19 hours
	Mathematics	20 hours
	Military Science	21 hours
	Philosophy	18 hours
	Physical Science	20 hours
	Political Science	18 hours
	Psychology	18 hours
	Recreation and Park Administration	18 hours
	Rehabilitation Science	18 hours
	Religious Studies	18 hours
	Sociology	18 hours
	Spanish	17 hours
	Speech	18 hours
	Strategic Studies	18 hours
	TESL	18 hours
	Theatre	18 hours

### Physical Plant

The physical plant of Arkansas Tech University is located on a tract of 533 acres near the northern boundary of the city of Russellville. Acreage provides space for varsity and intramural recreational activities, drill fields, and the University farm. The McClellan – Kerr Arkansas River Navigation System provides a freshwater lake which borders on the west edge of the campus.

All instructional programs are taught in buildings which have been specifically designed or modified to complement the projected instructional tasks. The Corley Building, renovated in 2009, provides instructional space and state of the art laboratories for engineering, computer science, and mathematics. McEver Hall, renovated in 2010, provides specialized classrooms and labs for Biological and Physical Sciences. Norman Hall, which was completed in 2007, houses the Department of Art and contains a gallery and specialized classrooms. Rothwell Hall houses Academic Advising, College of Business offices and classrooms, a trading room with a live Stock Market Ticker and Video Display Wall, and the Arkansas Small Business and Technology Development Center. Rothwell Hall was not only completed in Arkansas Tech's 100th year of operation (2009), but is also Tech's 100th building.

The College of Professional Studies and Community Outreach and the Center for Leadership and Learning are located at our Lake Point Conference Center which was acquired by Tech in 2006.

Arkansas Tech University has several resources which lend themselves to serving the cultural and recreational needs of the University and surrounding community. The John E. Tucker Coliseum complements the instructional program by providing a modern setting for concerts, conventions, and sporting events. The Hull Physical Education building, renovated in 2001, has an Olympic-style swimming pool which is used for physical education classes; for recreational swimming for students, faculty, and staff; and by the community swim club. The Witherspoon Arts and Humanities Building has a modern auditorium with a seating capacity of 742. The L.L. "Doc" Bryan Student Services Center and the Student Activities Building constitute the main facilities for student services, student government, publications, and indoor recreational activities. The Arkansas Tech Museum, located in the Techionery Building, contains exhibits on archeology and early history of western Arkansas; museum lectures and events address cultural needs on the campus and in the community, and offer opportunities for students in the Parks, Recreation and Hospitality Department to become involved in interpretive activities.

Ross Pendergraft Library and Technology Center houses more than 1,195,000 items, including: 168,000 print volumes; 895,000 microforms; 115,000 government documents; 13,000 multimedia items; and 825 periodical subscriptions. Among these holdings are extensive backfiles of journals and newspapers. Photocopiers and microform reader-printers are available using the VendaCard system. The library is a member of AMIGOS/OCLC, a regional broker of international bibliographic data and information services. Over 140 electronic databases covering most subjects are accessible from the library and over the Internet through the Tech homepage at <http://library.atu.edu>. Assistance in the retrieval and use of materials is provided by seven professional librarians, nine paraprofessional staff, and a number of part-time employees. Librarian-mediated instruction and online searches are provided on request. Materials not available in the library may be requested through our interlibrary loan system, normally at no charge. The Library is the publisher of the retrospective Arkansas Gazette Index.

Pendergraft Library is open 97 hours per week except between semesters and during holidays. The state-of-the-art facility includes a variety of computer labs (both open use and instructional), a music/multimedia lab, two distance learning classrooms, a large conference room, five breakout/meeting rooms, ten group study rooms, satellite downlink, cable TV connections, 135 publicly accessible computers, 132 lab computers, about 400 data drops for laptop computers, and access to the Tech wireless network.

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All trademarks herein belong to their respective owners

**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**Admission**

Individuals who meet the admission requirements listed below may apply to Arkansas Tech University. The University reserves the right to reject the application of any individual. Every student must file an application for admission. Applications and additional information about Arkansas Tech are available from the Office of Admissions, 1605 Coliseum Drive, Suite 141 Doc Bryan, Arkansas Tech University, Russellville, Arkansas 72801.

Students may apply on-line from the Tech web site at <http://www.atu.edu/> or e-mail for additional information via [tech.enroll@atu.edu](mailto:tech.enroll@atu.edu).

Tech will provide equal opportunity in admission to all persons. This applies to all phases of the admission process. Any demographic information collected through the Admission Application is on a voluntary basis and is to be used in a nondiscriminatory manner consistent with applicable civil rights laws for reporting and statistical purposes only and cannot affect eligibility for admission.

Tech is subject to and endorses both the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. The Director of Disability Services serves as the coordinator for these federal programs. The Office of Disability Service is located in Bryan Hall 103, Arkansas Tech University, Russellville, AR 72801, and can be contacted by calling (479) 968-0302 or FAX (479) 964-0375.

Beginning June 1, 2007, all students at Arkansas Tech University will be assigned a permanent, randomly generated, student identification number. A student's social security number will be used only on applications for admission and solely for the purposes of Federal reporting requirements and determination of eligibility for Federal financial aid.

All students must provide proof of two measles, one mumps and two rubella immunizations by way of an official record from another educational institution, certificate from a licensed medical doctor, or an authorized public health department representative. Proof of the appropriate immunizations must be presented to the Office of Admissions prior to enrollment in classes.

Entering freshmen must comply with the following admission requirements and freshman placement standards. This includes students who enter with college credit earned prior to high school graduation, during summer following high school graduation, or by advanced placement.

Residual college entrance exams, taken on other college campuses, will not be accepted for admissions.

**Entering Freshman/  
New Student**

New students to Arkansas Tech University must submit an application for admission, college entrance exam scores, a record documenting completion of secondary requirements, and proof of immunization. If you have concurrent college credit, an official transcript from that institution is required. For Advanced Placement (AP), College Level Examination Program (CLEP) or International Baccalaureate (IB) credit, an original or certified copy from your high school will need to be submitted prior to credit being awarded. Detailed course articulation for AP, CLEP, and IB can be located under Credit by Exam. A minimum criterion for exam scores and grade point averages is listed below:

1. Composite ACT score of 15 or above, SAT Reasoning Test (formerly SAT-1) composite score of 710 (mathematics and critical reading average) or above, or a COMPASS composite score of 47 or above for students who graduate from an accredited public secondary school; or composite ACT score of 19 or above, composite SAT Reasoning Test score of 910 (mathematics and critical reading average) or above, or composite COMPASS score of 68 or above for students who graduate from private secondary schools, were home schooled, or received a GED. Note: SAT exam scores are to include the SAT Reasoning Test averages for mathematics and critical reading only. Writing exams for neither ACT nor SAT are required.
2. Completion of graduation requirements from an accredited public or private secondary school, a non-accredited private secondary school, or a home school program documenting a minimum 2.0/4.0 cumulative grade point average, and completion of the university's secondary school core curriculum, OR minimum GED score of 450.

**Secondary School  
Core Course  
Recommendation**

Twenty-two credits minimum earned from grades nine through twelve from the following core courses or equivalent are recommended for college preparation. Asterisks indicate core courses required by Act 1290 for unconditional admission:

\*English - 4 units, with emphasis on writing skills, but not to include oral communications, journalism, drama, or debate.  
Oral Communications -  $\frac{1}{2}$  unit of oral communications.

\*Science - 3 units with laboratories, chosen from physical science, biology, chemistry, or physics. Only one unit may come from a life science.

\*Mathematics - 4 units, including algebra I and algebra II, geometry, and an advanced math course. The fourth unit may be college algebra or a higher level college math course, as long as three college credit hours are earned. College credit will show on a high school transcript as a half-unit of credit, but will still be considered the fourth unit for unconditional college admission purposes. The student must present a college transcript along with his or her high school transcript when applying for unconditional admission. It is strongly recommended that students take a math course during their senior year.

\*Social Studies - 3 units, to include 1 unit each of American history (does not include contemporary American history), world history (not to include world cultures, world geography, or global studies), and  $\frac{1}{2}$  unit of American government, or civics and  $\frac{1}{2}$  unit of social studies (not to include courses in practical arts).

Physical Education -  $\frac{1}{2}$  unit of physical education.

Health and Safety -  $\frac{1}{2}$  unit of health and safety.

Fine Arts -  $\frac{1}{2}$  unit of fine arts.

Foreign Language - 2 units in one foreign language.

Electives - 4 units of electives.

#### Freshman Placement Standards

In accordance with A.C.A. § 6-61-110, first-time entering undergraduate students (includes students who entered college the summer of 1995 or thereafter and students who enter with advanced standing) who enroll in baccalaureate degree programs or associate-degree transfer programs must meet the following placement standards prior to enrollment in college-level mathematics or English composition courses.

**Mathematics** – Students scoring 19 or above on the mathematics section of the ACT, 460 or above on the quantitative portion of SAT-1, may enroll in college-level mathematics courses. For students who take the COMPASS, those scoring a 41 or above on the algebra section may enroll in college-level mathematics courses. Students not meeting the standard must successfully complete a developmental (pre-college level) mathematics program, demonstrating achievement at least as sophisticated as intermediate algebra, in order to be placed in college-level mathematics courses.

**English Composition** – Students scoring 19 or above on the English section of the ACT or 470 or above on the verbal section of SAT-1 may enroll in college-level English courses. For students who take the COMPASS, those scoring 75 or above on the writing section may enroll in college-level English courses. Students not meeting the standard must successfully complete a developmental program.

**Reading** – Students scoring 19 or above on the reading section of the ACT, 470 or above on the verbal section of SAT-1 will be considered to have met minimal reading skill requirements. For students who take the COMPASS, those scoring 82 or above on the reading section will be considered to have met minimal reading skill requirements. English composition may be taken concurrent with or subsequent to any required developmental reading program.

Students who are required to complete developmental program(s) in mathematics, English, and/or reading, must enroll in the appropriate course during their first semester at Tech and in each subsequent semester until the developmental program is completed. A grade of "C" or better is required in all developmental courses before the student may advance to higher level courses.

#### Former Students

Students who have interrupted their attendance at Arkansas Tech University must reapply for admission. Academic clemency may be granted in accordance with the clemency policy detailed in the Regulations and Procedures section.

#### Transfer Students

Transfer students making application for admission to Arkansas Tech University must submit official transcripts from all colleges/universities where they have been officially registered. Students seeking transfer of credit from other institutions may be asked to provide a catalog or course description from the transfer institution.

Students with fewer than 24 semester hours of earned college-level credit must also submit a high school transcript and must request current transferable ACT or SAT scores be sent to the University. ACT, SAT, or COMPASS scores will not be required if the English and mathematics general education requirements have been satisfied with grades of "C" or better. In the event that receipt of a student's transcript is unavoidably delayed, as may frequently occur at midyear, a transfer student may be admitted provisionally pending receipt of the official transcript, but the University reserves the right to require immediate withdrawal if the previous record does not meet admission requirements.

Applicants for transfer must have earned a GPA of 2.00 (on a 4.00 scale) on all college-level courses attempted and be eligible to re-enroll at the last college or university attended.

Financial aid applicants must request a financial aid transcript from each post-secondary institution attended whether they received aid from that institution or not. Aid applications will not be processed until these transcripts are received by the financial aid office.

#### Transfer Credit

The following policy is effective January 2, 2007. Credit from colleges and universities accredited by one of the six U.S. regional accreditation associations will be accepted for transfer credit. Credit from U.S. colleges and universities not accredited by one of the six regional accreditation associations will not be accepted for transfer credit. Credit from colleges or universities outside the U.S. presented for transfer credit will be considered on an individual basis. A maximum of 68 semester hours of acceptable credit may be transferred from community colleges. **Transfer credit, although accepted by the university, is not guaranteed to be applicable toward meeting degree requirements for all programs offered by the university. Applicability of transfer credit to meet degree requirements depends on the major selected by the transfer student.**

#### Arkansas Course Transfer System (ACTS)

The Arkansas Course Transfer System (ACTS) is designed to assist in planning the academic progress of students from the high school level through the adult workforce. This system contains information about the transferability of courses within Arkansas public colleges and universities. Students are guaranteed the transfer of applicable credits and equitable treatment in the application of credits for admissions and degree requirements. Students may complete specified General Education courses anywhere in the public system as well as many courses in the degree/major that have been pre-identified for transfer. Course transferability is not guaranteed for courses listed in ACTS as "No Comparable Course." Transferability of courses taken prior to January 1, 2007, is at the discretion of the receiving institution. The Arkansas Transfer System can be accessed at <http://acts.adhe.edu/>.

#### International Student Admissions

The International and Multicultural Student Services Office (IMSSO) is pleased to serve as the admissions office for international students studying at Arkansas Tech University (Tech). Any student who is not a United States citizen or a permanent resident of the United States is considered an international student. International students are subject to out-of-state tuition rates and an international student services fee as well as additional admission requirements. International students interested in applying for admission to Tech must submit the following documents:

1. **Application** – An application for international admission, properly completed
2. **Application Fee** – A nonrefundable application fee of \$50 USD

3. **Academic Records** – All transcripts must be originals or school-certified copies of originals with official English translations. Notarized copies are not accepted.
- Entering Freshmen:** All applicants must submit appropriate academic records verifying previous educational attainment and the completion of secondary education requirements or the equivalency of US high school. This documentation should include grade/mark sheets as well as certificate/diplomas showing completion of secondary education equivalent to 12 years of US high school.
  - Transfer Students:** Students who have previously attended college either in the US or abroad must submit official transcripts from all colleges/universities where they have been officially registered. Students seeking transfer of credit must complete a credential evaluation through a company authorized by Arkansas Tech University (a list of approved service providers can be obtained in the IMSSO or in the Registrar's Office) and submit catalog or course descriptions from the transfer institution. Students with fewer than 24 semester hours of earned college-level credit must also submit a high school transcript or the equivalency of a US high school transcript and diploma as well as complete an entrance exam such as the ACT, SAT or COMPASS.
4. **Entrance Exam** – All applicants must complete the ACT, SAT or COMPASS exam. Students who have not completed the ACT or SAT may take the COMPASS exam on campus upon arrival and after admission to assist in advisement and course placement. However, if ACT or SAT scores are available, please provide this documentation along with the application for admission. Students with more than 24 semester hours of earned college-level credit are not required to take an entrance exam.
5. **English Proficiency** – Students who wish to apply for admission to the English Language Institute (ELI) are not required to demonstrate English proficiency. All other applicants should submit official documentation of meeting one of the following standards:
- A minimum score of 500 on the written TOEFL (Test of English as a Foreign Language), 173 on the computerized TOEFL or 61 on the Internet-based TOEFL. Scores must be received directly from Educational Testing Service (ETS). The school code for Arkansas Tech University is 6010.
  - A minimum score of 5.5 on the International English Language Testing System (IELTS). An official score card must be sent directly to Arkansas Tech University.
  - An EIKEN score of Grade 2A. Scores must be sent directly from STEP, Inc. (Society for Testing English Proficiency).
  - For transfer students from US colleges/universities, one of the above mentioned documents can be provided or an official college/university transcript showing successful completion of college-level English Composition I and English Composition II with a grade of C or better.
- NOTE: Test scores are only valid for 2 years. Please submit only those scores taken within two years from the time of application.
6. **Evidence of Sufficient Financial Support** – Undergraduate costs are estimated at \$17,092 USD for 9 months of study including tuition and fees, housing, meals, books and other living expenses. Applicants must provide certified evidence of the source and amount of funding that will be utilized to support educational expenses. Documents must be official and issued within the 6 months previous to the time of application. No copies are accepted.
7. **Passport** – Please provide a photocopy of your current passport as well as any previous visas to the US, I-20's and an I-94 card if available.

The application for international admission and all supporting documents should be submitted by May 1 for the fall semester, October 1 for the spring semester and March 1 for both summer sessions for priority consideration. Applications are still accepted after the priority dates. Admission will not be granted until all supporting documentation as listed above has been received and evaluated. Upon acceptance, notification will be sent to the student along with an I-20 (Certificate of Eligibility).

Students seeking to defer admission to a future term must submit a \$25 USD deferral fee along with updated evidence of financial support. Please send a written request for deferral to the IMSSO along with the fee and updated financial support documentation within 60 days of the start date of your last admission.

Full payment of tuition and fees must be paid at registration each semester. International students are required to purchase a health insurance policy provided by the university. Tech receives no remuneration as a result of international student enrollment in the health insurance plan.

More detailed information regarding international student admissions may be obtained by contacting the International and Multicultural Student Services Office, Tomlinson 29, Arkansas Tech University, Russellville, Arkansas, 72801-2222, USA; telephone 479-964-0832; fax 479-880-2039; web <http://www.atu.edu/imss>.

**Conditional Admission** First-time entering freshmen and transfer students who have been denied admission may file a written appeal addressed to the Associate Vice President for Enrollment Management seeking conditional admission. The appeal should be made within ten calendar days from the date admission was denied and should state applicant's grounds for appeal. Students granted conditional admission will be admitted on academic probation.

**Non-Degree Admission** Arkansas Tech University serves the general public by allowing individuals to enroll in classes for professional development and self-fulfillment without meeting regular admission requirements. The student admitted under this policy, who later chooses to pursue a degree, must reapply for admission as a degree seeking student and meet standard admission policies. A maximum of 27 credit hours earned as a non-degree seeking student may be applied to a degree program. Financial Aid benefits may not be granted to students admitted as non-degree seeking. For more information, call the Office of Admissions at (479) 968-0343.

**High School – University Admissions** Arkansas Tech University welcomes the opportunity to serve area schools by complementing their programs with special opportunities for students to enroll for college courses and earn college credit by attending Tech during summer sessions or by attending on a part-time basis during the regular academic year, concurrent with enrollment in secondary school. In accordance with the Arkansas Code of 1987 Annotated, paragraph 6-18-223, makes provisions whereby a student who is enrolled in a public school in Arkansas and who has completed the eighth grade is eligible to enroll at Arkansas Tech University upon approval of the appropriate public school official, provided the student does not need developmental courses in mathematics, English or reading and has a cumulative high school grade point average of 2.00 or greater on a 4.0 scale.

Upon completion of a course(s), students may choose whether or not to have the course(s) and grade(s) recorded for college credit. Students who do not wish to have the course(s) and grade(s) recorded for college credit must notify the Registrar in writing within thirty days of the end of the term or semester. A student must reapply each term or semester attended. The course(s) agreed upon by the student and their high school must also be approved each term by a university official. An application for concurrent enrollment can be found at <http://admissions.atu.edu>.

**ACT (American College Testing) Program**

Entering freshmen are required to provide Arkansas Tech University with American College Testing (ACT) Assessment scores for purposes of admission, academic placement, and the awarding of academic scholarships. Entering freshmen who have not taken the ACT prior to arrival at Arkansas Tech or whose score report is more than five years old are required to take the Residual ACT preceding their first semester. The ACT, which covers English, mathematics, reading and science reasoning, is administered five times per year at test centers, such as high schools, colleges and universities, across the nation. ACT information and registration forms may be obtained from local high schools, colleges, or universities.

You may also contact the Arkansas Tech University Testing Center for ACT information and registration materials. In addition, you may correspond directly with ACT at American College Testing Program, P.O. Box 168, Iowa City, Iowa 52243.

The 2010-2011 ACT national test schedule is as follows:

Test Date	Registration Deadline
September 11, 2010	August 6, 2010
October 23, 2010	September 17, 2010
December 11, 2010	November 5, 2010
February 12, 2011	January 7, 2011
April 9, 2011	March 4, 2011
June 11, 2011	May 6, 2011

Please check the ACT Website for the 2011-2012 test schedule at <https://www.actstudent.org>.

**COMPASS (Computerized-Adaptive Placement Assessment and Support System)**

Entering freshmen are required to provide Tech with American College Testing (ACT) Assessment or Computerized-Adaptive Placement Assessment and Support System (COMPASS) scores for purposes of admission and academic placement. COMPASS is administered on the computer and consists of three tests: writing, math algebra, and reading. Please contact the Arkansas Tech University Testing Center for ACT or COMPASS information at (479) 968-0302.

**Student Retention and Graduation Rates**

For information about retention and graduation rates at Tech, go to <http://ir.atu.edu> or contact the Office of Institutional Research.

**Selecting a Major Field**

Arkansas Tech University encourages students to give long and serious thought to the selection of a major field of study. They should determine the academic pursuits that lead to the vocations most attractive, not only in financial gain, but in interest as well. Then they should examine the program of study most closely related to their interest areas.

**Undecided Study**

Many students entering the University have not chosen a major. The individual who has not decided on a major may enroll in general education courses which are required of all candidates for the baccalaureate degree (see "[General Education Requirements](#)"). Students enrolling as "undecided" majors will be assigned to the Academic Advising Center. The Academic Advising Center is located in Rothwell Hall, room 107 and can be contacted by calling (479) 964-0843. Students enrolled as "undecided" may select a major at any time; however, a student must select a major during the semester in which the student earns 45 credit hours.

**Procedure for Scheduling Courses**

Detailed procedures for registration/preregistration are contained each semester in the schedule of courses. Prior to enrollment, students, in consultation with an academic advisor in their major field of study, prepare a class schedule and officially register for classes, pay fees and, if living on campus, pay room rent and board.

**Course Information**

All courses taught at Arkansas Tech University are listed alphabetically by subject area in the [Course Descriptions](#) section. Course symbols, the four-digit numbers used to identify courses within a department, have the following significance: the first digit of the number denotes the year level at which the course is given; the second and third digits differentiate the course from others in the department; the fourth digit shows the number of credit hours given. Typically an "hour of credit" requires one hour of classroom work per week for the duration of a semester.

**Graduate Program**

The requirements for the degree of master of education, master of science in education, master of liberal arts, master of arts, master of science, master of science in nursing, master of engineering, and educational specialist degree are set forth in the publication entitled "Graduate Catalog". Information may be obtained by contacting the Dean of the Graduate College, telephone (479) 968-0398.



## COURSE CATALOGS

[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)

### Fees and Expenses

Students enrolling at Arkansas Tech University are assessed tuition and fees to cover the costs of instruction and other student services common to a university setting. Additionally, certain courses requiring individual instruction or special facilities carry fees which are listed with the course description.

Students enrolling for twelve or more semester hours of undergraduate courses for the fall or spring semester are considered full-time. Tuition is assessed for each course at the appropriate credit-hour rate according to residency for full-time and part-time students. Instate tuition is \$167 per credit hour (\$334 per credit hour for out-of-state students). Up to \$11.50 per credit hour (\$23.00 per credit hour for out-of-state students) of the tuition fee for courses taken during the fall and spring semesters will be allocated to athletics.

Full-time students enrolled for the fall or spring semester are assessed a \$25 student activity fee (students enrolled for summer I or summer II are assessed a \$5 student activity fee), a \$110 technology fee, a \$10 technology equipment fee, a \$5 publications fee, a \$4 per credit hour instructional support fee, a \$5 per credit hour strategic facilities initiative fee, a \$10 assessment fee, and a \$5 transcript fee. Students registering for fewer than twelve semester hours during the fall or spring semester will be charged a \$4 per credit hour instructional support fee, a \$5 per credit hour strategic facilities initiative fee, a \$10 assessment fee, a \$110 technology fee, a \$10 technology equipment fee, a \$5 activity fee, and a \$5 transcript fee which entitles them to a photo ID card and admission to all University-sponsored activities on the same basis as full-time students.

All fees and charges to students are set by the University's Board of Trustees. Every attempt is made to establish charges in time to appear in the catalog; however, when this is not possible, estimated charges are shown. **The University reserves the right to change fees and charges at any time if conditions necessitate or permit the change.**

Total University charges for instate residents for the school year (twelve hours fall and spring semesters) are estimated as follows:

Tuition (based on 12 credit hours)	\$4,008
Student Activity, publications, technology, assessment, and transcript fees	330
Instructional Support Fee (\$4.00 per credit hour)	96
Strategic Facilities Initiative Fee (\$5.00 per credit hour)	120
Room and board:	
Residence Hall with Meal plan (average)	4,891
University Commons Apartments	from 4,374 to 5,436
East Gate Apartments	3,000 to 3,400
Books and supplies (estimated)	1,380

Tuition for courses taken during summer and mini-sessions will be assessed at the appropriate credit-hour rate for each course. A \$10 assessment fee, a \$5 transcript fee, a \$5 activity fee (Summer I and II only), a \$4 per credit hour instructional support fee, a \$5 per credit hour strategic facilities initiative fee, a \$110 technology fee, and a \$10 technology equipment fee are also assessed each summer and mini-session.

Tuition, fees, and one-fourth of the room and board charges for on campus students are due and payable prior to the beginning of each term. The balance of room and board charges may be paid in three monthly installments. An alternative payment plan is offered via the web site: <http://stuacct.atu.edu>.

### Fees and Charges

Prices quoted are rates currently in place for the 2009-2010 academic year. All rates are subject to change as necessary.

	Instate	Out-of-State
Undergraduate tuition <sup>1,2</sup>		
Full-time (12 credit hours per semester)	\$2,004	\$4,008
Summer and part-time (per credit hour)	167	334
Graduate tuition <sup>1,2</sup> (per credit hour)	191	382
Instructional support fee (per credit hour)	4	4
Strategic Facilities Initiative fee	5	5
Student activity fee		
Full-time students (fall and spring)	25	25
Part-time and summer students	5	5
Publications fee (required fall and spring semesters)		
Full-time students	5	5
Technology fee (required each semester or term)	110	110
Technology equipment fee	10	10
Assessment fee (required each semester or term)	10	10
Transcript fee (required each semester or term)	5	5
International Student service fee		
Per semester (fall/spring)	30	
Per summer term (five-week)	15	
Per mini-term	10	
Residence Hall Board Charges		
19 meal-per-week plan	1,050	
15 meal-per-week + \$100 Declining Balance Dollars	1,090	
165 meals + \$100 Declining Balance Dollars	1,030	
145 meals + \$130 Declining Balance Dollars	1,030	
106 meals + \$150 Declining Balance Dollars	1,000	
Residence Hall Room Charges		
Baswell, Paine, South Hall, Nutt Hall and Stadium Suite - Doubles	1,635	
Jones and Roush Halls	1,365	

Brown, Caraway, Massie, Turner and Wilson Halls		1,200
Campus Courts Double		1,365
Campus Courts Single		1,715
Stadium Suites and Nutt Hall Singles		1,985
University Commons Apartments		
2 bedroom apartments		2,718
4 bedroom apartments		2,187
East Gate Apartments		
1 bedroom apartments		1,500
2 bedroom apartments		1,700
Degree audit processing fee		25
Late registration fee		25
Adding/dropping courses		10
Returned check		10
Replacement of ID card		25
Post office box rent (required of students living in university housing)		10
Auto registration		30
Parking fees and fines (see Traffic Regulations)		
(All students parking on campus must have parking permits.)		
<sup>1</sup> Students who enroll for undergraduate and graduate courses will be charged according to the student's classification.		
<sup>2</sup> Required course fees are listed along with the appropriate course descriptions.		

**Estimated Living Expenses**

All students living in residence halls are required to purchase a meal plan; Declining Balance Dollars (DCB) may be used in Chambers Cafeteria, Doc Bryan Food Court, and Convenience Store.

Payment for room and board is due and payable prior to the beginning of the semester. Students may, however, arrange to make four equal payments--one prior to the beginning of the semester and one by the 15th of each month. Room and board charges are subject to change.

When space permits, students may be allowed single occupancy of a residence hall room. The additional charge of \$350 per semester is payable in full upon receipt of the monthly statement.

Residence halls are closed between fall and spring semesters. However, residents may remain in the residence halls during this period provided they submit proper paperwork to the Office of Residential Life to gain approval. There will be an additional cost for residents approved to remain in the residence halls over this break period. Residents may remain in the residence halls during all other breaks, provided they notify the residence hall staff of their intentions prior to the break period.

University Commons apartments are available to upper-class students. No board plan is required, and students are able to sign a nine-month or twelve-month contract. Two bedroom and four bedroom apartments are available.

**Payment of Accounts**

Tuition and all other fees and charges, including at least one-fourth of room and board charges for students in residence halls, are due and payable prior to the beginning of each term at the Student Accounts Office, in the Doc Bryan Student Services Center, Office 133. Financial settlement may be made by personal payment or authorized financial aid (loans, scholarships, grants, third parties, etc.). Visa, Master Card, and Discover credit cards are accepted for all charges. An alternative payment plan is offered via the web site: <http://stuaccts.atu.edu>. Registration is not complete until all financial obligations have been met satisfactorily. Failure to make financial settlement will result in cancellation of the class schedule.

Monthly billing statements are electronic. Near the first of each month, notification and information for access will be provided to students via the individual student e-mail address and online at <http://stuaccts.atu.edu>. Students are responsible for accessing billing statements and printing a paper copy if desired. In addition, paper copies are mailed twice yearly shortly before the beginning of the fall and spring terms. Students registering between billing cycles are responsible for accessing their charges online or contacting Student Accounts to insure making correct payment by the required due date. Payment is due even if billing statement is not received.

Students with delinquent accounts are not eligible for food service, transcripts, recommendations, advance registration, or readmission to any term. Collection fees for outstanding debts owed to the University may be assessed to the student.

The University reserves the right to amend or add to the regulations of the institution, including those concerning charges and methods of payment, and to make such changes applicable to students enrolled in the University, as well as to new students.

**Reduction of Fees and Charges**

Students officially withdrawing from the University by the end of the fifth day of the semester in a summer term, as listed in the "Academic Calendar" will receive an 80 percent reduction of tuition for courses which they are enrolled in at time of withdrawal. No reduction in tuition will be made after the fifth day of the summer semester. No reduction in fees will be made beginning with the first day of class of the summer term.

**Reduction of Tuition for Official Withdrawal**

Students registering for the fall or spring semester but officially withdrawing from the University by the end of the second day of the semester, as listed in the "Academic Calendar" will receive a 100 percent reduction of tuition and fees. Room and Board will be reduced on a pro rata basis. Thereafter, students officially withdrawing by the end of the twenty-fifth day of the semester will receive an 80 percent reduction of tuition only for courses in which they are enrolled at time of withdrawal. No reduction in tuition will be made after the twenty-fifth day of the semester. No reduction in fees will be made after the second day of the semester.

In the event a student is receiving student financial aid, any refund amount attributable to a loan, grant, or scholarship will be returned to the appropriate account and not to the student. The amount returned to federal programs will be the amount of unearned Federal aid based on the number of calendar days of attendance up to the sixty percent point of the semester. Aid accounts will be refunded in the following order up to the amount of the original disbursement: Federal Family Education Loan Programs, Federal Perkins Loan Program, Federal PLUS Loan Program, Federal Pell Grant Program, Federal Academic Competitiveness Grant, Federal SMART Grant, Federal SEOG Program, Arkansas Department of Higher Education Programs, Tech scholarships and

private aid. Additionally, students who have received a cash payment of Federal aid money will receive a letter after their withdrawal informing them of any amount to be repaid. These repayments will be made through the Student Accounts Office.

The student will be ineligible to register for additional courses until the required payments are made.

**Reduction of Tuition/Fees for Dropping to Fewer Hours**

Students dropping to fewer hours before the end of the fifth day of the semester in a summer term as listed in the "Academic Calendar" will receive an 80 percent reduction for the courses which are dropped. No reduction in tuition will be made after the fifth day of the semester. No reduction in fees will be made once the summer session begins.

Students enrolled for the fall or spring semester who drop courses by the end of the second day of the semester, as listed in the "Academic Calendar" will receive a 100 percent reduction of tuition for the courses dropped. Thereafter, students enrolled who drop courses before the end of the twenty-fifth day of the semester will receive an 80 percent reduction of the courses dropped. No reduction will be made after the twenty-fifth day of the semester. No reduction in fees will be made after the second day of the semester.

**Reduction of Room and Board**

A student withdrawing from school will be charged pro rata room and board to the date of official check-out from the residence hall. It is the student's responsibility to make arrangements to do a complete check-out with their hall staff upon withdrawal from the university. Students moving from the residence hall at their request during an academic year will be charged the full room and board for term of their housing agreement (typically an academic year). Students moving into residence halls during a semester will pay a pro rata charge on room and board.

Students moving out of University Commons apartments before the end of their lease term will forfeit their deposit and will be responsible for all apartment rent.

**Out-of-State Residence Status for Tuition and Fee Purposes**

Students classified as "out-of-state" must pay out-of-state tuition as shown in the section entitled "Fees and Charges."

No student who is a minor shall be admitted to Arkansas Tech University and classified as instate for fee purposes unless the parent or legal guardian is a bona fide domiciliary of Arkansas and has resided in this state in that status for at least six consecutive months prior to the beginning of the term or semester for which the fees are to be paid.

Any student not a minor must have lived in the state as a nonstudent for at least six consecutive months prior to the beginning of the term or semester for which fees are to be paid to be classified as an instate student. The policy in its entirety is available in the Office of the Registrar.

All undergraduate students (those who have not earned a baccalaureate degree) whose initial matriculation (first entry) into Arkansas Tech University is on or after July 1, 2004, and who are legal residents of states which are contiguous to Arkansas (specifically, Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, or Texas) shall receive a waiver of out-of-state tuition charges, effective for these tuition charges as of the beginning of the Fall Semester, 2005.

A student from outside of Arkansas entitled to be treated as an instate student for fee purposes should complete an "Application for Residency Classification as Instate Domiciliary" and supply evidence to that effect.

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**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**Student Services Operations****Housing**

Single students under 21, and with under 60 hours of college work completed, are required as space permits, to live on campus in University-owned housing units and to purchase a meal plan. This policy affects full-time (twelve hours or more, fall and spring; five hours or more, summer term) students only. Part-time students may reside in University housing with approval from the Office of Residential Life. For the purpose of health, safety, privacy and for the normal operation of the residence halls, residents must be 18 years of age or older by October 1 of the year under contract.

Rooms and apartments located on campus are reserved by students in advance of the term of residence. A \$25 application fee, payable to Arkansas Tech University, is required of applicants for campus housing.

Residence hall rooms are equipped with beds, mattresses, chairs, mirrors, and desks. Students furnish linens, bed cover and spreads, pillow, and study lamps. Custodians maintain the corridors and utility rooms, but students are responsible for the care, orderliness, and cleanliness of their rooms.

Each residence hall is supervised by a director assisted by student staff members. The Housing Office is located in Room 229 of the L.L. Doc Bryan Student Services Building.

Exemptions from student housing may be requested and will be considered on an individual basis.

**Campus Residence Units**

The University offers twelve residence halls for our students. Eighty-four apartments are available for upper-division students. The residence halls are air-conditioned and are constructed to accommodate two students per room (Campus Court, Stadium Suites, Nutt Hall, and Wilson Hall have some designed single rooms available). All rooms are equipped with cable television service as well as internet services. Laundry facilities are located in all residence halls with the exception of Stadium Suites. The Office of Residence Life also manages two smaller facilities for members of the Arkansas Tech University sororities.

**Baswell Hall**

Baswell is our newest addition to the Tech Campus, and provides the entrance to Tech's newly renovated football stadium. Baswell offers housing for both males and females in a suite style arrangement with two rooms sharing bathroom facilities. The unique design of Baswell Hall provides four spacious lounges on the second through fifth floors for our students to study, relax and socialize.

**Brown Hall**

Brown Hall is an all-male residence hall located on the west edge of campus between Tucker and Turner Halls. It houses approximately 150 students. It is designed as a traditional residence hall with three floors, each with a long hallway of rooms and rest rooms conveniently located off the hallways. Students desire to live in Brown Hall because of its strong community. Brown Hall was renovated during the Summer of 2003.

**Campus Court**

Campus Court, located less than a mile north of the center of campus, is a co-ed residence hall providing students with private bathrooms in each double room, similar in style to Paine Hall. This facility provides added security for our residents through electronic gates, manned 24 hours a day by campus security. Special parking on campus is provided for our residents choosing to reside in Campus Court.

**Caraway Hall**

Caraway Hall is located on the southeast side of campus nestled between Tomlinson Hall and the Alumni House. It currently houses approximately 100 women, with two students sharing a room and common bathrooms located on each floor. This hall has a tradition of academic excellence and great loyalty from its alumni. Two spacious lounges, one on the first floor and one on the fourth floor, give Caraway a great feeling of community and camaraderie with the hall. Caraway Hall is on the National Registry of Historical Buildings. The rest rooms in Caraway Hall were renovated during the summer of 2005.

**Critz/Hughes Complex**

This complex, opening in the Fall of 2009, is actually two residence halls, Critz Hall and Hughes Hall. Both facilities were built prior to 1960 and in the past few years have been used by the university to serve a variety of functions. Recently renovated, these buildings now serve to provide community style living for approximately 150 of our residents.

**Jones Hall**

Jones Hall is situated on the north side of campus. Jones houses approximately 210 students and provides a suite-style living arrangement in which two rooms share a common bathroom. As our largest all-female facility on campus, the ladies of Jones Hall have a strong sense of identity and many of them choose to stay in Jones Hall for their entire years at Tech!

**Nutt Hall** Nutt Hall opened its doors to students for the first time in the fall of 2002. It is a five story co-ed hall for 338 residents. Arranged in a variety of suite styles, Nutt has both double rooms as well as single rooms. Students in Nutt Hall enjoy the common living areas available on each of the ten wings in the hall. Single Rooms in Nutt are typically occupied by upperclass students.

**Paine Hall** Paine Hall was closed in the mid 1990s for renovation and was reopened for operation in the fall of 2001. Paine provides space for 216 students, and serves as a co-ed hall offering a unique living environment on campus. Located on the northwest edge of campus, Paine Hall has private bathrooms for each double room. Students who choose this hall appreciate this opportunity for increased privacy.

**Roush Hall** Roush Hall is located on the north side of the campus, next to the Doc Bryan Student Services Center. Roush provides a suite-style living arrangement for approximately 100 men in which two rooms share a common bathroom. Students desire this hall because of the close brotherly community and because of its convenient location. Roush has three lounges available for students to study, play games and socialize.

**Stadium Suites** Stadium Suites are located on the most southern part of campus directly across from the south goal post of Buerkle Field. This facility consists of 11 units housing 4 students in two singles and one double room, sharing a living room space. Priority for this unique living arrangement is given to upperclass students.

**Turner Hall** Turner Hall is a three-story traditional co-ed residence hall offering living opportunities for nearly 200 Tech students. It is not uncommon to walk into Turner Hall and be greeted by students socializing in the entryway or playing pool in the first floor lounge. Similar in design to Brown Hall, the rooms in Turner Hall are located off of central hallways, as are the bathroom and shower facilities.

**Wilson Hall** Wilson Hall is one of the oldest facilities on the Tech Campus and until this past year served the Tech Community as a classroom and Faculty Office building. Renovated during the past few months, Wilson Hall has been re-introduced to the campus once again as a residence hall, this time as a co-ed facility for over 150 residents. Wilson Hall offers both single and double rooms for our residents all located off of long hallways with community bathrooms and shower facilities.

**University Commons Apartments** Five units with four-bedroom and two units with two-bedroom apartments are offered to our upper-division students. Each apartment has a living room, kitchen, washer and dryer along with private bedrooms with Internet access. The residents share the common kitchen, washer and dryer, living room space and two full baths in the four-bedroom apartments. The two-bedroom units are comprised of two private bedrooms, a kitchen, washer and dryer, living room and two full baths. University Commons Apartments also have a centrally located clubhouse with a large television area, fitness equipment, game tables, the apartment staff office, and a full service kitchen.

**University Bookstore** The Arkansas Tech University Bookstore is located in the Young Building. Textbooks, study guides, school supplies, computer software, caps and gowns for graduation, in addition to other items may be purchased.

A full refund will be given on new or used textbooks until the end of the 5th class day. The following conditions will apply:

1. You need your cash register receipt and Tech I.D.
2. Your new textbooks must be returned in brand new condition with no bent corners or water damage.
3. Wrapped or boxed textbooks must be unopened.

**Textbook Refund Policy** An extended period for refunds is available to students who drop a class or withdraw from school. Specific dates will be posted each semester. Students must have a withdrawal slip and receipt. Returns are not allowed on study guides, workbooks, cliffnotes, wrapped or boxed merchandise that is opened, etc. The manager reserves the right to make the decision on the condition or salability of the merchandise.

**Buy Back Policy** Students may sell their textbooks for cash at the bookstore during examination week. Fifty percent of the new price will be paid to the student if the bookstore has received a request from the instructor stating the textbook will be used the following semester, the textbook is in good condition (no water damaged books will be bought back), and the bookstore is not overstocked. Textbooks with a new edition pending may be bought back at less than 50 percent of new price. Current market value will be paid on current editions not used or needed for the following semester on campus. A current Tech ID is required to sell books back. The bookstore does not guarantee the buy back of any textbook at any time.

Additional information concerning the University Bookstore may be obtained by visiting their web site at <http://bookstore.atu.edu>, by calling (479) 968-0255, by faxing (479) 964-0861, or by e-mailing [bvaughan@atu.edu](mailto:bvaughan@atu.edu).

**Counseling Services**

The Arkansas Tech University Counseling Services, 1605 Coliseum Drive, Doc Bryan Student Services 233, provides counseling, consultation, and outreach to the Arkansas Tech University community. The counseling staff is committed to promoting the educational mission of the University by working with the campus community to establish and maintain healthy and effective behavior patterns and lifestyles that enhance learning and personal development. The range of services provided includes personal counseling for students in individual, couples, or group sessions. The staff provides consultations to students, parents, staff, faculty, and administration. There is a small library of self-help books and videos, and a variety of informational brochures available. Presentations and outreach programming are scheduled throughout the year and are available upon request.

Services are provided Monday-Friday from 8:00 am - 5:00 pm\* year round. This service is staffed by the Associate Dean for Student Development and a Student Development Specialist/Personal Counselor. For additional information please visit the Student Services Office in Doc Bryan 233 or call (479) 968-0239.

\*For after-hours emergencies, an on-call Student Services staff member is available to assist students by calling Public Safety at (479) 968-0222.

**Department of Public Safety**

The Department of Public Safety is located on campus at 1511 N. Boulder Avenue. To report a crime or emergency call the Department of Public Safety at 479-968-0222 or 911. The Department of Public Safety maintains direct contact with the 911 communications center for all emergency services. It is the responsibility of the Department of Public Safety to investigate all reports of criminal activity and accidents that occur on campus. Also, you can visit the Department of Public Safety website for more information and services at <http://dps.atu.edu>.

**Health and Wellness Center**

Recognizing that optimum health is essential to effective learning, the University maintains a health services available to all students. The Health and Wellness Center, located in Dean Hall Room 126 (entrance on the north side of the building), provides confidential treatment of minor injuries and illnesses through a well-equipped facility and within the scope of practice of the two registered nurses who staff the center fulltime. The RNs make appropriate referrals to local health care providers when necessary.

The University assumes no financial responsibility for student care other than that provided by the Health and Wellness Center. Students are urged to carry their own health insurance and Tech cooperates with a number of other higher education institutions in Arkansas to make available a student group insurance policy. Students not adequately covered by an individual or family group insurance policy may purchase the policy at the beginning of any semester. Application forms are available at the Health and Wellness Center or online at: [www.macori.com](http://www.macori.com). All international students are required to purchase a medical insurance plan that satisfies the requirements of the Office of International and Multicultural Student Services.

In addition to clinical services, a wide range of health promotion and educational programs are provided in a variety of campus settings.

Patient hours are Monday-Friday, 8:00 a.m. - 5:00 p.m. Students are encouraged to make appointments but walk-ins are welcome. The Health and Wellness Center can be contacted by phone at 479-968-0329, email at [hwc@atu.edu](mailto:hwc@atu.edu) or by Web at [www.atu.edu/hwc](http://www.atu.edu/hwc).

**Student Accident and Health Insurance**

Arkansas Tech cooperates with a number of other higher educational institutions in Arkansas to make available a student group insurance policy. Students not adequately covered by an individual or family group insurance policy may purchase this policy at the beginning of any semester. Application forms are available at the Health and Wellness Center or online at: [www.macori.com](http://www.macori.com). All international students are required to purchase a medical insurance plan that satisfies the requirements of the Office of International and Multicultural Student Services.

**Disability Services for Students**

Arkansas Tech University is committed to providing equal opportunities for higher education to academically qualified individuals who are disabled. Students with a disability attending Tech will be integrated as completely as possible into the University community. Tech does not offer a specialized curriculum for students with disabilities nor does it assume the role of a rehabilitation center, but does assume responsibility for modifying campus facilities and procedures to accommodate individual needs where reasonable and without posing an undue hardship on the University.

Services arranged through the University's Disabilities Director include consideration of classroom and building accessibility, planning for adequate travel time between classes, note-taking assistance, alternative testing, and similar types of accommodations. Per individual needs, students who may require academic support are encouraged to utilize the various departmental tutorial laboratories as well as the Student Service Tutoring Center.

Tech is subject to and endorses both the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973. The Disabilities Director serves as the coordinator for these federal programs. The Disabilities Director is located in the University Testing Center in Bryan Hall, Suite 103, and may be contacted by calling (479) 968-0302, (479) 968-0308 (TDD), (479) 968-0375 (FAX), or by e-mail at [disabilities@atu.edu](mailto:disabilities@atu.edu).

**University Testing Center**

The University Testing Center provides services which assist in the recruitment, retention, and graduation of students.

Testing services include providing registration information and materials and administering examinations such as the American College Test Assessment (ACT), Graduate Record Exam (GRE), Law School Admission Test (LSAT), Miller Analogies Test (MAT), Medical College Admissions Test (MCAT), Professional Assessments for Beginning Teachers (PRAXIS), and others. Test registration bulletins and preparatory materials are available for many of these exams on line. Tests that will allow an individual to earn college credit by attaining the qualifying score established by Arkansas Tech University include Advanced College Placement (AP), College Level Examination Program (CLEP), National League for Nursing (NLN) and Arkansas Tech examinations. Tests that require payment must be paid in advance at Student Accounts in Doc Bryan.

The Center is staffed with a director and one testing coordinator. Arkansas Tech University students may use these services for free (excluding tests). The University Testing Center is located in Suite 103 of Bryan Hall and may be reached via phone (479) 968-0302,

fax (479) 968-0375 or e-mail: [universitytesting@atu.edu](mailto:universitytesting@atu.edu). For additional information, students may visit the center's web site at <http://utds.atu.edu>.

**Norman Career Services**

Norman Career Services provides online registration for students, alumni, and employers, as well as established web links to ethical employment boards. Registrants may access and provide information through WonderLink via the Career Service website [www.atu.edu/career/](http://www.atu.edu/career/), including cover letters, resumes, campus recruiting schedules, information sessions, etc. The center hosts and maintains a computerized career interest inventory, called "Discover," which may be accessed online. Services provided to ALL classifications of students and alumni include an extensive career library, company videos, career counseling, and resume critiquing. It also provides career workshops to classes, student groups and community organizations to ensure that Arkansas Tech University graduates are well informed, prepared for the job search, and availed of every opportunity to choose from professional alternatives. Career and part-time employment opportunities through business, industry, government, the health field and education are posted through WonderLink.

Norman Career Services hosts recruiters who conduct a variety of interviews each semester. Current contacts are maintained with local, national, and international employers seeking career professionals from every major. Career fairs are hosted each fall and spring for all students.

Additional information concerning Career Services may be obtained by visiting their web site at <http://www.atu.edu/career/>, by calling (479) 968-0278, or writing to ATU, Norman Career Services, Doc Bryan Student Services Center, Suite 211, Russellville, AR, 72801.

**Student Exchange Opportunity - Arkansas Tech University Komazawa University Student Exchange**

Students who wish to improve their Japanese language skills and learn more about Japanese society may do so by studying for a semester or a year at Komazawa University in Tokyo. Students must have completed two years of university work in the case of undergraduates and one year of graduate work in the case of graduates prior to enrollment in this program. Applicants must have good academic standing and a minimum of two years of Japanese language instruction. Students will be admitted in the first semester beginning in April or in the fall term which begins in September. Costs include Tech tuition and fees (students are exempt from Komazawa tuition) as well as transportation and living expenses. More information may be obtained from the Office of International and Multicultural Student Services, Tomlinson Room 029 phone (479-964-0832) or the College of Arts and Humanities, Witherspoon 240, phone (479-968-0274).

**International and Multicultural Student Services**

The International and Multicultural Student Services Office provides support services designed to enrich the college experience for multicultural and international students. The office actively recruits multicultural and international students to increase the diversity of the Tech campus, provide the opportunity for cultural exchange, and aid in helping all Tech students develop an appreciation for cultural differences.

The office offers a wide range of services for international students, including orientation, immigration updates, cross-cultural programming, and other support services necessary to ease the transition of international students into the U.S. culture. American college students play a vital role in this process by volunteering to serve as mentors to new international students through the Global Connect program.

Several established organizations receive support from the International and Multicultural Student Services Office, including the Black Student Association, the Chinese Student Association, the Hispanic Student Association, the Indian Student Association, the Association for Cultural Interaction, and the Japanese Student Association.

Working together, programs are developed and sponsored throughout the year to educate faculty, staff and students regarding international and multicultural heritage.

Additional information may be obtained by calling (479) 964-0832, faxing (479) 880-2039, or writing to the Director of International and Multicultural Student Services, Tomlinson Room 29, Arkansas Tech University, Russellville, Arkansas 72801, U.S.A.

**English Language Institute**

The mission of the ATU English Language Institute (ELI) is to provide classes that assist international students in developing the English language skills necessary to successfully pursue academic work in a United States college or university, and to assist in their adjustment to a different culture. The ELI accomplishes the mission by delivering non-credit English as a Second Language (ESL) instruction for international students, and by providing those students with activities that increase the awareness and understanding of American culture. The ELI is an integral part of the Office of International and Multicultural Student Services. Additional information may be obtained by calling (479) 964-0832, faxing (479) 880-2039, or writing to the Director of International and Multicultural Student Services, Tomlinson Room 029, Arkansas Tech University, Russellville, Arkansas 72801, U.S.A.

**Student Financial Aid**

The primary purpose of student financial aid at Tech is to provide assistance to students who, without aid, would be unable to attend college. Financial assistance consists of scholarships, grants, loans, and part-time employment, which may be offered to students singularly or in various combinations, depending upon the degree of need. In determining the extent of a student's need, the University must consider the financial support which may be expected from the income, assets, and other resources of the parents and the student. Aid awards by the University are considered supplementary to the efforts of the student's family in assisting their children with college expenses. All awards are administered by the Financial Aid Office in accordance with the University's equal educational opportunity policy. The University does not participate in individual financial aid agreements with other institutions. Application forms for all types of aid may be obtained from the Financial Aid Office in Doc Bryan Student Services Center, Office 117.

**Cost of Attendance**

A student's cost of attendance (also called the financial aid budget) is the total of required tuition and fees and allowances for books and supplies, room and board, travel and personal expenses. Since federal regulations allow the cost of a computer to be added to the cost of attendance one time during the college career of a student, the cost of a computer and related accessories up to \$1,500 purchased no earlier than four months prior to enrollment will be added to the student's cost of attendance budget upon the student's submission of an itemized paid-in-full receipt. This will be a one time adjustment with the costs being spread over the school year. No further adjustments will be made for upgrades or additional software at any time during the student's career. Other adjustments to the cost of attendance allowed by federal regulations include Tech sponsored study-abroad programs approved for academic credit,

child care costs, purchase of equipment required by all students in the same course of study, and reasonable expenses incurred related to a student's disability. These adjustments may result in additional financial aid if the student was not already receiving the maximum amount of every type of aid for which they were eligible. For more information, contact the Financial Aid Office: (479) 968-0399.

**Scholarship Stacking Policy**

Act 1180 of 1999 prohibits postsecondary institutions from using public funds in a student aid package which may contain a combination of state, institutional, private and federal funds, including Veteran's benefits, that exceeds the cost of attendance at the institution. Arkansas Tech follows the Arkansas Department of Higher Education regulations by reducing scholarship amounts which cause awards to exceed cost of attendance. Scholarships awarded by Tech will be reduced before other scholarships. If a student has both academic and performance scholarships from Tech, the academic scholarship will be reduced first. In absence of direction from a private donor, private funds will be credited to the first semester attended unless they cause an over-award for the semester. In these cases, the scholarship will be divided equally between the current and following semester. For more information on the scholarship stacking policy, contact the Financial Aid Office: (479) 968-0399.

**Institutional Stacking Policy**

Under Arkansas law, ACT 323, other financial aid received may reduce the value of the academic award. The maximum allowance for institutional scholarships will be limited so that the total award, including Federal grants and state awarded funds, does not exceed the actual billed cost for tuition, academic fees, room and board, plus a stipend up to \$700.

**Academic Scholarship Requirements**

Academic scholarships will be awarded on a priority basis; therefore, students should make application at an early date since only a limited number of these scholarships are available. The priority deadline is February 15. Students may receive only one Tech funded academic scholarship in any semester. The amount of total funds received by each student will be contingent on the Arkansas Department of Higher Education Scholarship Stacking Policy, Arkansas Act 1180 of 1999 and the Institutional Stacking Policy. Receipt, continued receipt, or renewal of all academic scholarships is contingent upon the student honoring the Arkansas Tech University Student Code of Conduct.

Main campus scholarship awards will only pay for main campus coursework and must be used the fall semester following high school graduation. Scholarship recipients must live in a residence hall or receive an exemption to the residency requirements from the Residential Life Office in accordance with established University policy. Recipients are responsible for making on-campus housing arrangements. Students who live in Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, and Texas are considered in-state for tuition purposes and are eligible to apply for in-state academic scholarships. Original ACT reports should not be altered. Superscores or recalculated ACT scores, using subset scores from multiple exams, will not be accepted.

All scholarship applicants must be admitted to the University with a Federal Financial Aid Application (FAFSA) on file before a scholarship will be authorized. All additional information requested by the Financial Aid Office must be submitted by December 1 in order to meet the aid application requirements for second semester renewal. For all subsequent semesters, the FAFSA must be completed by August 1.

Scholarships can be deferred for up to one year upon Scholarship Committee approval. A deferment must be requested in writing prior to the semester of the scholarship award.

Students, who received scholarship awards prior to fall 2010, see the undergraduate catalog printed for the year of entry for renewal requirements. Transfer credit, CLEP, AP, IB, summer courses, or concurrent enrollment credit cannot be used to qualify for scholarship renewal. To remain in compliance with Act 323 of 2009, the University reserves the right to cancel or modify any scholarship funded by the institution at any time.

To remain in compliance with Act 323 of 2009, the University reserves the right to cancel or modify any scholarship funded by the institution at any time.

**University Honors Scholarship**

University Honors participants receive a maximum award of \$5300 per semester for up to eight semesters or until the completion of an undergraduate degree, whichever comes first. Students who score a 28-36 ACT and have a 3.50 cumulative high school GPA are encouraged to apply. All University Honors scholarship recipients must participate in University Honors curriculum requirements, in the sophomore service requirement, and attend all Honors functions. Scholarship recipients must complete a minimum of 15 hours per semester with a 3.25 semester GPA to be eligible for the scholarship for the following semester. For additional information on the University Honors scholarship, contact Dr. Jan Jenkins, Director of Honors, at (479) 968-0456

**Distinguished Scholars**

Distinguished Scholars receive a maximum award of \$4500 per semester for up to eight semesters or until the completion of an undergraduate degree, whichever comes first. Incoming freshmen who score 26-36 ACT composite and 3.25 cumulative high school GPA are encouraged to apply. Scholarship recipients must enroll in a minimum of 15 hours during the fall semester of the freshman year and complete a minimum of 12 hours with a 3.00 semester GPA to be eligible for the scholarship for the following semester. Recipients must enroll in a minimum of 15 hours for the spring semester and complete a total of 30 hours for the freshman year with a 3.00 semester GPA to be eligible for the scholarship for the sophomore year. Transfer credit, CLEP, AP, IB, summer courses, or concurrent enrollment credit cannot be used to qualify for scholarship renewal. Renewal for subsequent semesters requires a 3.25 semester GPA on a minimum of 15 hours.

This scholarship must be used the fall semester following high school graduation.

**Second Century Scholars**

Second Century Scholars receive a maximum award of \$2,550 per semester for up to eight semesters or until the completion of an undergraduate degree, whichever comes first. Incoming freshmen who score 24-25 ACT composite and 3.25 cumulative high school GPA are encouraged to apply. Scholarship recipients must enroll in a minimum of 15 hours during the fall semester of the freshman year and complete a minimum of 12 hours with a 3.00 semester GPA to be eligible for the scholarship for the following semester. Recipients must enroll in a minimum of 15 hours for the spring semester and complete a total of 30 hours for the freshman year with a 3.00 semester GPA to be eligible for the scholarship for the sophomore year. Renewal for subsequent semesters requires a 3.25

semester GPA on a minimum of 15 hours. Failure to meet the renewal requirements in any semester will result in the forfeiture of the scholarship for all subsequent semesters. This scholarship must be used the fall semester following high school graduation.

**Collegiate Scholars**

Collegiate Scholars receive a maximum award of \$500 per semester for up to four semesters. Incoming freshmen who score 21-23 ACT composite and 3.25 cumulative high school GPA are encouraged to apply. Scholarship recipients must enroll in a minimum of 15 hours during the fall semester of the freshman year and complete a minimum of 12 hours with a 3.00 semester GPA to be eligible for the scholarship for the following semester. Recipients must enroll in a minimum of 15 hours for the spring semester and complete a total of 30 hours for the freshman year with a 3.00 semester GPA to be eligible for the scholarship for the sophomore year. Renewal for subsequent semesters requires a 3.25 semester GPA on a minimum of 15 hours. Failure to meet the renewal requirements in any semester will result in the forfeiture of the scholarship for all subsequent semesters. This scholarship must be used the fall semester following high school graduation.

**Academic Excellence Scholars**

Academic Excellence Scholars receive a maximum award of \$2,550 per semester for up to eight semesters or until the completion of an undergraduate degree, whichever comes first. Incoming freshmen, who are designated as valedictorian or salutatorian in his or her high school graduating class, are encouraged to apply. Scholarship recipients must enroll in a minimum of 15 hours during the fall semester of the freshman year and complete a minimum of 12 hours with a 3.00 semester GPA to be eligible for the scholarship for the following semester. Recipients must enroll in a minimum of 15 hours for the spring semester and complete a total of 30 hours for the freshman year with a 3.00 semester GPA to be eligible for the scholarship for the sophomore year. Renewal for subsequent semesters requires a 3.25 semester GPA on a minimum of 15 hours. Failure to meet the renewal requirements in any semester will result in the forfeiture of the scholarship for all subsequent semesters. This scholarship must be used the fall semester following high school graduation.

**Out-of-State Scholarship**

A limited number of scholarships are awarded on a competitive basis to out-of-state students. Special consideration will be given to children of Tech alumni. To be eligible, a student must score between 24-36 on the ACT and have a minimum of a 3.25 cumulative high school GPA or be designated as valedictorian or salutatorian in his/her high school graduating class. This scholarship award varies based on the level of the student's ACT score. Scholarship recipients must enroll in a minimum of 15 hours during the fall semester of the freshman year and complete a minimum of 12 hours with a 3.00 semester GPA to be eligible for the scholarship for the following semester. Recipients must enroll in a minimum of 15 hours for the spring semester and complete a total of 30 hours for the freshman year with a 3.00 semester GPA to be eligible for the scholarship for the sophomore year. Renewal for subsequent semesters requires a 3.25 semester GPA on a minimum of 15 hours. Failure to meet the renewal requirements in any semester will result in the forfeiture of the scholarship for all subsequent semesters. This scholarship must be used the fall semester following high school graduation.

**Tech Transfer Scholarship**

The award amount varies for this competitive scholarship. Students who have completed 30 or more transferable, for-credit hours at an accredited college or university with a minimum 3.25 transfer GPA should apply. Students who receive transfer scholarships are required to enroll in and complete 15 or more hours with a 3.25 semester GPA for renewal of up to three subsequent semesters. Transfer scholarships must be used on the main campus in Russellville.

**Phi Theta Kappa**

Two scholarships for up to \$2,550 each fall semester will be given to members of Phi Theta Kappa. These transfer students must also have completed a minimum of 30 transferable hours with a minimum 3.5 grade point average to be eligible. A student must enroll in and complete 15 or more hours with a 3.25 semester GPA for renewal of up to three subsequent semesters.

**Presidential Honors Transfer Scholarship**

This scholarship allows any Arkansas two-year college president/chancellor the opportunity to name one student each fall for a transfer scholarship awarded up to \$2,550 per semester. A student must enroll in and complete 15 or more hours with a 3.25 semester GPA for renewal of up to three subsequent semesters. Interested students should check with their current two-year school's Financial Aid Office or President's/Chancellor's office for further details.

**Academic All-Star Scholarship**

Transfer students who are selected as Academic All-Stars by their two-year institution are eligible to apply for this scholarship. This scholarship is awarded up to \$2,550 per semester. A student must enroll in and complete 15 or more hours with a 3.25 semester GPA for renewal of up to three subsequent semesters. Priority consideration will be given to the first ten students who apply.

**Departmental Fellowships**

A limited number of undergraduate fellowships are awarded yearly to students who show special aptitude in English, forensics, hospitality administration, sports information, theatre, or university recruitment. Students who receive a fellowship must be enrolled full time and cannot be on academic or disciplinary probation. The students are assigned to special projects in their intended profession for which they receive credit on their account.

**Music Performance Scholarships**

The University will award, on an audition basis, a limited number of music performance scholarships for participation in major instrumental or choral organizations. The amount of the scholarship will be determined based on criteria established by the Music Department. The award will not be relinquished so long as satisfactory participation in the major music organization(s) continues and other conditions given below are met. The awards are renewable for the seven regular semesters immediately following enrollment, based on the recommendation of the Music Department head and the student's maintaining a cumulative grade point average of 2.25 or higher. No student is eligible for the award in a semester in which he or she is on academic or disciplinary probation. Once lost,

the scholarship may be regained by raising the grade point average to the required level or by removal from academic or disciplinary probation and upon recommendation of the head of the Music Department.

<b>Senior Service Fellowships</b>	Fellowships in the various colleges of the University are open to a limited number of outstanding advanced students. These service fellowships are awarded at the discretion of college committees when the caliber of the applicant justifies such assistance. Candidates for the fellowship must have earned 90 semester hours of credit, have a minimum grade point average of 3.00 on all work, and be enrolled in a minimum of 12 hours for the semester(s) for which the fellowship is granted. Any deviation or exception to this policy must be approved by the Office of Academic Affairs. Students who would like to be considered for a Senior Service Fellowship must make written application by April 1 to the appropriate dean.
<b>Athletic Scholarship</b>	The maximum number and maximum value of such scholarships will be determined by the constitution and by-laws of the NCAA Gulf South Conference. Applicants should contact the Arkansas Tech University Athletic Director at 479-968-0245.
<b>Native American Out-of-State Waiver</b>	Arkansas Tech University offers in-state tuition rates to Native American students in other states belonging to tribes which formerly lived in Arkansas, before relocation, and whose names are on the rolls of tribal headquarters. Tribes thus identified include the Caddo, Cherokee, Chickasaw, Choctaw, Creek (Muskogee), Delaware, Kickapoo, Osage, Quapaw, Shawnee, and Tunica. Students who qualify for in-state tuition for fee purposes may apply for freshman academic scholarship. For more information contact the Office of Admissions at (800) 582-6953.
<b>Arkansas Tech University Foundation Scholarships</b>	<p>Arkansas Tech University Foundation Scholarships will be awarded if funds are sufficient. To be considered for an Arkansas Tech University Foundation scholarship where need is a determining factor, a Federal Financial Aid Application (<a href="http://www.fafsa.com">www.fafsa.com</a>) must be on file in the Financial Aid Office. Federal regulations do not permit students to receive financial aid in excess of their cost of attendance. For complete details regarding scholarship stacking regulations, contact the Financial Aid Office.</p> <p>Students who receive privately funded scholarships will be responsible for writing thank you notes. Expressing appreciation to donors for their interest in and support of higher education is an important part of receiving a scholarship.</p> <p>The Arkansas Tech University Foundation reserves the right to amend scholarship requirements and criteria.</p>

### **FOUNDATION GENERAL SCHOLARSHIPS**

The student is responsible for submitting the Foundation General Scholarship Application and all documentation listed in the scholarship criteria to the Office of Development. The application and all required documentation must be received by March 15 (i.e., applicant letter, reference letters, etc.). Only one application and documentation is required for multiple Foundation General Scholarships. The applicant will be considered for all scholarships through the Office of Development where all the criteria requirements have been fulfilled. Application is available for printing at [www.atu.edu/givetotech](http://www.atu.edu/givetotech).

Documentation must include:

- A letter from the applicant explaining the need for the scholarship, special family circumstances, and career goals.
- Three letters of recommendation from an Arkansas Tech faculty member, high school counselor or principal **and** a letter from your pastor, employer, or someone familiar with your work ethics and family situation.

<b>Susan Adams Memorial Scholarship</b>	The family and friends of Susan Adams have established a scholarship in her memory. The amount of the scholarship will be credited toward tuition for the recipient. Although any worthy student is eligible to receive the scholarship, preference in selection will be given to out-of-state students who are children of Tech graduates.
<b>J.L. Adkins and Cora E. Adkins Scholarship</b>	Established at the bequest of J.L. and Cora E. Adkins, annual scholarship awards are made to students pursuing a degree in Education or Fine Arts. While preference will be given to Arkansas Tech students from the Missouri counties of Dunklin, Stoddard or New Madrid, any Education or Fine Arts major is eligible to apply. Awards will be made each year that funds are sufficient.
<b>Heartsill and Polly Bartlett Scholarship</b>	Preference will be given to a student who is a traditional, incoming freshman from Pope or Yell County, Arkansas, has a cumulative grade point average from high school of 2.0 or higher, has demonstrated financial need and is planning to attend Arkansas Tech University full-time. To be considered for this scholarship, applicants must submit a letter of application and a letter of recommendation from their high school counselor in addition to a completed scholarship application. This scholarship may be renewable at the discretion of Arkansas Tech University if the recipient is making acceptable academic progress. Scholarships will be awarded each year that funds are sufficient.

This memorial scholarship has been established by the parents and friends of Janet Beck in honor of her many accomplishments. Awards will be made each year that funds are sufficient with the initial recipient being a graduating senior from Nemo Vista High

**Janet Beck Memorial Scholarship**

School. In addition, a second recipient will be chosen on an alternating basis from either Sacred Heart or Wonderview High School. In the event that no applicant meets the specified criteria in a given year, this scholarship may go un-awarded for that year. Two letters of recommendation from high school teachers and/or counselors should accompany the scholarship application.

**Dr. Robert Autry Brooks Scholarship**

Through the generosity of Dr. Robert Autry Brooks, scholarships will be granted each fall semester that funds are sufficient. Preference will be given to a traditional incoming freshman who is an Arkansas resident majoring in one of the Arts or Sciences (including, but not limited to English, Literature, Mathematics, and Chemistry). The recipient must have a high school cumulative grade point average of 3.0 or higher, maintain full-time student status and have demonstrated financial need. The scholarship may be renewable with the original recipient for three additional years if the recipient continues to remain in good academic standing and making academic progress, enroll in and successfully complete a full-time academic class load per semester.

**B. J. Burton Memorial Scholarship**

Scholarships and awards will be granted each fall that funds are sufficient. The recipient must be a member of the Arkansas Tech Softball Team, with full-time student status, sophomore level or higher, and have a cumulative grade point average of 2.5 or higher. Demonstrate financial need. The scholarship may be renewed for the spring semester provided the recipient continues to meet the scholarship criteria and funds are sufficient. Scholarship recipients from one year will be eligible to reapply for subsequent years.

**Markey Butterworth Scholarship**

An endowed scholarship in memory of Markey Butterworth is given annually to an out-of-state student majoring in Fisheries and Wildlife Biology.

**Harry T. Casner Memorial Scholarship**

This scholarship will be awarded each fall that funds are sufficient with preference being given to an incoming freshman who plans to major in Mathematics, is an Arkansas resident, has demonstrated financial need, has earned a high school cumulative grade point average of 2.5 or higher, submits a letter of recommendation and an applicant letter with the scholarship application. In addition, the scholarship may be renewable if the recipient enrolls in and successfully completes a full-time academic load of 15 hours per semester and maintains a cumulative grade point average of 2.5 or higher.

**Judge J. E. Chambers Scholarship**

Proceeds from an endowment by the family of the late Judge John E. Chambers provide scholarships for outstanding applicants from Danville, Western Yell County or Dardanelle high schools. Academic promise and service to school and community will be heavily considered in determining the recipient. Submit application with two supporting letters of recommendation.

**Ms. Baiyan Chen Memorial Scholarship**

Dr. Qing Zeng has established a scholarship in memory of her mother, Ms. Baiyan Chen (陈白燕女士, January 3, 1918—September 28, 2009), who was a high school teacher of language and literature in China. A scholarship will be awarded each fall based on the following criteria: preference will be given to a female student, junior or senior status, full-time student with preference given to a student seeking a degree within the Department of Behavioral Sciences, cumulative grade point average of 2.5, and must demonstrate financial need.

**John Clement/First State Bank Scholarship Fund**

Established by the First State Bank, this scholarship honors John Clement for his many years of service to the River Valley community. Scholarship applicants must be entering freshmen who graduated from Ola or Plainview-Rover, have the recommendation of their high school counselor as being qualified to complete a higher education curriculum. Additionally, applicants must have demonstrated financial need and not have access to other scholarships or grants which will completely pay their education costs.

**Connie V., Loretta M., & Elora C. Coker Scholarship**

This scholarship will be awarded each year that funds are sufficient. Preference will be given to an incoming freshman, graduating from Two Rivers School District in Arkansas, enrolled in 15 semester credit hours or more, and demonstrating financial need. This scholarship may be renewed for the freshman spring semester if the recipient continues to enroll in 15 credit hours and maintains a cumulative 2.0 grade point average or higher. If the recipient meets the scholarship renewal requirements of the freshman year, the scholarship may be renewed for an additional six consecutive semesters provided the recipient enrolls in and successfully completes 15 credit hours each semester and maintains a cumulative 2.5 grade point average or higher.

**J. Louis and Florence C. Cooper Scholarship**

This scholarship was established by educators J. Louis and Florence C. Cooper for needy and deserving individuals with priority being given to students in teacher education. To be eligible for this award, the student must have reached the junior or senior level, have a cumulative grade point average of 3.0 or higher, demonstrated financial need and enroll in and successfully complete a minimum of 15 credit hours per semester.

**DeHaven Family Annual Scholarship**

Awards will be made each year to recipient(s) who are concurrently enrolled in high school in Pope or Yell County and in undergraduate class at Arkansas Tech University, have demonstrated financial need and academic ability, and have the written recommendation of their high school counselor.

**Denton-Wainright  
Endowed Scholarship**

This scholarship was established by Cheryl Denton in memory of Dr. John Wainright and Joan Wainright in recognition of the difference they made in the lives of Tech students through their support and guidance. Joan Wainright was on the music faculty from 1955 to 1982. Dr. John Wainright, at Tech from 1952-1981, was on the faculty in music and education. He was named Dean of Education in 1970 and served in that capacity until 1981. Scholarships and awards will be granted each fall that funds are sufficient in accordance with the following criteria: The recipient must be a junior or senior majoring in music education with the intent to teach elementary music or education: preference order (1) music education-keyboard instrumental (2) music education-keyboard vocal (3) music education-vocal (4) English education or (5) education. In addition the recipient must maintain full-time student status, and have demonstrated financial need. The scholarship may be renewed for the spring semester provided the recipient continues to meet the scholarship criteria and funds are sufficient. Scholarship recipients from one year will be eligible to reapply for subsequent years.

**Nona Dirksmeyer  
Memorial Scholarship**

Awards will be granted each fall that funds are sufficient to a full-time student who majors in Music, is in good academic standing, and is enrolled in a minimum of 15 semester credit hours. The scholarship may be renewed for the spring semester provided the recipient continues to meet the scholarship criteria and funds are sufficient. Scholarship recipients from one year will be eligible to reapply for subsequent years.

**Bill Preston Donnell  
Memorial Art  
Scholarship**

The family and friends of Bill Donnell, a 1993 Tech graduate in graphic design, have established a tuition scholarship as a tribute to his memory. Each year the funds from the Bill Donnell, Jr., Memorial Golf Tournament hosted by Chamberlyne Country Club will be contributed to the scholarship account. This scholarship will be awarded each fall term to an entering freshman or current student who is majoring in art. Preference will be given to students who demonstrate financial need, who are residents of Yell County, and/or who plan to study emphasis in graphic design.

**T. A. Dulaney Memorial  
Scholarship**

Awards will be granted annually if funds are sufficient. Recipients will be chosen based on the following criteria: a junior or senior student who has declared a major in history or political sciences, demonstrated financial need, and enrolled in a semester course load of 15 hours or more. Preference will be given to a student who plans to teach. The recipient may re-apply for the scholarship.

**Gene Farmer Memorial  
Award**

A grant is awarded to an Arkansas high school editor who plans to specialize in either journalism or political science at Arkansas Tech University. This award, to honor and encourage a student of outstanding ability, will be made to the high school editor whose academic and journalistic accomplishments indicate the greatest potential for distinguished service in either field. The award, from the income of the Gene Farmer Memorial Endowment, is in memory of one of Arkansas Tech's most distinguished graduates, who from a beginning as editor of Tech's student newspaper, achieved national and international prominence as a journalist. Mr. Farmer authored several books and worked for many years as a senior editor for Life Magazine.

**Feltner Kirkpatrick  
Scholarship**

This scholarship will be awarded each year that funds are sufficient to a student who is pursuing a course of study that has ties to the food service or hospitality industry, has a minimum cumulative grade point average of 3.0 or higher and has a minimum ACT score of 20 or higher.

**First United Methodist  
Church Scholarship**

An endowed scholarship has been established by the First United Methodist Church in Russellville to assist Methodist students who are nursing, medical assistant, health information management, or medical technology majors at Arkansas Tech. Students majoring in nursing will receive first consideration. Students should be recommended by their home church pastor.

**Nicki Goodlett  
Memorial Scholarship**

A scholarship award will be made each year that funds are available. The student must meet the following criteria: be an Arkansas resident, full-time student, be of sophomore classification (30 credit hours) or higher, have a 2.0 cumulative GPA or higher, receiving no other scholarship. Applicants should submit a letter of application expressing need and goals, three letters of recommendation from a pastor, faculty member, or other who can articulate the applicant's background, financial situation, and goal; and show performance that reflects an ability to successfully attain a college degree and demonstrates a significant trend toward academic improvement.

**Don C. Guess 4-H  
Scholarship**

An endowed scholarship awarded each year that funds are sufficient. Preference will be given to entering freshman who is an active member of 4-H in either Pope or Yell County, has exhibited at the Pope or Yell County Fair, has a cumulative high school grade point average of 2.75 or higher and is planning to pursue an Agriculture or Agriculture-Business degree.

**Heard Scholarship**

The Heard Scholarship established by John W. Heard will be awarded each fall semester that funds are available. The student must be an entering freshman graduating from Lamar High School with a cumulative GPA of 2.5 or higher. Enroll in and successfully complete 15 hours class load per semester. An applicant letter explaining need and goals and letters of recommendation from high school counselor and principal should accompany the scholarship application.

**Jasper Vernon Howard Scholarship** An endowed scholarship in memory of Jasper Vernon Howard will be awarded annually to a student in the College of Business. The recipient must demonstrate a financial need and must meet and maintain satisfactory scholastic requirements.

**E. E. Hudson Scholarship** The applicant must be majoring in biology and enrolled in 12 semester credit hours if a first semester freshman or 15 semester credit hours if a second semester freshman or higher classification. An ACT composite score of 25 or above for freshmen, or an Arkansas Tech cumulative grade point average of 3.0 or higher for sophomores, juniors, or seniors. The applicant must have leadership potential demonstrated by extracurricular academic activities. Financial need will be considered. Preference will be given to graduates of Arkansas high schools. This scholarship may be renewed for one additional semester after the initial semester award if the student makes satisfactory academic progress by successfully completing 12 semester hours (first semester freshman) or 15 semester hours (second semester freshman or higher classification) with a grade point average of 3.0 or higher.

**International Relations Scholarship** Awards will be made each year that funds are sufficient to a sophomore, junior, or senior level student majoring in History/Political Science with a cumulative 3.0 or higher grade point average. Preference will be given to a veteran, current active duty military, National Guard, or member of the Reserve Armed Forces. The student must have completed at least 6 credit hours (with a "B" or better) from the following courses or completed 3 credit hours (with a "B" or better) and enrolled in 3 or more credit hours in the following International Relations or Foreign Policy courses: POLS 3013, POLS 3403, POLS 3413, POLS 4963 (with an international focus), POLS 4983 (with an international focus).

**Vann Kerns Memorial Scholarship** This scholarship will be awarded each year that funds are sufficient. Preference will be given to students pursuing a degree in physics, mathematics, or a pre-medical school course of study. To be considered for this award, students must have a cumulative grade point average of 3.0 or higher, have demonstrated financial need and enroll in and successfully complete a minimum of fifteen hours each semester.

**Charles and Carol Lee Ketcheside Scholarship** Scholarships will be granted each year that funds are sufficient to a full-time student who is in good academic standing and has demonstrated financial need.

**Jack L. King Scholarship** This partial-tuition scholarship will be awarded each semester that funds are available. To be eligible for this scholarship the student must be a graduate of Western Yell County High School, have an ACT composite score of 19 or above and an ACT Math and Science score of 22 or above, have declared a major in Engineering, Math, Science or a related field at Arkansas Tech University.

**Eupha Sue Knox Scholarship for Nursing** A scholarship will be awarded each semester that funds are sufficient to an upper division nursing student who is enrolled in a minimum of 15 credit hours. Preference will be given to Arkansas residents that have demonstrated financial need. Recipients may re-apply for further consideration in subsequent years.

**Charles D. and Edna B. Labahn Scholarship** This tuition, fees, and book scholarship will be awarded each year that funds are sufficient. Applicants should be an incoming freshman who has graduated from an Arkansas High School with a "B" grade point average or higher. Applicants must have demonstrated financial need, have declared a major in Accounting, pre-med, or Recreation and Parks Administration, and be full-time student status. Submit two letters of recommendation from high school teachers and/or counselors with the application. This scholarship is renewable for up to seven consecutive semesters, provided the recipient continues to maintain a 2.5 or higher cumulative grade point average, maintains full-time student status, and specifically requests such renewal.

**John Paul Leonard Memorial Scholarship** This scholarship will be awarded each fall that funds are sufficient. Preference will be given to a female student who is from Russellville, Arkansas, has reached junior or senior status in her undergraduate career, has demonstrated financial need, has declared a major in and is planning to pursue a career in teaching children with special educational needs, maintains a cumulative grade point average of 3.0 or higher, enrolls in and successfully completes a full-time academic class load. In addition, this scholarship is renewable for the spring if the recipient continues to meet the stated criteria.

**M. E. Maxwell Scholarship** The scholarship will be awarded each year funds are sufficient to a student who has been a Pope County resident for a minimum of five years, has an ACT composite score of 21 or above, a minimum cumulative grade point average of 3.0 or higher, is a full-time student, and demonstrates financial need. Recipients may re-apply for subsequent years.

This scholarship is based on financial need of a male student. A scholarship award will be made each fall semester that funds are sufficient.

**George C. McCarty  
Memorial Scholarship****David Harlan McMillan  
Memorial Scholarship**

This scholarship will be awarded each year that funds are sufficient with preference given to an Arkansas resident at the junior or senior level who is majoring in electrical or mechanical engineering, has a cumulative grade point average of 3.0 or higher and is enrolled in a 15 hour or more course load. The scholarship may be renewed for up to three consecutive semesters provided the recipient enrolls in and successfully completes a 15 hour course load each semester and maintains a cumulative 3.0 or higher grade point average.

**P. K. Merrill Memorial  
Scholarship**

This scholarship is given to a junior or senior majoring in sociology or history.

**Van & Marilyn Moores  
Scholarship**

This partial-tuition general scholarship will be awarded annually. Most awards are made to incoming freshmen.

**Bert and Annette  
Mullens Scholarship**

This partial-tuition scholarship is awarded each year that funds are sufficient to an incoming freshman majoring in business. Preference is given to a Pope County resident. Award is based on GPA, financial need and test scores.

**Earlene Mullins  
Nursing Scholarship**

This scholarship will be awarded each semester that funds are sufficient to an upper division nursing student who is enrolled in 15 credit hours or more, and has demonstrated financial need. Preference will be given to applicants who are single parents. Each award will be for one semester but recipients may re-apply for further consideration.

**Harold and Jackie Neal  
Scholarship**

A scholarship awarded each year that funds are sufficient to a deserving Arkansas Tech University student who demonstrates financial need and is making acceptable academic progress.

**James E. and Martha  
S. Newton Engineering  
Scholarship**

Scholarships will be granted each fall that funds are sufficient in accordance with the following criteria: the recipient must be a Pope County resident, junior or senior level student, major in engineering, be a full-time student enrolled in a minimum of 15 semester credit hours, and have a cumulative 3.0 or higher grade point average. Financial need will be considered. The scholarship may be renewed for the spring semester provided the recipient continues to meet the scholarship criteria and funds are sufficient. Scholarship recipients from one year will be eligible to reapply for subsequent years.

**Anita Page Memorial  
Scholarship**

The recipient of this scholarship must work a designated number of hours per week in a department related to the student's major.

**Tate Page Family  
Scholarship**

The family of the late Dr. Tate Page has endowed a scholarship in his memory which will be awarded annually.

**Greg A. Parks  
Memorial Scholarship**

A partial tuition scholarship will be granted each semester that funds are available to a junior or senior level student majoring in psychology or pre-med (biology or chemistry). Applicants must be enrolled in 15 credit hours or more, have a minimum cumulative 3.0 grade point average, and demonstrate financial need. The initial recipient shall be eligible to retain the scholarship for up to three additional consecutive semesters provided he/she enrolls in and successfully completes 15 credit hours and maintains a cumulative 3.0 grade point average.

**Glori Ann Perkins  
Scholarship**

The awarding of this scholarship will alternate between art/art education and engineering majors, with the first award being made to a student majoring in art (preference) or art education. The applicant must be a junior level student, enrolled in 15 semester hours or more, maintain a cumulative 3.2 or higher grade point average, have demonstrated financial need, and be a student legally present in the United States. This scholarship may be renewed three additional consecutive semesters provided the recipient enrolls in and

successfully completes a 15 hour course load each semester, maintains a cumulative 3.2 grade point average, and is on track to graduate by the end of the fourth semester.

<b>The Phoenix Scholarship</b>	A \$250 scholarship award will be made each fall and spring that funds are available based on the following criteria: applicant must be an Arkansas resident (or at least considered a resident for purposes of tuition), a full-time student with a declared major, and of sophomore classification or higher with a 2.0 cumulative grade point average or higher at the time funds are dispersed. Recipient cannot be a transfer student, must have demonstrated financial need, and must be making academic progress as defined through the Office of Financial Aid. Applicant should submit one letter of recommendation from a faculty or staff member attesting to their dedication to succeed, and submit an essay that clearly demonstrates a significant obstacle or challenge the applicant has faced and how overcoming it has affected them. The essay should also reflect how the applicant plans to give back to the community. This scholarship is renewable for the spring semester as long as the recipient continues to meet the above criteria. After receiving the scholarship for one academic year (fall and spring), the recipient is not eligible to re-apply.
<b>Pope County Cattlewomen's Scholarship</b>	A \$500 one-semester scholarship will be granted each fall that funds are available. The recipient must be a Pope County resident, freshman or sophomore level student with GPA of 2.5 or higher, full-time student enrolled in 12 semester credit hours with a minimum of one course in the department of agriculture. Applicant must submit one educational and one personal letter of recommendation, and a letter of application that expresses the students need and goals, specifically career goals as they relate to agriculture. Preference will be given to students who themselves, their parents or grandparents are members of the Pope County Cattlemen's Association (submit copy of receipt or letter, if applicable.) Demonstrate financial need.
<b>Pope County Farm Bureau Scholarship</b>	Two \$500 scholarships will be awarded each fall semester that funds are available to Pope County students majoring in a degree program within the Department of Agriculture or Department of Nursing. Preference will be given to students whose parents or grandparents are members of Pope County Farm Bureau. Recipients will be full-time students, with sophomore classification or higher, and a cumulative grade point average of 2.5 or higher. The scholarship is renewable for the spring semester if the student maintains a 2.5 grade point average and successfully completes a 12 credit hour course load during the fall semester. The recipient is eligible to reapply in subsequent years.
<b>Jim Price Memorial Scholarship</b>	Friends and members of the Church of Christ have established an endowed scholarship fund in memory of Jim Price to assist students who are members of the Church of Christ. The scholarship is awarded on a semester basis and can be renewed for one additional semester. To be eligible, a recipient must have completed 24 or more hours at Arkansas Tech with a "C" average or better. Applicants may contact the Jim Price Memorial Scholarship Fund Board of Directors at the Church of Christ Student Center in Russellville. Students should be recommended by their home congregation.
<b>A.L. &amp; Verneil Reed Scholarship Fund</b>	Established through the generosity of Mr. and Mrs. Reed, this scholarship shall be awarded each year that funds are sufficient to an undergraduate student who meets the entry requirements of Arkansas Tech and can provide proof of an earned cumulative grade point average of 3.0 or higher as reflected on an official high school transcript. In addition, applicants must enroll as a full-time student, successfully maintain that full-time status and have demonstrated financial need.
<b>Regions Bank Scholarship</b>	This scholarship will be awarded each year that funds are sufficient to a junior or senior level student majoring in a degree program within the College of Business, enrolled in a 15 credit hour or more course load, with a cumulative grade point average of 3.0 and demonstrated financial need. This scholarship can be renewed for up to three consecutive semesters provided the recipient enrolls in and successfully completes a 15 credit hour course load each semester and maintains a 3.0 grade point average.
<b>Reeves Ritchie Scholarship</b>	An annual scholarship in the amount of \$1,500 awarded to a senior majoring in electrical engineering. Preference will be given to a student who plans to reside in Arkansas after graduation. Mr. Ritchie, now retired, was a long-time president of Arkansas Power & Light (now Entergy).
<b>Davidson Roy Scholarship</b>	Awarded each year that funds are sufficient, this scholarship will be awarded to students who have a proven record of academic achievement and demonstrated financial need.
<b>Russellville Kiwanis Ark River Valley Arts Center Scholarship</b>	Scholarships will be granted each year that funds are sufficient to full-time students who have graduated from high school in Pope or Yell County, Arkansas, have achieved sophomore status, are majoring in Fine Arts and maintains a cumulative grade point average of 2.5 or higher. Recipients of this scholarship will be required to volunteer at least two hours per week at the Arkansas River Valley Arts Center for each semester that they receive this award. This scholarship is automatically renewable for an additional two years if the recipient maintains the required criteria.
<b>Russellville Kiwanis Club Jack</b>	This endowed scholarship has been established by the Russellville Kiwanis Club through the Arkansas Tech University Foundation for the purpose of providing scholarships for students attending Arkansas Tech University. This scholarship is in memory of Jack W. Holloway who was an active Kiwanian for over 30 years and a veteran of WW II. Joe Ray was from Havana and served in the

<b>Holloway/Joe Ray Scholarship</b>	Arkansas Senate. Scholarships will be granted each year that funds are sufficient with preference given to students who have graduated from high school in Perry, Yell, Newton or Pope County, have maintained a high school grade point average of at least 2.5 on a 4.0 scale and are planning to attend Arkansas Tech University on a full-time basis. Scholarships will be awarded for a period of one year. However, students may re-apply for subsequent years if they maintain a cumulative grade point average of 2.5 or higher at Arkansas Tech University.
<b>Russellville Noon Lions Club Scholarship</b>	A scholarship will be awarded to a local student who exhibits academic ability, leadership, and financial need.
<b>Russellville Rotary Club Scholarship</b>	A scholarship is awarded each year to a Pope County student. Applications may be made each summer to the Rotary Club through any of its members.
<b>Mary Teresa Shinn Scholarship</b>	The scholarship is given in memory of Mary Teresa Shinn.
<b>St. Mary's Regional Medical Center Nursing Scholarship</b>	This scholarship will be awarded each semester that funds are sufficient. The recipient will be a junior or senior level student majoring in Nursing, enrolled in a minimum of 15 credit hours, with a cumulative GPA of 3.0 or higher, and must demonstrate financial need. Special consideration shall be given to students who are conversant in Spanish or taking Spanish courses and intend to stay in the Russellville area after graduation. The scholarship is renewable for up to three consecutive semesters as long as the student enrolls in and successfully completes course load of 15 credit hours and maintains a 3.0 or higher grade point average.
<b>Kenneth and Janice Sutton Scholarship</b>	Through the generosity of Kenneth and Janice Sutton, a scholarship has been established to assist students who are residents of Stone County, Arkansas. The recipient will be an entering freshman, who is attending Arkansas Tech the fall immediately following high school graduation, have a high school cumulative grade point average of 3.0 or higher, have an ACT score of 21 or higher, be enrolled as a full-time student, and have a letter of recommendation from the high school guidance counselor or teacher. The scholarship is renewable for the spring semester provided the student completed a full-time course load in the fall with a 2.5 grade point average and enrolls as a full-time student in the spring semester.
<b>T-Smooth Scholarship Project</b>	Through the generosity of T. J. Smith, a scholarship fund has been established through the Arkansas Tech University Foundation. An award will be made each fall that funds are available to a full-time student with a declared major in journalism. An entering freshman must have a 3.0 or higher grade point average and a 21 ACT score; a sophomore or higher classification must have a 2.75 cumulative college grade point average. The recipient must demonstrate financial need and must submit an essay that clearly details why journalism was chosen as a major and how the student plans to use the journalism degree. This scholarship is renewable for the spring semester as long as the recipient continues to meet the above criteria. The recipient is not eligible to re-apply for subsequent years.
<b>Louise Berkeley Turner Scholarship</b>	This partial-tuition scholarship will be awarded each fall semester that funds are available to a student majoring in math, science or a related field and may be renewed for one consecutive semester provided the recipient is making sufficient academic progress.
<b>Mary Elizabeth Ragland Urton Memorial Scholarship</b>	An award will be given each year that funds are sufficient to a deserving female student who has maintained a minimum grade point average of 2.5; practices her leadership skills; and exemplifies ethical and moral values.
<b>Alfred and Martha Brownlee Vance Scholarship</b>	An annual scholarship for an incoming freshman will be awarded each year funds are sufficient. Preference will be given to a Pope County resident.
<b>Vance Family Scholarship</b>	The annual scholarship will be awarded when funds are sufficient.

**Jessie Rye Wade Scholarship** This scholarship will be awarded each year that funds are sufficient to full-time students who exhibit academic progress and have demonstrated financial need. To be considered, applicants must submit a completed application along with a letter of recommendation from an Arkansas Tech University faculty member.

**Eugene and Hazel Weir Educational Trust** This scholarship was established to provide scholarships to qualified Arkansas Tech University students from Pope County, Arkansas. Mrs. Weir graduated from Atkins High School, attended Arkansas Tech and then went on to teach in Pope County schools for 48 years, including many years in Russellville.

**Penny L. Wheeler Memorial Scholarship** A scholarship is awarded annually to the most deserving nursing student based upon high school record, need, and test scores.

**Robert Hays and Martha Williams Scholarship** The Robert Hays and Martha Williams tuition scholarship is awarded to an incoming freshman annually. The recipient must be a resident of an Arkansas county within 100 miles of Arkansas Tech University. The student must have maintained a "B" average through high school, participated in school activities, possess the quality of good citizenship and have financial need.

**Teresa Williams Memorial Endowment Scholarship** Endowed scholarships to Arkansas Tech will be awarded to qualified high school graduates of Benton, Arkansas.

**James L. Witt Scholarship** This scholarship was established for the purpose of providing scholarships for students attending Arkansas Tech University majoring in Emergency Management. Scholarships and awards will be granted each year that funds are sufficient, with preference given to students who have a minimum of 24 college hours, maintains a minimum class load of 6 hours per semester, and a cumulative 3.0 grade point average.

**Yell County Scholarship** This partial-tuition scholarship was established by an anonymous donor and is to be awarded to deserving students from Yell County.

**Yell County Wildlife Federation Scholarship** A \$500 scholarship award will be granted each spring that funds are available. The recipient will be a second-semester freshman or higher in classification with a 2.5 or higher cumulative grade point average, majoring in Fisheries and Wildlife or Parks and Recreation and demonstrated financial need. Recipient selection in order of preference will be: (1) a Fisheries and Wildlife major from Yell County, (2) a Parks and Recreation major from Yell County, (3) any qualified Fisheries and Wildlife major, (4) any qualified Parks and Recreation major. If no qualified student is identified from the specific preference categories listed above, the scholarship funds will be carried forward to the following year. The recipient must attend the January Federation meeting to have a picture made receiving the scholarship.

### Foundation Major Specific Scholarships

The student is responsible for contacting the department to verify additional application requirements in order to be eligible for these scholarships. The Foundation Major Specific Scholarship Application with supporting documentation and the department application (if required) must be submitted to the Department Head or Dean of the college. This will require a separate application packet for each Department Head or Dean of the college. The application may only be considered for the specific scholarship for which you apply, therefore: it is important to contact the department for additional requirements. Application is available for printing at <http://www.atu.edu/givetotech>.

The Foundation Major Specific Scholarship documentation must include:

- Documentation must include:
  - A letter from the applicant explaining the need for the scholarship, special family circumstances, and career goals.
  - Three letters of recommendation from an Arkansas Tech faculty, high school counselor or principal **and** a letter from your pastor, employer, or someone familiar with your work ethics and family situation.

The application and all required documentation must be received by March 15 (i.e., applicant letter, reference letters, etc.).

<b>Accounting Scholarships</b>	Several fee and book scholarships are awarded each year to accounting majors. The scholarships are provided by contributions made to the Accounting Club by alumni of the Accounting Department. The recipient selection is based on need and potential in the accounting profession. Submit applications to the head of the Accounting and Economics Department.
<b>Alumni Association Scholarship</b>	This scholarship is open to entering freshmen who are enrolled in a minimum of 12 credit hours, have a minimum cumulative grade point average of 3.2 on a 4.0 scale and have earned a minimum composite ACT score of 21. In addition, applicants must have one parent who attended Arkansas Tech University. Selection will be based on a review of high school GPA, ACT composite score, extra-curricular activities and community involvement. Two letters of recommendation are required. Applications are available through the alumni office, development office or online ( <a href="http://alumni.atu.edu/scholarship.htm">http://alumni.atu.edu/scholarship.htm</a> ). Children of Tech Alumni Association Scholarship Committee members are not eligible to apply. Application with all supporting documents including an official high school transcript must be postmarked by March 15 and submitted to the address on the application.
<b>Bob Adkison/ARVAC Addictions Research Scholarship</b>	To be eligible for this scholarship, applicant must be a full-time student enrolled in 12 credit hours per semester, major in Psychology, Sociology, or Rehabilitation Sciences, junior or senior level student with 75 earned credit hours, successful completion of Psy/Soc 2053, cumulative grade point average of 3.25 or higher, and submit a letter of application that expresses need for the scholarship and career goals. The scholarship may be renewed for the succeeding semester if the recipient continues to meet the criteria. Submit application and all supporting documentation to the head of the Behavioral Sciences Department.
<b>Virginia Bachman Textbook Scholarship</b>	This scholarship will be awarded each fall semester and is renewable for the succeeding spring semester as long as the recipient continues to meet the criteria and successfully completes the fall course load. Recipient selection will be a junior or senior Accounting major who is enrolled in a minimum of six semester credit hours and has a 2.0 or higher GPA. Financial need will be a consideration. Submit application to the head of the Accounting and Economics Department.
<b>Col. Alton F. Balkman Athletic Scholarship</b>	This partial-tuition scholarship will be awarded to a student from Arkansas who is either a current member of the Tech basketball or football team or a former member in the last semester or year of his or her undergraduate degree program. The student must demonstrate potential for service to country such as was exemplified by Colonel Alton F. Balkman. Applicants must have at least a "C" average and must submit a letter of application and two letters of recommendation from Athletic Department faculty. Financial need will be a consideration when making this award. This scholarship is renewable provided funds are available; the student receives the recommendation of the Athletic Department and continues to meet the scholarship criteria. Submit application to the Athletic Director.
<b>Nell Teeter Balkman Nursing Scholarship</b>	This partial-tuition scholarship will be awarded to a junior or senior nursing student from Arkansas who demonstrates potential for nursing leadership such as was exemplified by Nell Teeter Balkman. Applicants must have at least a "C" average and must submit a letter of application and two letters of recommendation from Arkansas Tech University Nursing Department faculty. This scholarship is renewable provided funds are available; the student receives the recommendation of the Nursing Department and continues to meet the scholarship criteria. Financial need will be a consideration in making this award. Submit application to the head of the Nursing Department.
<b>Col. Carl Baswell Engineering Scholarship</b>	To be considered for this scholarship applicants must have successfully completed the pre-professional curriculum as outlined in the Arkansas Tech University catalog, reached the junior or senior level, declared a major in Engineering, earned a cumulative grade point average of 3.0 or higher, demonstrated financial need and be a resident of Arkansas. Submit application to the Dean of the College of Applied Sciences.
<b>Sybil W. Bates Engineering Scholarship</b>	To be eligible for this scholarship, a student must be an incoming freshman majoring in Engineering, have an ACT composite score of 26 or higher and a 3.5 or higher grade point average in core classes from high school. This scholarship is for the freshman year only and is not renewable for subsequent years. Applications should be directed to the Dean of the College of Applied Sciences.
<b>Bridenthal Choir Scholarship</b>	This scholarship is named for Dorothy Bridenthal Bean and her twin sister, Deloris Bridenthal Prestridge, both of whom attended Arkansas Tech from 1940 until their graduation in 1942. While this award is designed for students whose studies concentrate on choir in their music education, a student who is majoring in choir or choral music is preferred. Each applicant must audition for the scholarship. The recipient must be in good academic standing. This scholarship will be awarded each semester that funds are sufficient. Interested students should contact the head of the Music Department.
<b>Bridenthal Piano Scholarship</b>	This scholarship is named for Dorothy Bridenthal Bean and her twin sister, Deloris Bridenthal Prestridge, both of whom attended Arkansas Tech from 1940 until their graduation in 1942. While this award is designed for students whose studies concentrate on piano in their music education, a student who is majoring in piano is preferred. Each applicant must audition for the scholarship. The recipient must be in good academic standing. This scholarship will be awarded each semester that funds are sufficient. Interested students should contact the head of the Music Department.

<b>Fay Bullock Scholarship Fund</b>	A scholarship awarded each semester to a student who is majoring, or one who intends to major, in the Department of History and Political Science. Academic achievement, need, and relevant extracurricular activities will be considered in making the award. Submit application to the head of the History and Political Science Department.
<b>Belinda Byrns Memorial Scholarship</b>	This annual scholarship was established in memory of Belinda Byrns and will be awarded each year funds are sufficient. Applicants must be a full-time Recreation and Parks major, have a cumulative grade point average of 2.75 or higher, submit a resume and an applicant letter explaining why he or she deserves the scholarship, educational and professional goals, and summarize professional experience. One letter of recommendation from a professional in the Recreation and Parks profession who is not a full-time or adjunct ATU Recreation and Parks faculty member is also required. Recipient must reapply each year for the scholarship.
<b>CADDIS Fly Fishing Club Annual Scholarship</b>	This annual scholarship will be awarded each year that funds are sufficient. Preference will be given to students who have achieved junior or senior status, have declared a major in Fisheries and Wildlife, and have maintained a minimum cumulative grade point average of 2.75 or higher. In addition financial need and/or research accomplishments may be considered. Submit application to the head of the Fisheries and Wildlife Department.
<b>Reuben Dee Caudle Scholarship</b>	A partial-tuition scholarship will be provided for a student majoring in one of the physical science fields. The recipient must demonstrate a financial need and must meet and maintain satisfactory scholastic requirements. Preference will be given to Arkansas residents and those who have prior military service. This scholarship is to be re-awarded to the initial freshman recipient each of his/her subsequent three years while at Tech provided he/she continues to major in Physical Sciences and maintains good academic standing. Awards will be made each fall semester that funds are sufficient. Submit application to the Dean of the College of Natural and Health Sciences.
<b>Chartwells Hospitality Scholarship</b>	To be considered for this scholarship, applicants must be a full-time Hospitality major. Students must have successfully completed 30 credit hours with a cumulative grade point average of 2.75 or higher and have an interest in food service. A letter of recommendation from a faculty member or industry representative, a one page biography or resume, an unofficial transcript, and a letter detailing their candidacy and qualifications as they relate to this scholarship should be submitted by students wishing to be considered for this scholarship. Applications and all supporting documents should be submitted to the head of the Parks, Recreation and Hospitality Administration Department.
<b>C. L. Chiang and C.C. Yang Chemistry Scholarship</b>	An endowed scholarship established by Mr. C. L. Chiang of Singapore in honor of Dr. C.C. Yang, Professor Emeritus. The scholarship is awarded to an incoming freshman majoring in chemistry. The requirements for this award are a high school GPA of 3.0 or greater, and a composite ACT score of 24 or greater. Applications should be made to the head of the Physical Sciences Department. This scholarship is renewable by request if the recipient makes satisfactory progress toward an ACS-accredited degree in chemistry.
<b>Dana Coffman Journalism Scholarship</b>	This partial-tuition scholarship has been established in memory of Dana Coffman, a former Journalism student at Arkansas Tech University. Preference will be given to a female student majoring in the field of Journalism. Academic achievement and financial need will be reviewed before making the award. Application should be made to the head of the Speech, Theatre, and Journalism Department.
<b>Rip Collins Memorial Scholarship</b>	Established by the Friends of the Little Red River to honor Mr. Rip Collins, the scholarship shall be used to make awards to full-time student(s) attending Arkansas Tech University. A recipient will be chosen annually and receive partial tuition for both the fall and spring semester of that academic year. Selection process will begin in the spring after recommendations are made by fisheries professors at Arkansas Tech. Applications and letters from the applicants expressing their thoughts, beliefs, and future plans concerning fisheries management are required. Preference will be given to a sophomore or junior fisheries student in good standing who is interested in either cold water fisheries biology, management, or stream/riverine fisheries biology or management. Application should be made to the head of the Biological Sciences Department.
<b>Connelly Music Fund</b>	This scholarship was established in honor of Ed Connelly a long-time professor of music at Arkansas Tech University. Students interested in being considered for this scholarship should submit the application to the head of the Music Department.
<b>G. M. and Ruby Cook Business Scholarship</b>	An endowed scholarship will be awarded annually to a business major. Applications should be made to the Dean of the College of Business.

**Dale Corley Memorial Scholarship**

Friends and former students have established an endowed scholarship fund to commemorate the many years of service the late Mr. Corley rendered as professor and chairman of the Department of Accounting. An annual award is made to a senior accounting major. Application should be submitted to the head of the Accounting and Economics Department.

**Alfred & Marge Crabaugh Scholarship**

Established through the benevolence of Alfred J. & Marge W. Crabaugh, both of whom were prominent figures in the history of Arkansas Tech University and the River Valley community. This renewable scholarship will be awarded to outstanding full-time student(s) who have an ACT score of 21 or above, demonstrate leadership skills, and excel in Speech, Journalism or Communication. To be considered for this award, in addition to the above stated criteria, entering freshmen must submit two letters of recommendation from teachers, a scholarship application, and high school transcripts. The scholarship can be renewed with the original recipient provided he/she continues to meet the criteria, maintains a 3.0 grade point average, and has written renewal recommendations from two Arkansas Tech University faculty members in their field of study. Renewal recommendations must be made to the Journalism Department. Scholarship recipients will receive an award for tuition, fees, and books and will be known as "Crabaugh Scholars." Financial need will be considered when making these awards. Application should be made to the head of the Speech, Theatre, and Journalism Department.

**Deward and Anne Dopson Scholarship**

A scholarship awarded from funds contributed by Coach Dopson's former players, managers, and friends. The scholarship goes to a former student-athlete who has no further athletic eligibility remaining but has a semester or year remaining to finish his or her undergraduate degree. Past service to Tech will be a strong factor for selection. Submit application to the Athletic Director.

**Linda Douthit Memorial Scholarship**

Awards will be granted on an annual basis as funds are available. Recipients will be chosen based on the following criteria: freshmen who have declared a major in Biology and maintained a minimum high school cumulative grade point average of 2.75; sophomores, juniors or seniors who have declared a major in Biology and have a minimum cumulative grade point average of 2.75. Make application to the head of the Biological Sciences department.

**Gerald Edgar Scholarship**

A performance scholarship paying a semester's tuition is awarded each spring in honor of Gerald Edgar who was News Bureau Director, advisor of student publications, and journalism professor for twenty-nine years at Arkansas Tech University. It is to be awarded to a student who shows ability in and dedication to publications work. Financial need will be considered. The student will be required to work ten hours per week on student publications. Application should be directed to the head of the Speech, Theatre, and Journalism Department.

**Dr. Robert R. Edwards Book Scholarship**

Several book scholarships are awarded each year to full-time senior students pursuing any of the business and economics majors. The scholarships, presented in recognition of outstanding academic achievement, are funded by contributions from the Business and Economics Department faculty. Applications should be directed to the head of the Accounting and Economics Department.

**Lawrence M. Evans Memorial Political Science Fund**

A memorial scholarship established by Dr. Larry Evans, his family and his friends for a sophomore, junior or senior majoring in History and Political Science. Preference will be given to those emphasizing Political Science. Academic achievement and need will be considered in making the award. Submit application to the head of the History and Political Science Department.

**Laura Ferguson Computer Science Scholarship**

This endowed scholarship was established by Laura Ferguson, Arkansas Tech University class of 1934, who worked in the computer industry for the majority of her career. This scholarship is for an upper level student enrolled in a Bachelor of Science program in Computer and Information Science with preference given to residents of Pope County. Application should be made to the head of the Department of Computer and Information Science.

**Clifford & Mary Anne Franks Scholarship**

To be considered for this award, the student must be involved in the Arkansas Tech Theater Department and be in good academic standing. Application should be directed to the head of the Speech, Theatre, and Journalism Department.

**Billy Free Scholarship**

An annual scholarship will be awarded as funds are sufficient to a student who has declared a major in one of the fields in the College of Business. Application should be directed to the Dean of the College of Business.

**Betty Jo Gober Memorial Scholarship**

Through the generosity of Keith Gober, this scholarship has been established to provide scholarships for students in the College of Business. A scholarship recipient will be selected each fall and each spring semester that funds are available based on the following criteria: be an Arkansas resident, preference will be given to students from the Redfield and Waldron school districts, enrolled in 15 credit hours or more, be a traditional student of freshman, sophomore, junior, or senior classification and pursuing a Bachelor of Science in Business Administration degree (major in accounting, economics & finance, or management and marketing). An entering freshman must have an ACT score of 21 or higher (or SAT score of 500 or higher) and a 3.5 or higher grade point average. Attach to the application at least one letter of recommendation from a non-sports related teacher/counselor who is not a relative. A sophomore

or higher classification must have a 3.25 or higher grade point, attach a letter of application that expresses need and goals and a letter of recommendation from a College of Business professor or work-related supervisor. Demonstrated financial need will be a consideration. Applicants who have full scholarship(s) paying tuition, fees, room and board will not be considered. This scholarship is for one semester only and recipients are not eligible to apply in subsequent semesters. Applications should be directed to the Dean of the College of Business.

**Leenita Sue Gober  
Memorial Scholarship**

Through the generosity of Keith Gober, this scholarship has been established to provide scholarships for students in the College of Business. A scholarship recipient will be selected each fall and each spring semester that funds are available based on the following criteria: be an Arkansas resident, preference will be given to students from the Redfield, White Hall, and Waldron school districts, be enrolled in 15 credit hours or more, be a traditional or non-traditional student of freshman, sophomore, junior, or senior classification and pursuing a Bachelor of Science in Business Administration degree (major in accounting, economics & finance, or management and marketing). An entering freshman must have an ACT score of 21 or higher (or SAT score of 500 or higher) and a 3.5 or higher grade point average. Attach to the application at least one letter of recommendation from a non-sports related teacher/counselor who is not a relative. A sophomore or higher classification must have a 3.25 or higher grade point, attach a letter of application that expresses need and goals and a letter of recommendation from a College of Business professor or work-related supervisor. Demonstrated financial need will be a consideration. Applicants who have full scholarship(s) paying tuition, fees, room and board will not be considered. This scholarship is for one semester only and recipients are not eligible to apply in subsequent semesters. Applications should be directed to the Dean of the College of Business.

**William C. (Bill) &  
Barbara Gund  
Scholarship**

Students majoring in English with a junior or senior standing are eligible for this partial-tuition scholarship provided that they maintain a grade point average of at least 3.0 and follow all established criteria. Preference will be given to non-traditional students. Application should be directed to the head of the English Department.

**Francis Gwaltney  
Memorial Scholarship**

An endowed scholarship awarded to an English or Creative Writing major with sophomore, junior, or senior standing in memory of Francis Gwaltney, former author and member of the English and Creative Writing faculty. The scholarship is awarded competitively based on original fiction submitted by applicants to the head of the English Department two weeks before the end of each spring semester

**Burl Harris Memorial  
Scholarship**

Mr. and Mrs. John G. Harris have established this scholarship in honor of Burl Harris, a long-time practicing Public Accountant and businessman in Russellville. During most of his life, he was actively involved in industrial development efforts for the Russellville area. Mr. Harris served on the Arkansas Tech University Foundation Board of Directors until his death in 1990. He was a dedicated supporter of the University as a whole and of the Department of Accounting in particular. This scholarship will be awarded each year that funds are available to a junior- or senior-level accounting major enrolled in a minimum of 6 or more credit hours. Applications should be directed to the head of the Accounting and Economics Department.

**Kathleen Tucker  
Hollabaugh Journalism  
Scholarship**

This scholarship is funded by the Pope County Historical Association in honor of Kathleen Tucker Hollabaugh, the first woman editor of the Arka-Tech. The annual award will be made to a sophomore, junior or senior journalism major each year funds are sufficient and will be based on commitment to journalism and work in the field. A letter about commitment to journalism and samples of the applicant's work should accompany the scholarship application. Application should be directed to the head of the Speech, Theatre, and Journalism Department.

**Hindsman Athletes  
Scholarship**

This endowed scholarship will be awarded annually to a member of the Tech Men's Basketball team. The recipient must be a full-time student, and have demonstrated financial need. This award is renewable for the spring semester as long as the recipient continues to meet the criteria, successfully completes a full-time course load in the fall semester, and funds are sufficient. Applications should be directed to the Athletic Director.

**Jimmie Hartman  
Hoover Memorial  
Scholarship**

This endowed scholarship was created for the purpose of assisting graduate students at Arkansas Tech University and will be awarded each year that funds are sufficient. The applicant must be a full-time graduate student who is enrolled in 6 semester credit hours in the Instructional Technology degree program and have a cumulative grade point average of 3.0 or higher. Preference will be given to students who have an interest in library science. In addition, financial need may be considered. Application should be directed to the Dean of the Graduate College.

**International Business  
Experience  
Scholarship**

This scholarship will be awarded each year that funds are sufficient to students who demonstrate a financial need and are committed to/or are enrolled in an International Business Experience course. Submit application to the Dean of the College of Business.

**Junior Auxiliary of  
Russellville Book  
Scholarship**

An award will be made to a Russellville high school graduate each year that funds are sufficient to defray the cost of books. The student must be currently enrolled at Arkansas Tech University. Applications are available in the Development Office, Administration Building room 209 in early February.

**Junior Auxiliary of Russellville Education Scholarship**  
An award will be made each year that funds are available to an Arkansas Tech student majoring in Education. Applicants must be junior or senior level with have a cumulative grade point average of 3.0 or higher and demonstrated financial need. Applications are available in the Development Office, Administration Building room 209 in early February.

**Junior Auxiliary of Russellville Judy Thacker**  
This scholarship is open to any major at any level in their undergraduate career who has a minimum cumulative grade point average of 2.75. Preference will be given to a non-traditional student. Awards will be made each year that funds are sufficient. Applications are available in the Development Office, Administration Building room 209 in early February.

**Junior Auxiliary of Russellville Marge Crabaugh**  
An award will be granted each year that funds are available to a student majoring in a field pertaining to "Child Welfare." Applicants must have a cumulative grade point average of 3.0 or higher, be a Russellville or Pope County resident with junior or senior status. Applications are available in the Development Office, Administration Building room 209 in early February.

**Junior Auxiliary of Russellville Nursing Award**  
This fund has been established to provide a scholarship each year that funds are available to an Arkansas Tech University Nursing student in their junior or senior year of study. Applicants must have a cumulative grade point average of 3.0 or higher. Applications are available in the Development Office, Administration Building room 209 in early February.

**Jackie Knight Memorial Scholarship**  
A scholarship awarded annually to an outstanding and deserving senior-to-be who is majoring in accounting. Grade point and financial need will be considered in making the selection. This scholarship was established by the family and friends of Jackie Knight, former Vice-President for Administration and Finance at Tech. Direct applications to the head of the Accounting and Economics Department.

**The Lake Dardanelle Big Bass Scholarship**  
Through the generosity and support of local and area fishermen, the organizers of "The Lake Dardanelle Big Bass Classic," Wilkins Sporting Goods and the Russellville Advertising and Promotion, the Lake Dardanelle Big Bass Scholarship has been established for the purpose of providing scholarships for Fisheries and Wildlife students attending Arkansas Tech University. Applications should be submitted directly to the director of the Fisheries and Wildlife Department in early September. Scholarships will be granted each fall in accordance to the following criteria: a declared major in Fisheries and Wildlife, a junior or senior level student in good standing, attach a resume, copy of transcripts, and a letter of application that indicates the scholarship for which application is being made and that addresses financial need and career goals. Preference will be given to Arkansas residents and to students whose career goals focus on fisheries management. The scholarship is for the fall semester only and is not renewable.

**Little Rock Grain Exchange Scholarship**  
To be considered for this scholarship, students must have declared a major in Agriculture or Agriculture Business. Freshmen students must rank in the upper half of their Arkansas high school graduation class and possess ACT or SAT test scores that exceed the state average. Additionally, applicants must have two or more positive recommendations from their high school principal, counselor or teachers. Sophomore students must have two or more positive recommendations from their university or college teacher and have a 3.0 cumulative grade point average. Financial need will be considered although not determinative. Scholarships are renewable each semester up to a total of eight semesters assuming the student takes a full academic load of 15 hours per semester and maintains a minimum cumulative grade point average of 3.0 or higher. Applications should be directed to the head of the Agriculture Department.

**Majors Family Engineering Scholarship**  
This partial tuition scholarship will be made to an engineering major at the junior or senior level. Recipients can be either continuing or transfer students. To be eligible for this scholarship, a student must have successfully completed the pre-professional curriculum as outlined in the Arkansas Tech University catalog, must have an overall GPA of 2.75 or greater, must be declared as a major within the engineering department and enroll in the appropriate classes with an engineering advisor for the semester of the award. Awards may be renewed for one additional semester if the student maintains a 2.75 overall grade point average, remains a major in the engineering program and is making satisfactory progress toward an engineering degree. Applications should be directed to the Dean of the College of Applied Sciences.

**Massie-Mobley Modern Foreign Language Scholarship**  
Scholarship will be awarded to an upperclassman majoring in foreign language. Application should be directed to the head of the Foreign Languages and International Studies Department.

**Wilson Matthews Distinguished Scholar Athlete Fund**  
Established in recognition of Mr. Wilson Matthews, a distinguished graduate of Arkansas Tech University, this scholarship will be awarded to students who participate in team sports. These scholarships are renewable annually based on the student-athlete's academic and athletic standing and with continued recommendation of the nominating coach and selection by the Matthews Scholarship Committee. Criteria for receiving this scholarship are: nomination by a coach; junior standing or above; GPA of 3.0; preferably from a rural area; and exemplary credentials in academics, athletics, and leadership skills in school or community. Selected students must submit a resume and three letters of reference representing the areas of academics, athletics and

leadership. Consideration will be given for additional financial assistance being received and to those students who meet the criteria with an emphasis on football. Application should be made through the Athletic Department.

**Lloyd D. McDaniel  
Engineering and  
Computer and  
Information Science  
Scholarship**

Scholarship awards will be granted each year that funds are sufficient to any level student who has declared a major in Engineering or Computer and Information Science, has a grade point average of 3.0 or higher, has demonstrated financial need, and submits the private scholarship application in writing. To be eligible for this scholarship, students must be enrolled in the appropriate classes and be under the direction of an Engineering or Computer and Information Science advisor for the semester of the award. Awards may be renewed until graduation if the student maintains a cumulative grade point average of 3.0 or higher, remains a major in Engineering or the Computer and Information Science program and is making satisfactory progress toward an Engineering or Computer and Information Science degree. Application should be directed to the head of the appropriate department.

**Truman McEver  
Memorial Scholarship**

Recipient must be an entering freshman who is majoring in an area of the Department of Physical Sciences. Academic ability and financial need are considered. Application should be directed to the Dean of the College of Natural and Health Sciences.

**Xzin McNeal  
Scholarship**

Scholarships are awarded annually to students in the Department of Agriculture. Students are selected by need and merit. Recipients are selected based on demonstrated financial need and academic merit. Students must maintain a 2.5 grade point average. Application should be directed to the head of the Agriculture Department.

**Maude Moore-Geurian  
Memorial Scholarship**

This scholarship has been established to honor Maude Moore-Geurian for her many years of dedication to Arkansas Tech University and devotion to her students. Applicants for this scholarship must have declared Math as a major course of study, maintain a minimum cumulative grade point average of 3.0, demonstrate financial need and have earned a minimum of 30 credit hours. Applications should be directed to the head of the Math Department.

**Dwight M. Moore  
Scholarship**

The scholarship was established by the late Dr. Moore, one-time head of the department, and by his wife Clemmie, a graduate of the department. Each spring, a book scholarship will be awarded to a student interested in and having potential in the field of botany. Applications should be directed to the head of the Biological Sciences Department.

**Joe Murphy  
Undergraduate History  
Award**

The recipient of this award will be selected by a History Department Paper Prize Award Committee. It is open to any student enrolled in an undergraduate History course at Arkansas Tech, regardless of major, during the current award cycle. Students should submit a scholarly paper written during the current award cycle in a History class at Arkansas Tech. Specific Submission Guidelines are available from Department of History and Political Science.

**John & Joie Nutt  
Scholarship**

This two-semester scholarship has been established to benefit students who are enrolled in either Agriculture or Agriculture Business at Arkansas Tech University. To be considered for this scholarship, students must be a sophomore, junior or senior and have a minimum cumulative grade point average of 2.75. To remain eligible to receive this award for the second semester, students need to complete 12 credit hours and have a minimum cumulative grade point average of 2.75. Scholarship recipients from one year will be eligible to re-apply for subsequent years; however, all applications will be considered equally for each award year. Application should be directed to the head of the Agriculture Department.

**Rexann Oller  
English/Creative  
Writing Scholarship**

One Scholarship from each area will be awarded annually to a deserving student. Recipients must be, sophomore, junior or senior level student, be in good academic standing, and should submit the application by April 1 of each spring. Submit applications to the head of the English Department.

**Rexann Oller  
International Students  
Scholarship**

The Rexann Oller International Students Scholarship will be awarded each year to an international student who shows academic achievement in international affairs and/or strong background and interest in international relations. This scholarship is open to all Arkansas Tech International undergraduate and graduate students who have a minimum GPA of 3.0. Preference will be given to students with demonstrated financial need. Recipients of other tuition scholarships are not eligible to apply. Please contact the office of ATU International Student Services and the Dean of the Graduate College for full application requirements.

**Rexann Oller Music  
Scholarship**

An endowed scholarship awarded annually to a deserving student in music. The recipient must be in good academic standing. Application should be directed to the head of the Music Department.

<b>B. G. and Anita Owen Textbook Scholarship</b>	A book scholarship awarded to a student with junior standing was initiated by B. G. Owen, Associate Professor of Biology. Following the expressed wishes of their daughter, friends may contribute funds to perpetuate this scholarship awarded according to criteria determined by the late Professor Owen. Applications should be directed to the head of the Biological Sciences Department.
<b>Odean Owens Criminal Justice Award</b>	One award will be granted each fall semester that funds are available based on the following criteria: A student with a major or minor in criminal justice and submission of a 500 word essay on a topic to be determined by the department head. Application should be directed to the head of the Behavioral Sciences Department.
<b>Tate C. "Piney" Page Memorial Athletic Scholarship</b>	An endowed scholarship to assist a graduate assistant who excelled in football and academics has been established in memory of Dr. Page through contributions by the Russellville Kiwanis Club. Application should be directed to the Athletic Director.
<b>Professor Tom Palko Scholarship</b>	A partial tuition scholarship established in honor of Mr. Palko, Emeritus Professor of Allied Health Science, will be awarded each year that funds are available. Selection will be based on an ACT composite score of 21 or above, sophomore class standing, a minimum college-level grade point average of 2.75, a declared major in the College of Natural and Health Sciences with preference being given to Medical Assisting or Medical Technology majors, and demonstrated financial need. Applications should be directed to the Dean of College of Natural and Health Sciences.
<b>Ross Pendergraft Scholarship</b>	Four renewable partial-tuition scholarships are to be awarded to full-time undergraduate students who have demonstrated financial need and are majoring in computer and information science, accounting and economics, management and marketing-one from computer and information science, one from management and marketing and two from accounting and economics. Each scholarship will be renewable with the original recipient provided he or she has a GPA of not less than 2.5 for the fall semester and a cumulative GPA of at least 3.0 at the end of each spring semester.
<b>William C. and Myonia Pinson Instrumental Music Scholarship</b>	A scholarship will be provided each year that funds are available for an instrumental music major. Students interested in being considered for this scholarship should direct a scholarship application to the head of the Music Department.
<b>James and Geneva Pledger Agriculture Scholarship</b>	Through the generosity of Jim and Geneva Pledger, this scholarship has been established to provide scholarships for Arkansas Tech students. One \$500 scholarship will be granted each year funds are available. The recipient must be a junior or senior in good standing, have declared a major within the Department of Agriculture, and have demonstrated financial need. Renewable for spring only and recipient may re-apply for subsequent years. Application should be directed to the head of the Agriculture Department.
<b>Quail Unlimited/Jim Ed McGee Scholarship</b>	Awards will be granted each fall that funds are sufficient to an Arkansas resident with a junior or senior class standing who has declared a major in Fisheries and Wildlife. The student must have a cumulative grade point average of 2.0 or higher, be enrolled in a minimum course load of 12 student semester credit hours, demonstrate financial need and submit a letter of application. The scholarship is renewable for the succeeding spring semester provided the student maintains a minimum 2.0 grade point on a minimum course load of 12 student semester credit hours. Students must re-apply each year. Application should be directed to the head of the Biological Sciences Department.
<b>Lillian Massie Reed Modern Foreign Language Award</b>	A scholarship awarded annually to a student majoring in foreign language. Application should be directed to the head of the Foreign Languages and International Studies Department.
<b>Lambert Resimont Scholarship</b>	This endowed athletic scholarship is to be awarded annually to a graduate assistant who excelled in basketball and academics. Students interested in applying should contact the Arkansas Tech Athletic Director.
<b>Ann and Gill Richards Engineering Scholarship</b>	This scholarship is awarded annually to an excellent engineering student. Application should be made to the head of the Electrical Engineering Department.

**John Rollow Memorial Scholarship** Established as a tribute to John Rollow to assist non-traditional students in English and Creative Writing with tuition expenses, this scholarship is open to any non-traditional undergraduate or graduate student with demonstrated financial need and a cumulative grade point average of 2.5 or higher. Application should be made to the Department of English.

**Russellville Symphony Guild Scholarship** Through the generosity of the Russellville Symphony Guild and in memory of Christina Stinnett, the above named scholarship fund has been established through the Arkansas Tech University Foundation for the purpose of providing scholarships for students attending Arkansas Tech University. A scholarship award will be made each fall that funds are available based on the following criteria: Entering freshman with a declared major in music, enroll in and successfully complete 12 credit hours per semester, a high school cumulative grade point average 3.0 or higher and a 20 or higher ACT composite score, a letter of recommendation from high school guidance counselor, and a letter of application describing your goals and plans. This scholarship is renewable for the spring semester as long as the recipient continues to make academic progress and maintains full-time status. Application should be directed to the head of the Music Department.

**Thomas A. Sands Art Scholarship** The family of Thomas Sands, an artist and environmental engineer, has established a visual arts scholarship in his memory. The award will be granted each year that funds are available. The recipient selected will be a declared art major and the award will be based on future promise and demonstrated ability. Application should be directed to the head of the Art Department.

**Mary McDonald Shinn Scholarship** An annual partial-tuition scholarship awarded to a vocal music major. Applications should be made through the Music Department.

**Simmons First Bank Annual Scholarship** Awarded each semester that funds are sufficient, this scholarship is designated for a student who is presently residing in Pope or a surrounding county, has demonstrated financial need, maintains a cumulative GPA of 3.0 or higher, is a junior or senior enrolled as a full-time student in a major directly related to banking: Finance, Market Management, Economics or Accounting and is not employed by a competing financial institution. The scholarship is not automatically renewable each semester. The student may reapply for subsequent semesters. Application should be submitted to the Dean of the College of Business.

**Doyle & Evelyn Sparks Scholarship** Scholarships will be awarded each year funds are sufficient to a student who has reached the junior or senior level in their undergraduate education, maintains a cumulative grade point average of 3.5 or higher, exhibits and has a record of campus involvement and/or community service and is from Pope, Yell, Conway or Johnson counties. Each recipient may be chosen to receive this award only once. Application should be directed to the head of the Biological Sciences Department.

**Carol Stewart Stark Scholarship** The family of Carol Stewart Stark has established this award in her memory and honor. Awards will be made each year funds are sufficient. Preference will be given to an undergraduate student majoring in music who demonstrates financial need. A married or single parent student will be given first priority. If no one meets this qualification in any given year, then an undergraduate music student demonstrating need will be considered. Applications should be directed to the head of the Music Department.

**Hazel Thrasher Memorial Scholarship Fund** Scholarships awarded to nursing majors based on need and the potential to meet the requirements of a professional nurse. Application should be directed to the head of the Nursing Department.

**John E. Tucker Scholarship** An endowed athletic scholarship awarded to a graduate assistant who excelled in football and athletics. Application should be made to the Arkansas Tech Athletic Director.

**Mary D. Turner Music Scholarship** An endowed scholarship will be awarded annually to a music major in honor of Mary D. Turner. Applications should be made to the head of the Music Department.

**Virgil Alvin Turner Book Scholarship** A book scholarship established by Mr. and Mrs. Raymond B. Stroud which is awarded for the fall semester of the sophomore year to a major in chemistry. Recipients should be dedicated to obtaining a degree in chemistry and demonstrate this through scholastic achievements. Application should be directed to the head of the Physical Sciences Department.

Scholarship awards will be made each year that funds are available to a junior or senior accounting major enrolled in a minimum of six semester credit hours. This scholarship is renewable for the spring semester as long as the recipient continues to make academic

progress and maintains a minimum of half-time status. Application should be directed to the head of the Accounting and Economics Department.

**Valley Motors  
Accounting  
Scholarship**

**Wal-Mart Information  
Systems Scholarship**

Scholarship awards will be made each fall that funds are sufficient, based on the following criteria: junior or senior classification, majoring in computer science, information systems, or information technology, a full-time student enrolled in 12 or more credit hours per semester, have a cumulative grade point average of 3.0 or higher, and be an Arkansas resident. This scholarship is renewable for the spring semester as long as the recipient continues to meet the criteria. The scholarship is for one year only, but a junior classification who is a recipient may re-apply for the succeeding year. Application should be directed to the head of the Computer and Information Science Department.

**Renee Walters/Julia  
Williams Memorial  
Scholarship**

Recipients will be selected each year that funds are sufficient. Preference will be given to students who have declared a major in Hospitality Administration, are currently enrolled in HA 4116, have successfully completed HA 4001, and have maintained a cumulative grade point average of 2.5 or higher. Students wishing to be considered must submit a letter of recommendation from a professional contact currently working in the field of Hospitality Administration and a letter of application of at least one page in length outlining their candidacy and qualifications as they relate to this scholarship. Applications and all supporting documents should be submitted to the head of the Parks, Recreation and Hospitality Administration Department.

**Melvern Watson  
Scholarship**

Awards will be made each year that funds are available. This scholarship will be awarded to a student majoring in Agriculture or Agriculture Business with preference given to current or transfer students, especially those who have achieved junior status. Financial need will be a consideration and students who receive the scholarship may re-apply for the scholarship for subsequent years. Applications should be turned in to the head of the Agriculture Department.

**Dr. Charles and Joyce  
Wilkins Nursing  
Scholarship**

This senior honors scholarship will be a one-semester partial tuition scholarship awarded to a full-time or part-time nursing student who has the highest grade point average prior to entering the first semester of the senior year. Since there are two nursing classes, a recipient will be selected from each class. Financial need is not a requirement. Application should be made to the head of the Nursing Department.

**Ted and Betty Williams  
Scholarship**

In honor of Ted and Betty Williams, this scholarship has been established to provide scholarships during the fall and spring semesters for students who demonstrate financial need, maintain a cumulative grade point average of 3.0 or higher, enroll in and successfully complete a minimum of fifteen hours each semester, and exhibit leadership potential as demonstrated by extracurricular achievements. Scholarship recipients from one year will be eligible to re-apply for subsequent years. Applicants must submit a written application to the Director of Enrollment Management in a process that will be administered by the Office of Academic Affairs. This scholarship requires a separate application which is available through the Admissions Office in the Student Services Building.

**Gene Witherspoon  
Memorial Scholarship**

A scholarship awarded each year that funds are sufficient to an instrumental music major by the Arkansas Tech Band Alumni in memory of Gene Witherspoon, director of bands at Arkansas Tech from 1950 to 1970. Application should be directed to the head of the Music Department.

**Hallie Belle  
Witherspoon Memorial  
Scholarship**

A scholarship is awarded each year that funds are sufficient to an instrumental music major by the Arkansas Tech Band Alumni in memory of Hallie Belle Witherspoon. Application should be directed to the head of the Music Department.

**Yell County Medical  
Society Scholarship**

A scholarship awarded each spring semester by the Yell County Medical Society to a Tech student from Yell County majoring in nursing. Application should be sent to the Head of the Arkansas Tech University Nursing Department by December 1st of each year.

**Privately Supported Scholarships**

**Allied Poultry  
Industries Scholarship**

Scholarships are awarded to students in the Department of Agriculture. These scholarships are awarded to promote entrance into this vast food-producing industry. Trained, high-quality college graduates are needed for jobs as administrators, production managers, and sales-service representatives. The selection is made by the Allied Poultry Industries Scholarship Committee.

<b>Arkansas Health Information Management Association Scholarship</b>	An annual scholarship fund has been established by the Arkansas Health Information Management Association. The scholarship is awarded each spring to a deserving health information management major in his/her junior or senior year. The recipient is determined by the Executive Board of the Arkansas Health Information Management Association. Interested students should contact the Health Information Management Program office at 1311 N. El Paso, T5 to obtain an application. Application deadline is January 31st.
<b>ATA Endowment Program</b>	A \$300 scholarship for African-American juniors or seniors in accredited teacher education programs in Arkansas colleges and universities. Details may be secured from the Student Aid Office or from Room 207, AEA Building, 1500 West Fourth Street, Little Rock, Arkansas 72201.
<b>FFA Scholarships</b>	The scholarship program for the national FFA organization will be determined jointly by an officer of the University and the FFA organization. Information concerning this program can be secured from the State Department of Education or the Tech Department of Agriculture.
<b>J.D. Knight Scholarship</b>	This scholarship was established by Mrs. J.D. Knight in memory of her late husband, Mr. J.D. Knight, a former member of the Arkansas Tech Board of Trustees. The recipient must be majoring in accounting, business, or economics and must have an interest in banking as a possible career.
<b>Cora McHenry Scholarship for Teaching Excellence</b>	Four tuition scholarships available to minority students committed to teaching in the public school of Arkansas at either the early childhood/middle or secondary level. Two of these scholarships will be awarded to early childhood or middle level education majors and two to secondary majors on a competitive basis. To apply a student should submit a high school transcript, two letters of recommendation from school officials, a brief handwritten essay on why the applicant is interested in teaching, and a record of activities in school, church, and the community to the Director of Teacher Education Student Services, College of Education, Arkansas Tech University. This scholarship is renewable as long as the recipient maintains a 2.50 grade point average and remains eligible for the teacher education program. Application deadline is April 15.
<b>Pope County Association for Handicapped Scholarships</b>	One or more scholarships of varying amounts awarded annually to students with disabilities who are residents of Pope County and who are enrolled or admitted as post secondary students. Application forms may be obtained from high school counselors or from the Pope County Association for Handicapped, P.O. Box 2512, Russellville, Arkansas 72801.
<b>Pope-Yell County Single Parent Scholarship</b>	Scholarships are awarded each semester to single parents who are residents of Pope or Yell counties. Recipients must have applied for federal financial aid and be eligible for a federal Pell Grant. Application deadline is July 15 for the fall semester and January 15 for the spring semester. Applications are available from Pope-Yell County Single Parent Scholarship Board, River Valley Shelter for Battered Women and Children, Inc. P.O. Box 2066, Russellville, Arkansas 72811.
<b>R. Lewis Urton Senior Rehabilitation Scholarship</b>	An annual grant provided by the Arkansas Rehabilitation Association to a senior major in rehabilitation science. Applications for the scholarship are received during the spring semester. Students interested in applying should contact the Director of the Rehabilitation Science program. Each applicant will be interviewed by a committee made up of members of the Arkansas Rehabilitation Association.
<b>Academic Policy for Students Receiving Federal Student Financial Aid</b>	<p>This policy applies to funds received through the Federal Pell, Supplemental Educational Opportunity (FSEOG), Academic Competitiveness (ACG) and SMART Grants, the Federal Work Study, the Federal Perkins Loan, the Federal Subsidized Stafford Loan, the Federal Unsubsidized Stafford Loan and the Federal PLUS loan programs.</p> <p>This policy will be applied automatically and without favor or prejudice, with all aid students progress being checked at the end of each fall and spring semester. Individual students will be reviewed within the semester if notification of a grade change is received by the Financial Aid Office.</p> <p>Any appeal of this policy must be made in writing to the Financial Aid Academic Policy Appeal Committee and turned in to the Financial Aid Office within thirty days of the notification of the violation. Financial aid will not be paid retroactively for any semester's lost eligibility.</p> <p>Students must meet all conditions of the policy. Violation of any section will result in loss of aid.</p>
<b>Institutional Academic Suspension</b>	Any student whose name appears on the institutional suspension list will not be eligible to receive aid for their next period of enrollment even if they do re-enroll with the approval of the Admissions Council unless summer hours earned at Tech re-establish eligibility.

It is the student's responsibility to notify the Financial Aid Office when they are no longer on the suspension list.

**First Undergraduate Degree**

A student is considered making satisfactory academic progress as a full-time student if the total credits earned (with a grade of "D" or better) are:

Number of Semesters	Minimum Hours "Earned"	Number of Semesters	Minimum Hours "Earned"
1	9	6	72
2	21	7	84
3	33	8	96
4	48	9	108
5	60	10	120

NOTE: ALL part-time students must always earn the number of hours in which they are enrolled. Incomplete, repeat and audit classes are counted as hours attempted, but do not increase hours earned. When a class is repeated the latest grades earned in 1000 and 2000 level classes will be counted in the cumulative grade point average. All grades for 3000 and 4000 level classes will count in the cumulative grade point average. If an incomplete grade is not replaced by an earned letter grade by the end of the next regular semester it will become a grade of "F" and will be considered in the next regular determination of policy progress. No special consideration of the effects of dropping classes will be allowed unless the Student Financial Aid Director is contacted for approval prior to dropping the courses. Students may use summer hours earned at Tech to fulfill the academic progress requirement. Hours earned at another institution will not meet the requirement.

**Transfer Students**

Transfer Students will be assigned an "equivalent semesters attended" based on the number of hours accepted by the Registrar's Office rounded down to the nearest quarter semester. Example: A student with fifty-four transfer hours would have "equivalent semesters attended" of 4.5 (54 divided by 12 = 4.5). It is the student's responsibility to make sure transfer transcripts are on file with the Registrar.

A student must receive a bachelor's degree by the end of six (6) years of full-time attendance or an associate's degree by the end of three (3) years of full-time attendance and a certificate by the end of one and one-half (1.5) years of full-time attendance. Allowances will be made for semesters involving required remedial course work and certificates which require more than one year. All fall and spring semesters attended will be counted whether a student received financial aid during the semester or not. Students may use summer hours earned at TECH to fulfill the academic progress requirement. Hours earned at another institution will not meet the requirement. Less than full-time semesters will be counted proportionally (See chart below).

Part-time Enrollment Chart:

Attempted Hours  
1-5 hrs = .25 semester  
6-8 hrs = .50 semester  
9-11 hrs = .75 semester  
12+ hrs = 1 semester

Students granted academic clemency will have all semesters attended counted on the basis of attempted hours and actual attendance.

**Subsequent Bachelors Degree OR Teacher Certification**

Full-time students must earn an average of twelve hours per semester; part-time students must earn the hours for which they enroll each semester. A second bachelor's degree or teacher certification must be completed by the end of three years of full-time enrollment. A second associate degree or certificate must be completed by the end of one and one-half years of full-time enrollment. If a degree is not completed within this time frame, the student may appeal and provide a memo from their advisor detailing the reasons why it was not possible for the subsequent degree to be completed in the required time frame. All hours not applicable to the subsequent degree will then be disregarded in the calculation of maximum semesters. Funds may be received for no more than three certificates, two associate degrees, two bachelors and two master's degrees.

**First Undergraduate Degree**

All students must have a minimum cumulative grade point average (GPA) of 1.0 at the end of their first semester, 1.50 at the end of their second semester, 1.75 at the end of their third semester and 2.0 at the end of their fourth and all following regular (fall and spring) semesters or "equivalent transfer semesters." Example: A student who earns 24 hours in four half-time semesters would be required to have a 2.0 at the end of the fourth semester. While a student who earns 24 hours in two full-time semesters would still have two additional semesters before a 2.0 GPA would be required. To continue on aid, this GPA must be maintained for all remaining semesters. No appeal will be granted for anyone in violation of the required cumulative 2.0 GPA.

Any student who fails to meet the required 2.0 GPA will be reinstated once the required GPA is met. However, financial aid will not be paid retroactively for any aid lost because of this requirement. It is the student's responsibility to notify the Financial Aid Office when they have attained the required GPA.

**Subsequent Credentials or Teacher Certification**

Students must maintain a 2.0 GPA each semester.

**Changing Majors**

When students change majors they are required to continue meeting all sections of this policy. If the major change causes the student to exceed the maximum number of semesters attended, they may appeal and provide a memo from their advisor detailing the hours from the previous major which do not apply to the current major. All hours not applicable to the new major will then be

disregarded and the calculation of maximum semesters. The cumulative grade point average will still be considered as the students grade point.

<b>Withdrawals</b>	<p>During each undergraduate or graduate career, a student receiving aid may completely withdraw ONE SEMESTER ONLY or receive all grades of "F" and return the next semester to receive all entitled financial aid. Upon withdrawing any additional semesters or receiving all grades of "F" while on financial aid, the student will not receive aid for their next period of enrollment. The next period of enrollment hours must be equivalent to the number of hours enrolled during the withdrawal semester. (Example: If a student withdraws a second time while enrolled in 12 hours, the student would have to pay for 12 hours before becoming eligible to receive financial aid).</p> <p>Federal regulations require a calculation to determine how much aid, if any, must be returned to the Federal program when a student withdraws or receives all grades of "F". Students who must repay funds will be notified within 45 days of the amount by the Financial Aid Office.</p>
<b>Application for Federal Student Aid</b>	<p><b>General</b> - Students use the Free Application for Federal Student Aid and list Tech as one of the schools to receive information. With the exception of Unsubsidized, Additional Unsubsidized Federal Stafford and PLUS loans, students must be financially eligible to receive funds from Federal financial aid programs.</p> <p><b>Deadline</b> - To receive equal consideration, a student must have a complete application on file by April 15. All remaining funds will be awarded on a first-come, first-serve basis until depleted. <b>Note: All requested information must be returned to the Financial Aid Office by July 15 to ensure aid availability at the beginning of the fall semester.</b></p>
<b>Federal Pell Grant</b>	<p>The Federal Pell Grant provides direct grants from the government to the undergraduate student for educational expenses. Since this is a grant program, the student does not have to repay the amounts received, unless the semester for which a grant is received is not completed.</p> <p>Under current guidelines, only students who have never received a bachelor's degree are eligible for the Pell Grant. The university does not determine whether a student is financially eligible. The amount of the grant given to an individual student is based on a schedule provided to the university by the government. No eligible student will be denied a grant.</p>
<b>Federal Academic Competitiveness Grant</b>	<p>The Federal Academic Competitiveness Grant provides up to \$750 per year to freshman students and up to \$1,300 per year to sophomore students who are also Federal Pell Grant eligible, are enrolled full time and have completed a rigorous academic program while in high school. Sophomore students must have completed a minimum of thirty hours with a 3.0 cumulative grade point average to be eligible. Students may receive this grant one time for each class level.</p>
<b>Federal SMART Grants</b>	<p>The Federal Science &amp; Mathematics Access to Retain Talent (SMART) Grant provides up to \$4,000 per year to full-time junior (60-89 earned hours) and senior (90-120 earned hours) students who are Federal Pell Grant eligible, have a 3.0 cumulative grade point average and are majoring in Computer Science, Information Systems, Information Technology, Electrical Engineering, Engineering Physics, Mechanical Engineering, Biology, Mathematics, Physical Science, Chemistry or Geology. Students may receive this grant one time for each class level.</p>
<b>Federal Supplemental Educational Opportunity Grant Program</b>	<p>The purpose of the Supplemental Educational Opportunity Grant Program is to provide additional funds to qualified students of exceptional need. Each grant is awarded according to federal guidelines.</p>
<b>Student Employment</b>	<p>The University uses student employees when practicable, but students are not encouraged to work to an extent which would hinder their scholastic program.</p> <p>Employment assignments are made under both the Federal College Work-Study Program and the institutional Non-Work-Study Program. To be eligible for student employment, the student must be enrolled at least half-time, successfully pass minimum load requirements, satisfy grade point requirements, maintain satisfactory employer-employee relations and have conduct and personal appearance that reflect credit to the student and the University.</p>
<b>Federal Perkins Loans</b>	<p>Under the program students may borrow up to \$27,500 for undergraduate students and \$40,000 for graduate students. Annual loan limits are \$5,500 for undergraduates and \$8,000 for graduates.</p> <p>The repayment period and the interest do not begin until six months after the student completes studies. The loan bears interest at the rate of five percent per year and repayment of principal may be extended over a ten-year period. The University approves and makes the loans and is responsible for collections. Repayment is deferred for as long as a borrower is enrolled at an institution of higher education and is carrying at least a half-time academic load. Under certain conditions, a part or all of the loan may be canceled if the student enters the teaching profession.</p>

**William D. Ford  
Direct Loan  
Program**

Federal regulations require a delayed disbursement of thirty days for all first-year, first-time undergraduate student borrowers in any Federal Direct Loan program. Additionally, all student borrowers must be enrolled in a minimum of six hours.

**Federal Direct  
Subsidized Loans**

The Federal Direct Loan program authorizes loans up to \$3,500 per year for first-year undergraduates, \$4,500 for second-year undergraduates, and \$5,500 per year for undergraduates who have completed two years of undergraduate work. Graduate students may borrow up to \$8,500 for a school year. The maximum an undergraduate student may borrow is \$23,000 which is included in the \$65,500 maximum for graduate students. Under this program a student must financially qualify for the loan. The loan has an interest rate of 4.5 percent through June 30, 2011. The rate will drop to 3.4 percent for the period of July 1, 2011 through June 30, 2012.

Repayment of principal and interest ordinarily begins six months after the student leaves school or ceases to be at least a halftime student. The amount of the monthly payments will be based on the total amount borrowed.

**Unsubsidized Federal  
Direct Loans**

The Federal Direct Unsubsidized Stafford Loan has the same loan limits and deferments as the Direct Subsidized Loan. However, the student does not have to be financially eligible for the loan and must either pay the interest while in school or have it capitalized for repayment with the loan principal. The total borrowed in Subsidized and Unsubsidized Direct Loans may not exceed the student's yearly maximum as shown above. The loan has an interest rate of 6.8 percent.

**Direct Federal PLUS  
Loans**

Parents of students may borrow annually the amount of the student's cost of education minus other aid for each child who is enrolled at least half time and is a dependent undergraduate student. PLUS is limited to parents who do not have an adverse credit history, and late payments on outstanding obligations are not to be considered as having adverse credit history. The interest rate is 7.9 percent, with the borrower beginning payment within sixty days of loan disbursement. Graduate students may also borrow under the PLUS loan program. They have to meet the same credit history requirements, must apply for Federal financial aid and may borrow up to the cost of attendance less other financial aid. As with the Parent PLUS, the interest rate is 7.9%.

**Additional Federal  
Direct Unsubsidized  
Loan**

Dependent students may borrow \$2,000 per year for four years. Independent students may borrow up to \$6,000 per year for the first two years of undergraduate study and \$7,000 per year thereafter with an undergraduate maximum of \$34,500. Graduate students may borrow up to \$12,000 per year with a combined undergraduate and graduate total of \$73,000. Borrowers do not have to show need but do have to apply for financial aid. The interest rate is 6.8 percent. Students are responsible for paying the interest that accrues on the loan from the time the loan is disbursed until it is paid in full but have the option to defer interest payments while in school and have the interest added to the amount borrowed.

**Mr. Tommy Memorial  
Student Loan Fund**

Arkansas Tech has a special loan fund known as the "Mr. Tommy Memorial Student Loan Fund." This fund was established by Arkansas Tech alumni as a memorial to the late E.S. Tomlinson, for many years head of the biology department. Supplementing lesser contributions by hundreds of former students is the Margaret McFadden Lykes, Jr., contribution. Loans from this fund are limited in amount and intended primarily for emergency aid to students. One semester of successful residence is required of all students applying for these loans. Information relative to this fund may be obtained from the Student Services Office.

**Dr. James I. Balch  
Student Loan Fund**

An interest-free loan to be repaid in installments of twenty percent, forty percent, and forty percent at nine, eighteen, and thirty-six month intervals. A student must be a junior or senior with a 3.0 cumulative grade point average, must demonstrate financial need, and must file a separate loan application which is available through the office of the Associate Vice President for Administration and Finance.

**Arkansas  
Department of  
Higher Education  
Programs**

The programs listed below are awarded and administered by the Arkansas Department of Higher Education. Further information may be obtained by writing to: Arkansas Department of Higher Education, 114 East Capitol, Little Rock, AR 72201, or by calling (479) 371-2000, or 1-800-547-8839 or at [www.adhe.edu](http://www.adhe.edu). The application for all programs is available on-line.

**Higher Education  
Opportunities Grant  
(GO! Opportunities  
Grant)**

The GO! Grant provides \$1000 grants to full-time and \$500 grants to part-time students based on financial need. Students must be an Arkansas resident for at least 12 months prior to applying for the grant. Students also must meet the financial need criteria established for the GO! Grant and attend an approved Arkansas Institution. Applicants must complete the Free Application for Student Aid (FAFSA). Application deadlines are June 1 and November 1.

Due to additional funding made possible by the Arkansas Scholarship Lottery, the Arkansas Academic Challenge Scholarship has been expanded to provide opportunities for higher education to previously unserved Arkansans (traditional & non-traditional students). The scholarship will be available to high school seniors and non-traditional students who are Arkansas residents. High school students are eligible if they have completed the Smart Core Curriculum with an overall grade point average of at least a 2.5 or have an ACT composite score of at least 19. Non-traditional students who graduated from an Arkansas public high school must have

**Arkansas Academic Challenge Scholarship Program**

a high school grade point average of at least a 2.5 and have an ACT composite score of at least 19 or have completed at least twelve college semester hours with a college grade point average of at least 2.5. There are no income restrictions but students still must complete the Free Application for Federal Student Aid. The application deadlines are June 1 and November 1. The scholarship award amount will be determined annually in early Spring.

**The Workforce Improvement Grant**

A need based grant for non-traditional students who are at least 24 years old. The program's goal is to help those students returning to school who have financial need but might not be eligible for assistance from traditional state and federal programs. The annual award is a maximum of \$2,000 for a student enrolled full time (12 semester hours), but may be less in order to prevent an overaward as defined by Federal regulations. Students enrolled part time will have their grants prorated based on the number of hours enrolled. Because the grants are not renewable, students must apply each year. To apply, fill out the FAFSA by July 1 of each year.

**The State Teacher Education Program (STEP)**

The State Teacher Education Program (STEP) provides Federal student loan repayment grants of up to \$7,000 to Arkansas residents who earned a teaching degree after 4/1/2004, are teaching in a public school in a geographical and/or subject shortage area or who are minorities. Application deadline is June 1.

**Governor's Scholars Program**

The Governor's Scholars Program provides \$4,000 merit grants each year to seventy-five of Arkansas' academically superior high school graduates in order to assist them in their undergraduate studies at approved colleges or universities in Arkansas. The scholarship is renewable for up to three additional years provided the student meets the continuing eligibility standards. Applications should be submitted prior to February 1 of high school graduation year.

**Governor's Distinguished Scholars**

The Governor's Distinguished Scholars Program provides a tuition, mandatory fees, and room and board not to exceed \$10,000 per year to students who achieve 32 or above on the ACT or 1410 on the SAT or are a National Merit Finalist attending an approved Arkansas public or private college or university. The scholarship is renewable for up to three additional years provided the student meets the continuing eligibility standards. Application deadline is February 1 of high school graduation year.

**Law Enforcement Officer's Dependents Scholarship**

The Law Enforcement Officers' Dependents Scholarship (LEO) provides a waiver of tuition, fees, and room at any public college, university, or technical institute in Arkansas for dependents and spouses of Arkansas law enforcement officers, some Highway and Transportation Department employees, and other public employees, who were killed or permanently disabled in the line of duty. Application deadlines are June 1 and November 1.

**Military Dependent's Scholarship**

The Military Dependent's Scholarship Program provides a waiver of tuition, fees, and on-campus room and board to full-time students at any public college, university, or technical institute in Arkansas for dependents and spouses of Arkansans who were killed or missing in action or who were prisoners of war or who are totally and permanently disabled. All applicants must also apply for and show acceptance or denial of the Federal dependent's Educational Assistance Program. Application deadlines are June 1 and November 1..

**Teacher Opportunity Program (TOP)**

The TOP program offers reimbursement grants to cover tuition and fees for up to six hours per fiscal year to current Arkansas teachers seeking to further their education..

**Arkansas National Guard Tuition Incentive Program (G-TIP)**

The Arkansas National Guard Tuition Incentive Program (G-TIP) provides up to \$5,000 per year to Arkansas residents who are active members of the Arkansas Army/Air National Guard. Applications may be obtained from the unit commander or online at <http://www.arguard.org/Education/ta.asp>

**Other Sources of Assistance****Military Activation**

Students who cease attendance at Arkansas Tech University without completing and receiving a grade in one or more courses due to military activation or deployment may receive compensation for the resulting monetary loss as provided by Act 85 of 2005. Please contact the Registrar's Office for information.

**Arkansas National Guard** Act 82 of 2005 provides a tuition and waiver assistance program for soldiers and airmen of the Arkansas National Guard. Members of the Arkansas National Guard should contact the Student Accounts Office for information.

**Over 60 Tuition Waiver** Students who are sixty or older on the first day of class may have tuition and fees waived upon completion of certification of eligibility. Students must notify the Financial Aid Office each semester of the number of enrolled hours which need to be waived. Applications are available in the Financial Aid Office.

**Workforce Investment Act** The Workforce Investment Act is a federal program which provides financial assistance to individuals in need. The program's primary targets are individuals with barriers to employment and dislocated workers. Candidates who meet eligibility requirements will receive tuition and book scholarships for two years to complete an associate degree at Arkansas Tech University. WIA is an equal opportunity employer/program. Auxiliary aids and services are available upon request to individuals with disabilities. Requests for information about eligibility may be made through the WIA office, 104 S. Rochester, Russellville, AR 72801; telephone 968-4919; TDD/ARS: 1-800-285-1131.

**Vocational Rehabilitation Assistance** Persons who have substantial handicap to employment as a result of a permanent disability may receive, at no cost to themselves, vocational counseling and some financial assistance toward the cost of their college training when the vocational objective of the disabled person is approved by the Vocational Rehabilitation Counselor. These services are available through the Division of Rehabilitation Services, 1401 Brookwood Drive, Little Rock, Arkansas 72203. Application for assistance or request for information about the program may be made to that address or to a local rehabilitation counselor.

**Veterans Benefits** Arkansas Tech University is approved by the State Approving Agency for Veterans as a school (college, university, etc.) whereby veterans and dependents of deceased or disabled veterans may obtain subsistence while working toward a degree. Eligible students should contact the Office of the Registrar to obtain information regarding school attendance under the following program: Title 38, Chapter 30, Montgomery GI Bill for Veterans; Title 38, Chapter 32, Veterans Educational Assistance Program (VEAP); Title 38, Chapter 35, Survivors and Dependents Education; Title 10, Chapter 1606, Montgomery GI Bill for Selective Reserves; and Title 10, Chapter 1607, Reserve Educational Assistance Program.

All students must be working toward a degree and should follow the curriculum outline for their objectives, since only specific courses may be applied toward VA certification and graduation. Veterans may be given placement credit for prior military training. The Office of the Registrar is available to assist students concerning VA benefits. The Office of the Registrar is located in the Doc Bryan Student Services Center, Office 153.

Enrollment certification will not be sent to the Department of Veteran's Affairs until transcripts are on file and the person applying for veteran's benefits has been admitted to the University.

**Activities and Organizations** Arkansas Tech University is exceptionally rich in the number of activities and organizations offered to its students. There are few members of the student body who do not take part in one or more of these activities.

Activities, except the all-university events sponsored by the Student Activities Board and Intramural & Recreational Sports, revolve around a large number of active student organizations which link together students with kindred tastes and interests.

The purpose and operation of the student organizations may be found in the current Arkansas Tech University Student Handbook.

Interfraternity Council Panhellenic Council  Alpha Kappa Delta Alpha Psi Omega Beta Beta Beta Beta Gamma Sigma Delta Sigma Omicron Honor Society for Nursing Kappa Kappa Psi Kappa Pi International Honorary Art Fraternity Phi Alpha Theta	<b>Governmental</b>  Residence Hall Association Student Government Association
	<b>Honorary Professional</b>  Phi Beta Lambda Phi Mu Alpha Sinfonia Pi Kappa Delta Psi Chi Rho Phi Lambda Sigma Alpha Iota Sigma Tau Delta Tau Beta Sigma
	<b>Honorary Service</b>  Order of Omega Phi Eta Sigma Student National Education Association
	<b>Religious</b>  Missionary Baptist Student Fellowship Oasis Campus Ministry Tech Fellowship United Campus Ministries Wesley Foundation Young Life ZOE Student Ministries
Alpha Chi Alpha Phi Omega Gamma Sigma Alpha  Baptist Collegiate Ministry Campus Ministry International Catholic Campus Ministry (St Leo's) Chi Alpha Church of Christ Student Center Excel Student Ministry Lutheran Student Fellowship	<b>Social</b>  Phi Beta Sigma Phi Lambda Chi
Alpha Gamma Sigma Alpha Phi Alpha	

Delta Zeta	Phi Mu
Kappa Sigma	Sigma Phi Epsilon
	Zeta Tau Alpha
	<b>Special Interest</b>
Accounting Club	Institute of Electrical and Electronic Engineers
Agri Club	International Emergency Management Student Association
Air Conditioning Engineers Inc. (ASHRAE)	Japanese Animation Brigade
American Society of Heating Refrigerating	Japanese Student Association
American Choral Directors Association	Marketing Club
American Society of Mechanical Engineers	Math Club
Association for Cultural Interaction	Medical Assistant Association
ATU Computer and Information Science Club	National Science Teacher Association
ATU Cycling Club	Non-Traditional Students Organization
ATU Fishing Club	Physics Club
ATU Kenjutsu Club	Pre-Law Society
ATU Paddler' Club	Pre-Med Club
ATU Recreation and Parks Club	Public Relations Student Society of America
Behavioral Science Club	ROTC Army Reserve Officer Training Corp.
Black Student Association	Roll Play Gamers of ATU
Campus Environmental Coalition	Rotaract Club
Chemistry Club	Society of Automotive Engineers
Chess Club	Society of Professional Journalists
Chinese Student Association	Solar Racers Club
College Republicans	Spanish Club
College Student Personnel Association	STRIDE
Collegiate Middle Level Association	Student Activities Board
Collegiate Music Educators National Conference	Student Health Information Management
CREW	Student Nursing Association
Ducks Unlimited	Students in Free Enterprise
Engineering Society	Tech Computer Graphics Society
Fisheries and Wildlife Society	Tech Sweethearts
Geology Society (Arkansas Tech Geological Society)	Theatre Guild
Health and Physical Education Wellness Science Club	United Voices Gospel Choir
Hispanic Student Association	Unity for Community
History, International Relations, Political Science and Philosophy	Up "til Dawn
Hospitality Society	Upward Bound Alumni Society
Hull - Hughes Collegiate FFA	Visual Arts Association
Indian Student Association	Young Democrats
	<b>University Recognized Groups</b>
Brass Choir	Jazz Band
Chamber Choir	Marching Band
Cheerleaders	Orchestra
Choir	Presidential Leadership Cabinet
Concert Band	Student Publications Arka-Tech (newspaper)
Concert Chorale	Symphonic Band
Golden Girls Dance Team	

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## Regulations and Procedures

All students must give prompt attention to communications from faculty and staff members of the University. Most communications will be sent through the United States mail or to your official Tech e-mail address.

### Academic Dishonesty

In addition to taking reasonable steps to discourage cheating, the faculty must accept a responsibility to clarify and interpret for the students matters of dishonesty, such as cheating or plagiarism.

If an occurrence of academic dishonesty is detected, the instructor should refer to the "Student Academic Conduct Policies" outlined in both the Student Handbook and the Faculty Handbook for the appropriate procedures. The policies also outline procedures to appeal a charge of academic dishonesty if the student feels the charge was inappropriate.

### Academic Misconduct

The faculty must also accept a responsibility to clarify and interpret for the students matters of academic misconduct which concerns the student's classroom behavior. For example, students may disrupt the learning environment in a classroom through inappropriate behavior, such as, talking to students, unnecessary interruptions, attempting to monopolize the professor's attention, or being chronically late to class. Misconduct also covers verbal or nonverbal harassment and/or threats in relation to classes. Student behavior should not infringe on the rights of other students or faculty during a class.

If an occurrence of academic misconduct is detected, the instructor should refer to "Student Academic Conduct Policies" outlined in both the Student Handbook and the Faculty Handbook for the appropriate procedures. The policies also outline procedures to appeal a charge of academic misconduct if the student feels the charge was inappropriate.

Involvement in such activities as conspiracy or breaking and entering is to be reported to the Vice President for Student Services for appropriate action through regular University disciplinary channels.

### Academic Probation

Students will be placed on academic probation whenever their semester grade point falls below 2.00 unless the cumulative grade point is 2.00 or higher. These criteria also apply to entering transfer students. Removal of probation will be accomplished by raising the cumulative grade point to 2.00 or higher.

Freshmen students who in a probationary semester fail to remove themselves will continue on probation for the following semester. Sophomore, junior, and senior students who in a probationary semester fail to remove themselves but achieve a 1.75 semester grade point will continue on probation for the following semester unless the academic suspension policy applies.

### Academic Suspension

Suspension will be automatic for sophomore, junior and senior students who in a probationary semester fail to achieve a 1.75 semester grade point; or who fail to remove themselves from probation within three successive full semesters. Students may combine summer term grades at Arkansas Tech with those of the spring semester immediately preceding in order to establish eligibility for retention in college.

Suspension means that the student will not be allowed to attend Arkansas Tech the succeeding regular semester; after one regular semester the student may be eligible for readmission on academic probation. Students receiving a second academic suspension will be eligible to seek readmission one year from the date of suspension. Students who believe there are extenuating circumstances which would justify earlier readmission must contact the Registrar's Office for assistance in arranging an appeal hearing with the appropriate college dean. Students who meet the semester/year stipulation must file a request for readmission with the Registrar's Office.

Students on academic suspension who wish to transfer to Arkansas Tech must meet the eligibility standards for readmission to the last college/university attended before being considered for admission to Tech.

### Adding/Dropping Courses

The deadline for adding courses or changing courses or sections is given in the University calendar; thereafter, changing to audit or dropping a course are the only changes permissible. Courses officially dropped after the 11th class day and through the thirteenth week of a fall or spring semester will be recorded as "W." Students may add, drop, or change sections of courses only by following the official procedure which requires that they obtain and return the necessary forms to the Registrar's Office after obtaining the formal approval of their academic advisor. Failure to complete this procedure can result in a grade of "F" being entered on the student's record. A fee of \$10 will be charged except for changes made for the convenience of the University. Please note: A student accumulating an excessive number of absences in a course may be dropped from the course by the instructor with a grade of "FE."

### Auditing Courses

Auditing of courses requires official admission to the University, approval by the instructor involved, and payment of the regular fee for the course. Audit will be on a "space available" basis. Students auditing courses are subjected to the same regulations as other students with regard to registration and attendance, but they do not take examinations nor receive credit for the course. A student

accumulating an excessive number of unjustifiable absences in an audited course may be administratively withdrawn at the request of the instructor. Students may change from taking a course for credit to audit during the first thirteen weeks of the semester. Students enrolled for audit who do not wish to complete the course(s) must complete official drop/withdrawal procedures stated in this section of the catalog.

**Class Absence**

Regular class attendance is considered essential if students are to receive maximum benefit from any course. Control of class attendance is vested in the teacher, who has the responsibility of defining early in each course his/her standards and procedures. A student accumulating an excessive number of unjustifiable absences in a course may be dropped from the course by the instructor with a grade of "FE." A student who is dropped from three courses in a semester for unsatisfactory class attendance may be immediately suspended.

**Class Load Policy**

A student can expect to spend 2-3 hours outside the class (for studying, homework, preparation, etc.) for each hour in the class. This means that a student can expect to spend 24-36 hours in studying for a 12 semester credit hour load. It is therefore recommended that a full-time student enroll in no more than 18 hours per semester (7 hours per summer session). Students working full-time are encouraged to take no more than 12 hours per semester. Students readmitted after academic suspension cannot take more than 12 hours per semester (3 hours per summer session). Students on academic probation must obtain approval from their advisor to enroll in more than 15 hours per semester.

These totals include all courses for which students may enroll. Permission to take course loads above these maximums must be obtained in advance of registration from the dean of the college of the student's major.

**Course Overload**

Students who enroll above the maximum loads without securing permission from the dean will be dropped from their classes. To be considered for a course overload, the student must submit a petition to the dean and should meet the following criteria:

1. Have a 3.25 minimum grade point average in the preceding two summer sessions (minimum: 12 semester hours) or in the preceding fall or spring semester (minimum: 12 semester hours) at the university, or
2. Be in good academic standing in the college if in the last semester before graduation.

The maximum overload permitted in any college by an approved petition is a load totaling 24 hours for a fall or spring semester, nine hours in summer session I or II, and 15 hours for any combination of summer enrollments. Overloads over 21 hours will be subject to review by the Office of Academic Affairs.

**Class Standing**

Students with fewer than 30 semester hours are classified as freshmen, students with 30 through 59 semester hours as sophomores, students with 60 through 89 hours as juniors, and students with at least 90 hours as seniors.

**Clemency**

In accordance with Act 1000 of 1991, a student who has not attended Arkansas Tech University for a period of at least three years may apply to have the grades and credits for one or more consecutive terms or semesters earned prior to the three year separation removed from his/her grade point average. Any undergraduate student who has previously attended Arkansas Tech University may qualify to request academic clemency providing the following criteria are met.

After re-entering Tech following a separation of at least three years, a student may request academic clemency at the Office of the Registrar for approval by the Vice President for Academic Affairs. The student must specify the term or consecutive terms for which academic clemency is desired. Any petition for academic clemency must be requested and granted prior to the beginning of the second semester of enrollment after returning to Tech. Academic clemency may be granted only one time and is irreversible. If the request is approved, Academic Clemency will cover all credits earned during the term or terms for which academic clemency is requested. The student's complete record will remain on the transcript with the added notation of "academic clemency granted" and the effective date.

For purposes of degree requirements, a student who received academic clemency must follow the provisions of the catalog in effect at the time of re-enrollment.

Academic clemency does not restore eligibility for student financial aid, scholarships or athletic eligibility.

**Conduct**

Arkansas Tech University expects its students to obey all the policies of the university and all federal, state and local laws. Each student, as a member of the Tech community, assumes an obligation to obey all rules and regulations made by properly constituted authorities. Failure to comply can result in disciplinary actions which may include disciplinary probation, suspension for a stated period of time, or expulsion which is permanent forced withdrawal. Conduct for which a student is subject to disciplinary action is published in the Student Handbook available in the Office of Student Services and in other official publications of Tech.

**Dean's List**

Undergraduate students whose grade point at the end of each semester is 3.50 or better, based on a minimum of 12 semester hours of work, will be placed on the Dean's list for outstanding scholarship. Recognition will be accorded these students through appropriate news media.

The Family Educational Rights and Privacy Act (FERPA) affords student's certain rights with respect to their education records. They are:

**Family Educational Rights and Privacy Act**

1. The right to inspect and review the student's education records within 45 days of the day the University receives a request for access. Students should submit to the Registrar, dean, head of the academic department, or other appropriate official, written requests that identify the record(s) they wish to inspect. The University official will make arrangements for access and notify the students of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

2. The right to request that the student's education records that the student believes are inaccurate or misleading be amended.

Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want changed, and specify why it is inaccurate or misleading.

If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

3. The right to consent to disclosures of personally identifiable information contained in the student's education records, except to the extent that FERPA authorizes disclosure without consent.

One exception which permits disclosures without consent is disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic, research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted (such as an attorney, auditor, collection agent, or internship agreement); a person serving on the Board of Trustee; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

4. The right to file a complaint with the U.S. Department of Education concerning alleged failures by Arkansas Tech University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Compliance Office  
U.S. Department of Education  
600 Independence Avenue, SW  
Washington, D.C. 20202-4605

"Directory information" at Arkansas Tech University consists of the student's name, address, telephone listing, electronic mail address, dates of attendance<sup>1</sup>, major field of study, enrollment status (e.g. undergraduate or graduate), participation in officially recognized activities and sports, weight and height of members of athletic teams, degrees, honors and awards received, and the most recent educational agency or institution attended.

This information may be made available upon request to members of the general public. If a student on the Russellville campus wishes for this information to be regarded as confidential, according to the provisions of the Family Educational Rights and Privacy Act of 1974, she/he should notify the Vice President for Students Services at (479) 968-0238.

If a student on the Ozark campus wishes for this information to be regarded as confidential, according to the provisions of the Family Educational Rights and Privacy Act of 1974, she/he should notify the Chief Student Officer at (479) 508-3310.

<sup>1</sup>Dates of attendance means the period of time during which a student attends or attended an educational agency or institution. Examples of dates of attendance include an academic year, a spring semester, or a first quarter. The term does not include specific daily records of a student's attendance at an educational agency or institution.

**Grading**

Final grades are reported to the Registrar's Office at the end of the semester. Midterm grades are reported for freshmen only. A final grade of "I" may be recorded for a student who has not completed all the requirements of a course only in situations where the student has an illness or other circumstances beyond the student's control, and has completed seventy-five percent of the course requirements provided work already completed is of passing quality. If a grade of "I" is assigned, the instructor will set a reasonable time limit within the following semester in which the work must be completed. Beginning the first summer term, 1990, and thereafter, a grade of "I" will not be computed in the grade point average for the semester recorded; however, the "I" will be automatically changed to a grade of "F" for grade and grade point purposes at the end of the next regular semester (fall or spring) unless course requirements are completed and the final grade is reported before the end of the semester. A grade of "I" recorded prior to the first summer term, 1990, will be computed as an "F" for grade point purposes.

No grade other than "I" may be changed after it is recorded except if an instructor finds that a grade has been erroneously recorded. The instructor may correct the grade by submitting a written request and explanation of the error to the Vice President for Academic Affairs.

Grade points are awarded on the basis of: A, 4 points; B, 3 points; C, 2 points; D, 1 point; F, 0 points.

**Graduation**

Please refer to the section entitled "[Graduation Requirements](#)" for information pertaining to degree audit, application for graduation, payment of graduation fees, and other graduation requirements.

**Late Registration**

For registration during the period stated in the University Calendar as late registration, a fee of \$25 is charged.

**Repeated Courses**

Students may repeat courses they have taken at Arkansas Tech University for the purpose of grade point adjustments (1) only by re-enrolling in the same courses at Arkansas Tech University and (2) subject to the following provisions. For repeated 1000- and 2000-level courses, only the grade from the last attempt of the repeated course is calculated into a student's cumulative grade point although all grades and all attempts are recorded on the student's academic record. For repeated 3000- and 4000-level courses, all grades for repeated courses are calculated into the student's cumulative grade point and all attempts of the repeated course are

recorded on the student's academic record. Adjustments to cumulative grade points are not made for courses transferred from other colleges or universities.

**Student Records**

Student academic records are maintained in the Office of the Registrar. Unofficial copies of academic records are available for guidance purposes to students and their advisors. All student records are maintained in compliance with the standards and guidelines of The Family Educational Rights and Privacy Act of 1974, Federal Law 93-380.

**Traffic Regulations**

By authority of the Board of Trustees and in accordance with Legislative Act 328, 1967, Arkansas Tech University requires all members of the faculty, staff, student body and classified personnel to register motor vehicles which they own or operate on the Tech campus or on lands controlled by the University. All registrants shall abide by all traffic and parking regulations as outlined by a printed pamphlet available in the Doc Bryan Student Services Building or at the Department of Public Safety office.

Registration of vehicles shall be accomplished at the time of regular registration for the fall, spring or summer semesters at the Department of Public Safety located at 1511 North Boulder. All faculty, staff and students must present a current Tech ID card before a permit will be issued. All vehicles on Tech campus are required to register and display a current parking permit. Parameters for the operation and parking of motor vehicles may be viewed on the campus map available at the Department of Public Safety. Vehicles are defined as any self-propelled vehicle having two or more wheels.

Permits are valid from August 15th one year through August 15th of the next year. After securing a permit at the Department of Public Safety, charges are assessed to the student's account at the Office of Student Accounts. Faculty and staff are required to prepay and bring their receipt along with their ID when picking up their permit. Permits must be displayed by hanging in the rear view mirror so the number can be read through the front windshield from the outside; they may not be taped on the vehicle or laid on the dash or seat. These permits can be moved from vehicle to vehicle. Permits are the responsibility of the purchaser and must be removed prior to sale or transfer of the vehicle, upon termination of employment or withdrawal from the university. Only one permit per individual can be purchased unless the prior permit was lost or stolen. The reported lost or stolen permit will be invalid. There is no refund for permit cost. The registration fee, penalties and fines are published in the ATU parking map.

Temporary permits are available at the Department of Public Safety for faculty, staff and students who have misplaced their permits. These permits are provided at no cost and are valid for a maximum of seven days.

**Withdrawals**

A student who wishes to withdraw from school during a semester is required to follow the official withdrawal procedure which requires reporting to the Office of the Registrar. Students who withdraw without following this required procedure will have their grades recorded as "F." If a student withdraws officially, the procedure for recording grades is identical with that for dropping an individual course, as described in this section under the heading "Adding/Dropping Courses." If a student withdraws from school during the final two weeks of a semester, the Vice President for Academic Affairs may waive the requirement that grades of "F" be recorded if the circumstances forcing a withdrawal justify special consideration.

**University Policy**

While every effort will be made to conform to catalog announcements, the University reserves the right to adapt its program as may be necessary.

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## COURSE CATALOGS

[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)

### Curricula

The following abbreviations are used in describing curricula listed in this catalog.

College of Applied Sciences (AS)	
AGAS	Agricultural Animal Science
AGBU	Agricultural Business & Economics
AGEG	Agricultural Engineering/ Mechanization
AGPM	Agricultural Pest Management
AGPS	Agricultural Plant Science
AGSS	Agricultural Soil Science
COMS	Computer and Information Science
CUL	Culinary Management
ELEG	Electrical Engineering
EAM	Emergency Management
HA	Hospitality Administration
MCEG	Mechanical Engineering
RP	Recreation & Park Administration

College of Arts and Humanities (AH)	
AMST	American Studies
ANTH	Anthropology
ART	Art
CHIN	Chinese
CJ	Criminal Justice
ENGL	English
FR	French
GEOG	Geography
GER	German
GRK	Greek
HIST	History
ITAL	Italian
JOUR	Journalism
JPN	Japanese
LAT	Latin
MUSM	Museum
MUS	Music
PHIL	Philosophy
POLS	Political Science
PSY	Psychology
READ	Reading
RS	Rehabilitation Science
RUSS	Russian
SOC	Sociology
SPAN	Spanish
SPH	Speech
TESL	Teaching English as a Second Language
TH	Theatre

College of Business (BA)	
ACCT	Accounting
BUAD	Business Administration
BLAW	Business Law
ECON	Economics
FIN	Finance
MGMT	Management
MKT	Marketing
VOBE	Vocational Business Education

  

College of Education (ED)	
CSP	College Student Personnel
DE	Driver Education
ECED	Early Childhood Education
EDFD	Educational Foundations
EDMD	Educational Media
HLED	Health Education
LBMD	Library Media
MLED	Middle Level Education
PE	Physical Education
SEED	Secondary Education
WS	Wellness Science

College of Natural and Health Sciences (NHS)	
AHS	Allied Health Science
BIOL	Biology
CHEM	Chemistry
FW	Fisheries & Wildlife Science
GEOL	Geology
HIM	Health Information Management
MATH	Mathematics
MEDT	Medical Technology
NUR	Nursing
NURN	Nursing for Registered Nurses
PHSC	Physical Science
PHYS	Physics

  

College of Professional Studies and Community Outreach (PS)	
ECE	Early Childhood Education (Associate Degree only)
Inter-College Areas	
MS	Military Science
TECH	University Orientation

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**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**Graduation Requirements**

Major fields of study leading to a bachelor degree are offered in accounting, agriculture business, art, art education, biology, business education, chemistry, computer science, creative writing, creative writing education, early childhood education, economics and finance, electrical engineering, emergency management, engineering physics, english, english education, fisheries and wildlife biology, foreign language, foreign language education, general studies, geology, health and physical education, health information management, history, hospitality administration, information systems, international studies, journalism, life and earth science education, management and marketing, mathematics, mathematics education, mechanical engineering, medical technology, middle level education, music, music education, nursing, physical science, physical and earth science education, political science, professional studies, psychology, recreation and park administration, rehabilitation science, social studies education, sociology, speech, and speech education.

Associate degrees are offered in criminal justice, culinary management, early childhood education, general studies, information technology, medical assistant and nuclear technology.

Students have a choice of the catalog under which they may complete graduation requirements. Non-transfer students must choose to complete requirements for graduation under the provisions of the Arkansas Tech University catalog in force at the time they enter Tech or in any subsequent Arkansas Tech catalog provided they were enrolled at the University during the year the catalog was in effect. Transfer students must choose to complete graduation requirements under the provisions of the Arkansas Tech catalog in force at the time they first enrolled in any college or any subsequent Arkansas Tech catalog, provided the Tech catalog was not over four years old at the time they entered Arkansas Tech, and they were enrolled in college either at Tech or elsewhere during the year in which the catalog was in effect. **The catalog a student selects to use to complete degree requirements may require departmental approval and approval of the Registrar's Office if significant curriculum changes have occurred.** For effective use of the results of its constant reexamination of student needs and as a means for improving its total educational program, the University reserves the right to make effective immediately any change in graduation requirements for students whose studies have not advanced beyond the level at which the change becomes operative.

**Degree Audit and Application for Graduation**

Candidates for graduation must complete a degree audit and an application for graduation. Seniors completing graduation requirements at the end of the fall semester must submit to the Registrar's Office an application for graduation and complete a degree audit in consultation with their advisor on or before the end of the eighth week of the previous fall semester. Seniors completing graduation requirements at the end of the spring semester or either of the following summer sessions must submit an application for graduation and complete a degree audit in consultation with their advisor on or before the end of the eighth week of the previous spring semester.

Students who file an application for graduation but fail to complete all graduation requirements as planned must submit a new degree audit and new application for graduation.

**Degree Audit Processing Fee**

A processing fee, payable at the Student Accounts Office, is assessed when the application for graduation is approved. If the student fails to complete all graduation requirements, an additional processing fee will be assessed for the next semester or term in which graduation is planned.

**Financial Obligation**

Before any transcript is issued, the student must have paid any debt owed the University.

**Graduation Honors**

The bachelor's degree with honors will be conferred upon candidates who at graduation have earned a minimum grade point average on all courses taken at Arkansas Tech as follows: Summa Cum Laude-3.900 - 4.000, Magna Cum Laude-3.700 - 3.899, Cum Laude-3.500 - 3.699. Graduation honors will be determined by work taken at Arkansas Tech only. The associate degree with honors will be conferred upon candidates subject to the grade point average criteria listed above. **This policy is effective to new students enrolling in the first summer term, 2000, and subsequent terms. Previously enrolled students should contact the Office of the Registrar for clarification of the policy.**

**Commencement Participation**

Students must complete all degree requirements prior to participating in the December, May, or August commencement ceremonies. Students completing all degree requirements in the fall semester will participate in the December commencement ceremony; spring semester will participate in the May commencement ceremony; and summer terms will participate in the commencement ceremony held in August. Students will not participate in the commencement ceremony if all degree requirements are not completed prior to the ceremony. Students not completing all requirements will participate in the next scheduled commencement ceremony providing all degree requirements are met. Students taking courses at other institutions must have official transcripts submitted to the Registrar's Office and have completed all degree requirements prior to the commencement ceremony to be allowed to participate.

Participation in commencement is expected of all candidates for degrees. Students who are unable to participate may officially petition the Vice President for Academic Affairs in writing for permission to have the degree awarded in absentia.

Students who do not have a minimum grade point of 2.00 in the major and overall will not be eligible to participate in the commencement ceremony.

Academic regalia shall be worn by the student during the graduation ceremony (see University Bookstore). The academic regalia will consist only of the cap and gown. No decorations, writings, necklaces, braids, pins, cords, medallions or other items other than the Arkansas Tech University Honors cord and medallion shall be worn or placed on the academic regalia.

Diplomas are mailed to graduates following commencement.

### Requirements for Baccalaureate Degrees

In compliance with Act 1014 of 2005, Arkansas Tech University has developed guaranteed, eight-semester degree completion plans for most of the baccalaureate degree programs offered by the institution. Incoming freshmen, beginning with fall, 2005, may elect to participate in these plans, which are published in a Freshmen Catalog Supplement and are accessible on the Tech website.

#### A. Residence

1. The last 30 semester hours of work toward a degree must be done in residence.
2. No more than a total of 30 semester hours of correspondence, extension, military service, or credit by examination work may be applied as credit towards a degree.

#### B. Hours of Credit and Grades

1. At least 124 semester hours (excluding pre-college level courses) must be successfully completed.
2. The cumulative grade point average must not be less than 2.00 and not more than 25 percent of the semester hours may carry the "D" grade. Students must have a 2.00 grade point in their major and a 2.00 grade point in their minor, if applicable.
3. At least 40 semester hours must be in junior and senior courses, preferably more.
4. No more than four semester hours of activity credit (basic military science and those courses that may be used to meet the General Education activity requirement) may be counted toward graduation. The only exception is that a student may have the standard allowance of military credit (three hours of military science and three hours of PE credit) and four other hours of activity credit for a total of ten semester hours. A student registering for an activities course in excess of these limits receives no credit for the additional course and the grade is not included in the computation of grade point.
5. Only six hours of freshman English composition may be used to satisfy degree requirements.
6. A transfer student must present a minimum of six semester hours in junior-senior courses taken at Arkansas Tech University in the major in which the degree is to be granted.
7. A student finishing two baccalaureate degrees concurrently must successfully complete a minimum of 154 semester hours (excluding precollege level courses) and all requirements for each degree. An additional \$25.00 degree audit processing fee will be charged for the second diploma.
8. For non-business majors, no more than 30 hours of courses offered by the College of Business may be counted towards completion of degree requirements.

#### C. General Education Requirements

To meet the need for all students to have educational experiences which broaden their knowledge of the arts, humanities, and sciences, all curricula are designed to include basic courses in these areas. Students should refer to the curriculum in their major area of study for specific courses either recommended or required by the academic department to fulfill the general education requirements (see "English - 6 hours").

#### D. Competence in English, Mathematics, and Reading

Each candidate for a baccalaureate degree is required to demonstrate the ability to write English clearly and correctly by completing the freshman composition courses (ENGL 1013 or 1043 and ENGL 1023 or 1053) with a grade of "C" or better. A student who receives a grade of "D" or "F" in English 0303, 1013, or 1043 must repeat the course to earn a grade of "C" or better before enrolling in the next course of the English sequence. The same criteria apply to transfer students.

A student who is placed in READ 0103 must earn a grade of "C" or better in the course or receive a departmental waiver to complete the reading requirement.

Students showing evidence of deficiency in mathematics will be counseled to enroll in appropriate remedial courses. All students must earn a grade of "C" or higher in the course used to satisfy the general education mathematics requirement.

#### E. Examination for Education Majors or Teacher Candidates

Section 1 (b) of Act 5 of the first Special Extraordinary Session (1983) of the Arkansas General Assembly stipulates: "After July 1, 1984, all colleges and universities in this State shall require persons who are education majors or teacher candidates to take the examination prescribed by the State Board of Education for initial certification as a teacher in the public schools of this State and to report the results of the examination to the college or university prior to graduation. All colleges and universities in this State shall report the results of the examinations to the Department of Education upon request."

#### F. Complete all assessment activities required by the University.

G. An official record of any correspondence or transfer work completed at another institution must be on file in the Registrar's Office prior to the end of the semester or term in which graduation is planned.

### Requirements for a Minor

Arkansas Tech University offers 33 minors with requirements varying from 17-21 semester hours. In order for the minor to be awarded a student must earn a 2.0 grade point average in the courses used to complete the minor. A minimum of 6 semester hours must be taken in residence and the same catalog must be used to complete requirements for both the major and the minor. Only one minor can be recognized on your transcript. Specific requirements for each minor are stated in the respective sections of this catalog.

The requirements for the associate degree in medical assistant are outlined under the statements of the College of Natural and Health Sciences; requirements for the associate degrees in information technology and nuclear technology are outlined under the statements of the College of Applied Sciences; and requirements for the associate degree in early childhood education is outlined under the statements of the College of Professional Studies and Community Outreach. The requirements for the associate degree in

**Requirements for Associate Degrees**

general studies are outlined under the statements of the College of Arts and Humanities. In addition to completing the necessary hours prescribed, candidates for associate degrees must meet the following requirements:

**A. Residence**

1. The last 30 semester hours of work toward a degree must be done in residence.
2. No more than a total of 30 semester hours of correspondence, extension, military service, or credit by examination work may be applied as credit towards a degree.

**B. Hours of Credit and Grades**

1. Refer to major field of study for semester hour requirements.
2. The cumulative grade point average must not be less than 2.00 and not more than 25 percent of the semester hours may carry the "D" grade. Students must have a 2.00 grade point in their major.
3. At least 20 semester hours of course work above the 1000 level are required for the degree of Associate of Arts in General Studies.
4. No more than four semester hours of activity credit (basic military science and those courses that may be used to meet the General Education activity requirement) may be counted toward graduation. The only exception is that a student may have the standard allowance of military credit (three hours of military science and three hours of PE credit) and four other hours of activity credit for a total of ten semester hours. A student registering for an activities course in excess of these limits receives no credit for the additional course and the grade is not included in the computation of grade point.
5. Only six hours of freshman English composition may be used to satisfy degree requirements.
6. Complete all assessment activities required by the University.
7. An official record of any correspondence or transfer work completed at another institution must be on file in the Registrar's Office prior to the end of the semester or term in which graduation is planned.

**Requirements for Additional Degrees****Baccalaureate Degrees**

To complete an additional baccalaureate degree, the following must be completed: (a) a minimum of 30 semester hours (18 of which must be upper division) at Arkansas Tech in addition to the hours earned for the first degree, (b) all University catalog requirements for the major field of study with the exception of the university-wide general education requirements, (c) applicable requirements specified under "Requirements for Baccalaureate Degrees". Students pursuing a second baccalaureate degree must use the Arkansas Tech University catalog in effect at the time they first enroll subsequent to receiving the first degree or any subsequent Tech catalog provided they were enrolled at the University during the year the catalog was in effect.

**Associate Degrees**

To complete an additional associate degree, whether the first degree is a bachelor or associate, the following must be completed: (a) a minimum of 30 semester hours at Arkansas Tech in addition to the hours for the first degree, (b) all University catalog requirements for the major field of study, (c) applicable requirements specified under "Requirements for Associate Degrees".

Students pursuing an associate degree must use the Arkansas Tech University catalog in effect at the time they first enroll or any subsequent Tech catalog provided they were enrolled at the University during the year the catalog was in effect.

**Assessment Program**

Arkansas Tech University began systematically assessing student learning in 1994 with the creation of two university-wide assessment plans. The first focused upon General Education and implemented guidelines of the State Board of Higher Education as required by legislative Act 874 of 1993. The second plan related to all academic programs and support offices in response to new initiatives of the Higher Learning Commission of the North Central Association of Colleges and Schools.

The University's initial efforts to assess General Education began in 1995 with the administration of tests to eligible students. While useful information was gleaned from such tests, university faculty devised a more comprehensive assessment plan in 2007. The new plan included direct measurement of student learning in the Core Curriculum courses and tracking the impact of such learning in upper-division courses and programs.

Both departmental and university-wide measures are used to evaluate student progress toward program-related educational goals. The measures include best practices used throughout the United States and Canada and involve faculty, students, and staff. In addition to direct measurement of student learning in specific classes, capstone courses, and student internships, students may be asked to complete surveys or participate in focus groups, senior exit interviews, and other assessment activities designed to ensure continual improvement in quality of learning. A final key component of program assessment involves detailed monitoring of student scores on nationally standardized exams, licensure tests, and certification requirements.

Information specific to each academic major is available on every departmental website. Additional details about university assessment can be obtained by contacting the Coordinator of University Assessment or the Director of Institutional Research.

**General Education Requirements**

The general education curriculum is designed to provide a foundation for knowledge common to educated people and to develop the capacity for an individual to expand that knowledge over his or her lifetime. Students who have completed the general education curriculum at Arkansas Tech University will be able to:

Communicate effectively

Think critically

Develop ethical perspectives

Apply scientific and quantitative reasoning

Demonstrate knowledge of the arts and humanities

Understand wellness concepts

To accomplish the above goals, Arkansas Tech requires the completion of the following general education curriculum. Students should refer to the curriculum in their major area of study for specific courses either recommended or required by the academic department to fulfill the general education requirements.

#### **English - 6 hours**

(See Course Descriptions for minimum grade requirements)

Three hours from one of the following:

ENGL 1013 Composition I

ENGL 1043 Honors Composition I

Three additional hours from one of the following:

ENGL 1023 Composition II

ENGL 1053 Honors Composition II

#### **Mathematics - 3 hours**

(See Course Descriptions for minimum grade requirements)

Three hours from one of the following:

MATH 1003 College Mathematics

MATH 1113 College Algebra

Any higher level mathematics course

#### **Science - 8 hours**

Complete two of the following, for a total of eight hours of science:

A. BIOL 1014\* Introduction to Biological Science or any other biology course (BIOL) that includes a lab

B. PHSC 1013\* Introduction to Physical Science and PHSC 1021\* Physical Science Laboratory or any other physical science course (CHEM, GEOL, PHYS, PHSC) that includes a lab

C. BIOL/PHSC 1004\* Principles of Environmental Science

\*Note that the science courses marked above are designed to meet general education objectives and are recommended unless you meet the prerequisites for a more specialized science course identified by your major curriculum.

#### **Physical Activity - 2 hours**

Two hours from the following:

Physical education activity courses

Recreation (RP) coeducational activity courses

Wellness science activity courses

Theatrical dance activity

Appropriate military science courses completed through cross-enrollment agreement with UCA.

#### **Fine Arts - 3 hours**

Three hours from one of the following:

\*ART 2123 Experiencing Art

MUS 2003 Introduction to Music

TH 2273 Introduction to Theatre

\*ENGL 2173 Introduction to Film

\*JOUR 2173 Introduction to Film

Art Majors:

Art Education Majors Take ART 2123

Fine Arts and Graphic Design majors take any of the above options except ART 2123

Music Majors:

Any of the above course options except MUS 2003

#### **Humanities - 3 hours**

Three hours from one of the following:

\*ENGL 2003 Introduction to World Literature

ENGL 2013 Introduction to American Literature

ENGL 2023 Honors World Literature

PHIL 2003 Introduction to Philosophy

PHIL 2043 Honors Introduction to Philosophy

#### **Social Sciences - 12 hours**

Three hours from one of the following:

HIST 1903 Survey of American History

POLS 2003 American Government

Nine additional hours from the following:

\*HIST 1503 World Civilization I  
 \*HIST 1513 World Civilization II  
 HIST 1543 Honors World Civilization I  
 HIST 2003 U.S. History I  
 HIST 2013 U.S. History II  
 HIST 2043 Honors U.S. History I  
 HIST 1903 Survey of American History  
 POLS 2003 American Government  
 ECON 2003 Principles of Economics I  
 ECON 2103 Honors Principles of Economics I  
 SOC 1003 Introductory Sociology  
 PSY 2003 General Psychology  
 \*ANTH 1213 Introduction to Anthropology OR  
 \*ANTH 2003 Cultural Anthropology  
 \*GEOG 2013 Regional Geography of the World  
 AMST 2003 American Studies

\*Of the above 18 hours in Fine Arts, Humanities, and Social Science, three hours must be from one of the following:

ART 2123 Experiencing Art  
 ENGL 2173 Introduction to Film  
 JOUR 2173 Introduction to Film  
 ENGL 2003 Introduction to World Literature  
 HIST 1503 World Civilization I  
 HIST 1513 World Civilization II  
 ANTH 1213 Introduction to Anthropology OR  
 ANTH 2003 Cultural Anthropology  
 GEOG 2013 Regional Geography of the World

#### **Freshman Orientation**

Beginning fall, 2008, all entering freshmen are required to take an orientation course during their first semester of enrollment (fall or spring). A number of the academic majors have an orientation course designed specific to the major. Students whose declared major does not have an orientation course or who are undeclared will take CSP 1013, Principles of Collegiate Success, or TECH 1001, Orientation to the University.

All orientation courses are designed to introduce the beginning student to the Arkansas Tech University campus, its culture, and traditions, and will contain certain common topics. Important policies governing campus life will be explained, and campus resources will be identified. Topics covered in each course will answer many questions typical freshmen have, which will assist in the transition from a high school environment. Subject matter will include managing time, setting academic goals, exam preparation, study and note-taking skills, introduction to library resources, and choosing a major and career.

#### **State Minimum Core**

The courses that comprise Tech's general education curriculum also constitute the University's State Minimum Core, established in accordance with Act 98 of 1989, for implementation the fall semester of 1991. Act 98 requires colleges and universities to identify "a minimum core of courses which shall apply toward the general education core curriculum requirements for baccalaureate degrees at state supported institutions of higher education and which shall be fully transferable between state institutions."

#### **Credit By Examination**

Information concerning the following tests may be obtained from the Arkansas Tech University Testing Center or from the appropriate department.

#### **IB (International Baccalaureate) Program**

High school students who participated in the International Baccalaureate (IB) Program may receive college credit by attaining Tech's IB qualifying score. Credit earned through IB may satisfy general education requirements. Scores of 5, 6, or 7 on standard level exams will provide three units elective credit in the subject area and will satisfy Core Curriculum requirements, as appropriate to the subject area. Scores of 5, 6, or 7 on higher level exams will provide six units of elective credit in the subject area and will satisfy Core Curriculum requirements, as appropriate to the subject area. Advanced placement in major courses will be awarded in consultation with the Department Chair. Following are the IB examinations that Tech will accept, the corresponding qualifying score, and credit awarded.

<b>IB Examination</b>	<b>Qualifying Score</b>	<b>Credit Awarded</b>
Anthropology/Standard	5	ANTH 1213
Biology/Standard or Higher	5	BIOL 1014 or 1114
Chemistry/Standard	5	CHEM 2124
Chemistry/Higher	5	CHEM 2124 & CHEM 2134
Computer Science/ Standard or Higher	5	COMS 2104
Economics/Standard	5	ECON 2003
Economics/Higher	5	ECON 2003 & ECON 2013
English/Standard	5	ENGL 1013
English/Higher	5	ENGL 1013 & ENGL 1023
History/Standard	5	HIST 1503
History/Higher	5	HIST 1503 & HIST 1513
Math Studies/Standard or Higher	5	MATH 1113
Math/Standard	5	MATH 2914
Math/Higher	5	MATH 2914 & MATH 2924
Music/Standard	5	MUS 1713
Music/Higher	5	MUS 1713 & MUS 1723
Philosophy/Higher	5	PHIL 2003
Physics/Standard	5	PHYS 2014
Physics/Higher	5	PHYS 2014 & PHYS 2024
Psychology/Higher	5	PSY 2003

**AP (Advanced Placement) Program**

High school students who participated in The College Board's AP Program may receive college credit by attaining Tech's AP qualifying score. Credit earned through AP may satisfy general education requirements. Following are the AP examinations that Tech will accept, the corresponding qualifying score required, and credit awarded.

<b>AP Examination</b>	<b>Qualifying Score</b>	<b>Credit Awarded</b>
American History	3	HIST 2003 & HIST 2013
Art History	4	ART 2103
Art History	5	ART 2103 & 2133
Biology	4	BIOL 1014 OR BIOL 1114
Calculus AB	3	MATH 2914
Calculus BC	3	MATH 2914 & MATH 2924
Chemistry	3	CHEM 2124 & CHEM 2134
Chemistry	3	CHEM 1114 & CHEM 2204
Computer Science A	3	COMS 2104
	4	COMS 2104 & 2203
Computer Science AB	2	COMS 2104
	3	COMS 2104 & COMS 2203
	4	COMS 2104 & COMS 2203 & COMS 2213
Drawing (Requires Department of Art Portfolio Review/Interview)	4	ART 1303
Design (Requires Department of Art Portfolio Review/Interview)	4	ART 1403
English	3	ENGL 1013
Lang/Comp or Lit/Comp	4	ENGL 1013 & ENGL 1023
French	2	FR 1014
	4	FR 1014 & FR 1024
German	2	GER 1014
	4	GER 1014 & GER 1024
Human Geography	3	GEOG 2023
Latin	2	LAT 1013
	4	LAT 1013 & LAT 1023
Music Theory	3	MUS 1713, MUS 1723, MUS 1731 & MUS 1741
Physics B	3	PHYS 2014 & PHYS 2024
Physics C	3	PHYS 2114
Psychology	3	PSY 2003
Spanish	2	SPAN 1014
	4	SPAN 1014 & SPAN 1024
Statistics	3	MATH 2163
U.S. Government	3	POLS 2003
World History	3	HIST 1503 & HIST 1513

**College Level Examination Program (CLEP)**

CLEP allows students to earn credit toward graduation by attaining Tech's qualifying score on either the general and/or subject examinations. A student may acquire a maximum of 30 hours of college credit through CLEP. Credit earned through CLEP may satisfy general education requirements. No more than one subject examination may be taken in a particular departmental area, and students must have prior approval from the department in which they are majoring to count the hours toward graduation.

It is recommended that an ACT sub-score of 24 or above or an SAT sub-score of 500 or above be used as a guideline for attempting to earn credit through CLEP. Following are the CLEP examinations that Tech will accept, the corresponding qualifying score required, and credit awarded.

<b>General Examination</b>	<b>Qualifying Score</b>	<b>Credit Awarded</b>
College Composition	50	ENGL 1013
	59	ENGL 1013 & ENGL 1023
Natural Sciences	56	BIOL 1014, PHSC 1013, &
PHSC 1021		
Social Sciences & History	50	HIST 1503
	56	HIST 1503 & HIST 1513
<b>Subject Examination</b>	<b>Qualifying Score</b>	<b>Credit Awarded</b>
Algebra, College	50	MATH 1113
American Government	50	POLS 2003
American Literature	50	ENGL 2013
Biology, General	50	BIOL 1014 or BIOL 1114
Calculus	49	MATH 2914
Chemistry, General	50	CHEM 2124
	55	CHEM 2124 & CHEM 2134
English Literature	50	ENGL 3413
	55	ENGL 3413 & ENGL 3423
French Language, College Level	42	FR 1014
	50	FR 1014 & FR 1024
German Language, College Level	43	GER 1014
	55	GER 1014 & GER 1024
History of the United States I:	49	HIST 2003
History of the United States II:	49	HIST 2013
Information Systems & Computer Applications	52	COMS 1003
Precalculus	50	MATH 1914
Psychology, Introductory	50	PSY 2003
Sociology, Introductory	50	SOC 1003
Spanish Language, College Level	45	SPAN 1014
	55	SPAN 1014 & SPAN 1024

**Institutional Credit**

**Computer Science** Students with previous computer experience may petition the Department of Computer and Information Science for credit for COMS 1003 Introduction to Computer Based Systems. Petitioners will be given written and/or oral examinations by a computer science faculty member.

**Engineering** Students who complete the appropriate Project Lead the Way (PLTW) course(s) with an average of "B" or better and score 70% or higher score on the corresponding PLTW college credit exam(s) may receive institutional credit for MCEG 1002, Engineering Graphics, and/or MCEG/ELEG 1012, Introduction to Engineering.

**Foreign Language** Students with previous foreign language experience may petition the Department of Foreign Languages and International Studies for advanced placement and credit. Petitioners will be given written and/or oral examinations by a foreign language faculty member, who will then recommend an appropriate foreign language placement level. This placement level will not exceed FR 3013, GER 3013, GRK 2023, JPN 2024, LAT 2023, or SPAN 3013, and will be approved by the department head. Students who have omitted one or more courses in the basic language sequence will receive credit for omitted courses when they have validated their advanced placement by passing the course into which they are placed with a grade of "C" or better.

**Challenge Subject Examinations** Students who have had extensive experience in health care and industrial settings may elect to attempt to earn credit through an institutional challenge examination in the following subjects or technical programs:

AHS 2013 Medical Terminology  
HIM 3023 Introduction to Health Information Management  
HIM 3033 Basic Coding Principles  
HIM 3133 Alternative Health Records  
HIM 3132 Health Data and Statistics  
Lab-based courses in Industrial Plant Maintenance and Industrial Electronic Technology (Advisor recommendation required).

**Nursing Examinations** Registered nurses, licensed practical nurses, and/or licensed psychiatric technician nurses seeking admission to Arkansas Tech University's nursing program may elect to demonstrate and validate previous collegiate-quality nursing education. This may be accomplished by successfully completing certain ACT-PEP, CLEP, and National League for Nursing examinations. See the "Department of Nursing".

**Internships** Arkansas Tech University endorses the internship approach to learning and has adopted university-wide guidelines. This approach can help students understand the reality of certain careers and supplement academic instruction with practical, realistic implementation in a work environment. Academic credit can be earned for internships in several degree programs. Please see individual programs for availability of specific degree credit.

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## COURSE CATALOGS

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### University Honors

Dr. Ellen J. Jenkins,  
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The University Honors program at Arkansas Tech University is designed to provide an enriched intellectual experience for students of outstanding educational talents and leadership potential. At Arkansas Tech University, the honors student will benefit from opportunities to interact with other highly-motivated students and outstanding professors in the challenging atmosphere of small, innovative honors classes specially designed to foster rational enquiry, critical thinking, and analytical skills.

Application to University Honors should be made as early as possible during the senior year of the high school student. Honors students are selected through an application process which includes a written essay and a personal interview on our campus. To be eligible for University Honors, the high school student must have a minimum ACT Composite score of 28 and a cumulative grade point average of 3.5 or higher.

Students in the honors program take special General Education courses in their freshman and sophomore years. Sophomores participate in on-campus volunteer projects, followed by participation as peer mentors during the junior year. The senior year requires completion of the Senior Honors Project, as well as presentation of project results at an annual Senior Honors Symposium.

Students selected for the University Honors program receive excellent scholarships as well as such privileges as preferred preregistration, opportunities for individual directed study with Tech professors, and special recognition at commencement. The prescribed curriculum for the University Honors program is provided below.

#### HONORS CURRICULUM

Freshman Year		
Fall Semester:	HONR 1001 Freshman Honors Seminar ENGL 1043 Honors Composition I HIST 1543 Honors World Civilization I OR HIST 2043 Honors US History I	1 hour 3 hours 3 hours
Spring Semester:	PHSC 1033Honors Introduction to Physical Science AND PHSC 1031 Honors Physical Science Laboratory OR BIOL 2144 Honors Zoology ENGL 1053 Honors Composition II	3 hours 1 hour 4 hours 3 hours
Sophomore Year		
Fall Semester:	ECON 2103 Honors Principles of Economics I Campus Service Component	3 hours
Spring Semester:	PHIL 2043 Honors Introduction to Philosophy OR ENGL 2023 Honors World Literature Campus Service Component	3 hours
Junior Year		
Fall Semester:	Mentor incoming Honors	
Spring Semester:	Write proposal for the Seniors Honors Project	
Senior Year		
Fall Semester:	HONR 4093 Senior Honors Project	3 hours
Spring Semester:	Honor students will present their Senior Honors Projects at the Senior Honors Symposium.	
		Total Hours
		19 - 23

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## COURSE CATALOGS

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### **ACCT 2003 ACCOUNTING PRINC I**

Each semester. Prerequisite: COMS 1003 or BUAD 2003. Fundamental process of accounting, books of original entry, preparation of working papers, adjusting entries, and financial statements for sole proprietorships. Accounting majors may not repeat this course to raise grade point in their major field after completing ACCT 3013.

### **ACCT 2013 ACCOUNTING PRINC II**

Each semester. Prerequisite: ACCT 2003. Accounting processes applied to corporations and partnerships. Manufacturing cost, income tax, managerial reports, cash flow, and statement analysis. Accounting majors may not repeat this course to raise grade point in their major field after completing ACCT 3013.

### **ACCT 3003 INTERMEDIATE ACCT I**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisites: ACCT 2013; junior standing in College of Business. A comprehensive study of accounting theory governing preparation of financial statements with emphasis on conceptual framework, development of accounting standards, and the recording and reporting process. Cash, receivables, inventories, property, plant and equipment, intangible assets, and other selected topics.

### **ACCT 3013 INTERMEDIATE ACCT II**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: ACCT 3003. Continuation of ACCT 3003. Topics covered include current and long-term liabilities, contingencies, stockholders' equity, earnings per share, temporary and long-term investments, revenue recognition, accounting changes, cash flows, statement analysis, and disclosure in financial reporting.

### **ACCT 3023 ACCOUNTING INFO SYSTEMS**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Spring Semester. Prerequisites: MGMT 2013 and ACCT 3003. A study of accounting information processing, the systems concept, the analysis and design of accounting information systems, and database hardware and software technology as they apply to producing accounting information to be used in decision making.

### **ACCT 3043 FEDERAL TAXES I**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: ACCT 2013. A study of federal income tax laws and their relationship to other forms of taxation with primary emphasis on the determination of federal income tax liability and tax planning for individuals.

**ACCT 3053  
FEDERAL TAXES II**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: ACCT 3043. A study of federal income tax laws with primary emphasis on the determination of federal income tax liability and tax planning for entities other than individuals.

**ACCT 3063  
MANAGERIAL ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: ACCT 2013. A study of accounting principles, concepts and procedures as an aid to management for internal use in planning, controlling and decision making. Financial statements, cost accounting, cost behavior, budgets, capital expenditures, pricing decisions, and other selected topics will be covered.

**ACCT 4003  
ADVANCED ACCT I**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: ACCT 3013. A comprehensive study of complex accounting problems involving financial statement treatment of income taxes, pensions, and leases. Problems underlying accounting for partnerships, corporate liquidations and reorganization, and estates and trusts are examined.

**ACCT 4013  
ADVANCED ACCT II**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: ACCT 3013. A comprehensive study of complex problems involving mergers and acquisitions, consolidated financial statements, segment and interim reporting, multinational accounting, SEC, and accounting theory.

**ACCT 4023  
COST ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Spring. Basic principles of cost accounting, departmentalization, budgets, standard cost, variance analysis, job order and process costs.

**ACCT 4033  
AUDITING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Fall. Prerequisite: ACCT 3013. Auditing procedures and concepts, audit working papers and reports, evaluation of internal controls, legal and ethical environment.

**ACCT 4053  
CPA REVIEW**

Spring. Prerequisites: ACCT 3043 and 4003. A review of problems relating to preparation for the C.P.A. examination. Emphasis on all four examination parts: practice auditing, law, and theory with concentration in theory and practice.

**ACCT 4071  
SEMINAR IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Department. Accounting topics of current interest will be covered. Coverage will include international accounting practices, S.E.C., and accounting ethics. Cases and small group activities will be utilized. Participants will prepare and present written and oral reports on topics under study. Credit for one to three hours may be earned depending upon the material covered.

**ACCT 4072  
SEMINAR IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Department. Accounting topics of current interest will be covered. Coverage will include international accounting practices, S.E.C., and accounting ethics. Cases and small group activities will be utilized. Participants will prepare and present written and oral reports on topics under study. Credit for one to three hours may be earned depending upon the material covered.

**ACCT 4073  
SEMINAR IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Department. Accounting topics of current interest will be covered. Coverage will include international accounting practices, S.E.C., and accounting ethics. Cases and small group activities will be utilized. Participants will prepare and present written and oral reports on topics under study. Credit for one to three hours may be earned depending upon the material covered.

**ACCT 4083  
INTERNSHIP IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Accounting Department Head and senior standing. A structured assignment which allows a senior accounting major to gain "real world" professional experience in an accounting position relating to an area of career interest. The student works full-time one semester in the office of a cooperating firm under the supervision of a member of management of that firm. An accounting faculty member will observe and consult with the student and the cooperating firm's management periodically during the period of internship. A term paper prepared by the student will be required.

**ACCT 4084  
INTERNSHIP IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Accounting Department Head and senior standing. A structured assignment which allows a senior accounting major to gain "real world" professional experience in an accounting position relating to an area of career interest. The student works full-time one semester in the office of a cooperating firm under the supervision of a member of management of that firm. An accounting faculty member will observe and consult with the student and the cooperating firm's management periodically during the period of internship. A term paper prepared by the student will be required.

**ACCT 4085  
INTERNSHIP IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Accounting Department Head and senior standing. A structured assignment which allows a senior accounting major to gain "real world" professional experience in an accounting position relating to an area of career interest. The student works full-time one semester in the office of a cooperating firm under the supervision of a member of management of that firm. An accounting faculty member will observe and consult with the student and the cooperating firm's management periodically during the period of internship. A term paper prepared by the student will be required.

**ACCT 4086  
INTERNSHIP IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Accounting Department Head and senior standing. A structured assignment which allows a senior accounting major to gain "real world" professional experience in an accounting position relating to an area of career interest. The student works full-time one semester in the office of a cooperating firm under the supervision of a member of management of that firm. An accounting faculty member will observe and consult with the student and the cooperating firm's management periodically during the period of internship. A term paper prepared by the student will be required.

**ACCT 4093  
GOVERNMENTAL ACCT**

Prerequisite: ACCT 3013. Study of GAAP underlying accounting for governmental/ nonprofit entities. Governmental, Proprietary, and Fiduciary funds along with Fixed Asset and Long-term Liability Account Groups are covered.

**ACCT 4103  
SPECIAL TOPICS IN ACCOUNTING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) This course provides in-depth exploration of selected accounting topics. The primary topic will vary from offering to offering; thus, the course may be taken more than once.

**ACR 1004  
GASOLINE ENGINE THEORY**

Provides the student with an introduction to automotive engines. Students learn the proper use and care of hand tools, precision tools, special tools, and equipment. Theory of operation with attention to components is included. Cooling systems, lubrication systems, intake systems, exhaust systems, vehicle maintenance, as well as PC based automotive schematics and flow charts are taught. Safety is emphasized.

**ACR 1203  
FUNDAMENTAL ELECTRICITY**

The characteristics of alternating current, waves, phase relations, transfer action, electrical circuits, and its use with controls, motors, relays, resistors, including legends and symbols are taught. In addition, the student will study the wide variety of motors, single and three phase, used in the air conditioning and refrigeration field.

**ACR 1205  
TUBING AND PIPING**

This course covers the process of identifying tubing and pipe with practical applications in sizing and fitting to different configurations using mechanical fittings and soldering. The history and development of air conditioning is also covered. Silver branding and aluminum soldering is also taught. Practical application is provided in the laboratory. Safety is emphasized.

**ACR 1222  
INDUSTRIAL CONTROLS**

Designed to teach the student how to set up a control system for different types of control requirements. Different types of control methods are studied, such as PLC, digital and microprocessor systems.

**ACR 1301  
INDUSTRIAL SAFETY IN A/C**

The hazards associated with the different refrigerants, electricity, the oxy-acetylene torch, radon, carbon monoxide, extreme heat and extreme cold will be addressed.

**ACR 1302  
BASIC COMPRESSION/REFRIG**

A comprehensive study of mechanical refrigeration systems emphasizing proper service techniques through analysis of the problem. Testing procedures, parts removal and installation are covered in depth. Also included is a study of the computation of temperature - pressure relationship and related problems.

**ACR 1503  
ELECTRONIC COMPONENTS**

The student will study the wide variety of motors used in the air conditioning and refrigeration field. In addition, various system controls, relays, resistors, contactors, and timers are concepts that will be taught as they relate to motors and their operation.

**ACR 1602  
SCHEMATICS**

The student will learn to read, draw, and interpret writing diagrams and to place the circuitry in operative arrangements with electrical and electronic symbols. System diagrams will be developed by the student for a wide variety of A/C equipment.

**ACR 1803  
RESIDENTIAL SYSTEMS**

This course is a study of the major components and control devices for gas and oil furnaces, hydronic systems, heat pumps, and cooling systems.

**ACR 2102  
RESIDENTIAL SYSTEMS**

Pre-requisite: ACR 1203 and ACR 1302. This course is a study of the major components and control devices for gas and oil furnaces, hydronic systems, heat pumps, and cooling systems.

**ACR 2104  
HEAT GAIN AND LOSS**

Pre-requisite: ACR 1302. A study of air properties and the instrumentation to meet the environmental needs of structures, residential and commercial, and the factors involved in the calculation of heating and cooling loads. Also included, is a study of the distribution mediums such as duct design and sizing.

**ACR 2112  
AIR CONDITIONING SERVICE**

This course includes a comprehensive study of air conditioning systems which emphasizes proper service techniques through analysis of the problem. Testing procedures, parts removal, and installation are covered in depth. A study of the computation of temperature pressure relation and related problems is included. Environmental impacts and safety are emphasized , including Environmental Protection Agency certification.

**ACR 2114  
INDUSTRIAL REFRIGERATION**

Covers all aspects of using ammonia as a refrigerant. Describes both single-stage and two-stage ammonia systems. Explains the importance of accumulators and intercoolers in ammonia systems. Concludes with coverage of liquid recirculation system operation.

**ACR 2124  
SHEET METAL**

Provides an introduction to safety, tools, machinery, materials, and fasteners used in the sheet metal trade.

**ACR 2125  
BOILER OPERATIONS**

Will cover the basic theory, operation and construction of a high pressure boiler.

**ACR 2134  
BOILER OPERATIONS**

Will cover the basic theory, operation, and construction of a high pressure boiler.

**ACR 2904  
INTERNSHIP**

Provides students with the experience of a job in a business. Students will participate in internship during the final phase of program completion. Contracts will be signed between the school, students, and training site stating the rules and objectives of internship.

**ACR 2991  
SPECIAL TOPICS FOR ACR**

This course is designed to introduce students to specific areas in Air Conditioning and Refrigeration. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ACR 2992  
SPECIAL TOPICS FOR ACR**

This course is designed to introduce students to specific areas in Air Conditioning and Refrigeration. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ACR 2993  
SPECIAL TOPICS FOR ACR**

This course is designed to introduce students to specific areas in Air Conditioning and Refrigeration. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ACR 2994  
SPECIAL TOPICS FOR ACR**

This course is designed to introduce students to specific areas in Air Conditioning and Refrigeration. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ACR 2995  
SPECIAL TOPICS FOR ACR**

This course is designed to introduce students to specific areas in Air Conditioning and Refrigeration. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ACR 2996  
SPECIAL TOPICS FOR ACR**

This course is designed to introduce students to specific areas in Air Conditioning and Refrigeration. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**AGAS 1001  
PRIN/ANIMAL SCIENCE LAB**

Study of management and the facilities used in the production of beef cattle, swine, sheep, and horses. Laboratory mandatory for all animal science majors. Optional for others. Laboratory two hours.

**AGAS 1014  
PRIN OF ANIMAL SCIENCE**

A study of the American livestock industry and the scientific principles underlying the management and production of livestock and poultry. Lecture three hours, laboratory two hours.

**AGAS 2083  
FEEDS/FEEDING**

Prerequisites: AGAS 1014, CHEM 1114, or consent of instructor. Principles of animal nutrition, characteristics of feed ingredients, feeding strategies, and formulation of rations for farm animals. Lecture three hours.

**AGAS 3004  
REPRODUCT FARM ANIMALS**

Prerequisite: AGAS 1014 or consent of instructor. Anatomy and physiology of the reproductive system of farm animals; to include a study of the causes of reproductive failure, management to improve reproductive efficiency, and practical training in pregnancy testing and artificial insemination of cattle. Lecture three hours, laboratory two hours.

**AGAS 3014  
BEEF CATTLE MANAGEMENT**

Prerequisite: AGAS 1014 or consent. A study of practices in management of beef cattle including breeding, feeding, care and marketing, with emphasis on production in the South. Lecture three hours, laboratory two hours.

**AGAS 3104  
SWINE MANAGEMENT**

Prerequisite: AGAS 1014 or consent of instructor. A study of current practices during the farrowing, growing, and finishing phases of swine production. Topics covered include housing, feeding, scheduling, reproduction, disease control, and waste disposal. Lecture three hours, laboratory two hours.

**AGAS 3113  
LIGHT HORSE PRODUCTION**

Prerequisite: AGAS 1014 or consent of instructor. A study of breeding, feeding, management, and disease control practices in light horse production. Lecture three hours.

**AGAS 3303  
POULTRY MANAGEMENT**

Prerequisite: Junior standing or consent of instructor. A study of the management practices involved in the various phases of the production of eggs, broilers, turkeys, and breeders. Lecture three hours.

**AGAS 3323  
POULTRY NUTRITION**

Prerequisite: Junior standing or consent of instructor. An introductory course in poultry nutrition. A study of the essential nutrients for poultry, available sources of these nutrients and formulation of diets that supply the nutrients in their appropriate amounts. Lecture three hours.

**AGAS 3333  
POULTRY PROC/PROD TECH**

Prerequisite: Junior standing or consent of instructor. A study in depth of the overall industry practices and problems covering the processing, handling, marketing, and preparation of poultry meat and by-products. Lecture three hours.

**AGAS 4203  
ANIMAL NUTRITION**

Prerequisites: CHEM1114 and AGAS 2083 or consent of instructor. Digestion, absorption of nutrients, and metabolism of farm animals. Includes a study of the requirements for maintenance, growth, activity, and reproduction of ruminants and non-ruminants. Lecture three hours.

**AGAS 4303  
POULTRY DISEASE**

Prerequisite: Junior standing or consent of instructor. The etiology, basic pathology, and combatants of bacterial, viral, protozoan, and mycotic diseases of poultry. Lecture three hours.

**AGBU 1013  
PRIN OF AGRICULTURAL BUS**

Overview of the economic theories associated with the production, consumption, and marketing of agricultural products, and with the policies designed to achieve efficiency and welfare goals in agriculture. Lecture three hours.

**AGBU 2063  
PRIN/AGRI MACROECONOMICS**

Prerequisite: AGBU 1013. A study of macroeconomic variables that affect agriculture with emphasis on consumption, unemployment, inflation, government spending and taxes, investments, national income, and money and banking. Lecture three hours.

**AGBU 2073  
PRIN/AGRI MICROECONOMICS**

Prerequisite: AGBU 1013. A study of microeconomics variables that affect agriculture with emphasis on price determination, production, costs, income distribution, perfect and imperfect competition. Lecture three hours.

**AGBU 3133  
INTERMED AGRI MACROECON**

Prerequisite: AGBU 2063 and 2073 or consent of instructor. A study of macroeconomic theory and its application to the agriculture industry. Lecture three hours.

**AGBU 3143  
INTERMED AGRI MICROECON**

Prerequisite: AGBU 2063 and 2073 or consent of instructor. A study of microeconomic theory and its application to the agriculture industry. Lecture three hours.

**AGBU 3213  
CAREER DEVELOPMENT IN AG**

Prerequisite: Junior standing. Study of the professional opportunities and responsibilities associated with agricultural business careers. Interaction with professionals in the chosen career along with development and improvement of written communication, oral communication, and leadership skills. Lecture three hours.

**AGBU 3993  
INTERNSHIP I IN AGRI**

Prerequisite: Approval of the department head. A supervised, practical experience providing undergraduate agribusiness majors with a hands-on, professional experience in a position relating to an area of career interest. The student will work in a local cooperating agribusiness establishment under the supervision of a member of management of that firm. A minimum of 300 clock hours of supervision, maintain a weekly internship log and prepare a final report. Note: only three hours of Internship I in Agriculture may be used to satisfy the curriculum requirements for a B.S. degree in Agribusiness.

**AGBU 4003  
AGRI-BUSINESS MGMT**

Prerequisite: AGBU 1013, Junior standing, or consent of the instructor. A study of the managerial practices and procedures that apply to all agriculture businesses. Emphasis is placed on the use and application of management and economic principles in decision making directed toward profit maximization. Lecture three hours.

**AGBU 4013  
AGRICULTURAL MARKETING**

Prerequisite: AGBU 2063 and 2073, or consent of instructor. A study of marketing functions, practice, organizational structure, legal aspects of agricultural marketing in relation to marketing policies, analysis of consumer behavior, and market demand. Lecture three hours.

**AGBU 4023  
AGRICULTURAL FINANCE**

Prerequisite: AGBU 2063 and 2073 and ACCT 2003. Designed as an economic and accounting study of the processes in agricultural businesses. Manufacturing costs, income tax, managerial reports, cash flow, and statement analysis of agricultural businesses along with capital allocation and the purpose and efficiency of agricultural lending institutions are analyzed. Lecture three hours.

**AGBU 4033  
AGRICULTURAL POLICY**

Prerequisite: AGBU 2063 and 2073 or consent of instructor. Designed as an introduction to historical and current federal governmental legislation in agriculture. Specific emphasis is placed on the logic, beliefs, attitudes and values of the American people coincident with the social, economic, and political environment, and on evaluating the objectives, means and the observed results through the criteria of resource allocation and income distribution in the agricultural sector of the economy. Lecture three hours.

**AGBU 4043  
APPRAISAL FARM REAL EST**

Prerequisite: AGBU 2063 and 2073, or consent of instructor. A practical application of principles and practices in farm real estate evaluation, emphasizing the processes of value development and uses. Lecture three hours.

**AGBU 4053  
AGRI PRICE ANALYSIS**

Prerequisite: AGBU 2063 and 2073. Study of the trends, cycles, and seasonal patterns associated with agricultural markets and institutional arrangements. Graphical and statistical analysis of commodity data and the fundamentals of agricultural futures markets are covered. Lecture three hours.

**AGBU 4063  
AGRICULTURAL INVESTMENTS**

Prerequisite: AGBU 2063 and AGBU 2073, senior standing or consent of instructor. An in-depth analysis of investment opportunities available in the field of agriculture. Emphasis will be on investment in stocks, bonds, agricultural commodities, futures hedging, and in international currencies. Students will be required to create and maintain a diversified investment portfolio with weekly monitoring of their chosen investments. Lecture three hours.

**AGBU 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**AGBU 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**AGBU 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**AGBU 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**AGBU 4983  
INTERNSHIP II IN AGRI**

Prerequisite: Internship I in Agriculture, approval of the department head, junior or senior standing, minimum of 2.5 GPA overall. A supervised, practical experience providing undergraduate agribusiness majors with a hands-on, professional experience in a position relating to an area of career interest. The student will work in a local cooperating agribusiness establishment under the supervision of a member of management of that firm. A minimum of 300 clock hours of supervision, maintain a weekly internship log, prepare a final report and present at least a 15 minute seminar to the agriculture department. Note: only three hours of Internship II in Agriculture may be used to satisfy the curriculum requirements for a B.S. degree in Agribusiness.

**AGBU 4991  
SPEC PROB/AGRI**

Prerequisite: Permission of the department. One to four hours credit, depending on the nature and extent of the problem. This is a course designed to introduce qualified students to specific agricultural areas including Agribusiness, Animal Science, Horticulture, or Plant Science. Note: only six hours of Special Problems in Agriculture may be used to satisfy the curriculum requirements for the B.S. degree in Agribusiness.

**AGBU 4992  
SPEC PROB/AGRI**

Prerequisite: Permission of the department. One to four hours credit, depending on the nature and extent of the problem. This is a course designed to introduce qualified students to specific agricultural areas including Agribusiness, Animal Science, Horticulture, or Plant Science. Note: only six hours of Special Problems in Agriculture may be used to satisfy the curriculum requirements for the B.S. degree in Agribusiness.

**AGBU 4993  
SPEC PROB/AGRI**

Prerequisite: Permission of the department. One to four hours credit, depending on the nature and extent of the problem. This is a course designed to introduce qualified students to specific agricultural areas including Agribusiness, Animal Science, Horticulture, or Plant Science. Note: only six hours of Special Problems in Agriculture may be used to satisfy the curriculum requirements for the B.S. degree in Agribusiness.

**AGBU 4994  
SPEC PROB/AGRI**

Prerequisite: Permission of the department. One to four hours credit, depending on the nature and extent of the problem. This is a course designed to introduce qualified students to specific agricultural areas including Agribusiness, Animal Science, Horticulture, or Plant Science. Note: only six hours of Special Problems in Agriculture may be used to satisfy the curriculum requirements for the B.S. degree in Agribusiness.

**AGEG 3003  
SOLVING AGRI PROBLEMS**

Prerequisite: Junior standing and fulfill general education mathematics requirements. This course will use dimensional analysis to solve agriculturally oriented problems such as irrigation, fertilizer, and organic matter application rates; energy cost-estimates; pump sizing for heads and flow rates; dilution factors; and feed ingredient selection. The course will use computers and such programs as MathCad and Microsoft Excel.

**AGEG 3203  
SOIL/WATER/FOREST CONSER**

Prerequisite: Junior standing or consent of instructor. Causes and control of soil and water losses; methods of erosion control; relationship of soil and water conservation to forest, recreation, pollution and wildlife management. Lecture three hours.

**AGEG 3213  
WATERSHED MANAGEMENT**

Prerequisite: Junior standing or consent of instructor. An introductory course in the problems of water supplies from surface sources and underground aquifers. Practices to develop supplies, to protect sources, and maintain water quality will be emphasized. Lecture three hours.

**AGEG 3413  
AGRI WASTE MANAGEMENT**

Prerequisites: MATH 1113, CHEM 1114, and AGSS 2014. A study of potential adverse environmental quality problems associated with agricultural operations, current trends and innovative solutions to waste management problems, and current legal constraints and regulating agencies. Lecture three hours.

**AGPM 3104  
INTRODUCTION TO ENTOMOLOGY**

This course will introduce the student to insect diversity and the identification of the major families of insects. Laboratory time will be spent learning family characteristics and collecting and preserving insect specimens. Lecture will consist of topics such as insect diversity, morphology and physiology. \$25 course fees.

**AGPM 3124  
APPLIED PEST CONTROL**

Prerequisites: AGPS 1003, AGPM 3104, AGPS 3053, Junior standing or consent of instructor. Advanced concepts and techniques used in modern pest control practices and the chemistry and environmental fate of pesticides.

**AGPM 4103  
INTEGRATED PEST MANAGEMENT**

Prerequisite: AGPS 1003, Junior standing or consent of instructor. A systematic approach utilizing biological, cultural and genetic control methods to suppress pest numbers in agroecosystems.

**AGPS 1003  
PRINCIPLES OF AGRONOMY**

A study of important agronomic practices associated with crop production, including classification of crops, the role of soil and the environment, crop management, cropping systems, integrated pest management and harvest methods. Lecture three hours.

**AGPS 1024  
PRIN OF HORTICULTURE**

Principles and practices in propagation of plants, sexual and asexual reproduction methods; construction and management of greenhouses. Lecture three hours, laboratory two hours.

**AGPS 1033  
INTRO TO FORESTRY**

General survey of the five fields of forestry; a preview of forestry subjects; forestry resources; some emphasis on silviculture, measurement, protection, utilization, preservation and forest administration. Lecture three hours.

**AGPS 3024  
FORAGE CROPS/PASTURE MGT**

Prerequisites: AGPS 1003, Junior standing or consent of instructor. Selection, culture, production, distribution and uses of pasture and forage plants; management problems in hay and silage; emphasis on utilization and improvement of pasture. Lecture three hours, laboratory two hours.

**AGPS 3044  
PLANT PROPAGATION**

Prerequisite: AGPS 1024, Junior standing or consent of instructor. A study of the principles and practices in the propagation of herbaceous and woody indoor plants and flowers. Lecture three hours, laboratory two hours.

**AGPS 3053  
WEED ECOLOGY**

Prerequisite: AGPS 1003 and Junior standing or consent of instructor. The principles of weed ecology including weed demography and population dynamics, competition, interference, soil seed bank concept and systematic approaches to weed management.

**AGPS 3064  
VEGETABLE GROWING**

Prerequisite: AGPS 1024, Junior standing or consent of instructor. The application of scientific facts and principles that are involved in the successful production of vegetables under cover and/or in the open. Lecture three hours, laboratory two hours.

**AGPS 3074  
FLORICULTURE**

Prerequisite: AGPS 1024, Junior standing or consent of instructor. Commercial production and marketing of major cut flower crops, bedding plants, and flowering pot plants under cover and/or in the open. Lecture three hours, laboratory two hours.

**AGPS 3083  
SM FRUIT/NUT CULTURE**

Prerequisite: AGPS 1024, Junior standing or consent of instructor. A study of the factors underlying the commercial and home production of small fruits and nuts, including a study of varieties, propagation, pruning, spraying, harvesting, and marketing. Lecture three hours.

**AGPS 3093  
GREENHOUSE OPERAT/MGMT**

Prerequisite: AGPS 1024, Junior standing or consent of instructor. Greenhouse construction and management of heating, cooling, moisture, fertilization, lighting, insect and disease control in the growth of major greenhouse crops. Lecture three hours.

**AGPS 3244  
PLANT PATHOLOGY**

Prerequisite: BIOL 2134 or BIOL 1014. Introductory course in plant diseases. A study of the causes, symptoms, spread and control of plant diseases. The emphasis is placed on the interaction between disease causing agents and the diseased plant and the way in which environmental conditions influence the mechanisms by which factors produce plant disease. Lecture three hours, laboratory two hours.

**AGPS 4103  
CROP/GARDEN INSECTS**

Prerequisite: AGPS 1024, Junior standing or consent of instructor. Anatomy, physiology, ecology, life history, and control of insects affecting crops and garden plants. Lecture three hours.

**AGSS 2014  
SOILS**

Prerequisite: CHEM 1114. Development, classification, and properties of soils. A review of the major areas of soil science and their application to agricultural production and the environment. Lecture three hours, laboratory two hours.

**AGSS 3033  
SOIL FERTILITY**

Prerequisite: AGSS 2014. Physical, chemical, and biological properties that relate to soil fertility as measured by plant production and quality. Growth response to fertilizers and fertilization methods. Lecture three hours.

**AHS 1023  
BASIC PHARM W/OVERVIEW MICRO**

Fall and Spring. Enrollment is limited to medical assistant and health information management majors. Topics to be covered in addition to introductory pharmacology will include basic chemistry as it applies to the medical laboratory and a brief overview of microbiology and immunology. Basic pharmacology as it relates to the drug interaction with each of the body systems and classifications of drugs will be covered. Students will utilize the Physicians' Desk Reference (PDR) in the course. Lecture three hours.

**AHS 2013  
MED TERMINOLOGY**

Fall and Spring. A study of the language of medicine including word construction, definition, and use of terms related to all areas of medical science, hospital service, and the allied health specialties. Duplicate credit for AHS 2013 and 3013 will not be allowed.

**AHS 2022**  
**MED LAB ORIEN/INST,LAB**

Fall. Prerequisites: a grade of "C" or higher in BIOL 1114 or BIOL 2124. Enrollment is limited to students enrolled in BIOL 2023. Topics covered will include laboratory orientation, laboratory procedures/ techniques, introduction to clinical laboratory instrumentation (both manual and automated), quality control principles, and care of equipment. Laboratory four hours per week. \$10 laboratory fee.

**AHS 2023**  
**MED LAB ORIENT/INSTRUM**

Fall. Enrollment is limited to medical assistant and/or medical technology majors who have completed at least BIOL 1114 or BIOL 2124 (AHS 2013 recommended) with a grade of "C" or higher and are in the final year of their program at Tech. This course is concerned with both the theoretical and practical application of a wide range of clinical duties performed by the medical assistant and medical technologist. Topics covered will include hematology, urinalysis, hematostatic processes, body chemistry, microbiology, and blood typing. Lecture three hours.

**AHS 2032**  
**MED ASST CLIN PRAC LAB**

Spring. Enrollment is limited to medical assistant majors who are enrolled in AHS 2034 and in the final semester before the medical assistant externship assignment. This course is designed to allow for practice in locale area clinics. Students will complete a two-hour laboratory in the simulated lab and will be assigned to three hours in area clinics on a weekly basis. While at the medical facility students will apply the theories and concepts covered in AHS 2023 and AHS 2034. Five-hour laboratory weekly. \$10 laboratory fee.

**AHS 2033**  
**CODING PRINC MEDICAL OFFICE**

Prerequisites: AHS 2013, 1023, BIOL 2004, or permission of instructor. A study of medical coding using ICD-9-CM and CPT codes in the medical office. Students will be taught to evaluate patients' medical records to correctly assign both diagnostic and procedural codes required for healthcare reimbursement in the medical office setting.

**AHS 2034**  
**MED ASST CLIN PRAC**

Spring. Enrollment is limited to medical assistant majors. Prerequisite: AHS 2023 and 2022. Topics covered will include examination room techniques, sterilization procedures, operation and care of electrocardiograph, assisting with minor surgery, physiotherapy, pharmacology, medications and specialist assisting. Students must subscribe to malpractice liability insurance. Lecture four hours.

**AHS 2044**  
**MED ASST ADM PRACTICE**

Fall. Prerequisite: AHS 2013. This course is open only to medical assistant majors in the final part of the program or by permission of the medical assistant program director. A survey course emphasizing the business administrative duties of the medical assistant. Course content will include working with patients, medical records, medical dictation, office procedures, and office management. Student must subscribe to malpractice liability insurance. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**AHS 2053  
COMPUTER/OVERVIEW/INSUR**

Spring. Prerequisites: HIM 2003, AHS 2044. This course is open only to medical assistant majors in the final part of the program or by permission of the medical assistant program director. This course will prepare the medical assistant to work as an administrative medical assistant in a health care facility. Students are introduced to the computerization of the medical office using current operating systems. Topics covered will include recording information on patients, scheduling appointments, printing reports, producing patient statements and claim forms, and filing electronic claims. Lecture 3 hours.

**AHS 2055  
EXTERNSHIP**

First summer term. Prerequisites: Completion of all other required courses in medical assistant curriculum. The course is scheduled at the end of the program. It shall include the opportunity to perform various clinical and administrative procedures under supervision. The student will remain in a medical facility for a period of four weeks. Assignments may be made anywhere in Arkansas; students must assume the full financial responsibility for this assignment. A seminar will be scheduled for the fifth week. Student must subscribe to malpractice liability insurance.

**AHS 2061  
MED ASSISTANT SEMINAR**

First summer term. Prerequisite: AHS 2055. A one week seminar scheduled for the week following the externship. Topics discussed will be based on those arising from the student's experiences while on his/her externship. Employment procedures will also be covered.

**AMST 2003  
AMERICAN STUDIES**

An exploration of American culture through study of significant ideas, social issues and literary texts. AMST 2003 may be used to fulfill 3 hours of the Social Sciences general education requirements.

**ANTH 1213  
INTRO TO ANTHROPOLOGY**

An introduction to the subdisciplines of cultural anthropology, physical anthropology, archeology, and linguistics.

**ANTH 2003  
CULTURAL ANTHROPOLOGY**

A study of contemporary and historical peoples and cultures of major world culture areas. May not be taken for credit after completion of ANTH 3213.

**ANTH 2103  
HUMAN ECOLOGY MOUNTAIN SOUTH**

This course provides students with the knowledge and skills to understand changing human-environment relationships in the mountain South and to apply these understandings to the assessment of, and potential solutions to, contemporary socio-environmental issues in the area. We will explore the emergence of Mississippian societies, their transformation during prehistoric and early historic eras, the impacts of early European settlements and the regions? incorporation into the global marketplace, development and the growth of tourism and industry in the area, and current social and environmental issues in the mountain South.

**ANTH 2203  
INDIANS/NORTH AMERICA**

A study of contemporary and historical peoples and cultures of North America.

**ANTH 2223  
NORTH AMER ARCHAEOLOGY**

The study of prehistoric peoples and cultures of North America.

**ANTH 2303  
GLOBALIZATION**

This course provides an overview of the economic, social, technological, environmental, and ideological impacts of globalization on national communities, with an emphasis on the cultural dynamics of the process. Through class discussions and lectures, readings, and student research, this course will examine the complex implications of globalization on culture change in different national settings.

**ANTH 3241  
SEMINAR/ANTHROPOLOGY**

Prerequisite: Permission of instructor. A directed seminar in an area of anthropology. The specific focus will depend upon research interests, student interest, and current developments in the field of anthropology.

**ANTH 3242  
SEMINAR/ANTHROPOLOGY**

Prerequisite: Permission of instructor. A directed seminar in an area of anthropology. The specific focus will depend upon research interests, student interest, and current developments in the field of anthropology.

**ANTH 3243  
SEMINAR/ANTHROPOLOGY**

Prerequisite: Permission of instructor. A directed seminar in an area of anthropology. The specific focus will depend upon research interests, student interest, and current developments in the field of anthropology.

**ANTH 3244  
SEMINAR/ANTHROPOLOGY**

Prerequisite: Permission of instructor. A directed seminar in an area of anthropology. The specific focus will depend upon research interests, student interest, and current developments in the field of anthropology.

**ANTH 3303  
SOUTHEASTERN ARCHAEOLOGY**

The course will survey the rise of chiefdom-level societies in the prehistoric Southeast, reconstruct the ?Mississippian world? these chiefdoms created, document the activities of sixteenth-century Spanish explorers in the region, and trace the subsequent decline of Mississippian chiefdoms. In addition to reconstructing the landscape of the ancient South, students will explore long-term social and cultural traits of southeastern Indians and discover the secrets unearthed at famous Mississippian sites such as Cahokia, Moundville, and Etowah.

### **ANTH 3313 SOUTHEASTERN INDIANS**

This course is an ethnographic and historic survey of southern Indians from European contact through the era of Removal. Particular emphasis will be placed on the following subjects: the decline of chiefdom societies across the South, the Spanish mission system, the development of the deerskin and Indian slave trade, native resistance to colonial encroachment, and a detailed discussion of Removal. The course also includes ethnographic descriptions of major southern Indian groups, including the Creek, Cherokee, Catawba, Choctaw, Chickasaw, Seminole, Apalachee, and Natchez. By the end of the course students should acquire an understanding of a little known aspect of our country?s heritage, be able to distinguish between the various colonial strategies at play in the region, as well as the various forms of native resistance, and gain an appreciation for the place of southern Indians within U.S. society today.

### **ANTH 3403 ETHNOGRAPHIC METHODS**

This course trains students in research methods in anthropology with an emphasis on qualitative research. Students learn the different uses of methodologies to address specific types of research questions, practice participant-observation and interview techniques as part of semester-long research projects, and survey anthropological theory as it relates to conducting ethnographic fieldwork.

### **ANTH 4103 ANTHROPOLOGY OF EUROPE**

This course focuses on cultural history and diversity in Europe in the era of modern nation-state. Course topics include: state formation and the development of national communities, relations between rural cultural enclaves and industrialized population centers, supranational integration and cultural identity, and nationalism in the era of global immigration into Europe. The goal of this course is to analyze how cultural identities in Europe have been formed, sustained, and challenged given these multiple transformations in the political, economic, and social fabric of European nation-states. This is a reading and writing-intensive course.

### **ANTH 4206 WORKSHOP IN ANTHROPOLOGY**

Five week summer session. Prerequisite: Permission of instructor and department head. An intensive five week experience in anthropology combining classroom study and field exposure to techniques, artifacts, and findings pertinent to anthropology/ archeology of North America. Extensive travel to sites and collections will be an integral part of the study experience. It may be necessary to assess a special fee which would be stated in advance.

### **ANTH 4403 INTERP/EDUC/MUSEUM/METH**

Prerequisites: Senior or Graduate standing, or permission of instructor. Museum perspectives and approaches to care and interpretation of cultural resources, including interpretive techniques of exhibit and education- outreach materials, and integrating museum interpretation/education into public school and general public programming. Class projects focus on special problems for managing interpretive materials in a museum setting.

### **ANTH 4853 MUSIC OF THE WORLD'S PEOPLES**

A survey of predominantly non-Western world music cultures with attention to sonic structures, musicians, musical instruments, and socio-cultural contexts of music making. Open to students in all majors. Listening emphasized.

**ANTH 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ANTH 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ANTH 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ANTH 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ANTH 4991  
SPEC PROB/ANTH**

Prerequisite: Permission of instructor. Independent work under individual guidance of staff member.

**ANTH 4992  
SPEC PROB/ANTH**

Prerequisite: Permission of instructor. Independent work under individual guidance of staff member.

**ANTH 4993  
SPEC PROB/ANTH**

Prerequisite: Permission of instructor. Independent work under individual guidance of staff member.

**ANTH 4994  
SPEC PROB/ANTH**

Prerequisite: Permission of instructor. Independent work under individual guidance of staff member.

**ART 1163  
BASIC PHOTOGRAPHY**

A study of the use of the camera, films, equipment, and the basics of black and white processing and printing. Includes introductions to lighting techniques, composition, and color photography.

**ART 1303  
INTRO TO DRAWING**

An introduction to structural and expressive responses in drawing by the study of line, volume, shape, light perspective, the media, and their interrelations. Studio six hours. \$36 art fee.

**ART 1403  
TWO-DIMENSION DESIGN**

Basic study of elements and principles of two-dimensional design employing a variety of tools and materials. Studio six hours.

**ART 1503  
INTRO TO GRAPHIC DESIGN**

Prerequisite: ART 1403, ART 1303 or permission of instructor. An introduction to fundamental graphic design principles, techniques and materials. \$36 art fee.

**ART 2103  
ART HISTORY I**

An examination of the periods and western cultures responsible for major artistic monuments and achievements from pre history through the Gothic period.

**ART 2113  
ART HISTORY II**

A western art survey of the events, people, and stylistic trends involved in the development of major art forms from the era of the Italian Renaissance to the present.

**ART 2123  
EXPERIENCING ART**

This course is designed to provide a background in art and the related processes so that a student may develop powers of observation and thereby respond to a work of art.

**ART 2213  
DIGITAL SKILLS FOR GD**

Prerequisites: ART 1503 Introduction to the Macintosh computer system. Students will learn graphic design software which they will, in turn, use to create various projects. \$36 art fee.

**ART 2303  
FIGURE DRAWING**

Prerequisite: ART 1303. Introduction to the study of the human figure. A major emphasis will be directed to exercises in the study of anatomy, proportion, and line as it relates to the figure. Studio six hours. \$36 art fee.

**ART 2403  
COLOR DESIGN**

Basic application of color principles and color theory. Studio six hours. \$36 art fee.

**ART 2413  
THREE-DIMENSION DESIGN**

Prerequisite: ART 1403. Basic study of three-dimensional problems of structure, spatial organization, and introductory sculptural concerns. Studio six hours. \$36 art fee.

**ART 2703  
INTRO TO SCULPTURE**

Prerequisites: ART 1303, 1403, 2413. Basic techniques of sculpture and sculptural composition. Modeling, casting, carving, and constructive processes are introduced. Studio six hours. \$100 art fee.

**ART 3003  
CONCEPTS/ART EDUCATION**

Prerequisite: Sophomore Review. Introduction to theory and specialized practice in art education issues as applied to elementary art experience. Studio processes, art criticism, aesthetics, and art history methodology will be incorporated into lessons implemented as part of field experience in local elementary schools. Studio six hours. \$36 art fee.

**ART 3013  
ART EDUCATION PRACTICUM**

Prerequisite: Sophomore Review. Curriculum design with emphasis on visual art standards, art media, and assessment as applied to teaching on the secondary level. Students will implement a unit of study in partnership with local schools. Studio six hours. \$36 art fee.

**ART 3113**  
**ART HISTORY/AMERICAN**

Prerequisite: Sophomore Review. A study of art forms in architecture, painting, sculpture and craft from Colonial times to the present.

**ART 3123**  
**ART HISTORY/RENAISSANCE**

Prerequisite: Sophomore Review. A concentrated study of art forms in architecture, painting, sculpture and crafts during the period of the Italian and Northern Renaissance.

**ART 3203**  
**TYPOGRAPHY AND LAYOUT**

Prerequisites: ART 1503, ART 2213, and Sophomore Review. Beginning and intermediate problems in layout designs as well as the effective use of type. \$36 art fee.

**ART 3223**  
**THREE DIMEN/GRAFH/DESIGN**

Prerequisite: ART 1503, ART 2213, ART 3203 and Sophomore Review. Studio problems in the design and presentation of 3 D advertising packaging and displays. Studio six hours. \$36 art fee.

**ART 3233**  
**PRODUCTION TECHNIQUES**

Prerequisite: ART 1503, 2213, 3203, 3223, and Sophomore Review. Introductory course on methods for producing camera ready art. Studio six hours. \$36 art fee.

**ART 3243**  
**WEB DESIGN**

Prerequisite: ART 2213, 3203, and Sophomore Review. Introduce basic website planning, content editing and creation using graphic arts techniques. Screen-based color theory, web design aesthetics, use of graphic editors, and interface design are explored. Studio six hours. \$36 course fee.

**ART 3253**  
**COMPUTER ILLUSTRATION**

Prerequisite: ART 2213 and Sophomore Review. This course will provide students with advanced conceptual skills in computer illustration and digital imaging. Students will acquire intermediate knowledge in vector and pixel-based drawing formats, digital painting effects, comic art/video game illustration, storyboarding and coloring through the completion of integrated design projects. Studio six hours. \$36 course fee.

**ART 3303  
DRAWING STUDIO I**

Prerequisites: ART 1303, 2303, or permission of instructor and Sophomore Review. The application of the theories and techniques of drawing as they relate to the study of composition in finished works of art. Studio six hours. \$36 art fee.

**ART 3403  
INTRO TO OPAQUE PAINTING**

Prerequisites: Art 1303, 1403, 2403, Sophomore Review or permission of instructor. The exploration of opaque painting techniques. Traditional oil, acrylic and alkyd will be studied. Studio six hours. \$36 course fee.

**ART 3503  
PAINTING STUDIO I**

Prerequisite: ART 3403 and Sophomore Review. A continued study in the opaque or transparent painting techniques. Emphasis will be directed toward the economy of conception and performance in the completion of finished works of art. Studio six hours. \$36 art fee.

**ART 3533  
WATERCOLOR PAINTING**

Prerequisite: ART 1303, 1403, 2403, or permission of instructor and Sophomore Review. The exploration of transparent water painting techniques. Studio six hours. \$36 art fee.

**ART 3603  
INTRODUCTION TO CERAMICS**

Prerequisites: ART 1403 or permission of instructor and Sophomore Review. An introduction to ceramics, emphasizing the imaginative design and production of ceramic objects utilizing hand building and wheel throwing techniques. Exposure to the complete ceramic process through the use of demonstrations, slides, and lectures. Studio six hours. \$100 art fee.

**ART 3703  
SCULPTURE STUDIO I**

Prerequisite: ART 2703 and Sophomore Review. A continued study of sculptural techniques introduced in Introduction to Sculpture, allowing for student expansion and specialization on individual conceptions. Studio six hours. \$100 art fee.

**ART 3713  
SCULPTURE STUDIO II**

Prerequisite: ART 2703 and Sophomore Review. A continued study of sculptural techniques introduced in Introduction to Sculpture, allowing for student expansion and specialization on individual conceptions. Studio six hours. \$100 art fee.

### **ART 3803 INTRO TO PRINTMAKING**

Prerequisites: ART 1303, 1403, 2403 and Sophomore Review. A survey of traditional printmaking techniques will be taught including intaglio, relief, and monotype. Studio six hours. \$100 art fee.

### **ART 3813 PRINTMAKING STUDIO I**

Prerequisite: ART 3803 and Sophomore Review. Printmaking activities introduced in Introduction to Printmaking will be used as a basis for the student to expand and specialize. Students will be expected to develop an individual print series in one or more print techniques. Studio six hours. \$100 materials fee.

### **ART 3903 INTRO TO FIBER ARTS**

Prerequisites: Art 1303, 1403, 2403 and Sophomore Review. An introduction to fiber arts to include historical and cultural connections, techniques and processes associated with materials studies such as weaving, papermaking, textile design, and mixed media. Studio six hours. \$36 art fee.

### **ART 4103 ART HISTORY/MODERN**

Prerequisite: Sophomore Review. The study of art and architecture from neo classicism to the present with emphasis on the art styles after Impressionism.

### **ART 4123 ART HISTORY, MEDIEVAL**

Prerequisite: ART 2103, sophomore review or permission of instructor. A study of the art and architecture of the European Middle Ages, from the rise of Christianity through the Gothic period.

### **ART 4133 ART HISTORY/NATIVE AMERICAN**

This course surveys the Native American arts of North America from ancient to modern (and postmodern) times looking at various geographical regions. Course content includes the relationship between indigenous American worldview and Native artistic traditions and visual culture. The course also covers the impact of colonialism and modernization on Native American culture and how Native communities have negotiated, appropriated, and/or resisted these pressures. We will also look at the adaptation of modernism to Native American visual culture, both by Native and non-Native artists.

### **ART 4143 ART HISTORY/LATIN AMERICAN**

This course surveys Latin American art from the Colonial to the Modern period, covering a wide geographic region and emphasizing certain patterns of colonialism, nationalism, modernism, and regionalism that give us a glimpse of the cultural processes at work in this vast region in the early modern Americas. The first half of the course is divided into such themes as the arts and visual culture of indigenous Americans and its interplay with European

colonization, the consolidation of colonial power in viceroyalties, the work of missionaries, the metropolitan church, and the colonial aristocracy. The class then covers the development of national art in the nineteenth century, before looking at Latin American arts in the twentieth century including the interplay between modernism and regionalism.

**ART 4163  
ADVANCED PHOTOGRAPHY/VIDEO**

Prerequisite: JOUR (ART) 1163 or consent of instructor. An introduction to advanced photographic techniques including digital photography and nonlinear editing. Various historic and current theories of visual journalism provide a substantive base for the application of techniques.

**ART 4233  
TECHNIQ/ILLUSTRATION**

Prerequisites: ART 1303, 1403, 2303, 2403 and Sophomore Review. Application of fine art drawing and painting techniques to illustration problems. Studio six hours. \$36 course fee.

**ART 4243  
PROF PORTFOLIO PREP FOR GD**

Prerequisites: Art 1503, Art 2213, Art 3203, Art 3223, Art 3233 and Sophomore Review. The purpose of this course is to prepare the student for entry into the professional world through the development of a resume and the presentation of their work. \$36 course fee.

**ART 4313  
DRAWING STUDIO II**

Prerequisite: ART 3303 and Sophomore Review. The further development of advanced drawing concepts and skills. This course will deal with each student on a one to one basis. The student will present a "contract of drawing projects" subject to instructor's approval. Studio six hours. \$36 art fee.

**ART 4323  
DRAWING STUDIO III**

Prerequisite: ART 3303 and Sophomore Review. The further development of advanced drawing concepts and skills. This course will deal with each student on a one to one basis. The student will present a "contract of drawing projects" subject to instructor's approval. Studio six hours. \$36 art fee.

**ART 4503  
PAINTING STUDIO II**

Prerequisite: ART 3503 and Sophomore Review. Advanced study of the opaque/ transparent painting techniques. Emphasis will be theme oriented. Each student must submit to the instructor a "painting contract" which must be approved. Studio six hours. \$36 art fee.

**ART 4513  
PAINTING STUDIO III**

Prerequisite: ART 3503 and Sophomore Review. Advanced study of the opaque/ transparent painting techniques. Emphasis will be theme oriented. Each student must submit to the instructor a "painting contract" which must be approved. Studio six hours. \$36 art fee.

**ART 4603  
CERAMICS STUDIO I**

Prerequisites: ART 3603 and Sophomore Review. A study of advanced techniques and skills. This course will deal with each student on a one to one basis. Each student must submit a "contract of ceramics project" subject to instructor's approval. Studio six hours. \$100 art fee.

**ART 4613  
CERAMICS STUDIO II**

Prerequisites: ART 3603 and Sophomore Review. A study of advanced techniques and skills. This course will deal with each student on a one to one basis. Each student must submit a "contract of ceramics project" subject to instructor's approval. Studio six hours. \$100 art fee.

**ART 4623  
ANIMATION TECHNIQUES**

Prerequisite: ART 2213, 2303, 3203, and Sophomore Review. Introduce basic drawing/2D animation, and create movies/cartoons, motion graphics/interactive content using multimedia tools and techniques. Time-based media, animation timing, use of audio-visual editors, and effective storyboard techniques are explored. Studio six hours. \$36 course fee.

**ART 4701  
SPECIAL METHODS/ART**

Prerequisites: Sophomore Review, admission to student teaching phase of teacher education program and concurrent enrollment in SEED 4809. Intensive on campus exploration of the principles of curriculum construction, teaching methods, use of community resources, and evaluation as related to teaching art.

**ART 4703  
SENIOR PROJECT/EXHIBITION**

Spring. Prerequisite: Junior Review, Sophomore Review. This course is required for all Fine Arts majors, and elective for Graphic Design and Art Education majors.

**ART 4723  
ART HISTORY SEMINAR**

Prerequisite: Sophomore review, senior standing, or permission of instructor. This course will provide a forum for in-depth examination of a particular artist, movement, theme, or period in art history.

**ART 4733  
GRAPHIC DESIGN INTERNSHP**

Prerequisites: Art 1503, 2213, 3203, 3233, Sophomore Review, Junior Review and instructor's permission. A supervised, practical experience providing graphic design majors with professional hands-on training in a position relating to an area within their chosen field of graphic design at a cooperating business.

**ART 4736  
GRAPHIC DESIGN INTERNSHP**

Prerequisites: Art 1503, 2213, 3203, 3233, Sophomore Review, Junior Review and instructor's permission. A supervised, practical experience providing graphic design majors with professional hands-on training in a position relating to an area within their chosen field of graphic design at a cooperating business.

**ART 4803  
PRINTMAKING STUDIO II**

Prerequisite: ART 3813, Sophomore Review and permission of Instructor. A concentration on printmaking techniques which will develop additional strength and capability in the student. Studio six hours. \$100 art fee.

**ART 4813  
PRINTMAKING STUDIO III**

Prerequisite: ART 3813, Sophomore Review and permission of Instructor. A concentration on printmaking techniques which will develop additional strength and capability in the student. Studio six hours. \$100 art fee.

**ART 4823  
ART CRITICISM/AESTHETICS**

Prerequisites: Sophomore Review, Art 2103 and/or 2113. Perspectives on analyzing and interpreting works of art required for art education majors. The course may be used as an art history elective for graphics and fine arts majors.

**ART 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ART 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ART 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ART 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ART 4991  
SPEC PROB/ART**

This course requires advance approval by the instructor, department head, and the dean of school. Designed to provide certain advanced students with further concentration in a particular area. Fee may apply.

**ART 4992  
SPEC PROB/ART**

This course requires advance approval by the instructor, department head, and the dean of school. Designed to provide certain advanced students with further concentration in a particular area. Fee may apply.

**ART 4993  
SPEC PROB/ART**

This course requires advance approval by the instructor, department head, and the dean of school. Designed to provide certain advanced students with further concentration in a particular area. Fee may apply.

**ART 4994  
SPEC PROB/ART**

This course requires advance approval by the instructor, department head, and the dean of school. Designed to provide certain advanced students with further concentration in a particular area. Fee may apply.

**AST 1004  
GASOLINE ENGINE THEORY**

Provides the student with an introduction to automotive engines. Students learn the proper use and care of hand tools, precision tools, special tools, and equipment. Theory of operation with attention to components is included. Cooling systems, lubrication systems, intake systems, exhaust systems, vehicle maintenance, as well as PC based automotive schematics and flow charts are taught. Safety is emphasized.

**AST 1005  
ENGINE PERFORMANCE**

Provides students with an understanding of fuel, ignition, drivability, and emissions systems. Theory of operation as well as relevant electronic components and computing systems diagnosis is included.

**AST 1103**  
**AUTOMOTIVE BRAKE SYSTEMS**

Concentrates on the theory and operation of disc and drum brake systems. Basic hydraulic principles as well as the operation and components of the brake foundation systems are taught. The course includes an in-depth study of various power brake systems, including vacuum assisted systems, hydraulically boosted systems, and several types of anti-lock braking systems.

**AST 1105**  
**GASOLINE ENGINE THEORY**

Provides the student with an introduction to automotive engines. Students learn the proper use and care of hand tools, precision tools, special tools, and equipment. Theory of operation with attention to components is included. Cooling systems, lubrication systems, intake systems, exhaust systems, vehicle maintenance, as well as PC based automotive schematics and flow charts are taught. Safety is emphasized.

**AST 1113**  
**INTRO AUTO DRIVETRAINS**

Designed to cover the entire drivetrain on a late model vehicle with a standard transmission. Instruction will begin with the flywheel and proceed to the transmission, through the differential assembly, and ending at the wheel and hub. Includes the principles of gear reduction as it applies to the theory, operation, and repair of manual transmission, differential, and transaxles. Several types of four-wheel drive systems will be taught.

**AST 1202**  
**INTRO AUTO DRIVETRAINS**

Designed to cover the entire drive train on a late model vehicle with a standard transmission. Beginning with the flywheel, to the transmission, through the differential assembly and ending at the wheel and hub. Includes the principles of gear reduction as it applies to the theory, operation, and repair of manual transmission, differential, and transaxles. Several types of four-wheel drive systems will be taught.

**AST 1203**  
**AUTO CLIMATE CONTROL**

Begins with a study of refrigeration, the refrigeration cycle, and basic components of a typical automotive refrigeration system. The function and construction of compressors, lines, expansion valves, expansion tubes, condensers, evaporators, blower motors, and air distribution systems is covered. Automatic temperature control systems including the latest computer monitored systems, and heating and ventilation will also be covered. Service and maintenance procedures as well as shop safety are emphasized.

**AST 1206**  
**ENGINE PERFORMANCE**

Provides students with an understanding of fuel, ignition, drivability, and emissions systems. Theory of operation as well as relevant electronic components and computing systems diagnosis is included.

**AST 1212  
ADV AUTO DRIVETRAINS**

Pre-requisite: AST 1202. A continuation of AST 1202. A study of theory and operation of the entire drive train of automotive automatic transmissions and transaxles.

**AST 1213  
AUTO CHASSIS/STEERING**

Designed to introduce the student to the theory and operation of modern suspension and steering systems. The study of the suspension system includes wheels, tires, hubs, bearings, seals, springs, and vehicle forms. Various designs and construction of each of these components will be covered. Steering and suspension systems start with the basic theory of steering geometry and the related factors. Wheel alignment, construction and operation of the various manual, and power steering components is included.

**AST 1223  
ADVANCED AUTO DRIVETRAINS**

Pre-requisite: AST 1113. A continuation of AST 1113. A study of the theory and operation of the entire drivetrain of automotive automatic transmissions and transaxles.

**AST 1904  
INTERNSHIP I**

Provides student with the experience of a job in a business. Students will participate in internship during the final phase of program completion. Contracts will be signed between the school, students, and training site stating the rules and objectives of internship.

**AST 2103  
ADVANCED AUTO ELECTRONICS**

Prerequisites: AST 1105 and ELT 1222. This course applies the fundamentals of electronics, including Ohm's Law, basic electrical circuits, wiring diagrams, and common electrical symbols to the automobile. Diagnosis and troubleshooting of electrical circuits is emphasized, including familiarizations with most common types of testing equipment. It includes an in-depth study of the theory and operation of automobile electronic control systems.

**AST 2113  
ADV ENGINE PERFORMANCE**

Prerequisites: AST 1105, AST 1206, and ELT 1222. This course covers advanced theory and testing of engine related fuel and computerized systems. The student should have a basic understanding of basic computer, fuel, and ignition systems. Students will use more advanced equipment for testing.

**AST 2203  
DIESEL THEORY**

Studies the basic principles involved in the construction and operation of diesel engines. Examines fuel, air, cooling, and control systems of various designs. Discusses engine overhaul and repair, includes gauging proper measuring instruments and tools for these tasks. Studies the design, operation, care, and repair of fuel injection systems used on a variety of diesel engines. Emphasizes care and cleanliness in troubleshooting the fuel preheating, starting, generating, and lighting systems. Lecture: 2 hours, laboratory: 1 hour.

**AST 2903  
INTERNSHIP II**

Provides student with the experience of a job in a business. Students will participate in internship during the final phase of program completion. Contracts will be signed between the school, students, and training site stating the rules and objectives of internship.

**AST 2991  
SPECIAL TOPICS FOR AST**

This course is designed to introduce students to specific areas in Automotive Service Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**AST 2992  
SPECIAL TOPICS FOR AST**

This course is designed to introduce students to specific areas in Automotive Service Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**AST 2993  
SPECIAL TOPICS FOR AST**

This course is designed to introduce students to specific areas in Automotive Service Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once. This course requires 15 clock hours per one semester credit hour.

**AST 2994  
SPECIAL TOPICS FOR AST**

This course is designed to introduce students to specific areas in Automotive Service Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**AST 2995  
SPECIAL TOPICS FOR AST**

This course is designed to introduce students to specific areas in Automotive Service Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**AST 2996  
SPECIAL TOPICS FOR AST**

This course is designed to introduce students to specific areas in Automotive Service Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**BIOL 1004**  
**PRIN ENVIRONMENTAL SCI**

On demand. This course is designed to bring the student to a basic but informed awareness of and responsible behavior toward our environment and the role of the human race therein. The content will include a study of the philosophical and scientific basis for the study of ecosystems and the environment, the nature of ecosystems, the techniques used to study the environment, the origin and development of current environmental problems, the interdisciplinary nature of environmental studies, the processes of critical thinking and problem solving, and the moral and ethical implications of environmentally-mandated decisions. Lecture three hours, Lab three hours. \$20 laboratory fee.

**BIOL 1011**  
**ORIENTATION TO BIOL SCI**

This course orients entering students to the biological sciences. Topics examined in this course include an overview of the Tech Department of Biological Sciences and careers in biology, managing a biology curriculum (registration procedures, student responsibilities, and study skills), requirements for professional schools and graduate education, and undergraduate research opportunities.

**BIOL 1014**  
**INTRO/BIOLOGICAL SCIENCE**

Each semester. An introduction to the major concepts of biological science, with an emphasis on the development of this scientific perspective and how it applies to humans. Duplicate credit for BIOL 1014 and BIOL 1114 will not be allowed. May not be taken for credit after completion of BIOL 1114, 2124, or 2134. Lecture three hours. Laboratory two hours. \$10 laboratory fee.

**BIOL 1114**  
**PRINCIPLES/BIOLOGY**

Each semester. Prerequisite: scores of 19 or higher on the reading and science reasoning portions of the enhanced ACT; or a grade of C or higher in a science course; or approval of the instructor. Duplicate credit for BIOL 1014 and BIOL 1114 will not be allowed. An in depth study of biological principles and the interrelationships of biology with other sciences. Topics included are: cellular structure, intermediary metabolism and differentiation, population genetics, ecology, and evolution. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 2004**  
**BASIC HUMAN ANAT/PHYSIOL**

Each semester. Prerequisites: a grade of C or higher in a science course or approval of the instructor. This course may not be taken for credit after completion of BIOL 2014, 3074, or equivalent. This course is intended for students who have a need for basic studies in functional aspects of the organ systems of the human body. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 2014**  
**HUMAN ANATOMY**

Each semester. Prerequisites: a grade of C or higher in a science course or approval of the instructor. This is an introductory course in human anatomy which should be useful to students in the biological and health oriented fields. The course is designed to present an introduction to the unified concepts and data that contribute to a basic understanding of the structure of the human body. The course will include familiarization with essential technical vocabulary; reference to general functions of organs and organ systems; and brief encounters with histology, embryology, and comparative anatomy. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 2022**  
**MED LAB ORIEN/INST,LAB**

Fall. Prerequisites: a grade of "C" or higher in BIOL 1114 or BIOL 2124. Enrollment is limited to students enrolled in BIOL 2023. Topics covered will include laboratory orientation, laboratory procedures/ techniques, introduction to clinical laboratory instrumentation (both manual and automated), quality control principles, and care of equipment. Laboratory four hours per week. \$10 laboratory fee.

**BIOL 2023**  
**MED LAB ORIENT/INSTRUM**

Fall. Enrollment is limited to medical assistant and/or medical technology majors who have completed at least BIOL 1114 or BIOL 2124 (AHS 2013 recommended) with a grade of "C" or higher and are in the final year of their program at Tech. This course is concerned with both the theoretical and practical application of a wide range of clinical duties performed by the medical assistant and medical technologist. Topics covered will include hematology, urinalysis, hematostatic processes, body chemistry, microbiology, and blood typing. Lecture three hours.

**BIOL 2111**  
**ENVIRONMENTAL SEMINAR**

Spring. A seminar for students pursuing the environmental option of biology, chemistry, or geology and other students interested in environmental sciences.

**BIOL 2124**  
**PRINCIPLES/ZOOLOGY**

Each semester. Prerequisite: scores of 19 or higher on the reading and science reasoning portions of the enhanced ACT; or BIOL 1014 or BIOL 1114; or approval of the instructor. A survey of the major animal phyla: morphology, physiology, and natural history. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 2134**  
**PRINCIPLES OF BOTANY**

Each semester. Prerequisite: scores of 19 or higher on the reading and science reasoning portions of the enhanced ACT; or BIOL 1014 or BIOL 1114; or approval of the instructor. Introduction to the structure, function, classification, and importance of nonvascular and vascular plants. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 2144**  
**HONORS ZOOLOGY**

Prerequisites: Admission to the Tech Honors Program or permission of the instructor. An honors course which includes a survey of the major animal phyla: morphology, physiology, and natural history. The presentation will foster rational inquiry, critical thinking, and analytical skills in general and specifically toward discussions of evolution and associated implications for world views. Duplicate credit for BIOL 2124 and 2144 will not be allowed. Lecture 3 hours, lab 2 hours.

**BIOL 2881**  
**SPECIAL TOPICS IN BIOLOGY**

On demand. Prerequisites: consent of the instructor. This course offers specialized instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Note: BIOL 2884 includes a \$10 lab fee.

**BIOL 2882**  
**SPECIAL TOPICS IN BIOLOGY**

On demand. Prerequisites: consent of the instructor. This course offers specialized instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Note: BIOL 2884 includes a \$10 lab fee.

**BIOL 2883**  
**SPECIAL TOPICS IN BIOLOGY**

On demand. Prerequisites: consent of the instructor. This course offers specialized instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Note: BIOL 2884 includes a \$10 lab fee.

**BIOL 2884**  
**SPECIAL TOPICS IN BIOLOGY**

On demand. Prerequisites: consent of the instructor. This course offers specialized instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Note: BIOL 2884 includes a \$10 lab fee.

**BIOL 3004**  
**PLANT TAXONOMY**

Spring. Prerequisite: BIOL 1114 and 2134 or permission of instructor. An overview of the major principles of classification, identification, naming, and collection of representatives of vascular plants. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 3014**  
**COMPARATIVE ANATOMY**

On demand. Prerequisite: BIOL 2124. A comparative study of the vertebrate classes in terms of their organ systems. An emphasis is placed on evolution from aquatic to terrestrial forms and significant phylogenetic trends. Lecture two hours, laboratory four hours. \$10 laboratory fee.

**BIOL 3024**  
**EMBRYOLOGY**

On demand. Prerequisite: BIOL 2124. A comparative study of the development of the frog, pig, and chick, and an introduction to human embryology. Lecture two hours, laboratory four hours. \$10 laboratory fee.

**BIOL 3034**  
**GENETICS**

Each semester. Prerequisites: BIOL 1114 (or equivalent) with a grade of "B" or higher, MATH 1113 (or higher) and two semesters of chemistry. Introduction to and discussion of the principles of Mendelian, molecular and population genetics with a strong emphasis on problem solving. Laboratory exercises will involve hands-on experience with microbes, plants, animals and fungi using traditional and molecular techniques. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 3043  
CONSERVATION**

On demand. Prerequisite: BIOL/CHEM/ GEOL 2111. A study of natural resources, their utilization in a technical society, and factors leading to their depletion. Lecture three hours.

**BIOL 3054  
MICROBIOLOGY**

Each semester. Prerequisites: One semester of chemistry and one semester of biology. An introduction to the microbial world with an emphasis on prokaryotes. Identification of bacteria based on staining, immunologic reactions, morphology and physiology. Symbionts and pathogens of human and domestic animals. Principles of control using chemical and physical agents. An overview of virology and immunology. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 3064  
PARASITOLOGY**

On demand. Prerequisite: BIOL 2124. A survey of parasitism in the various phyla. Special emphasis is given to parasites that affect humans. Lecture two hours, laboratory four hours. \$10 laboratory fee.

**BIOL 3074  
HUMAN PHYSIOLOGY**

Each semester. Prerequisites: C grade or better in BIOL 2014 and CHEM 1114 or CHEM 2124. An introduction to the function of vertebrate body systems, i.e., muscle action, digestion, circulation, nervous control, endocrine, metabolism and respiration, with special emphasis on the human body. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 3084  
ICHTHYOLOGY**

Fall. Prerequisite: BIOL 2124. Systematics, collection, identification, natural history, and importance of fishes. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 3094  
ENTOMOLOGY**

On demand. Prerequisite: BIOL 2124. Introduction to the world of insects: morphological and physiological adaptations, classification, methods and collecting and preserving common insects. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 3111  
ENVIRONMENTAL SEMINAR**

Spring. A seminar for students pursuing the environmental option of biology, chemistry, or geology and other students interested in environmental sciences.

**BIOL 3114**  
**PRINCIPLES OF ECOLOGY**

Fall and Spring. Prerequisites: BIOL 2124, 2134, and one semester of chemistry. Responses of organisms to environmental variables, bioenergetics, population dynamics, community interactions, ecosystem structure and function, and major biogeographical patterns. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 3124**  
**GENERAL PHYSIOLOGY**

Fall. Prerequisites: BIOL 1114, 2124, 2134, and two semesters of chemistry. An in depth study of basic physiology employing examples of both plants and animals. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**BIOL 3134**  
**INVERTEBRATE ZOOLOGY**

Spring. Prerequisites: BIOL 1114, 2124, 2134, and two semesters of chemistry. Morphology, physiology, natural history and taxonomy of major invertebrate phyla. Laboratory maintenance and preservation techniques. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 3144**  
**ORNITHOLOGY**

Spring. Prerequisite: BIOL 2124. An introduction to the biology of birds. The course covers aspects of anatomy, physiology, behavior, natural history, evolution, and conservation of birds. Laboratories address field identification and natural history of the birds of Arkansas. Students will be expected to participate in an extended 5-7 day field trip. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 3154**  
**MAMMALOGY**

Fall. Prerequisite: BIOL 2124. Taxonomy, identification, ecology, and study natural history of the mammals. Lecture three hours, laboratory two hours. \$20 laboratory fee.

**BIOL 3163**  
**BIODIVERSITY/CONSERV BIO**

Fall of even years. Prerequisites: FW(BIOL) 3114 and one of the following: BIOL 3004, FW(BIOL) 3084, BIOL 3094, BIOL 3134, FW(BIOL) 3144, FW(BIOL) 3154, BIOL(FW) 3224, BIOL 4044, or permission of instructor. The concepts of, processes that produce, and factors that threaten biological diversity are introduced and examined. Further emphasis is placed on unique problems associated with small population size, management of endangered species, and practical applications of conservation biology. Lecture three hours

**BIOL 3174**  
**PHYSIOLOGICAL ECOLOGY**

Prerequisites: BIOL 1114, 2124, 2134 and two semesters of chemistry. An in-depth study of plant and animal adaptations and responses to different environmental conditions. Comparative physiology of major systems, mechanisms of adaptation and adaptations to challenging habitats will be studied. \$10 laboratory fee.

**Biol 3184  
ANIMAL BEHAVIOR**

Spring of even years. Prerequisites: sophomore standing in biology or psychology, or approval of instructor. An introductory course in animal behavior covering behavioral responses in primitive and advanced animals exposed to a wide range of environmental and social conditions. Laboratory exercises will include field as well as in-lab exercises and will focus on observational techniques and analyses of behavioral patterns in vertebrates and invertebrates. Lecture three hours, laboratory two hours. \$20 laboratory fee.

**Biol 3213  
SCI EDUC IN ELEM SCHOOL**

Each semester. Prerequisites: Junior standing, ECED 2001, ECED 2002, and at least six credit hours in science. An overview of the most recent and research-based strategies and techniques for planning, teaching, and assessing elementary science. Inquiry-based methods and other constructivist approaches as described in the National Science Education Standards will be emphasized. Design and execution of learning activities for an elementary school setting are required. Lecture two hours, laboratory two hours; three credit hours. \$10 laboratory fee. Note: To enroll in an internet section (TC1 or AT1) of this course, one of these prerequisite courses is required: COMS 1003, EDMD 3013, or equivalent.

**Biol 3223  
SCI ED MIDDLE LEVEL**

Spring. Prerequisites: 16 hours in science and MLED 2001. This course is designed to provide pre-service teachers with an integrated approach to the teaching of science in the middle grades. Theoretical and practical aspects of teaching science will be explored and students will develop curricular materials based on their explorations. Lecture two hours, laboratory 2 hours. \$10 laboratory fee.

**Biol 3224  
HERPETOLOGY**

Spring of odd years. Prerequisite: BIOL 2124. The phylogeny, classification, physiology, behavior, and distribution of reptiles and amphibians. The Laboratory will stress identification of the species found in Arkansas Lecture two hours, laboratory four hours. \$20 laboratory fee.

**Biol 3233  
SCI EDUC IN SEC SCHOOL**

Fall. Prerequisites: 16 hours in biology or 16 hours in physical science and SEED 2002. This course will examine the issues of nature and history of science, developing lessons and assessments, and science education standards for the prospective secondary school teacher. Curriculum development, including assessment and planning skills, utilizing various instructional media and inquiry methodology are emphasized. Design and execution of learning activities for a secondary school setting are required. Lecture two hours and lab two hours. \$10 laboratory fee.

**Biol 3252  
NATURE/CONTEXT OF SCI**

On demand. Prerequisite: At least 12 hours of science courses. This seminar course examines science from a holistic perspective. It will concentrate on examining how current science develops scientific knowledge including unifying concepts across scientific disciplines, the place of science within modern society, technology and its role in science and society, and current scientific methodology.

**BIOL 3803  
APPL PATHOPHYSIOLOGY**

Each semester. Prerequisites: grade of C or better in BIOL 2014 and BIOL 3074. This course focuses on the mechanisms and concepts of selected pathological disturbances in the human body. Emphasis is placed on how the specific pathological condition effects the functioning of the system involved, as well as its impact on all other body systems. Lecture 3 hours.

**BIOL 4003  
HIST/PHIL SCIENCE**

On demand. Prerequisite: a Sophomore- level science course (or higher). A course in the historical development and philosophical basis of modern science. BIOL (PHSC) 5003 may not be taken for credit after completion of this course. Three hours lecture.

**BIOL 4013  
MULTICULTURAL SCIENCE ED**

On demand. Prerequisites: Junior standing or admission to teacher education program. A course designed to familiarize prospective teachers with the materials, methods, and procedures to meet the needs of culturally diverse learners in the science classroom. This course includes the discussion of equity issues, the limitations of Eurocentric and androcentric science world views, how culturally diverse students learn science, instructional strategies, technology, and alternative assessment. Lecture three hours for three credit hours.

**BIOL 4014  
ENDOCRINOLOGY**

Spring of odd years. Prerequisites: BIOL 1114, 2124 and one semester of chemistry. An in-depth study of the endocrine systems of animals with emphasis on vertebrates. Histology and embryology of endocrine organs or cell groups, mechanisms of stimulation, response, and actions plus comparative aspects of similar organs in different animal groups will be studied. Lecture 3 hours, laboratory two hours. \$10 laboratory fee.

**BIOL 4023  
IMMUNOLOGY**

Spring. Prerequisites: Four hours each in biology and chemistry and/or consent of instructor. An overview of the human immune system, including cellular and humoral defense mechanisms, immunity to infection, hypersensitivity, transplant rejection, and tumor destruction. Immune deficiency and autoimmune diseases. Antibody structure and the use of antibodies in medicine and research. Three hours lecture.

**BIOL 4024  
LIMNOLOGY**

Spring. Prerequisite: BIOL(FW) 3114. A study of physical and chemical processes in fresh water and their effects on organisms in lakes and streams. Laboratory sessions and field trips demonstrate limnological instrumentation and methodology. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 4033  
CELL BIOLOGY**

Fall. Prerequisites: BIOL 1114, 2124 or 2134 plus four additional hours of biology and one course from BIOL 3034, 3054, 4023 or CHEM 3343; eight hours of chemistry. The primary goal of this course is to introduce the basic cell structures and the molecular mechanisms whereby the cell functions through the

directed application of energy and processing of information. Topics include methods of cell study, cellular organelles and their ultrastructures, membrane structure and function, cell differentiation, and reproduction. Lecture three hours.

**BIOL 4044  
DENDROLOGY**

Fall. Prerequisites: BIOL 1114 and 2134. A study of woody plants with emphasis on field recognition throughout the year. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**BIOL 4054  
VERTEBRATE HISTOLOGY**

Spring of even years. Prerequisites: BIOL 1114, 2124 and an additional four hours in biology. A study of functional/ structural relationship of cells, tissues, and organs. Exercises in the preparation and observation of tissues and development of general principles of micro techniques. Lecture two hours, laboratory four hours. \$10 laboratory fee.

**BIOL 4064  
EVOLUTIONARY BIOLOGY**

Spring of even years. Prerequisite: BIOL 3034 or permission of instructor. This course focuses upon the principles and major concepts in evolutionary biology from a historical and contemporary viewpoint. Morphological and molecular evolution, population genetics, systematics, the fossil record, a history of life on earth, macroevolution, and adaptation are among the topics examined in this course. Lecture 3 hours, lab 3 hours. \$10 laboratory fee.

**BIOL 4074  
MOLECULAR GENETICS**

Spring of odd years. Prerequisite: BIOL 3034. This course continues the material introduced in Genetics (BIOL 3034) with a focus upon the major concepts and techniques in contemporary molecular genetics. Current viewpoints of the gene, gene regulation, developmental genetics, recombinant DNA technology, genomics, proteomics, and molecular evolution are among the topics examined in the course. Lecture 3 hours, laboratory 3 hours. \$10 laboratory fee.

**BIOL 4083  
CANCER BIOLOGY**

Prerequisites: BIOL 3034. An in-depth study of major areas and topics in cancer biology, including etiology and epidemiology of cancer, impact of the human genome mapping project, molecular genetics and cell biology of cancer, cancer modeling and clinical aspects of human cancer.

**BIOL 4094  
COASTAL ECOLOGY**

May Mini-Term. Prerequisites: BIOL 2124 and BIOL 2134 and one semester of chemistry. A focused study of coastal ecology, as represented by the Mississippi Gulf Coast. Coastal plants, animals, their interactions, and relationship to the physical environment are explored. The course includes a required field trip to the Gulf Coast. Investigations are conducted in the marshes, bays, estuaries, bogs, and barrier island systems. Students bear the cost of food and a nominal housing fee. \$20 laboratory fee.

**BIOL 4111  
ENVIRONMENTAL SEMINAR**

Spring. A seminar for students pursuing the environmental option of biology, chemistry, or geology and other students interested in environmental sciences.

**BIOL 4112**  
**BIOLOGY INTERNSHIP**

Each semester. Prerequisite: junior or senior standing and consent of internship program director. A supervised, practical experience providing BIOL majors with a hands-on, professional experience related to their career interests. The course will allow students to gain experience in an occupational environment. Students will be placed in positions under the direction of the internship program director and work supervisor. The program will emphasize application of classroom knowledge to career goals. Approximately 200 clock hours, a proposal, a log book or journal, a summary letter from the employment supervisor, and a written report are required. A maximum of four credit hours is allowed for BIOL internship.

**BIOL 4114**  
**BIOLOGY INTERNSHIP**

Each semester. Prerequisite: junior or senior standing and consent of internship program director. A supervised, practical experience providing BIOL majors with a hands-on, professional experience related to their career interests. The course will allow students to gain experience in an occupational environment. Students will be placed in positions under the direction of the internship program director and work supervisor. The program will emphasize application of classroom knowledge to career goals. Approximately 400 clock hours, a proposal, a log book or journal, a summary letter from the employment supervisor, and a written report are required. A maximum of four credit hours is allowed for BIOL internship.

**BIOL 4701**  
**SPECIAL METHODS/BIOL**

Fall and Spring. Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4909. Intensive on campus exploration of the principles of curriculum construction, teaching methods, use of community resources, and evaluation as related to teaching biology.

**BIOL 4881**  
**ADVANCED TOPICS BIOLOGY**

On demand. Prerequisites: an upper level science course and consent of the instructor. This course offers advanced instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Offered on demand. \$10 laboratory fee.

**BIOL 4882**  
**ADVANCED TOPICS BIOLOGY**

On demand. Prerequisites: an upper level science course and consent of the instructor. This course offers advanced instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Offered on demand. \$10 laboratory fee.

**BIOL 4883**  
**ADVANCED TOPICS BIOLOGY**

On demand. Prerequisites: an upper level science course and consent of the instructor. This course offers advanced instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Offered on demand. \$10 laboratory fee.

**BIOL 4884**  
**ADVANCED TOPICS BIOLOGY**

On demand. Prerequisites: an upper level science course and consent of the instructor. This course offers advanced instruction in an area of biological sciences that is not otherwise covered in the curriculum. The focus of the course will vary from offering to offering, thus the course may be taken more than once. Offered on demand. \$10 laboratory fee.

**BIOL 4891**  
**SEMINAR IN BIOLOGY:**

Fall and Spring. Prerequisite: an upper level biology course and senior standing. Designed to integrate all aspects of biology by covering current topics in many fields of biology and to acquaint the student with fields of biology not covered in the general curriculum.

**BIOL 4951**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**BIOL 4952**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**BIOL 4953**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**BIOL 4954**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**BLAW 2033**  
**LEGAL ENVIRON/BUSINESS**

Each semester. Prerequisite: Sophomore standing. A survey of the basic framework of the American and international legal systems, including civil procedure, constitutional law, administrative regulation, and topics in business law, with particular emphasis on the ethical, sociocultural and political influences affecting such environments.

**BLAW 3063  
COMMERCIAL LAW**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisites: BUAD 2033. An in-depth analysis of the Uniform Commercial Code and its effect on the business environment. Course focuses on sales, negotiable instruments, secured transactions, and bankruptcy. Significant federal and state statutes affecting commerce also are explored.

**BLAW 4073  
SPECIAL TOPICS IN LAW**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: BUAD 2033. Course offers an in-depth exploration of selected legal issues affecting business. The primary focus of the course will vary from offering to offering; thus the course may be taken more than once.

**BUAD 1003  
INTRO/BUSINESS SYSTEMS**

This course cannot be taken for credit after completion of any upper division (3-4000 level) College of Business course. The purpose of "Introduction to Business Systems" is to orient students to the business disciplines and business expectations including professionalism and ethics. Topics examined include business fundamentals such as accounting, finance, management, marketing, information technology and a basic understanding of economic factors. The course also provides an overview of the College of Business programs, the College of Business core curriculum (including course requirements, student responsibilities, and study skills), and an overview of business career options.

**BUAD 1023  
KEYBOARDING**

Instruction and supervised practice in basic keyboarding skills with emphasis on alphabetic and numeric keyboard, ten-key pad, and basic applications transferable to computer terminal keyboards. The purpose of the course is to prepare Business Education majors for teaching secondary education students how to use computer and typewriter keyboards. The course is required by Business Education majors, but may be taken by other majors as well. May not be taken for credit after successful completion of BUAD 2002.

**BUAD 2003  
BUSINESS INFO SYSTEMS**

Each semester. Prerequisite: Sophomore standing. An introduction to business information systems with emphasis on concepts and applications utilizing spreadsheets, word processing, and database management as productivity tools; provides basic rationale for using computers in generating and managing information necessary for the business decision making process.

**BUAD 2043  
PRIN/WORD PROCESSING**

Prerequisite: BUAD 1023 or BUAD 2003 or COMS 1003. A course designed to develop technology skills using current software; application documents include letters, memos, reports, tables, desktop publishing, and graphics for business as well as personal use.

**BUAD 2053  
BUSINESS STATISTICS**

Each semester. Prerequisites: COMS 1003, COMS 2003, BUAD 2003 or MGMT 2013, and MATH 2223 or any higher level math course. This course reviews basic descriptive statistics and probability distributions. The course introduces inferential statistics and their application to business problems. Topics covered include data collection, the t-tests for one sample, matched-pairs, and independent groups, the F-test for one and two-way analysis of variance, the

z-test for one and two proportions, the chi-square tests for independence and goodness of fit, the t- and F- tests as they relate to simple and multiple regression, control charts, time-series analysis, the visual display of quantitative information, and the reporting of results. Problems are addressed using technology such as statistical calculators and advanced statistical software.

**BUAD 2073  
PRINCIPLES/REAL ESTATE**

An orderly approach of study to prepare students for the Uniform License Examination. Topics covered include contracts, real estate financing ownership, brokerage, valuation, settlements, arithmetic review, forms of ownership, title transfer, mortgage instruments, deeds, leases, title closing, contract laws, real estate taxes, property descriptions, and other pertinent areas.

**BUAD 3023  
BUSINESS COMMUNICATIONS**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Each semester. Prerequisites: 6 hours of English Composition and COMS 1003 or BUAD 2003. Course includes principles of effective business communication using technology to generate documents including letters, memos, and reports; international, ethical, legal, and interpersonal topics are integrated throughout the course.

**BUAD 4001  
PROBLEMS/BUSINESS ADMIN**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) On demand. Prerequisites: Senior standing and permission of department head. Individual exploration of significant topics and problems in business administration under the direction of an assigned faculty member. A report will be required.

**BUAD 4002  
PROBLEMS/BUSINESS ADMIN**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) On demand. Prerequisites: Senior standing and permission of department head. Individual exploration of significant topics and problems in business administration under the direction of an assigned faculty member. A report will be required.

**BUAD 4003  
PROBLEMS/BUSINESS ADMIN**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) On demand. Prerequisites: Senior standing and permission of department head. Individual exploration of significant topics and problems in business administration under the direction of an assigned faculty member. A report will be required.

**BUS 0903  
KEYBOARDING**

Acquaints the student with the alphabetic keyboard through usage of the computer. The course emphasizes basic skill development through drills for speed and control, methods used in centering and tabulations, letter style, business reports, and production measurement. (May be required if student's skill level is not adequate for other course work.)

**BUS 1003  
BUSINESS ENGLISH**

Designed to develop the student=s vocabulary skills, dictionary usage, proofreading, listening, and English grammar as needed for current business usage enabling the student to write and communicate effectively.

**BUS 1013  
WORD PROCESSING I**

Pre-requisite: BUS 0903 or permission of instructor. Provides instruction in basic word processing machine operations and word processing skills. The student will learn to produce documents through keyboarding, editing, storing, retrieving, and printing. The student will also learn basic maintenance of word processing software and equipment in the modern business office.

**BUS 1023  
BUSINESS MATHEMATICS**

A comprehensive study of mathematics as applied to business. Banking, payroll, business statistics, and other selected topics will be covered.

**BUS 1033  
ADMIN SUPPORT PROCEDURES**

Prerequisite: BUS 0903 or permission of instructor. Emphasizes the practices and procedures acceptable in a business office. Topics include interpersonal relations, telephone usage, mail handling, records management, job application procedures, travel arrangements, reprographics, and financial statements.

**BUS 1043  
PROF COMMUNICATION**

Designed to review and/or learn the basics in punctuation and to further develop spelling skills. The course covers the principles of effective communication in the modern business office. Topics include writing skills, reading skills, and psychological principles involved in effective business letter writing as well as oral communication.

**BUS 1053  
SPREADSHEETS**

Students will develop comprehensive skills using Microsoft Excel. These skills will include toolbar usage, cell and worksheet formatting, cell functions, worksheet organization and printing. The user will become adept at advanced features such as charts, linking worksheets and workbooks, customizing templates and toolbars, and other features.

**BUS 1063  
LEGAL ENVIRON/BUSINESS**

Provides an introduction to characteristics of the American system of free enterprise and the obligations and rights of an individual. Topics include torts, rights of private property, contracts, bailment, insurance and risk, labor, and dignity and worth of an individual.

**BUS 1073  
ACCOUNTING**

The study of fundamental accounting concepts and procedures. The course emphasizes the accounting cycle, and includes journalizing and posting transactions, preparing trial balances, worksheets, and financial statements. Emphasis is also given to cash, banking, payroll procedures, sales, purchases, and accounts receivable/ payable.

**BUS 1083  
INTRO TO ECONOMICS**

An overview of macroeconomics with continued emphasis on microeconomic theory as it applies to business technology students

**BUS 1303  
INTRO TO COMPUTERS**

Designed to introduce students to computer hardware, software, procedures, systems, and human resources as applied to business. It focuses on computer literacy, the concepts of the data processing cycle, and an introduction to commercially available software.

**BUS 2113  
WORD PROCESSING II**

Pre-requisite: BUS 1013. Provides students an opportunity for more in-depth practical application of word processing skills. Emphasis is given to design, format, merging, and advanced editing techniques.

**BUS 2123  
COMPUTER APS/ACCOUNTING**

Prerequisite: BUS 1073. Designed to acquaint students with major areas of computerized accounting. Application areas covered will include general ledger, accounts payable, accounts receivable, and payroll.

**BUS 2133  
MULTIMEDIA**

Focuses on a variety of software as well as technology-based equipment used in advanced office settings. Projects will emphasize the use of the following: digital camera, video equipment, desktop publishing, graphics production, electronic slide show presentations, E-mail, and Internet.

**BUS 2143  
INTRO TO MANAGEMENT**

Provides insight into the characteristics, organization, and operation of a business. Studies include international business, factors of business operations, and business decision-making. Management skills, the legal environment, and types of business ownership are included in this course.

**BUS 2153  
DATABASE MANAGEMENT**

This course includes elementary database design, record layouts, simple selection operations, and basic report generation.

**BUS 2163  
DESKTOP PUBLISHING**

Prerequisites: COMS 1003 or BUS 1303 and/or BUS 1013. Utilizes a desktop publishing software program in order to provide practical experience in the development of marketing and informative correspondence. Activities include creating newsletters, menus, posters, fact sheets, advertisements, business reports, brochures, comprehensive indexes, and planning a web page.

**BUS 2173  
SPECIAL TOPICS/BUSINESS**

This course covers new developments in business environments, such as technologies, laws, and organizational structures. The instructor selects a pertinent and current topic as the focus of the course. Topics will change with semesters. May be repeated for credit for total of 6 hours.

**BUS 2213  
INTRO HUMAN ANATOMY**

This course is designed for the student desiring knowledge relative to the human structure and basic functioning of the human body. This course meets the basic requirement of in-breadth, but not in-depth study of the human body.

**BUS 2223  
MEDICAL TRANSCRIPTION I**

Pre-requisite: BUS 0903. Introduces the student to the skills needed to properly format medical documentation such as history and physical reports, operative reports, discharge summaries, etc. Provides training in the transcribing of documents from recordings using a microcomputer and transcription machine.

**BUS 2233  
MEDICAL TERMINOLOGY**

Study of terms that relate to body systems, anatomical structures, medical processes and procedures, drugs and a variety of diseases that afflict humans. This course includes medical word construction, definitions, spellings, and the use of terms in the medical field.

**BUS 2243  
DISEASE PROCESSES**

Pre-requisites: BUS 2213 and BUS 2233. Coverage of the nature of diseases and human conditions. Includes symptoms, signs, etiological factors, diagnostic studies, and treatments.

**BUS 2253  
MEDICAL CODING I**

Pre-requisites: BUS 2213 and BUS 2233. Introduces the student to the concepts of coding medical conditions and procedures. The student will gain entry-level proficiency in the techniques of coding using the ICD- 9-CM (International Classification of Diseases, 9th revision, Clinical Modification) system.

**BUS 2263  
MEDICAL CODING II**

Pre-requisite: BUS 2253. Introduces the student to the concepts of coding medical procedures in the physician office. The student will become familiar with entry-level proficiency in the techniques of coding using the Current Procedural Terminology (CPT) system.

**BUS 2273  
MEDICAL TRANSCRIPTION II**

Pre-requisite: BUS 2223. Includes advanced word and information processing concepts and advanced applications.

**BUS 2283  
HUMAN ANATOMY AND PHYSIOLOGY**

This course is designed to present an indepth study of the anatomical structure of the human body. Students in this course will be presented concepts which will continue to develop a basic understanding of the internal relationships within the human body.

**BUS 2303  
MONEY AND BANKING**

Addresses the various financial markets as well as economic factors and their impact on the banking industry.

**BUS 2313  
DEPOSIT OPERATIONS**

Covers customer services, teller functions, new accounts, accounts payable, trusts, estates, branch security, general ledger banking, e-banking and online banking, call support, confidentiality, and research in banking.

**BUS 2333  
LOAN OPERATIONS**

All aspects of consumer and commercial lending as well as financial and insurance statements. Other topics that will be addressed include managing loan files, assessing risk in lending, understanding issues of regulation and compliance, bankruptcy, credit reports, and appraisals.

**BUS 2903  
INTERNSHIP**

Provides students with experience in a business setting. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of the internship.

**BUS 2991  
SPEC TOPIC/BUSINESS TECHNOLOGY**

This course is designed to introduce students to specific areas in Business Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**BUS 2992  
SPEC TOPIC/BUSINESS TECHNOLOGY**

This course is designed to introduce students to specific areas in Business Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**BUS 2993  
SPEC TOPIC/BUSINESS TECHNOLOGY**

This course is designed to introduce students to specific areas in Business Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**BUS 2994  
SPEC TOPIC/BUSINESS TECHNOLOGY**

This course is designed to introduce students to specific areas in Business Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**BUS 2995  
SPEC TOPIC/BUSINESS TECHNOLOGY**

This course is designed to introduce students to specific areas in Business Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**BUS 2996  
SPEC TOPIC/BUSINESS TECHNOLOGY**

This course is designed to introduce students to specific areas in Business Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CHEM 1114  
SURVEY OF CHEMISTRY**

Each semester. Prerequisite: a score of 19 or above on the mathematics section of the ACTE exam, or completion of MATH 0903, Intermediate Algebra, with a grade of C or better. A survey of selected topics in chemistry for life science majors. A brief introduction to fundamental concepts, atomic structure, chemical bonding, and periodic law as applied in the life sciences and allied areas. Lecture three hours, laboratory three hours. May not be taken for credit after completion of CHEM 2124 or 2134. \$10 laboratory fee.

**CHEM 2111  
ENVIRONMENTAL SEMINAR**

(See CHEM 4111).

**CHEM 2124  
GENERAL CHEMISTRY I**

Each semester. Prerequisites: score of 21 or higher on the math portion of the ACTE; or MATH 1113 or equivalent; or a "C" or better in CHEM 1114; or approval of the instructor. The first of a two semester sequence designed for science and engineering majors. Topics include qualitative and quantitative, applied and theoretical analyses of the interactions of matter; atoms, molecules, ions, the mole concept, chemical equations, gases, solutions, intermolecular forces, thermochemistry, quantum theory, periodic law, ionic and covalent bonding, molecular geometry. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 2134  
GENERAL CHEMISTRY II**

Each semester. Prerequisite: completion of CHEM 2124 or equivalent. A continuation of CHEM 2124, encompassing chemical kinetics, equilibrium, acid/base systems, atmospheric chemistry, thermodynamics, electrochemistry, descriptive inorganic chemistry and nuclear chemistry. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 2201  
CHEMISTRY SEMINAR**

(See CHEM 4401).

**CHEM 2204  
ORGANIC PHYS CHEMISTRY**

Spring semester. Prerequisites: CHEM 1114 or CHEM 2124. For students who desire only one semester of organic/ physiologic chemistry, such as wildlife biology and various allied health programs. A brief introduction to organic and physiological chemistry. The structures, reactions and biological aspects of organic compounds will be stressed. Will not be counted for chemistry credit toward the ACS approved BS in chemistry. Lecture three hours, laboratory three hours. \$10 lab fee.

**CHEM 2991  
SPECIAL PROBLEMS/CHEM**

Permission of instructor. One to three credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 2992  
SPECIAL PROBLEMS/CHEM**

Permission of instructor. One to three credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 2993  
SPECIAL PROBLEMS/CHEM**

Permission of instructor. One to three credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 3111  
ENVIRONMENTAL SEMINAR**

(See CHEM 4111).

**CHEM 3245  
QUANTITATIVE ANALYSIS**

Spring. Prerequisites: CHEM 2134. This is a lab intensive course, that focuses on a variety of experimental techniques that enable the chemist to characterize and quantify many types of samples. Lecture three hours, laboratory six hours. \$10 laboratory fee.

**CHEM 3254  
FUND OF ORGANIC CHEM**

Fall, Spring. Prerequisites: CHEM 2134. An introduction to the chemistry of covalently bonded carbon. Special emphasis will be given to descriptive and structural aspects of Organic Chemistry. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 3264  
MECH ORGANIC CHEMISTRY**

Spring. Prerequisite: Completion of CHEM 3254 or equivalent. A continuation of CHEM 3254 with special emphasis on theory and mechanisms of organic reactions. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 3301  
CHEMISTRY SEMINAR**

(See CHEM 4401).

**CHEM 3313  
ENVIRONMENTAL CHEMISTRY**

Spring. Prerequisite: Chemistry 3254. An examination of the chemistry of the environment including the origins, natural processes, and anthropogenic influences.

**CHEM 3324  
PHYSICAL CHEMISTRY I**

Fall. Prerequisites: CHEM 3245, PHYS 2024, or 2124, MATH 2924. Upper division chemistry course designed for chemistry, physical science, and engineering majors desiring a deeper understanding of the physical and mathematical processes of chemistry. Course content includes ideal and non-ideal gases, laws of thermodynamics, enthalpy, heat capacity, free energy, Maxwell's relations, chemical and phase equilibria, electrochemical equilibria, fugacities, activity coefficients, mixtures, colligative properties, surfaces. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 3334  
PHYSICAL CHEMISTRY II**

Spring. Prerequisite: CHEM 3324. Continuation of CHEM 3324 (Physical Chemistry I). Upper division chemistry course designed for chemistry, physical science and engineering majors desiring a deeper understanding of the physical and mathematical processes of chemistry. Course content includes chemical kinetics and reaction mechanisms, molecular collisions, transition state theory, quantum mechanics, electronic structure of atoms and diatomic molecules, molecular spectroscopy, solid-state chemistry. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 3344  
PRINC OF BIOCHEMISTRY**

Fall, Spring. Prerequisite: CHEM 3264 and BIOL 1014 or 1114. The chemistry of metabolism of carbohydrates, lipids, and proteins. Basic concepts of the biochemistry of DNA, vitamins, enzymes, biological oxidations, and bioenergetics with introduction to biochemical laboratory techniques. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 3353  
FUNDAMENTAL/TOXICOLOGY**

On demand. Prerequisite CHEM 3254. An introduction to the science of poisons. Toxicological principles studied include structures, dose/response relationships, metabolism, mechanism of action, and gross effects of chemicals.

**CHEM 3363  
METABOLIC BIOCHEMISTRY**

Prerequisites: CHEM 3343. The study of metabolism of carbohydrates, lipids, proteins, and nucleic acids, and the study of biological information flow in organisms. Metabolic pathways and genetic informational flow in plants and animals will be addressed. Lecture three hours.

**CHEM 3423  
DESCRIPTIVE INORGANIC CHEM**

Prerequisite: CHEM 3264. Basic descriptive inorganic chemistry dealing in a systematic way with the elements and the structures, properties and reactions of their inorganic compounds. Topics range from coordination chemistry to organometallic chemistry to bioinorganic chemistry. Three hours of lecture.

**CHEM 3991  
SPECIAL PROBLEMS/CHEM**

Permission of instructor. One to three credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 3992  
SPECIAL PROBLEMS/CHEM**

Permission of instructor. One to three credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 3993  
SPECIAL PROBLEMS/CHEM**

Permission of instructor. One to three credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 4111  
ENVIRONMENTAL SEMINAR**

Spring. A seminar for students pursuing the environmental option of chemistry, biology, or geology and other students interested in environmental sciences.

**CHEM 4401  
CHEMISTRY SEMINAR**

Spring. Participants will prepare written reviews, present oral reports, and defend their reports. Emphasis will be on the use of the library and current chemical research.

**CHEM 4414  
INSTRUMENTAL ANALYSIS**

Fall. Prerequisite: CHEM 3245. This course is designed for chemistry majors. It will focus on the understanding of the instrumental methods used in analytical chemistry. A variety of spectrometric, chromatographic, and electrometric techniques will be covered in the lecture and laboratory. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 4422  
ADVANCED ORGANIC CHEM**

On demand. Prerequisite: CHEM 3264. An expansion and/or continuation of theoretical topics addressed in CHEM 3264.

**CHEM 4424  
ADV INORGANIC CHEMISTRY**

Spring. Prerequisite: CHEM 3324. CHEM 4424 is a senior level inorganic chemistry course. The course gives an overview of some of the many advanced areas of study in inorganic chemistry including atomic and molecular structure, acid-base chemistry, symmetry and group theory, coordination chemistry and organometallic chemistry. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**CHEM 4432  
ADVANCED TOPICS/CHEM**

On demand. Prerequisite: Permission of instructor. Various advanced topics in any specialty area of chemistry, e.g., polymers, coordination chemistry, and nuclear chemistry.

**CHEM 4433  
ADVANCED TOPICS/CHEM**

On demand. Prerequisite: Permission of instructor. Various advanced topics in any specialty area of chemistry, e.g., polymers, coordination chemistry, and nuclear chemistry.

**CHEM 4434  
ADVANCED TOPICS/CHEM**

On demand. Prerequisite: Permission of instructor. Various advanced topics in any specialty area of chemistry, e.g., polymers, coordination chemistry, and nuclear chemistry.

**CHEM 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CHEM 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CHEM 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CHEM 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CHEM 4991  
SPEC PROB/CHEM**

Permission of instructor. One to four credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 4992  
SPEC PROB/CHEM**

Permission of instructor. One to four credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 4993  
SPEC PROB/CHEM**

Permission of instructor. One to four credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHEM 4994  
SPEC PROB/CHEM**

Permission of instructor. One to four credits, depending on the nature and extent of the problem. This course is designed to encourage creative, independent scientific activity on the part of advanced students. Problems will be designed to fit the future aspirations of individual students and will be supervised by a faculty mentor.

**CHIN 1014  
BEGINNING CHINESE I**

Prerequisite: Consent of Instructor. Student will be given credit for 40 hours of set construction participation.

**CHIN 1024  
BEGINNING CHINESE II**

Continued emphasis on conversation and fundamental language skills.

**CHIN 2014  
INTERMEDIATE CHINESE I**

Prerequisite: Beginning Chinese II (CHIN 1024) or equivalent. Instruction designed to develop communication skills and knowledge of grammar, reading, writing, and culture.

**CHIN 2024  
INTERMEDIATE CHINESE II**

Prerequisite: Intermediate Chinese I (CHIN 2014) or equivalent. Instruction designed to enhance communication skills and knowledge of grammar, reading, writing, and culture.

**CIS 1103  
PROGRAMMING I**

This course is designed to give the student an understanding of established and new methodologies using Microsoft Visual Basic programming. Course content will include an overview of programming, designing an application and using variables and constants. Emphasis will be placed on developing logical thinking skills. No prior programming skill is necessary.

**CIS 1113  
FUNDAMENTAL COMPUTER OPERATION**

Students will learn to manage current Microsoft Operating Systems. Topics included are troubleshooting and applying basic commands that are necessary in a working environment. Students will also explore basic Network and Web Design concepts. No prior computer experience is necessary.

**CIS 1123  
NETWORKING I**

Designed as a foundation course that provides the theory and basic understanding of the hardware and software that comes together to build local area and wide area networks.

**CIS 1133  
MICROCOMP APPLICATIONS**

This class is an introduction to using microcomputer application software. It uses business software in a hands on lecture approach. Topics include the use of microcomputers for word processing, spreadsheet, database, electronic publishing and presentation functions.

**CIS 1143  
INTRO TO DIGITAL LOGIC**

An introductory course in the study of Digital Logic Systems. Basic digital logic gates, truth tables, numbering systems, and different types of TTL integrated circuits are studied.

**CIS 1153  
NETWORKING I**

Designed as a foundation course that provides the theory and basic understanding of the hardware and software that comes together to build local area networks.

**CIS 1203  
PROGRAMMING II**

A continuation of Programming I. This course introduces the programming power of Microsoft Visual Basic 6.0.

**CIS 1213  
OPERATING SYSTEMS**

Pre-requisite: CIS 1113. Expands on the foundation that was built in Operating Systems I. Topics will include file management, multitasking, graphics, peer-to-peer networking, and accessories. Specific tasks of networking such as E-mail and scheduler will be covered.

**CIS 1223  
NETWORKING II**

Pre-requisite: CIS 1123. Builds upon the skills and concepts learned in Networking I. Emphasis will be on the hands-on aspects of personal computer networks using Microsoft and Linux based networking products, including installations and/or expanding a networking system and troubleshooting problems.

**CIS 1233  
SYSTEM ANALYSIS & DESIGN**

This course is an introduction to basic concepts regarding the system life cycle, analytical tools and methods, file and record layouts, and elements of the design phase.

**CIS 1243  
HTML PROGRAMMING**

Pre-requisite: CIS 1103. This class provides training in coding simple to complex web pages using HTML code. Common programming practices as well as distinct HTML skills are taught. Repetition, variable usage, and decision structures are covered, as well as some basic Javascript routines.

**CIS 1253  
NETWORKING II**

Pre-requisite: CIS 1153. Builds upon the skills and concepts learned in Networking I. Emphasis will be on the hands-on aspects of personal computer networks using Microsoft and Linux based networking products, including installations and/or expanding a networking system and troubleshooting problems.

**CIS 1303  
PC MAINTENANCE I**

This course is designed to prepare individuals to troubleshoot, build, and repair personal computers, workstations, printers, and other computer peripherals. The student will also learn to install, debug, diagnose, and repair software problems associated with PCs.

**CIS 2133  
WEB PAGE DESIGN**

This course introduces the student to design and development of web pages. HTML, images, multimedia, and other topics will be covered so that students learn how to publish and maintain a web site to a server.

**CIS 2143  
HELP DESK SUPPORT**

This course is designed to teach individuals to troubleshoot the Microsoft Office Application Suite. It focuses on customer service and communication with the end user.

**CIS 2153  
MICROSOFT PROGRAMMING**

This course is designed to teach individuals to use the Microsoft Visual Basic for applications. It focuses on macro creation and integration of a programming language into a business application suite.

**CIS 2303  
PC MAINTENANCE II**

Pre-requisite: ICS/CIS 1303. This course is designed to teach individuals core elements of computer repair based on the A+ Certification exams. The student will build on the knowledge acquired from PC Maintenance I, allowing them to be more prepared to diagnose, and repair computers in the working environment.

**CIS 2903  
INTERNSHIP**

Provides students with the experience of a job in a business. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of internship.

**CIS 2991  
SPECIAL TOPICS FOR CIS**

This course is designed to introduce students to specific areas in Computer Information Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CIS 2992****SPECIAL TOPICS FOR CIS**

This course is designed to introduce students to specific areas in Computer Information Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CIS 2993****SPECIAL TOPICS FOR CIS**

This course is designed to introduce students to specific areas in Computer Information Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CIS 2994****SPECIAL TOPICS FOR CIS**

This course is designed to introduce students to specific areas in Computer Information Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CIS 2995****SPECIAL TOPICS FOR CIS**

This course is designed to introduce students to specific areas in Computer Information Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CIS 2996****SPECIAL TOPICS FOR CIS**

This course is designed to introduce students to specific areas in Computer Information Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CJ 2003****INTRO/CRIMINAL JUSTICE**

An overview of the criminal justice system and the workings of each component. Topics include the history, structure, and functions of law enforcement, judicial and correctional organizations, their interrelationship and effectiveness, and the future trends in each.

**CJ 2033****SOCIAL PROBLEMS**

Prerequisite: SOC 1003. A sociological analysis of contemporary social problems including inequalities, deviance, population changes, and troubled institutions.

**CJ 2043****CRIME AND DELINQUENCY**

Prerequisite: SOC 1003 or CJ(SOC) 2003. A study of the major areas of crime and delinquency; theories of crime, the nature of criminal behavior and the components of the criminal justice system. Topics include: crime statistics, criminology research, theories of crime and delinquency, criminal typologies and operations of the criminal justice system.

**CJ 3023****JUDICIAL PROCESS**

The structure and operations of the state and national court systems. Emphasis is upon the role of the criminal courts in the political system and the consequences of judicial policy making.

**CJ 3033****THE CRIMINAL MIND**

Prerequisite: PSY 2003 and CJ(SOC) 2003 or (CJ)SOC 2043. The course familiarizes students with various models, theories, and research regarding criminality from a psychological perspective. Genetic, constitutional, and biological factors will be emphasized and some practical applications to dealing with criminals will be considered.

**CJ 3083****SOCIAL DEVIANCE**

Prerequisite SOC 1003 or SOC(CJ) 2003. An introduction to the sociological and criminological study of human deviance. Various theories of deviance will be examined and applied to real life examples.

**CJ 3103****JUVENILE JUSTICE SYSTEM**

Prerequisite: CJ(SOC) 2003 or permission of instructor. An in-depth look at the juvenile justice system including the structure, statuses and roles as well as current issues, problems, and trends.

**CJ 3153****PRISONS AND CORRECTIONS**

Prerequisite: SOC 1003 and SOC(CJ) 2033. An introduction to and analysis of contemporary American corrections. Emphasis will be on current and past correctional philosophy, traditional and modern correctional facilities, correctional personnel and offenders, new approaches in corrections, and the relationship of corrections to the criminal justice field.

**CJ 4013****DRUGS IN SOCIETY**

Prerequisites: SOC 1003 or CJ 2003. This course presents a comprehensive study of the history and prohibition of drug use in the United States, as well as the effects of drugs on society in the form of crime, prison and treatment. The main focus of this class is on the history of drug use, how certain drugs become illegal, and the intended and unintended consequences of drug prohibition for communities and society.

**CJ 4023  
LAW & THE LEGAL SYSTEM**

A comprehensive study of judicial process and behavior in criminal and civil law. May not be taken for credit after completion of POLS 5023 or equivalent.

**CJ 4053  
CRIMINAL LAW/CONSTIT**

A survey of the procedures and issues associated with American criminal justice as viewed from a Constitutional perspective.

**CJ 4141  
SEMINAR IN CRIMINAL JUSTICE**

Prerequisite: CJ 2003 and consent of instructor. This course is a directed seminar in an area of criminal justice selected by both the student and supervising faculty member. Topics will vary depending on the research underway, community or student need, and the unique educational opportunity available. This course may be repeated for course credit if the content differs.

**CJ 4142  
SEMINAR IN CRIMINAL JUSTICE**

Prerequisite: CJ 2003 and consent of instructor. This course is a directed seminar in an area of criminal justice selected by both the student and supervising faculty member. Topics will vary depending on the research underway, community or student need, and the unique educational opportunity available. This course may be repeated for course credit if the content differs.

**CJ 4143  
SEMINAR IN CRIMINAL JUSTICE**

Prerequisite: CJ 2003 and consent of instructor. This course is a directed seminar in an area of criminal justice selected by both the student and supervising faculty member. Topics will vary depending on the research underway, community or student need, and the unique educational opportunity available. This course may be repeated for course credit if the content differs.

**CJ 4144  
SEMINAR IN CRIMINAL JUSTICE**

Prerequisite: CJ 2003 and consent of instructor. This course is a directed seminar in an area of criminal justice selected by both the student and supervising faculty member. Topics will vary depending on the research underway, community or student need, and the unique educational opportunity available. This course may be repeated for course credit if the content differs.

**CJ 4206  
THE LAW IN ACTION**

Prerequisite: SOC/CJ 2043, 9 hours of Criminal Justice coursework, senior classification, and instructor permission. Offered only in the summer. An examination of sociological theories of law and main currents of legal philosophy is followed by participant observation of actual community legal agencies, including police, courts, and others as available. Requires insurance fee.

**CJ 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CJ 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CJ 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CJ 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**CJ 4991  
SPEC PROB/CJ**

Prerequisite: Prior approval of instructor and department. Content is to be determined by faculty student conference and based on student background and interest.

**CJ 4992  
SPEC PROB/CJ**

Prerequisite: Prior approval of instructor and department. Content is to be determined by faculty student conference and based on student background and interest.

**CJ 4993  
SPEC PROB/CJ**

Prerequisite: Prior approval of instructor and department. Content is to be determined by faculty student conference and based on student background and interest.

**CJ 4994  
SPEC PROB/CJ**

Prerequisite: Prior approval of instructor and department. Content is to be determined by faculty student conference and based on student background and interest.

**COMS 1003  
INTRO COMP BASED SYS**

Provides students with both computer concepts and hands-on applications. Although little or no prior computer experience is required for this course, keyboarding proficiency is assumed. Topics include PC basics, file maintenance, and hardware and software components. Students will gain experience in the use of Windows, e-mail, the Internet, word processing, spreadsheets, databases, and presentation packages. The integration of software packages will also be covered. This course may not be taken for credit after completion of COMS 2003 or BUAD 2003. Credit by examination is offered to students who have notable experience with computers and MS Office applications. Information regarding this examination can be found at [cs.atu.edu/coms1003](http://cs.atu.edu/coms1003).

**COMS 1103  
FORTRAN PROGRAMMING**

Prerequisite: MATH 1113 or equivalent. An introduction to programming using the FORTRAN language with emphasis on numerical computing, including the use of scientific subroutine libraries.

**COMS 1203  
PROGRAMMING IN BASIC**

An introduction to programming using BASIC and/or Visual Basic.

**COMS 1303  
COMP APPL FOR TECH MAJ**

Corequisite: MATH 1113 or equivalent. The purpose of this course is to give the students in engineering, mathematics, chemistry, and other technical disciplines the prerequisite computer skills necessary to make effective use of the computer in their major degree programs where computer applications have been integrated into the course of study.

**COMS 1333  
WEB PUBLISHING I**

Prerequisite: COMS 1003 or BUAD 2003. This course focuses on how to develop web pages for display on the World Wide Web. Topics covered include markup languages, style sheets, links, images, multimedia, tables, forms, design issues, and other topics as appropriate. Students will learn how to publish a web site to a server and maintain the site.

**COMS 1403  
ORIENT TO COMP INFO/TECH**

Corequisite: MATH 1113 and COMS 1411. (Required of all students who have declared a major in computer science, information systems, and information technology). An introduction to the professions of computer science, information systems, and information technology. Topics include ethics, professionalism, and opportunities within the three fields as well as an overview of hardware, software, technology, and information systems concepts and terms.

**COMS 1411  
COMPUTER/INFO SCI LAB**

Corequisite: COMS 1403. An introduction to the computing resources of the department and the university.

**COMS 2003  
MICROCOMP APPLICATIONS**

Prerequisite: COMS 1003 or BUAD 2003. This course provides hands-on experience with several software applications. Topics include intermediate and advanced word processing and desktop publishing features; spreadsheet design, formulas, and charts; database design principles and implementation; presentation design and techniques; and integration among these applications. Students will be required to apply each package on a semester project related to their major.

**COMS 2104  
FOUND COMPUTER PROG I**

Prerequisite: MATH 1113, and either COMS 1403 and 1411 or consent of instructor. An introduction to structured programming using C++. This is the beginning programming course for students majoring in computer science, information systems, and information technology. Programming principles covered in lecture are practiced in lab. Major topics include sequential, selection, and iterative control structures, functions, parameter passing, and file processing. Arrays are introduced as a structured data type.

**COMS 2163  
SCRIPTING LANGUAGES**

Prerequisite: Minimum of 3 hour programming course. This course introduces the student to script writing in several languages. The primary categories of scripts will be UNIX shell, text processing, and Perl. CGI Scripts, using Perl, will be introduced.

**COMS 2203  
FOUND COMPUTER PROGRAMMING II**

Prerequisite: MATH 1113 and completion of COMS 2104 with a grade equal to or greater than a C. Topics include multi-dimensional arrays, functions, string processing, classes, and records. Students are introduced to object-oriented programming using C++.

**COMS 2213  
DATA STRUCTURES**

Prerequisite: COMS 2203, and COMS 2903. This course involves a study of abstract data structures and the implementation of these abstract concepts as computer algorithms.

**COMS 2223  
COMP ORGANIZ/PROG**

Prerequisite: COMS 2203 and ELEG 2134. This course covers computer architecture and machine-level programming in assembly language. Considerable practical experience will be gained through programming projects. Topics include internal data representation and manipulation, as well as physical, and logical level input-output macros.

**COMS 2233  
INTRODUCTION/DATABASES**

Prerequisite: COMS 1003 or 1403. This course develops a detailed understanding of a database software package developed for microcomputer applications. Topics include how to design, implement, and access a personal database. Entity relationship diagrams are emphasized in design. The use of macros, data conversion operations, linking, and complex selection operations are used in implementation. Advanced report generation mechanisms are covered along with custom-designed menus and user interfaces.

**COMS 2333  
WEB PUBLISHING II**

Prerequisite: COMS 1333 or consent of instructor. This course is a continuation of COMS 1333. Students are introduced to multimedia design concepts and software. Multimedia applications and design tools are used to create and maintain multimedia products such as dynamic graphics, animation, interactive websites, and video.

**COMS 2700  
NETWORK ARCH LAB**

Corequisite: COMS 2703. Laboratory exercises repairing and networking computers.

**COMS 2703  
COMPUTER NETWORKS/ARCHITECTURE**

Prerequisite: COMS 1411 and COMS 1403. Corequisite: COMS 2700. This course covers how to install and administer a local area network and connect it to the Internet. Topics include network architecture, hardware, and software, along with popular protocols for establishing connectivity for sharing resources such as printers and files. Participation in a designated lab outside of the regularly scheduled meeting time is required.

**COMS 2713  
SURVEY/OPERATING SYSTEMS**

Prerequisite: COMS 1411; COMS 1003 or COMS 1403. Several Operating Systems (such as Unix, Microsoft, AS/400) will be examined with regard to the user's view of the system. This view includes the types of files supported, the kinds of operations that can be performed on files (from the shell and from programs), the mechanisms for starting and controlling processes (i.e. running programs), some basic utility programs that a beginning or intermediate level administrator would need to use.

**COMS 2733  
INTRO COMP FORENSICS/SECURITY**

Prerequisites: COMS 2703. Corequisite: COMS 2713. An introduction to the fundamentals of computer forensic technology. The course emphasizes techniques for identifying and minimizing the threats to, and vulnerabilities of computer systems. These techniques include methods and tools for tracking suspicious activity, for recovering and preserving digital media, and for doing post-mortem analysis.

**COMS 2803  
PROGRAMMING IN C**

Corequisite: MATH 1113. Not for majors. This course involves the design, coding, debugging, and implementation of programs using the C language. The UNIX operating system is introduced. May not be taken for credit after the successful completion of COMS 2104.

**COMS 2853  
BUSINESS APPL PROGRAM COBOL**

Prerequisites: COMS 2203. This course involves the analysis, design, development, testing, implementation, and maintenance of business application programs using the COBOL language. Topics include traditional data file organization, access, and processing methodologies. Additional topics include data validation, tables, sorting, searching, screen I/O, and report-based output. Programs are developed in PC and IBM mid-range computing environments.

**COMS 2903  
DISCRETE STRU/TECH MAJOR**

Prerequisite: MATH 1113. Fundamental mathematical concepts related to computer science, information systems, and information technology, including logic and proof techniques; sets, sequences, relations, and functions; combinatorics; algebraic structures and Boolean algebra; trees and graphs.

**COMS 2981  
SPECIAL TOPICS**

Prerequisite: Permission of the department. This course will be offered on an "as-needed" basis to cover those topics and subject areas in computing that are emerging in a technological sense, but that do not yet warrant the addition of a new course to the curriculum. This course may be repeated for credit if course content differs.

**COMS 2982  
SPEICAL TOPICS**

Prerequisite: Permission of the department. This course will be offered on an "as-needed" basis to cover those topics and subject areas in computing that are emerging in a technological sense, but that do not yet warrant the addition of a new course to the curriculum. This course may be repeated for credit if course content differs.

**COMS 2983  
SPECIAL TOPICS**

Prerequisite: Permission of the department. This course will be offered on an "as-needed" basis to cover those topics and subject areas in computing that are emerging in a technological sense, but that do not yet warrant the addition of a new course to the curriculum. This course may be repeated for credit if course content differs.

**COMS 2984  
SPECIAL TOPICS**

Prerequisite: Permission of the department. This course will be offered on an "as-needed" basis to cover those topics and subject areas in computing that are emerging in a technological sense, but that do not yet warrant the addition of a new course to the curriculum. This course may be repeated for credit if course content differs.

**COMS 3053  
IMPLIC/TECHNOLOGY/SOCIET**

Prerequisite: Junior standing. This course explores social, legal, philosophical, political, economic, and constitutional issues related to information technology. The focus will be on those issues faced as members of a complex technological society and as professionals in a technology-related field. Extensive research on current issues is expected.

### **COMS 3163 WEB PROGRAMMING**

Prerequisite: COMS 2163. This course expands on the concept of CGI programming introduced in COMS 2163. Topics include features of web forms and CGI processing via a scripting language. Basic database interaction and Server-Side Includes (SSI), client-side implementation of pop-up windows, form validation, cookies, security, and other concepts will also be discussed.

### **COMS 3213 ADV DATA STRUCTURES**

Prerequisite: COMS 2213. Concepts, implementation, and application of B trees, AVL trees, hashing, graphs, and other abstract data structures will be studied.

### **COMS 3333 IMPLEMENT/E-COMMERCE**

Prerequisite: COMS 2333 and 3163. This course covers technical issues involved in developing online stores. The primary emphasis of this course will be the design, implementation, and configuration of the "shopping carts" used for online business. Particular attention will be paid to areas of security, privacy, and protection.

### **COMS 3503 VISUAL PROGRAMMING**

Prerequisite: COMS 2003 (or equivalent) and COMS 2213. This course covers the design and development of event-driven programs using an object-oriented visual programming language such as Visual Basic.

### **COMS 3513 ADMIN/USING IBM PLATFORM**

Prerequisite: COMS 2104 or consent of instructor. This course is an introduction to the operations of the IBM midrange computer system. Topics include architecture, system security, user interface, and work management. Coverage will also extend to applications and programming using an introduction to DB2 and RPG.

### **COMS 3523 HUMAN FACTORS/INFO TECH**

Prerequisite: Junior standing in a computing major or instructor consent. A study of the major factors involved in Human-Computer Interaction. A system-oriented, multi-disciplinary approach to understanding the human considerations in the design, testing, implementation, and administration of computer-based systems and information technology.

### **COMS 3603 PRINC OF MGT SCIENCE**

Prerequisite: BUAD 2053 and junior standing. An introduction to management science analytical techniques, including such topics as the simplex method of linear programming, dual problem and sensitivity analysis, and integer programming. Emphasis is placed on the application of these methods using case studies and examples from the area of finance, marketing, and production. Applicable management science software will be used.

**COMS 3703  
OPERATING SYSTEMS**

Prerequisite: COMS 2213 and 2223. This course explores the fundamental concepts upon which modern operating systems are based. Topics include CPU, memory, file and device management, concurrent processes, protection mechanisms, and distributed systems. Several important algorithms will be implemented by the student.

**COMS 3803  
COMP APPL/ACCT-BUS**

Prerequisites: COMS 2003 or equivalent, ACCT 2013, Junior standing. Topics to be covered include intermediate and advanced microcomputer applications in business.

**COMS 3903  
SYS SOFTWARE/ARCHITECT**

Prerequisite: COMS 2703 and junior standing. This course covers the implementation of production operating systems, the fundamentals of digital logic, and machine architecture. This course does not count as credit toward a degree in Computer Science.

**COMS 4013  
QUALITY MGMT INFORMATION TECH**

Prerequisite: BUAD 2053 and COMS 4203. The study of quality management and quality assurance with regard to the analysis, design, development, and implementation of information systems and information technology. Topics include measurement techniques and standards, including ISO 9001 and other associated best practices regarding process management and process improvement.

**COMS 4033  
SYS ANALYSIS/DESIGN I**

Prerequisite: COMS 4203. The application of concepts, tools, procedures, and techniques involved in the development of information systems. Emphasis is placed on the systems approach to problem solving, user involvement, the management of quality, project control, and teamwork.

**COMS 4043  
SYS ANALYSIS/DESIGN II**

Prerequisite: COMS 4033 and either COMS 4133, 4163, or 4313. A continuation of COMS 4033, with emphasis on the application of the theory and techniques covered in the previous course. Students will research, analyze, design, implement, test and document a complete system. Students will complete and present their final system project as a team.

**COMS 4053  
INFO SYS RESOURCE MGMT**

Prerequisite: Junior standing in information systems, information technology, or computer science. A study of the principles and concepts involved in the management of organizational maintenance of all information resources, including hardware, software, and personnel. Includes coverage of departmental functions within computer services and information systems. Additional topics include legal, ethical, and professional issues, quality management, and the strategic impact of information systems.

**COMS 4063  
IT PROJECT ADMIN**

Prerequisite: Junior standing in information technology, information systems, or computer science. This course provides a thorough introduction to the art and science of Project Management, as applied in the domain of information technology. Theories, best practices, and tools of project management are studied in relation to the completion of a successful project life cycle.

**COMS 4103  
ORGANIZATION PROG LANGUAGES**

Prerequisite: COMS 2213 and COMS 2223. This course emphasizes the comparative structures and capabilities of several programming languages. Major emphasis will be placed on language constructs and the run-time behavior of programs.

**COMS 4133  
APPL PROGRAM DEVELOPMENT**

Prerequisite: COMS 2213 and COMS 2853. Object-oriented application development. Topics include OO Programming, three-tier design, and model-driven development. The course involves a major individual programming project. Students will develop and present their own large-scale application program.

**COMS 4163  
PERSONAL SOFTWARE ENGR**

Prerequisite: COMS 3213. Formal methods for software specification. Program analysis, verification, and testing. Principles of software design. Object-oriented program implementation. Personal software process and product measurements. Program documentation. Software tools. Each student will implement a large application.

**COMS 4203  
DATABASE CONCEPTS**

Prerequisite: COMS 2003, COMS 2203 and COMS 2903. Problems associated with common data processing systems, reasons for database system development; objectives such as data, device, user, and program independence; hierarchical, network, and relational models; data structures supporting database systems; operational considerations such as performance, integrity, security, concurrency, and reorganization; characteristics of existing database systems.

**COMS 4213  
DATABASE ADMINISTRATION**

Prerequisites: COMS 4203. This course develops a comprehensive foundation in the planning, implementation and execution of database management policies and procedures. Topics include installation, storage and replication implementation, security management, indexing and performance tuning, and backup and recovery.

**COMS 4253  
COMPUTER GRAPHICS**

Prerequisite: COMS 2213 and MATH 4003. Developing algorithms to do line drawing, two and three dimensional displays, clipping and windowing, and hidden line removal. Other areas will include graphic I/O devices, display processors, and data structures for graphics.

**COMS 4303  
CLIENT/SERVER SYSTEMS**

Prerequisite: COMS 2213 and COMS 4203. This course provides in- depth coverage of client/server concepts. The student will use object-oriented visual programming tools and SQL in the construction of client/server programs. Emphasis will be placed on the proper design of server databases and on programming techniques used in event- driven environments.

**COMS 4313  
WEB SERVER ADMIN**

Prerequisites: COMS 2333 and COMS 2733. The tools and techniques needed to administer a web server. Installation, configuration, and administration of a variety of web servers on different platforms.

**COMS 4353  
ARTIFICIAL INTELL**

Prerequisite: COMS 2213 and junior standing. General concepts, wide overview of AI history, and development and future of AI. Implementation of AI techniques using the LISP and or PROLOG languages. Additional topics include pattern recognition, natural language processing, learning process, and robotics.

**COMS 4403  
COMPILER DESIGN**

Prerequisite: COMS 2223, 3213 and 4103. This course covers syntax translation, grammars and parsing, symbol tables, data representation, translating control structures, translating procedures and functions, processing expressions and data structures, and multipass translation. Students will design a computer language and implement the compiler.

**COMS 4603  
SYSTEM PROGRAMMING**

Prerequisite: COMS 2213 and either COMS 3703 or COMS 3903. This course is intended to give the student practical experience in the implementation, modification, and maintenance of system software.

**COMS 4700  
DATA COMMUNICATION/NETWORK LAB**

Corequisite: COMS 4703. Students will complete network lab exercises in support of COMS 4703.

**COMS 4703  
DATA COMMUNIC/NETWORKS**

Prerequisite: COMS 2703, COMS 2903; COMS 2223 or COMS 3903. Corequisite: COMS 4700. Basic elements and functional aspects of the hardware and software required to establish and control data communications in a stand-alone or network environment. Topics include communication protocols, media, network topologies, and system support software. Participation in a designated lab outside of the regularly scheduled meeting time is required.

**COMS 4710  
HETEROGENEOUS NETWORKS LAB**

Corequisite: COMS 4713. Students will complete network lab exercises in support of COMS 4713.

**COMS 4713  
HETEROGENEOUS NETWORKS**

Prerequisite: COMS 4703. Corequisite: COMS 4710. The student will design, develop, implement and manage numerous heterogeneous networking operating system environments. Required policies and procedures are examined and developed. Networking tools required for the development of a seamless heterogeneous networking environment are studied and applied.

**COMS 4803  
SYSTEMS SIMULATION**

Prerequisite: COMS 2213 and 3 hours of Statistics. Three hour programming course and junior/senior classification. An introduction to simulation methodology as it applies to the analysis and synthesis of systems. Design of simulation experiments and the analysis of data generated therefrom. Random sampling of the Monte Carlo method are used to develop computer procedures for simulated sampling. A broad range of applications is discussed.

**COMS 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**COMS 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**COMS 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**COMS 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**COMS 4981  
SEMINAR COMPUTER INFO SCIENCE**

Prerequisite: Permission of department. A directed seminar in an area of computer and information science. Seminars will focus on topics relating to emerging technologies which are beyond the scope of other computer and information science courses. This course may be repeated for credit if course content differs.

**COMS 4982  
SEMINAR COMPUTER INFO SCIENCE**

Prerequisite: Permission of department. A directed seminar in an area of computer and information science. Seminars will focus on topics relating to emerging technologies which are beyond the scope of other computer and information science courses. This course may be repeated for credit if course content differs.

**COMS 4983  
SEMINAR COMPUTER INFO SCIENCE**

Prerequisite: Permission of department. A directed seminar in an area of computer and information science. Seminars will focus on topics relating to emerging technologies which are beyond the scope of other computer and information science courses. This course may be repeated for credit if course content differs.

**COMS 4991  
SPEC PROB/COMS INFO SCIENCE**

Prerequisite: Permission of department. This course will allow the student to work individually or as part of a small team to study and design practical computerized systems in order to solve problems of particular interest. This course may be used to offer a variety of subjects that strengthen the student's knowledge in areas not covered by other course offerings.

**COMS 4992  
SPEC PROB/COMS INFO SCIENCE**

Prerequisite: Permission of department. This course will allow the student to work individually or as part of a small team to study and design practical computerized systems in order to solve problems of particular interest. This course may be used to offer a variety of subjects that strengthen the student's knowledge in areas not covered by other course offerings.

**COMS 4993  
SPEC PROB/COMS INFO SCIENCE**

Prerequisite: Permission of department. This course will allow the student to work individually or as part of a small team to study and design practical computerized systems in order to solve problems of particular interest. This course may be used to offer a variety of subjects that strengthen the student's knowledge in areas not covered by other course offerings.

**COMS 4994  
SPEC PROB/COMS INFO SCIENCE**

Prerequisite: Permission of department. This course will allow the student to work individually or as part of a small team to study and design practical computerized systems in order to solve problems of particular interest. This course may be used to offer a variety of subjects that strengthen the student's knowledge in areas not covered by other course offerings.

**COS 1101  
HYGIENE & SANITATION I**

This course provides you with the necessary information to master the National Industry skill Standard for entry level Cosmetologist. Students will conduct services in a safe environment and take measures to prevent the spread of infectious and contagious disease. Students will safely use a variety of salon products while providing client safety.

**COS 1110  
HAIRDRESSING I W/LAB**

A basic study of the properties of the hair and scalp. Basic hair care, shampooing, rinsing, conditioning, braiding, the care and styling of wigs and hair enhancements, wet styling, thermal straightening (hair pressing), and the principles of hair design with labs.

**COS 1121  
RELATED SCIENCE I**

A study of cell growth, metabolism, tissues, organs, skeletal and muscular systems, basics of electricity, and basics of chemistry.

**COS 1131  
MANICURING I**

A study of skin and nails, which includes manicuring, pedicuring, and massage.

**COS 1141  
COSMETIC THERAPY I**

A study of histology of the skin, hair removal, skin care facial, electrotherapy and light therapy, facial makeup, and eyebrow arching.

**COS 1151  
SALES/MGMT/DEPORT I**

A study of the principles of selling and practice of applying knowledge to give the client full service through management and shop department.

**COS 1201  
HYGIENE/SANITATION II**

Prerequisite: COS 1101. A continuation of COS 1101, This course provides you with the necessary information to master this National Industry skill Standard for entry level Cosmetologist. Students will conduct services in a safe environment and taking measures to prevent the spread of infectious and contagious disease. Students will safely use a variety of salon products while providing client safety.

**COS 1210  
HAIRDRESSING II W/LAB**

Pre-requisite: COS 1110. A continuation of COS 1110, this course is a basic study of the properties of the hair and scalp. Basic hair care, shampooing, rinsing, conditioning, braiding, the care and styling of wigs and hair enhancements, wet styling, thermal straightening (hair pressing), and the principles of hair design with labs.

**COS 1221  
RELATED SCIENCE II**

Pre-requisite: COS 1121. A continuation of COS 1121, a study of cell growth, metabolism, tissues, organs, skeletal and muscular systems, basics of electricity, and basics of chemistry.

**COS 1231  
MANICURING II**

Pre-requisite: COS 1131. A continuation of COS 1131, a study of skin and nails, which includes manicuring, pedicuring, and massage.

**COS 1241  
COSMETIC THERAPY II**

Pre-requisite: COS 1141. A continuation of COS 1141, a study of histology of the skin, hair removal, skin care facial, electrotherapy and light therapy, facial makeup, and eyebrow arching.

**COS 1251  
SALES/MGMT/DEPORT II**

Pre-requisite: COS 1151. A continuation of COS 1151, a study of the principles of selling and practice of applying knowledge to give the client full service through management and shop deportment.

**COS 2301  
HYGIENE & SANITATION III**

Prerequisites: COS 1101 and COS 1201. A continuation of COS 1201, This course provides you with the necessary information to master this National Industry skill Standard for entry level Cosmetologist. Students will conduct services in a safe environment and taking measures to prevent the spread of infectious and contagious disease. Students will safely use a variety of salon products while providing client safety.

**COS 2310  
HAIRDRESSING III W/LAB**

Pre-requisites: COS 1110 and COS 1210. A continuation of COS 1210, this course is a basic study of the properties of the hair and scalp. Basic hair care, shampooing, rinsing, conditioning, braiding, the care and styling of wigs and hair enhancements, wet styling, thermal straightening (hair pressing), and the principles of hair design with labs.

**COS 2321  
RELATED SCIENCE III**

Pre-requisites: COS 1121 and COS 1221. A continuation of COS 1221, a study of cell growth, metabolism, tissues, organs, skeletal and muscular systems, basics of electricity, and basics of chemistry.

**COS 2331  
MANICURING III**

Pre-requisites: COS 1131 and COS 1231. A continuation of COS 1231, a study of skin and nails, which includes manicuring, pedicuring, and massage.

**COS 2341  
COSMETIC THERAPY III**

Pre-requisites: COS 1141 and COS 1241. A continuation of COS 1241, a study of histology of the skin, hair removal, skin care facial, electrotherapy and light therapy, facial makeup, and eyebrow arching.

**COS 2351  
SALES/MGMT/DEPORT III**

Pre-requisites: COS 1151 and COS 1251. A continuation of COS 1251, a study of the principles of selling and practice of applying knowledge to give the client full service through management and shop deportment.

**COS 2405  
THEORY/PRACTICAL APPLIC**

A course covering all faces of Cosmetology. Theory and practical applications are stressed.

**CRT 1105  
BASIC METAL REPAIR**

The straightening, alignment, and fitting of major panels are taught. Procedures necessary to weld, heat, cut, and shape are taught. Emphasis in this course is on theory and practical application.

**CRT 1113  
METAL REPAIR I**

The straightening, alignment, and fitting of major panels is taught. Procedures necessary to rough, shrink, bump, and finish are included. Emphasis in this course is on theory and practical application.

**CRT 1123  
BODY FRAME ALIGNMENT I**

Students will receive instruction in the use of frame equipment and frame construction, sectioning, and straightening. Experience working with unitized construction using frame alignment equipment will be provided.

**CRT 1133  
PAINTING I**

This course includes skills and technical knowledge in the preparation of metal for paint; stripping of old finishes; use and maintenance of spray painting equipment; mixing and spraying of all types of automotive finishes; and identification of common materials used.

**CRT 1143  
COLOR MATCHING I**

Develop the skills needed to match any type of paint. Summarize color theory; color evaluation; color matching; computer analysis of paint, tinting, and other factors.

**CRT 1205  
BODY AND FRAME ALIGNMENT**

Pre-requisite: CRT 1105. Students will receive instruction in the use of frame equipment and construction, as well as sectioning, and straightening. Experience working with unitized construction using frame alignment equipment will be provided.

**CRT 1312  
AIR BRUSHING**

The student will learn spraying techniques using multiple colors, metal flake paints, and multilayer masking using special spraying techniques and air brushes.

**CRT 1313  
AIR BRUSHING**

The student will learn spraying techniques using multiple colors, metal flake paints, and multilayer masking using special spraying techniques and brushes.

**CRT 1405  
PAINTING**

This course includes skills and technical knowledge in the preparation of metal for paint; chemical stripping of old finishes; use and maintenance of spray painting equipment; mixing and spraying of all types of automotive finishes; and identification of common materials used.

**CRT 1505  
COLOR MATCHING**

Pre-requisite: CRT 1405. A continuation of painting with emphasis on spraying techniques and tinting of paints to achieve color match.

**CRT 2903  
INTERNSHIP**

Provides students with the experience of a job in a business. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of internship.

**CRT 2904  
INTERNSHIP**

Provides students with the experience of a job in a business. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of internship.

**CRT 2991  
SPECIAL TOPICS FOR CRT**

This course is designed to introduce students to specific areas in Collision Repair Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CRT 2992  
SPECIAL TOPICS FOR CRT**

This course is designed to introduce students to specific areas in Collision Repair Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CRT 2993  
SPECIAL TOPICS FOR CRT**

This course is designed to introduce students to specific areas in Collision Repair Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CRT 2994  
SPECIAL TOPICS FOR CRT**

This course is designed to introduce students to specific areas in Collision Repair Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CRT 2995  
SPECIAL TOPICS FOR CRT**

This course is designed to introduce students to specific areas in Collision Repair Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CRT 2996  
SPECIAL TOPICS FOR CRT**

This course is designed to introduce students to specific areas in Collision Repair Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**CSP 1013  
PRIN OF COLLEGE SUCCESS**

Prerequisite: Open to undergraduate students with no more than 30 earned semester hours or by permission of the Vice President for Academic Affairs. This course is designed specifically to enhance student adjustment to college life, student adaptation to the higher education learning experience, student comprehension of personal responsibility, and student advancement regarding career pathways.

**CUL 1013  
SANITATION SAFETY**

This course provides knowledge of food safety, potable water, bioterrorism and risk management particularly in the areas of food service and storage. The student will gain knowledge on safe food handling from; receiving and storage through preparing and serving food. This course will also analyze ethical considerations with regards to food and water safety and food service. ServSafe certification from the NRAEF will result upon successful completion of standardized exam.

**CUL 1923  
INTRO TO FOOD/BEVERAGE MGMT**

Prerequisite CUL (HA) 1013. This course introduces the practical skills and knowledge necessary for the effective management of food and beverage operations encompassing the historical timeline of food and beverage, non-alcoholic beverages, the identification of meats, fishes, fruits, vegetables, dairy products and proteins. This course also introduces the front-of-the-house essentials for food and beverage operations encompassing glassware, service ware and other front-of-the-house equipment.

**CUL 2003  
COST CONTROLS**

This course will study the role of cost control management on overall profitability of hospitality entities. Basic principles of purchasing food, beverage, and non-food items with regards to maintaining an operation's competitive advantage within the industry will be covered.

**CUL 2023  
HOSPITALITY SUPERVSN/LEADERSHP**

This course provides comprehensive coverage of the principles, theories, human-relations techniques, leadership styles, and decision-making skills that are required to manage a team to profitable results in the food service and lodging industries.

**CUL 2053  
WORK EXPERIENCE**

Prerequisites: HA major, minor and/or culinary students. Sophomore standing or permission of instructor. Placement in selected hospitality settings as a student worker under professional guidance of both agency and faculty. Students are given the opportunity to take part in meaningful work experiences in actual work situations and managerial observation. Minimum of 200 clock hours of work experience.

**CUL 2063  
GUEST SERVICES MGMT**

Prerequisite HA 1063. The analysis and development of guest services management skills including leadership behavior, motivation, communication, training, staffing, etiquette, and professional service. Lecture two hours, lab minimum of three hours depending on the special event requirements. \$100 lab fee which helps to cover your meal costs and/or travel.

**CUL 2813  
BASIC HUMAN NUTRITION IN HA**

Study of the relationship between nutrition and health as a basis for food choices of all ages; the application of nutrient functions in human life processes and cycles; how balanced eating promotes healthy lifestyles. Current concepts and controversies are highlighted.

**CUL 2903  
INTRODUCTION TO GARDE MANGER**

Prerequisite CUL (HA) 1013. This course is an introduction to three main areas of the cold kitchen: reception foods, plated appetizer and buffet arrangements. Students will learn to prepare canapes, hot and cold hors d'oeuvre, appetizers, forcemeats, pates, galantine, terrines, roulades, salads and sausages. Curing and smoking techniques for meat, seafood and poultry items will be covered. Cheese identification, production, presentation and service will be studied. The student will also explore contemporary styles of presenting foods and buffet preparation. Lecture 1 hour, lab 3 hour minimum. \$100 lab fee required. Additional Costs: professional uniforms and knives are required and are to be considered additional out-of-pocket expenses to the student.

**CUL 2913  
PRINC/FOOD PREPARATION**

Prerequisites: CUL (HA) 1013. Corequisite: CUL (HA) 2813 and CHEM 1114. Upon completion of this course the student should be able to demonstrate skills in basic cooking techniques and methods, recipe conversion, and professional food preparation and handling. Additionally, the student should be able to recognize and safely operate common foodservice equipment used in commercial kitchens and demonstrate proficient culinary knife skills. This course is 2 hours lecture and a 4 hour lab depending upon special event requirement(s). \$100 lab fee required. Additional costs: professional uniforms and knives are required and are to be considered additional out-of-pocket expenses to the student.

**CUL 2923  
STOCKS, SAUCES, AND SOUPS**

Corequisite: CUL (HA) 2913. This course is an introduction to the basic stocks, sauces and soups and is based on the classical model by Escoffier. Fundamental elements covered include the entire classic French repertoire of hot sauces; the five leading sauces; bechamel, veloute, espagnole (also known as brown), tomato and hollandaise as well as small compound sauces, cold sauces, compound butter, court bouillon and marinades, roux and other thickening agents. Clear soups, thick soups and specialty soups will be introduced and expanded upon. Lecture 1 hour, lab 3 hour minimum. \$100 lab fee required. Additional costs: professional uniforms and knives are required and are to be considered additional out-of-pocket expenses to the students.

**CUL 2933  
ADVANCED FOOD PREPARATIONS**

Prerequisite: CUL (HA) 2913. This course reviews basic cooking methods and techniques and refines the understanding of/and application of culinary terminology, proper care and use of tools and equipment as well as safety and sanitation techniques. Students will gain an advanced knowledge of the correct procedures for the following methods: poach, fry, bake, broil, boil, roast, stew, saute, grill and steam. Students will gain an advanced knowledge of vegetable, pasta, grain, and potato cookery as well as preparation of game, fish, shellfish, lamb, and veal. Lecture 1 hour, lab 3 hour minimum. \$100 lab fee required. Additional costs: professional uniforms and knives are required and are to be considered additional out-of-pocket expenses to the student.

**CUL 2943  
INTRO TO BAKING AND PASTRY**

Prerequisite: CHEM 1114. This course introduces basic methods used in baking and pastry. Methods introduced include, creaming, thickening for custards, pre-cooked, foaming, cut-in/rubbing, straight dough, blending and lamination. This course will focus on the range of baking ingredients in original, modified, and prepared forms as well as the theory and operation of large and small equipment used in bakeries and pastry shops. Through preparing, tasting and testing, students will learn to identify and select quality grains, dairy products, baking spices, flours, chocolates, fats, and oils used in baking. Lecture 1 hour, lab 3 hour minimum. \$100 lab fee required. Additional costs: professional uniforms and knives are required and are to be considered additional out-of-pocket expenses to the student.

**CUL 2996  
EXTERNSHIP**

Fall, spring and summer semesters. Culinary majors only. Prerequisites: Sophomore standing, current certifications in CPR, Standard and Advanced First Aid, consent of the department head and completion of all other courses applicable to degree. This course provides industry experience for students in cooperating businesses, agencies and organizations under professional guidance of both agency supervisor and faculty. While enrolled in this course, a student must work a minimum of 600 hours and a minimum of 15 weeks in an approved position in the hospitality industry. Student cannot document more than 40 hours of work experience per week. No prior experience credit will be given. A written report is required within two weeks of externship completion. \$100 supervisor travel fee is required.

**DE 4543  
DRIVER/TRAFFIC EDUC II**

Prerequisites: A valid driver's license, admission to teacher education program, a driving record free from frequent and unusual violations. This course is designed to prepare teachers to organize and teach driver education and traffic safety programs in secondary schools. It includes administration, supervision of personnel, design of facilities, and a research project. May not be repeated for credit as DE 5543 or equivalent.

**DE 4613  
DRIVER/TRAFFIC EDUC I**

Prerequisites: A valid driver's license, admission to teacher education program, and a driving record free from frequent and unusual violations. This course is designed to prepare teachers to organize and teach driver education and traffic safety programs in secondary schools. This course provides a survey of materials and methods of instruction plus evaluation of textbooks and in car training of a student driver. Two hour lecture, two hours laboratory. May not be repeated for credit as DE 5613 or equivalent.

**EAM 1003  
LIV/HAZARD ENVIRONMENT**

Overview of emergency management systems with an analysis of the causes, characteristics, nature and effects of such disasters as avalanches, drought, earthquakes, epidemics, fires, flooding, hazardous materials, hurricanes, industrial accidents, nuclear power plant accidents, power failures, volcanoes, and other catastrophic hazards. Required for major.

**EAM 1013  
AIM/SCOPE EMERGENCY MGMT**

Analysis of disasters in historical settings and current situations. Areas covered include the role of local, state, and federal government, the unique problems of business/industry crisis management, disaster prevention and mitigation policy, technology support, and professionalism and litigation issues. Required for major.

**EAM 2033  
CIT/COM DISASTER PREPARE**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The course covers the need for citizen disaster preparedness; research findings on the subject; program design models; team and coalition building, materials and approaches, effective presentation skills, overcoming disaster denial and apathy; preparedness with children, the elderly, and other high-risk populations.

**EAM 3003  
DEV EMERGENCY MGMT SKILL**

Prerequisites: EAM 1003 and 1013 or consent of instructor. Topics covered in this course include: program planning and management, financial planning and management, managing information, managing people and time, personality types, leadership styles, followership styles, decision-making skills, team-building skills and group dynamics; community-building skills, intergovernmental relationships, negotiating skills, communications skills, emergency management ethics, and professionalism.

**EAM 3013  
PUB POL ISSUE/EMER MGMT**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The course will analyze the role of public policy in relation to disaster planning issues, financial impact of disasters, disaster mitigation issues, land use planning, disaster recovery issue, legal and liability issues, management of large-scale disaster response/recovery, and disaster legislation.

**EAM 3023  
DISASTER PLAN/RESP OPER**

Prerequisites: EAM 1003 and 1013 or consent of advisor. The course is an in-depth study of pre-plan requirements, hazards and resource assessments, vulnerability analysis, methodology of planning, and public policy considerations. Course content will include steps necessary for implementing a disaster plan and recovery efforts with consideration given to disaster warning systems, emergency center operations, public health issues in large-scale disasters, the press and communications issues, utilizing local, state, and federal interfaces. May not be taken for credit after completion of EAM 1023 and 2023.

**EAM 3033  
SOCIAL DIMENSION/DISASTE**

Prerequisites: EAM 1003 and 1013 or consent of instructor. Overview of empirical vs. theoretical approaches; human behavior in disaster, myths and reality; group disaster behavior; community social systems and disaster; cultures, demographics and disaster behavior distinctions, and model-building in sociological disaster research.

**EAM 3123  
PUBLIC INFO SKILLS**

This course provides the student with experience in dealing with the media before, during and after a crisis or disaster. The student will be able to demonstrate presentation skills using a variety of communication styles, graphics integration, informational brochures, and electronic resources. Much of the course will involve working at onsite locations with actual media contact.

**EAM 3143  
ECONOMICS OF DISASTER**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The course concentrates on the implications of disaster on state, regional, national, and international economies; case studies in false economies; economics of disaster modeling; and current issues in state, federal, and global economic disaster policy.

**EAM 3206  
EXTERNSHIP**

Prerequisites: EAM 1003 and 1013 or consent of instructor. This course should be completed by the end of the junior year. Students will enroll in this course, pay the regular tuition and fees, and complete an assessment portfolio documenting their experience and training totaling 150 contact hours. No more than 100 contact hours of FEMA study courses can be applied. At least 50 hours of training or related activities must be included. This course is graded Pass/Fail.

**EAM 3243  
INTRO TO TERRORISM**

Prerequisites: EAM 1003 and 1013 or consent of instructor. This course is an overview of terrorism in which students will explore various aspects of terrorism in a Post 9/11 world leading to a basic understanding of a global phenomenon. Subject matter will include the history of terrorism, its strategies, and why those strategies are effective. The student will examine the psychology of fundamentalist religious movements and extreme political organizations. While studying the effects of terrorism the student will examine governmental concerns, preparedness and response operations and the politics of dealing with terrorism.

**EAM 4003  
DISASTER RELIEF/RECOVERY**

Prerequisites: EAM 1003 and 1013 or consent of instructor. Recovery issues are studied and how they relate to ethical, medical, and economic and environmental considerations; initial, short-term, and long-term recovery efforts and group exercises; and documentation and record-keeping.

**EAM 4013  
BUS/INDST CRISIS MGMT**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The course provides an analysis of the players involved; conjunction with governmental emergency management; legal requirements; employee disaster awareness and preparedness; disaster mitigation and response; business resumption considerations and public policy considerations and community outreach.

**EAM 4023  
INFORM TECH/EMERG MGMT**

Prerequisites: EAM 1003 and 1013 or consent of instructor. This course emphasizes the application of computer technology to emergency management issues. It includes determining information requirements and the acquisition, analysis, modeling and data management processes used to address those requirements. Technologies covered include geospatial, networking, communications, remote sensing, and decision support systems and other emerging technologies related to emergency management. Required for major.

**EAM 4033****EAM RESEARCH METH/ANALYS**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The course covers the basic research methodology and statistical analysis required for managing a research/data base to be utilized for decision-making and policy development. Required for major.

**EAM 4043****DISASTER/EMERG MGT ETHIC**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The course will involve a study of a variety types of ethical theory (teleological, deontological, distributive theories of justice, natural law), a review of specific ethical dilemmas per disaster phase, professional ethics, overcoming biases, avoiding discrimination, and developing sensitivity. Detailed ethical case studies will be conducted (Bhopal, Chernobyl, Three-Mile Island, Love Canal, Exxon Valdez).

**EAM 4053****COM MGT HAZARD/MATERIALS**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The course addresses chemical properties of hazardous materials and wastes; legal requirements for their handling, storage, transportation, and disposal; and methods for protecting employees, facilities, and the community.

**EAM 4106****PRACTICUM IN EAM**

Prerequisites: EAM 1003 and 1013 or consent of instructor. Students will enroll in this course and pay the regular tuition and fees in order to obtain credit on their transcripts toward degree requirements. A portfolio will be required to document competencies attained. A minimum of 400 hours of relevant work experience must be completed in an approved internship site. The student will work with an advisor to have a site approved at least one semester in advance.

**EAM 4951****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**EAM 4952****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**EAM 4953****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**EAM 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**EAM 4991  
SPECIAL PROBLEMS/TOPICS**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The topics will vary to reflect the continual changes in the emergency management field. This course may also serve as an independent study course upon recommendation of the advisor and approval by the dean.

**EAM 4992  
SPECIAL PROBLEMS/TOPICS**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The topics will vary to reflect the continual changes in the emergency management field. This course may also serve as an independent study course upon recommendation of the advisor and approval by the dean.

**EAM 4993  
SPECIAL PROBLEMS/TOPICS**

Prerequisites: EAM 1003 and 1013 or consent of instructor. The topics will vary to reflect the continual changes in the emergency management field. This course may also serve as an independent study course upon recommendation of the advisor and approval by the dean.

**ECE 2112  
BASIC CH GROWTH/DEV I**

Prerequisite: Score of 75 or above on the writing portion of the COMPASS or 19 or above on the English portion of the ACTE. A study of the developmental principles of the developmental stages of the child from birth to age eight. Involves both observation and lecture.

**ECE 2212  
BASIC CH GROWTH/DEV II**

Prerequisite: ECE 2112. A study of the developmental principles of the developmental stages of the children from age nine to eighteen. Involves both observation and lecture.

**ECE 2312  
FOUNDATIONS & THEORIES**

Prerequisite: Score of 75 or above on the writing portion of the COMPASS or 19 or above on the English portion of the ACTE. An introduction to the profession including historical and social foundations, awareness of value issues, ethical and legal issues, staff relations, and the importance of becoming an advocate for children and families.

**ECE 2513  
CURRICULUM FOR ECE**

Prerequisites: ECE 2112 and ECE 2312. A study and application in the field of the theoretical base for early learning. Covers curriculum for young children based on research and theory.

**ECE 2613  
METH/MAT/DEV APP PRAC/ACTV YC**

Prerequisites: ECE 2112 and 2312. A combination of classroom and field based experiences stressing developmentally appropriate techniques and materials fostering successful development and learning in young children.

**ECE 2991  
PRACTICUM IN ECE**

Prerequisites: Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2992  
PRACTICUM IN ECE**

Prerequisites: Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2993  
PRACTICUM IN ECE**

Prerequisites: Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2994  
PRACTICUM IN ECE**

Prerequisites: Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2995  
PRACTICUM IN ECE**

**Prerequisites:** Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2996**  
**PRACTICUM IN ECE**

**Prerequisites:** Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2997**  
**PRACTICUM IN ECE**

**Prerequisites:** Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2998**  
**PRACTICUM IN ECE**

**Prerequisites:** Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECE 2999**  
**PRACTICUM IN ECE**

**Prerequisites:** Completion of 12 hours of ECE courses taken for meeting assessment requirements for the Child Development Associate credential. Variable credit available for documented early childhood training related to the principles and procedures which support the development and operation of an effective early childhood education program. Credit may also be awarded for portfolio development for the Child Development Associate assessment. Equivalencies for awarding credit will be determined by the advisor in accordance with guidelines of the National Association for the Education of Young Children (NAEYC). Additional coursework approved by the advisor may be applied toward any balance of credit needed to complete the nine hours.

**ECED 2001**  
**INTRO/EARLY CHILDHOOD ED**

Must be taken concurrently with ECED 2002. This course studies the social, historical, and philosophical foundations in American Education. Basic technology skills including the portfolio will be introduced.

**ECED 2002**  
**FIELD-BASED EXPER SEM**

Must be taken concurrently with ECED 2001. This course provides an opportunity for prospective education majors to participate in guided classroom observation with time for reflection and discussion.

**ECED 3023  
FOUNDATIONS OF ECED**

Must be taken concurrently with ECED 3033. An introduction to the field of early childhood education, including a history of the movement, influencing concepts and theories, and relevant issues.

**ECED 3033  
CHILD DEVELOPMENT**

Must be taken concurrently with ECED 3023. A study of the physical, cognitive, and psychosocial development of the individual beginning with the prenatal period and continuing through early adolescence. This course includes an on-site field experience in settings for young children.

**ECED 3043  
DEV APPROPRIATE PRACTICE**

Perequisite: ECED 3023 and ECED 3033 and admission to Stage II. Corequisite: ECED 3053. A study of developmentally appropriate practice for young children, birth through age 9. This exploration is an integrated curricular study of appropriate early childhood curriculum, materials, environments, assessments, expectations, instructional strategies, and considerations for early childhood educators. Appropriate field observations and experiences are an integral part of this course, and will be integrated with course content.

**ECED 3053  
CHILD/FAMILY DIVERSE SOC**

Perequisite: ECED 3023 and ECED 3033 and admission to Stage II. Corequisite: ECED 3043. A study of the characteristics of young children with developmental disabilities in the contexts of family theory and intervention. Particular emphasis will be placed on how these characteristics impact the child's family and educational needs.

**ECED 3113  
INTEGRATED CURR 3-5 YRS**

Prerequisites: ECED 3043 and ECED 3053 and admission to Stage II. Corequisites: ECED 3122, ECED 3162, ECED 3172, ECED 3183, ECED 3192. In this course, pre-service teachers build a working knowledge of curriculum strategies and techniques on which to base wise curriculum decision making for children ages 3-5. This course is connected to the ECED 3122 Practicum.

**ECED 3122  
PRACTICUM I**

Prerequisite: ECED 3043 and ECED 3053 and admission to Stage II. Corequisites: ECED 3113, ECED 3162, ECED 3172, ECED 3183, ECED 3192. Practicum I is designed to provide pre-service teachers with field-based experiences for children age 3-5 years.

**ECED 3162  
DIAG/ASSESS CHILD I 3-5**

Prerequisite: ECED 3043 and ECED 3053 and admission to Stage II. Corequisite: ECED 3113, ECED 3122, ECED 3172, ECED 3183, ECED 3192. A study of observational and developmentally appropriate tools and methods of collecting data for decision making. Emphasis is on qualitative assessment techniques that are specific to 3-5 year-old children. This course is connected to the ECED 3122 Practicum.

### **ECED 3172 GUIDING YOUNG CHILDREN**

Prerequisite: ECED 3043 and ECED 3053 and admission to Stage II. Corequisites: ECED 3113, ECED 3122, ECED 3162, ECED 3183, ECED 3192. Emphasis is placed on the guidance and management, individually and in groups, of young children ages 3-5 years. The course focuses on developmentally appropriate practices in early childhood settings. Creation of learning environments that foster social competence, build self-esteem in young children, and assist them in the exploration of ways to independently solve problems and gain self-control are emphasized. This course is connected to the ECED 3122 Practicum.

### **ECED 3183 LANG/LITERACY I 3-5 YRS**

Prerequisite: ECED 3043 and ECED 3053 and admission to Stage II. Corequisites: ECED 3113, ECED 3122, ECED 3162, ECED 3172, ECED 3192. A study of teaching strategies and support systems for encouraging the various areas of literacy in the 3-5 year-old child. This course is connected to the ECED 3122 Practicum.

### **ECED 3192 CHILDREN'S LIT 3-5 YRS**

Prerequisite: ECED 3043 and ECED 3053 and admission to Stage II. Corequisites: ECED 3113, ECED 3122, ECED 3162, ECED 3172, ECED 3183. Study of sources and types of reading materials available for 3-5 year old children and ways to use them to enhance learning. This course is connected to the ECED 3122 Practicum.

### **ECED 3213 INTREGATED CURR II 6-9**

Prerequisite: ECED 3113 and admission to Stage II. Corequisites: ECED 3222, ECED 3262, ECED 3272, ECED 3283, ECED 3292. ECED 3213 builds on the concepts presented in ECED 3113 and emphasizes developmentally appropriate curriculum for children ages 6-9; mandated curriculum; and contemporary issues related to curriculum. This course is connected to the ECED 3222 Practicum.

### **ECED 3222 PRACTICUM II**

Prerequisite: ECED 3122 and admission to Stage II. Corequisites: ECED 3213, ECED 3262, ECED 3272, ECED 3283, ECED 3292. Practicum II is designed to provide pre-service teachers with field-based experiences for children age 6-9 years.

### **ECED 3262 DIAG/ASSESS CHILD II 6-9**

Prerequisite: ECED 3162 and admission to Stage II. Corequisite: ECED 3213, ECED 3222, ECED 3272, ECED 3283, ECED 3292. A study of fundamental observation, assessment, and evaluation concepts and tools. Emphasis on both qualitative and quantitative methods of measuring and reporting student progress and learning. Designed to give the beginning teacher a background in the collection and interpretation of data with the goal of making valid data-driven decisions. This course is connected to the ECED 3222 Practicum.

**ECED 3272  
GUIDING CHILD II 6-9 YRS**

Prerequisite: ECED 3172 and admission to Stage II. Corequisites: ECED 3213, ECED 3222, ECED 3262, ECED 3283, ECED 3292. Emphasis is on the guidance and management, individually and in groups, of primary-aged children, 6-9 years. The course focuses on developmentally appropriate practices in multi-cultural school settings that encourage children to become self-regulated learners. Creation of a context for positive discipline and a guidance approach for an encouraging classroom are explored. This course is connected to the ECED 3222 Practicum.

**ECED 3283  
LANG/LITERACY II 6-9 YRS**

Prerequisite: ECED 3183 and admission to Stage II. Corequisites: ECED 3213, ECED 3222, ECED 3262, ECED 3272, ECED 3292. A study of teaching strategies and support systems for encouraging the various areas of literacy in the 6-9 year-old child. This course is connected to the ECED 3222 Practicum.

**ECED 3292  
CHILDREN'S LIT II 6-9 YR**

Prerequisite: ECED 3192 and admission to Stage II. Corequisites: ECED 3213, ECED 3222, ECED 3262, ECED 3272, ECED 3283. Study of sources and types of reading materials available for 6-9 year old children and ways to use them to enhance learning. This course is connected to the ECED 3222 Practicum.

**ECED 4915  
EARLY CHLD ED INTERNSHIP**

Prerequisite: Admission to Internship. (Fifteen hour course.) An intensive field experience and campus seminar class which culminates the early childhood program. Students will spend time in early childhood environments and in campus seminars applying their knowledge and skills in reflective decision making with children and families. \$100 fee.

**ECON 2003  
PRINC OF ECONOMICS I**

Each semester. Macroeconomic analysis of output, income, employment, price level, and business fluctuations, including the monetary system, fiscal and monetary policy, and international economics.

**ECON 2013  
PRINC OF ECONOMICS II**

Each semester. Prerequisite: ECON 2003. Microeconomic analysis of consumer and producer behavior. Includes theory of production and cost, the effects of market structure on resource allocation, distribution of income, and welfare economics.

**ECON 2103  
HONORS PRINC OF ECONOMICS I**

Prerequisites: Admission to University Honors or permission of Honors Director. Macroeconomic analysis of output, income, employment, price level, and business fluctuations, including the monetary system, fiscal and monetary economics, and international economics.

**ECON 3003  
MONEY AND BANKING**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Each semester. Nature, principles and functions of money, macroeconomic theory, development and operation of financial institutions in the American monetary system, with emphasis on processes, problems, and policies of commercial banks in the United States.

**ECON 3013  
ECON OF LABOR RELATIONS**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) An overview of U.S. labor sector including demographic trends, labor unions, human capital issues and work-leisure values. A brief review of neo-classical wage theory with critiques. Selected labor sector issues such as global labor developments, public sector employment, migration/mobility and discrimination.

**ECON 3073  
INTER MICROECON THEORY**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisites: ECON 2003 and 2013, MATH 2243 or 2914, and junior standing. An examination of the theories of consumer behavior and demand, and the theories of production, cost and supply. The determination of product prices and output in various market structures and an analysis of factor pricing.

**ECON 3093  
ECONOMETRICS**

Prerequisites: BUAD 2053, PSY 2053 or MATH 2163 or consent of instructor. This course develops the theory and applications of regression analysis, which is the primary tool for empirical work in economics. Emphasis is placed on techniques for estimating economic relationships, economic modeling, inference, and testing economic hypotheses in the context of real world problems. Students will also be exposed to other empirical techniques to prepare them for further studies.

**ECON 4001  
READINGS/ECONOMIC THEORY**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) On demand. Prerequisites: Senior standing, background of courses needed for problem undertaken and permission of the department head. Advanced study on an individual basis is offered in money and banking, public finance, general economics, international trade, labor relations, transportation.

**ECON 4002  
READINGS/ECONOMIC THEORY**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) On demand. Prerequisites: Senior standing, background of courses needed for problem undertaken and permission of the department head. Advanced study on an individual basis is offered in money and banking, public finance, general economics, international trade, labor relations, transportation.

**ECON 4003  
READINGS/ECONOMIC THEORY**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) On demand. Prerequisites: Senior standing, background of courses needed for problem undertaken and permission of the department head. Advanced study on an individual basis is offered in money and banking, public finance, general economics, international trade, labor relations, transportation.

**ECON 4033**  
**CURRENT ECON PROBLEMS**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Emphasis is on a "way of thinking" about current economic problems including a conceptual context, critical thinking and problem solving approaches. Major domestic and global economic trends are reviewed. Current economic issues are selected for evaluation.

**ECON 4053**  
**COMPARATIVE ECON SYST**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Fall. Survey of a conceptual framework for comparing national economies and for studying a global economic system. Review of the current world economic environment and of policy issues at the national and multinational levels.

**ECON 4073**  
**WORLD ECONOMIC SYSTEMS**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) On demand. A study of the institutional framework of an economic system selected by the instructor. The course includes a visit to the country being studied.

**ECON 4093**  
**INTL ECON AND FINANCE**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) A course designed specifically for economics and finance majors desiring an understanding of the interplay of economic and financial forces between nations. While developing the theoretical base underlying these forces, the course will emphasize practical aspects of cross border flows of goods, services, and capital from the point of view of the firm. Lecture and discussion will be supplemented by analysis of cases and current events where appropriate. The content of the course should be readily applicable to any private or public sector policy making situation involving an international dimension in which students find themselves.

**EDFD 3023**  
**HUMAN DEVELOPMENT**

A study of the physical, emotional, mental, and social growth of the individual beginning with the prenatal period and continuing through adulthood.

**EDFD 3042**  
**EDUCATIONAL PSY**

Prerequisite: Admission to Stage II of the teacher education program and completion or concurrent enrollment in EDFD 3023. General principles of learning, the learner's potentialities with attention to individual differences, the environment of effective learning, application of psychology to educational problems. May not be taken for credit after completion of EDFD 3043.

**EDFD 3072  
INTRO/ED MEASUREMENTS**

Prerequisite: Admission to Stage II of the teacher education program and completion or concurrent enrollment in EDFD 3023. Characteristics of good school appraisal; principles and procedures in the selection and use of standardized tests; techniques in the construction and use of classroom tests; the interpretation of various types of tests. May not be taken for credit after completion of EDFD 3073.

**EDFD 4052  
TEACHING EXCEP LEARNERS**

Prerequisite: Admission to Stage II of the teacher education program. A study of the major areas of exceptionality including the learning disabled, mentally retarded, physically disabled, and the gifted, and of their special needs in a school program. May not be taken for credit after completion of EDFD 4053 or repeated for credit as EDFD 5052 or equivalent.

**EDFD 4333  
TEACH READ/STUDY STRAT**

Prerequisite: Admission to Stage II of the teacher education program. This course is designed to provide pre service and in serve teachers and administrators with a knowledge of reading factors as they relate to various disciplines. The content of the course includes estimating the student's reading ability, techniques for vocabulary, questioning strategies, and developing reading related study skills. May not be repeated for credit as EDFD 5333.

**EDMD 3013  
INTGRATING INSTR TECH**

An instructional technology course for preservice to teachers introducing students to the incorporation of technology into instructional situations. Students will become familiar with classroom computer utilization for instructional and classroom management technology, state and national standards for technology and curriculum areas, and create lessons centered upon those standards.

**EDMD 4033  
INTRO INSTRUCT TECH**

A media methods course for teachers providing an introduction to classroom computer utilization; applications of the principles of graphic design, visual literacy, communications and learning theory to the selection, evaluation and use of instructional materials, and a survey of production techniques for teacher made materials. Includes basic production principles, operation of audiovisual equipment, and an introduction to computer assisted instruction and computerized classroom management. May not be repeated for credit as EDMD 5033 or equivalent.

**ELEG 1012  
INTRO TO ENGINEERING**

Prerequisite: MATH 1113 or any higher level mathematics course. An introductory course to acquaint students with the technical and social aspects of engineering, the analytic approach to problem solving, measurements and calculations, including application of computer techniques. Lecture one hour, laboratory two hours.

**ELEG 2103  
ELECTRIC CIRCUITS I**

Corequisite: MATH 2934 or consent of instructor. An introduction to circuit theory and electrical devices. Topics include resistive circuits, independent and dependent sources; analysis methods, network theorems; RC and RL first order circuits, and RLC second order circuits. Lecture three hours.

**ELEG 2111**  
**ELECTRIC CIRCUITS LAB**

Corequisite: ELEG 2113. Report writing; use of basic electrical measurement devices; voltmeters, ammeters, R meters, wattmeters, and oscilloscopes. Computer modeling and data analysis of AC and DC circuits. Emphasis on developing laboratory techniques through experiments paralleling topics in ELEG 2103 and ELEG 2113. Laboratory three hours per week.

**ELEG 2113**  
**ELECTRIC CIRCUITS II**

Prerequisite: ELEG 2103 or consent of instructor. Prerequisite/Corequisite MATH 3243. A continuation of ELEG 2103 covering phasor analysis, steady state power, complex network functions, frequency response, transformers, Laplace methods. Lecture three hours.

**ELEG 2130**  
**DIGITAL LOGIC DESIGN LAB**

Corequisite: ELEG 2134. Prerequisite: COMS 2803 or COMS 2104 or consent of instructor. Laboratory must be taken during the same semester as the lecture, ELEG 2134. A study of basic digital logic circuit design and implementation. Circuit schematic development utilizing computerized automated design tools. Computer modeling and simulation of digital systems. Emphasis will be placed on proper laboratory techniques, including data collection, data reduction, and report preparation. Laboratory three hours.

**ELEG 2134**  
**DIGITAL LOGIC DESIGN**

Corequisite: ELEG 2130. Prerequisite: COMS 2803 or COMS 2104 or consent of instructor. Binary numbers and codes, Boolean algebra, combinational and sequential logic including: minimization techniques, memory systems, register transfers, control logic design, and state machines. Lecture three hours.

**ELEG 3003**  
**ENGR MODELING/DESIGN**

Prerequisites: COMS 2803 or MCEG 2203 and MATH 3243. Reduction of engineering systems to mathematical models; methods of analysis using computers; interpretation of numerical results; optimization of design variables. Examples are drawn from various engineering disciplines. Lecture three hours.

**ELEG 3103**  
**ELECTRONICS I**

Prerequisite: ELEG 2113. Physics and electrical characteristics of diodes, bipolar transistors, and field effect transistors, behavior of these devices as circuit elements; common electronic circuits in discrete and integrated form; digital circuits including standard IC gates and flip flops, linear circuits including standard discrete and integrated amplifier configurations and their characteristics. Lecture three hours.

**ELEG 3123**  
**SIGNALS/SYSTEMS**

Prerequisites: MATH 3243, ELEG 2113. Signal and system modeling, time and frequency domain analysis, singularity functions, the Dirac Delta function, impulse response, the superposition integral and convolution, Fourier series and Fourier and Laplace transformations. Lecture three hours.

**ELEG 3131  
ELECTRONICS LABORATORY**

Prerequisite: ELEG 2111 and ELEG 3103. Experiments paralleling ELEG 3103 emphasizing the applications and limitations of discrete electronic devices, circuit modeling, and applications of integrated circuits. Laboratory three hours per week.

**ELEG 3133  
MICRO-PROC SYST DESIGN**

Prerequisites: ELEG 2134 and ELEG 2130 or consent. Digital design using microprocessors. Microcomputer architecture, memory structures, I/O interfaces, addressing modes, interrupts, assembler programming, development tools. This course should also attract computer science students interested in hardware. Lecture three hours.

**ELEG 3143  
ELECTROMAGNETICS**

Prerequisite or Corequisite: ELEG 3123. An introduction to static and dynamic electromagnetic fields using vector methods. Transmission lines, electrostatic fields, magnetostatic fields, Maxwell's equations, plane electromagnetic wave propagation, reflection, refraction, attenuation, antennas, reciprocity, and gain. Lecture three hours.

**ELEG 3153  
ELECTRICAL MACHINES**

Prerequisite: ELEG 2113. Steady state analysis of single phase and polyphase transformers, direct current machines, synchronous machines, induction machines, and special purpose machines. Special emphasis will be given to the modeling and control of these machines. Lecture three hours.

**ELEG 3163  
ELECTRIC POWER SYSTEMS**

Prerequisite: ELEG 2113. Introduction to industrial and utilities electric power systems, poly-phase systems, fault conditions, per-unit values, and the method of symmetrical components.

**ELEG 4103  
ELECTRONICS II**

Prerequisite: ELEG 3103. A continuation of ELEG 3103 specializing in characteristics and applications of both linear and digital integrated circuits; amplifiers, feedback analysis, frequency response, oscillators, amplifier stabilization, microprocessors, memory systems, emphasis on design. Lecture three hours.

**ELEG 4113  
DIGITAL SIGNAL PROCESS**

Prerequisites: ELEG 3123. The study of discrete-time signals and systems, convolution, correlation, z-transform, discrete-time Fourier transform, analysis and design of digital filters. Lecture three hours.

### **ELEG 4133 ADVANCED DIGITAL DESIGN**

Prerequisites: ELEG 2134. Principles of digital systems design and the use of hardware description languages (HDL) are targeted toward the development of programmable logic devices in this project oriented course. The basic tenets of HDL will be presented including design flow, structural and behavioral descriptions, data types, concurrent and sequential statements, processes, procedures, functions, and packages. Approximately one hour per week will be devoted to supervised project development.

### **ELEG 4143 COMMUNICATION SYS I**

Prerequisites: ELEG 3123, MATH 3153. An introduction to design and analysis of analog and digital communication systems. Amplitude and angle modulation and demodulation, bandwidth, frequency division multiplexing, sampling and pulse- code modulation, detection error statistics in digital communication. Lecture three hours.

### **ELEG 4153 COMMUNICATIONS SYS II**

Prerequisite: ELEG 4143. Continuation of ELEG 4143. Design and analysis of analog and digital communication systems, taking into account the effects of noise. Random variables, random processes, analog and digital communication systems in the presence of noise. Lecture three hours.

### **ELEG 4193 ELEC DESIGN PROJECT**

Prerequisites: ELEG 3003, 4103, ELEG(MCEG) 4202, senior standing and consent of instructor. An independent or group project in electrical engineering design. Where appropriate, a team approach will be employed. Emphasis will be placed on designing an electrical system or sub system with due regard for: safety, environmental concerns, reliability, longevity, ease of manufacturing, maintainability, and cost effectiveness. A written and oral report are required.

### **ELEG 4202 ENGINEERING DESIGN**

(ELEG majors) prerequisite: Senior standing and corequisite ELEG 4103. This course serves as the first part of a two course sequence in which the student completes a senior design project. Design methodologies and tools including real world design considerations such as environmental impact, engineering ethics, economics, safety, product costing and liability are introduced. Design for manufacture, project management, scheduling and proposal writing will be covered. Successful completion of this course shall require completion of a proposal for a senior design project being accepted by the faculty design project review process.

### **ELEG 4303 CONTROL SYSTEMS**

Prerequisites: ELEG(MCEG) 3003 and ELEG 2113. An introduction to the field of control system engineering. Topics include: open and closed loop systems; mathematical modeling of electrical and mechanical systems; linearization; stability; block diagram reduction; signal flow graphs; transient analysis; stability analysis; root locus analysis; frequency analysis; and an introduction to compensator design. Lecture three hours.

**ELEG 4313  
MODERN CONTROL SYSTEMS**

Prerequisite: ELEG 4303. A continuation of ELEG 4303 Control Systems. Topics include: frequency response design, state space analysis, controllability, observability, state space design, robustness, and an introduction to digital control. Lecture three hours.

**ELEG 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ELEG 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ELEG 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ELEG 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ELEG 4991  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**ELEG 4992  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**ELEG 4993  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**ELEG 4994  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**ELT 1103  
PROGRAMMING I**

This course is designed to give the student an understanding of established and new methodologies using Microsoft Visual Basic programming. Emphasis is placed on developing logical thinking skills.

**ELT 1104  
FUNDAMENTALS/ELECTRICITY**

This course is an overall study of the fundamental principles of D.C. and A.C. circuits. A basic study of Ohm=s Law, series, parallel and series parallel resistor circuits. The fundamental concepts form the basis for the study of advanced applications of electronic systems. It is necessary for the electronic technician to be able to understand the basic concepts to function as an Electronic Technician.

**ELT 1113  
INTRO TO DIGITAL LOGIC**

This is an introductory course in the study of Digital Logic Systems. Basic digital logic gates, truth tables, numbering systems, and different types of TTL integrated circuits are studied.

**ELT 1123  
SEMICONDUCTORS I**

This course introduces semiconductors or solid-state components. Topics covered include the diode and applications, transistors, and amplifiers.

**ELT 1143  
INTRO TO DIGITAL LOGIC**

An introductory course in the study of digital logic systems. Basic digital logic gates, truth tables, numbering systems, and different types of TTL integrated circuits are studied.

**ELT 1222  
BASIC ELECTRONICS/T & I**

This course is an overall study of the fundamental principles of DC and AC electricity, Ohm's Law, series, parallel, and series parallel circuits as related to the automotive field.

**ELT 1253  
NETWORKING II**

Prerequisite: ELT 1153. Builds upon the skills and concepts learned in Networking I. Emphasis will be on the hands-on aspects of personal computer networks using Microsoft and Linux based networking products, including installations and/or expanding a networking system and troubleshooting problems.

**ELT 1303  
PC MAINTENANCE**

This course is designed to prepare individuals to troubleshoot, build, and repair personal computers, workstations, printers, and other computer peripherals. The student will also learn to install, debug, diagnose, and repair software problems associated with PCs.

**ELT 2107  
BASIC INDUSTR AUTOMATION**

An illustrated study of circuit configurations used in industry. Topics to be covered are: solid-state systems used to control DC and AC motors, electro-mechanical devices, three phase power, open and closed loop motor control, robotic input and output transducers, various instrumentation and process control classes. Lecture: 9 hours, Laboratory: 5 hours.

**ELT 2115  
PROGRAMMABLE CONTROLLERS**

Deals with the subject of programmable controllers (PCs). The PC is a microprocessor-based programmable device used in controlling mechanical machinery, energy management systems, computer integrated manufacturing, and other applications. Lecture: 3 hours, laboratory: 6 hours.

**ELT 2116  
BASIC INDUSTRIAL AUTOMATION**

An illustrated study of circuit configurations used in industry. Topics to be covered are: solid-state systems used to control DC and AC motors, electro-mechanical devices, three-phase power, open and closed loop motor control, robotic input and output transducers, various instrumentation and process control classes. Lecture 9 hours. Laboratory: 5 hours.

**ELT 2123  
INDUSTRIAL FLUID POWER**

This course is designed to provide the basic knowledge and application of physical principles involving pumps, cylinders, valves, motors, design, assembly, graphic symbols, and the operation of hydraulic and pneumatic control circuits based on logic principles. Lecture: 4 hours, laboratory: 1 hour.

**ELT 2203  
COMPUTER SYSTEM COMPONENTS**

A study of the internal structure of the microprocessor. The full computer system is analyzed from both aspects of hardware and software. Many of the principles studied apply to computer troubleshooting and computer interfacing. Many of the computer support circuits are studied. Many of the skills learned from Programming I, Operating Systems, and Digital Logic are brought together and enhanced.

**ELT 2204  
COMPUTER SYS COMPONENTS**

This course is a study of the internal structure of the microprocessor. The full computer system is analyzed from both aspects of hardware and software. Many of the principles studied apply to computer troubleshooting and computer interfacing. Many of the computer support circuits are studied. Many of the skills learned from Basic Programming, operating systems, and Digital Logic are brought together and enhanced.

**ELT 2212  
SEMICONDUCTORS II**

A continuation of ELT 1123 Semiconductors I, this course is a study of field effect transistors, thrists, and linear integrated circuits.

**ELT 2213  
SEMICONDUCTORS II**

A continuation of ELT 1123 Semiconductors II, this course is a study of field effect transistors, thrists, and linear integrated circuits.

**ELT 2214  
COMP INTERFACING/NETWORK**

This course is a study of the different types of networks systems. The student is taught how to set up the hardware and software for a complete network system.

**ELT 2215  
COMPUTER TROUBLESHOOTING**

This course is a study of the concepts of computer repair on IBM compatible computer systems. The student is taught how to troubleshoot hardware and software problems on these systems. Different types of configurations are studied, and upgrade methods are also considered. The student will learn to put a system together from the basic hardware components of a system. The student will troubleshoot a system that has both hardware and software problems.

**ELT 2903  
INTERNSHIP**

Provides students with experience in a business setting. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of the internship.

**EMPT 1302  
RHYTHM RECOGNITION**

Students will gain knowledge of EKG monitoring of leads I, II, and III. Students will learn the basic electro physiology of cardiac conduction through the heart. Emphasis is on the study of arrhythmia etiologies and irregular waveforms and arrhythmia recognition. The knowledge and ability to perform cardioversion, noninvasive TCP pacing and 12-Lead Interpretation and application will be presented in this section.

**EMPT 1304  
MEDICAL EMERGENCIES I**

This section teaches a systematic approach to assessment of cardiac patients with pathological disease processes and acute coronary symptoms. Students will learn to manage patients with cardiac pharmacological and electrical interventions. Designed to teach a comprehensive approach to cardiac patients with cardiovascular compromise. Students will study pulmonary disease and common acute reactions with review of pulmonary anatomy and treatment. Students will understand a comprehensive approach and clinical assessment and treatment for medical emergencies. Behavioral emergencies, neurology, anaphylaxis, renal, toxicology, hematology, and endocrinology with gastroenterology will be included in this section with an emphasis on assessment and field treatment.

**EMPT 1305  
CLINICAL PRACTICUM II**

The student will apply basic and advanced assessment and procedures in the emergency department, Intensive Care Unit, and Operating Room while under supervision of preceptor and/or clinical coordinator. The student will have specific age and patient conditions to evaluate and assist in management of care in the ER department.

**EMPT 1331  
LAB II**

Will be re-evaluated in basic skills learned in Lab I. Students will learn the application of EKG monitors, pacing, synchronized cardioversion, pacing and the practical use of pulmonary oximeters. Students will apply the knowledge of advanced patient assessment to clinical scenarios.

**EMPT 1401  
LAB III**

Will demonstrate all skills learned in Labs I and II. Students will learn pediatric skills such as airway management, invasive therapy, and advanced trauma skills. Students will also demonstrate competency in advanced cardiac life support, pediatric life support, and pre-hospital trauma life.

**EMPT 1412  
MEDICAL EMERGENCIES II**

Designed to train students the understanding of pathophysiology, assessment and management of infectious disease, geriatrics, pediatric/neonatology, and OB/GYN. Medical Emergencies II will emphasize assessment based management of present illness and focused patient complaints. Student will also be prepared for pre-hospital trauma in this session.

**EMPT 1413  
CLINICAL PRACTICUM II**

Designated preceptors and/or clinical coordinator in the following areas will supervise students: Intensive Care Unit, Surgical Recovery, and Operating Room, and Labor & Delivery. Students will apply knowledge of course information learned and perform procedures that are appropriate for these areas of hospital. Students will have patient condition and age specific criteria to evaluate in this session that is mandatory to course completion.

**EMPT 1424  
PARAMEDIC INTERNSHIP I**

Preceptors in the field will supervise patient assessment and management skills during the student=s pre-hospital rotation. Students will have a greater understanding of EMS systems and dispatching or emergencies with a higher level of competency in patient report transmission to the ED=s and patient report documentation. Students must successfully complete ACLS, the program=s skill and critical thinking competency, to be scheduled for an interview with the program medical director prior to scheduling their internship rotation.

**EMPT 1431  
ADV CARDIAC LIFE SUPPORT**

Designed to offer health care professionals a high-density course of advanced cardiac knowledge and treatment. The course offers extensive EKG dysrhythmia treatment guidelines and a strong emergency cardiac pharmacological background. This course is for those individuals who are employed for an agency that requires knowledge and training in emergency cardiac care, such as RN=s, paramedics, physicians, and other health care professionals who seek advanced level training. The course will train an individual in a systematic approach to treatment of life-threatening cardiac and medical emergencies.

**EMPT 1451  
PREHOSP TRAUMA LIFE SUPP**

Designed to expand pre-hospital care provider=s knowledge of trauma care. The course emphasizes that critically injured patients must be assessed and treated in a rapid systematic approach with aggressive care given en route to the receiving emergency department. Pre-hospital care providers are trained to operate within the Golden Hour, in order to offer a greater chance of patient survival. The course reviews and expands on anatomy and physiology, kinematics of trauma, pediatric and geriatric trauma, and shock treatment. The course can include RN=s, paramedics, EMT=s, physicians, and other health care providers who seek greater knowledge of trauma care.

**EMPT 1461  
PEDIATRIC ADV LIFE SUPP**

Designed to provide health care professionals a greater knowledge of emergency care for the pediatric age group. This course is advanced level guidelines for medically ill, traumatically ill infants and children. The course stresses critical thinking of the health care provider in life threatening situations involving this age group. Resuscitation and management, as well as, anatomy and physiology review, pharmacologic lectures and skills check-offs, including a written exam is offered within this course. The course teaches current health care provider level pediatric emergency care.

**EMPT 1504  
PARAMEDIC INTERNSHIP II**

Continuation of Internship I with evaluation by designated preceptors in the pre-hospital environment. Students must achieve a level of understanding, professionalism and clinical knowledge of pre-hospital emergency care to be recommended by the medical director and program director to enter this phase of the paramedic program. Students must perform patient assessment and management skills while under supervision of experienced preceptors including the ability to perform as a team leader in the pre-hospital setting during this phase of the program. A closer evaluation of student=s character and professionalism will be emphasized. This course will be the student=s final step in pre-hospital field evaluation.

**EMPT 1512  
ASSESSMENT BASED MGMT**

The student will learn the final aspects of pre-hospital care and management in this session of the paramedic program. The student will learn effective scene and patient management, critical thinking and clinical decision-making. This session will serve as a final analysis of the student=s ability to analyze patient

information and provide the treatment necessary for the best outcome of the patient=s condition. The student must have an understanding of all tasks required of the paramedic provider in the pre-hospital setting prior to the final exit of the paramedic program.

**EMTP 1001  
FIRST AID AND CPR**

Student in this course will learn to recognize and provide first aid for injuries ranging from simple lacerations to musculoskeletal injuries. Students will also learn how to recognize various medical emergencies ranging from heart attacks to allergic reactions. Students will complete requirements for certification in first aid, adult, child and infant CPR including Automated External Defibrillator (AED). This course is recognized by health care agencies, fire departments, police departments and local industries. (Cost of certification will be assessed.)

**EMTP 1003  
MEDICAL FIRST RESPONDER**

This course is designed to train students to perform in pre-hospital care of acutely ill or injured patients. Medical First Responders perform such measures as cardiopulmonary resuscitation, extrication, initial patient assessment and triage, and stabilization of any emergency.

**EMTP 1007  
EMERGENCY MEDICAL TECHNICIAN**

This course is designed to train students to perform in pre-hospital care of acutely ill or injured patients. EMTs perform such measures as cardiopulmonary resuscitation, extrication, initial patient assessment and triage, stabilization and transport of any emergency, to include routine transport of non-emergent patient to allied health care facility.

**EMTP 1103  
LIFE SPAN DEVELOPMENT**

Designed to prepare the student for the psychological development of infancy to geriatrics. The course of study will emphasize normal and abnormal physiological changes in people, both during their growth and development.

**EMTP 1107  
ADV EMERGENCY MED TECHNICIAN**

This course is designed to train students to perform in pre-hospital care of acutely ill or injured patients. EMTs perform such measures as cardiopulmonary resuscitation, IV access, extrication, initial patient assessment and triage, stabilization and transport of any emergency, to include routine transport of non-emergent patient to allied health care facility.

**EMTP 1113  
PHARMACOLOGY I**

Includes the pharmacological developments, standards, and patient rights and drug controls. The student will apply their knowledge of human anatomy and physiology, and ethics with the pharmacological use of medications, pharmacokinetics, fluids, and electrolytes. Clinical pharmacology will be emphasized.

**EMTP 1123  
PREHOSPITAL ENVIRONMENT**

The role of the advanced pre-hospital provider in the EMS system is emphasized along with the legal responsibilities and liabilities of the EMS environment. The course will include the utilization of medical direction and use of EMS protocol, ethics and the well being of EMS personnel is emphasized with emphasis on illness and injury prevention. Students will also learn rescue, stress management, and triage. Hazardous materials will be taught as well as violence, with emphasis on pre-hospital provider safety.

### **EMTP 1133 ANATOMY AND PHYSIOLOGY**

This course is the basic study of human anatomy and physiology. Students will study body systems and functions of human organisms. Students will learn basic biological chemistry and have an understanding of all systems and how homeostasis in human bodies is achieved.

### **EMTP 1201 PAT/ASSESS/PATH SHOCK I**

Will learn an advanced and comprehensive approach to patient assessment and history taking. Students will apply current patient status and will continue to gather pertinent patient data. Review of anatomy and physiology with a more direct approach and emphasis on particular age groups. Students will use patient data with head to toe examinations and the use of mnemonics such as SAMPLE. An empathetic approach will be discussed in this section. Introduction to the phases of shock with emphasis of physiological changes at the cellular level. The student will have an understanding of disease process and fluid and acid-base balance. Students will gain the knowledge of assessment and management of patients with hypoperfusion including various forms of shock, multiple organ dysfunction syndrome, and cellular metabolism impairment. Students will have the knowledge of assessment and treatment of various shock conditions.

### **EMTP 1213 PREHOSPITAL ENVIRONMENT**

The role of the advanced prehospital provider in the EMS system is emphasized along with the legal responsibilities and liabilities within the EMS environment. This course includes the utilization of medical direction and protocols, ethics, and the well being of EMS personnel with an emphasis on illness and injury prevention. Rescue, stress management, and mass casualty response will be included in this course. Hazardous materials as well as violent situations will be covered with an emphasis on personal and bystander safety. The patient assessment portion will include history taking, interview skills, and the physical exam. EMT level assessment techniques will be readressed in addition to the introduction of paramedic level skills/techniques.

### **EMTP 1221 PHARMACOLOGY II**

Utilizes the EMT 1113 Pharmacology I course objectives to help the student gain a greater understanding of more advanced drug therapy. This section of pharmacology will focus on cardiac medications and administration to pediatric, adult and geriatric patients in the clinical and pre-hospital setting. A basic knowledge of cardiac complaints and medications that are required for proper treatment and stabilization will be covered into this portion. Additional medications taught will include thrombolytic and respiratory medications.

### **EMTP 1223 CLINICAL PRACTICUM I**

The student will receive supervised/ preceptor clinical experience in the emergency department, respiratory therapy, and operating room. Students will perform patient procedures under the guidance of a professional health care preceptor with expertise in the patient care area. Students will observe care of critical and non-critical patients. Students will be required to assess and document on specific age and diverse complaint based patients while in the clinical area. Students will earn a team approach in the clinical area while performing basic and advanced patient skills check-off in Lab I.

### **EMTP 1231 LAB I**

Review and successfully perform EMT Basic skills. Advanced skill demonstration and proficient performance evaluations that will prepare the student for practical use in clinical and field internship. Advanced airway, intravenous therapy, intramuscular injections, and IV medication administration. Emphasis on patient rights in the area of health care.

### **EMTP 1302 RHYTHM RECOGNITION**

Students will gain knowledge of EKG monitoring of leads I, II, and III. Students will learn the basic electro physiology of cardiac conduction through the heart. Emphasis is on the study of arrhythmia etiologies and irregular waveforms and arrhythmia recognition. The knowledge and ability to perform cardioversion, noninvasive TCP pacing and 12-Lead Interpretation and application will be presented in this section.

### **EMTP 1303 CARDIOLOGY**

This course is designed to train students to understand the pathophysiology, assessment and management of cardiac patients to include pharmacological and electrical interventions. The pharmacology section will focus on the study, preparation, administration, and indications of cardiac medications. Students will gain knowledge of EKG (ECG) monitoring of leads I, II, and III with an emphasis on the study of arrhythmia etiologies and irregular waveforms. The American Heart Association (AHA) Advanced Cardiac Life Support (ACLS) will be administered during this course. ACLS is designed to offer health care professionals a high-density course of advanced cardiac knowledge and treatment. Critical thinking skills will be examined through case based scenarios as well as a written test. In addition to the regular coursework, students must successfully complete ACLS practical (Pass/Fail) and written exam (84%) to successfully complete Cardiology. (Certification costs will be assessed.)

### **EMTP 1304 MEDICAL EMERGENCIES I**

This course will present the student with the pathophysiology, clinical assessment and treatment of patients presenting with specific illness. Pulmonology, neurology, endocrinology, allergies, anaphylaxis, gastroenterology, urology, nephrology, toxicology, substance abuse, hematology, environmental emergencies, and infectious disease will be included in this section with an emphasis on assessment based management of present illness and focused patient complaints for effective field treatment.

### **EMTP 1305 CLINICAL PRACTICUM II**

The student will apply basic and advanced assessment and procedures in the emergency department, Intensive Care Unit, and Operating Room while under supervision of preceptor and/or clinical coordinator. The student will have specific age and patient conditions to evaluate and assist in management of care in the ER department.

### **EMTP 1331 LAB II**

Will be re-evaluated in basic skills learned in Lab I. Students will learn the application of EKG monitors, pacing, synchronized cardioversion, pacing and the practical use of pulmonary oximeters. Students will apply the knowledge of advanced patient assessment to clinical scenarios.

### **EMTP 1401 LAB III**

Will demonstrate all skills learned in Labs I and II. Students will learn pediatric skills such as airway management, invasive therapy, and advanced trauma skills. Students will also demonstrate competency in advanced cardiac life support, pediatric life support, and pre-hospital trauma life.

**EMTP 1403  
MEDICAL EMERGENCIES II**

This course is designed to train students to understand the pathophysiology, assessment and management of infectious disease, abuse or assault, geriatrics, pediatrics, neonatology, and OB/GYN. Emphasis will be placed on assessment based management of present illness and focused patient complaints. The American Heart Association (AHA) Pediatric Advanced Life Support (PALS) program will be presented during this course. PALS is designed to provide health care professionals a greater knowledge of emergency care for the pediatric patient. Airway management, specialized procedures and pharmacological techniques will be addressed. The PALS program stresses critical thinking skills and the student will be examined through case based scenarios as well as a written test. In addition to the regular coursework, students must successfully complete the PALS practical exam (Pass/Fail) and written exam (84%) for successful completion of Medical Emergencies II. (Certification costs will be assessed.)

**EMTP 1412  
MEDICAL EMERGENCIES II**

Designed to train students the understanding of pathophysiology, assessment and management of infectious disease, geriatrics, pediatric/neonatology, and OB/GYN. Medical Emergencies II will emphasize assessment based management of present illness and focused patient complaints. Student will also be prepared for pre-hospital trauma in this session.

**EMTP 1413  
CLINICAL PRACTICUM III**

Designated preceptors and/or clinical coordinator in the following areas will supervise students: Intensive Care Unit, Surgical Recovery, and Operating Room, and Labor & Delivery. Students will apply knowledge of course information learned and perform procedures that are appropriate for these areas of hospital. Students will have patient condition and age specific criteria to evaluate in this session that is mandatory to course completion.

**EMTP 1423  
TRAUMA MANAGEMENT**

This course is intended to present the student with a comprehensive insight into traumatic injury. Pathophysiology, assessment, and management of trauma to include blunt, penetrating, soft-tissue, burn, musculoskeletal, head, face, neck, spinal, thoracic, and abdominal trauma as well as hemorrhage and shock will be analyzed. Types and phases of shock will be explored to provide the student assessment knowledge for the treatment of various shock conditions. Epidemiology of trauma will be discussed as well as the Arkansas Trauma System. The course will culminate with the National Association of Emergency Technicians (NAEMT) Prehospital Trauma Life Support (PHTLS). PHTLS is designed to refine the student's trauma knowledge and critical thinking skills through lecture, practical applications, and case based management scenarios. The student will also receive insight into special circumstances and alternative treatment methods for trauma victims. (Certification costs will be assessed.)

**EMTP 1424  
PARAMEDIC INTERNSHIP I**

Preceptors in the field will supervise patient assessment and management skills during the student's pre-hospital rotation. Students will have a greater understanding of EMS systems and dispatching or emergencies with a higher level of competency in patient report transmission to the ED's and patient report documentation. Students must successfully complete ACLS, the program's skill and critical thinking competency, to be scheduled for an interview with the program medical director prior to scheduling their internship rotation.

**EMTP 1431  
ADV CARDIAC LIFE SUPPORT**

Designed to offer health care professionals a high-density course of advanced cardiac knowledge and treatment. The course offers extensive EKG dysrhythmia treatment guidelines and a strong emergency cardiac pharmacological background. This course is for those individuals who are employed for an agency that requires knowledge and training in emergency cardiac care, such as RN's, paramedics, physicians, and other health care professionals who seek advanced level training. The course will train an individual in a systematic approach to treatment of life-threatening cardiac and medical emergencies.

**EMTP 1451  
PREHOSP TRAUMA LIFE SUPP**

Designed to expand pre-hospital care provider's knowledge of trauma care. The course emphasizes that critically injured patients must be assessed and treated in a rapid systematic approach with aggressive care given en route to the receiving emergency department. Pre-hospital care providers are trained to operate within the Golden Hour, in order to offer a greater chance of patient survival. The course reviews and expands on anatomy and physiology, kinematics of trauma, pediatric and geriatric trauma, and shock treatment. The course can include RN's, paramedics, EMT's, physicians, and other health care providers who seek greater knowledge of trauma care.

**EMTP 1461  
PEDIATRIC ADV LIFE SUPP**

Designed to provide health care professionals a greater knowledge of emergency care for the pediatric age group. This course is advanced level guidelines for medically ill, traumatically ill infants and children. The course stresses critical thinking of the health care provider in life threatening situations involving this age group. Resuscitation and management, as well as, anatomy and physiology review, pharmacologic lectures and skills check-offs, including a written exam is offered within this course. The course teaches current health care provider level pediatric emergency care.

**EMTP 1504  
PARAMEDIC INTERNSHIP II**

Continuation of Internship I with evaluation by designated preceptors in the pre-hospital environment. Students must achieve a level of understanding, professionalism and clinical knowledge of pre-hospital emergency care to be recommended by the medical director and program director to enter this phase of the paramedic program. Students must perform patient assessment and management skills while under supervision of experienced preceptors including the ability to perform as a team leader in the pre-hospital setting during this phase of the program. A closer evaluation of student's character and professionalism will be emphasized. This course will be the student's final step in pre-hospital field evaluation.

**EMTP 1512  
ASSESSMENT BASED MGMT**

The student will learn the final aspects of pre-hospital care and management in this session of the paramedic program. The student will learn effective scene and patient management, critical thinking and clinical decision-making. This session will serve as a final analysis of the student's ability to analyze patient information and provide the treatment necessary for the best outcome of the patient's condition. The student must have an understanding of all tasks required of the paramedic provider in the pre-hospital setting prior to the final exit of the paramedic program.

**EMTP 2991  
SPECIAL TOPICS FOR EMTP**

This course is designed to introduce students to specific areas in Paramedic/Emergency Medical Services. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**EMTP 2993  
SPECIAL TOPICS FOR EMTP**

This course is designed to introduce students to specific areas in Paramedic/Emergency Medical Services. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ENGL 0203  
ENGL AS SECOND LANG**

A course in basic English grammar, composition, reading, aural comprehension, and oral communication designed to prepare speakers of English as a second language for the six hour, college level composition sequence. The grade in this course will be computed in semester and cumulative grade point averages, but the course may not be used to satisfy general education requirements nor provide credit toward any degree. Students who are placed in ENGL 0203 must earn a grade of C or better in the course before enrolling in ENGL 1013. A student who makes a D or F in ENGL 0203 must repeat the course in each subsequent semester until he or she earns a grade of C or better.

**ENGL 0303  
FOUNDATIONAL COMP**

A course in basic grammar and writing to prepare students for the required six hour composition sequence. The grade in the course will be computed in semester and cumulative grade point averages, but the course may not be used to satisfy general education requirements nor provide credit toward any degree. A student who is placed in ENGL 0303 must earn a grade of C or better in the course before enrolling in ENGL 1013. A student who makes a D or F in ENGL 0303 must repeat the course in each subsequent semester until he or she earns a grade of C or better.

**ENGL 1013  
COMPOSITION I**

Prerequisite: Score of 19 or above on English section of the Enhanced ACT, 460 or above on the quantitative portion of the SAT, 40 or above on the TSWE, 75 or above on the COMPASS writing section, or a grade of C or better in ENGL 0203 or 0303. A review of grammar, introduction to research methods, and practice in writing exposition using reading to provide ideas and patterns. May not be taken for credit after successful completion of ENGL 1043.

**ENGL 1023  
COMPOSITION II**

Prerequisite: Minimum grade of C in ENGL 1013 or 1043. A continuation of ENGL 1013 with readings in poetry, fiction, and drama. May not be taken for credit after successful completion of ENGL 1053.

**ENGL 1043  
HONORS COMPOSITION I**

Prerequisite: Admission to the Tech Honors Program or permission of the Honors Program Director. An honors course that concentrates on advanced reading and writing skills.

**ENGL 1053  
HONORS COMPOSITION II**

Prerequisite: Successful completion of ENGL 1013 or ENGL 1043 and admission to the Tech Honors Program or permission of the Honors Program Director. An honors writing course that includes the study of poetry, fiction, and drama. NOTE: A grade of C or better must be earned in each of the two composition courses used to satisfy the general education requirement of English/ Communication.

**ENGL 2003  
INTRO/WORLD LITERATURE**

Prerequisite: ENGL 1013 or equivalent. An exploration of significant authors and themes in world literature. ENGL 2003 may be used to fulfill the general education humanities requirements.

**ENGL 2013  
INTRO/AMERICAN LITERATUR**

Prerequisite: ENGL 1013 or equivalent. An exploration of significant authors and themes in American literature. ENGL 2013 may be used to fulfill the general education humanities requirement.

**ENGL 2023  
HONORS WORLD LITERATURE**

Prerequisites: Successful completion of ENGL 1013 or 1043 and admission to the Tech Honors Program, or permission of the Honors Program Director. An honors course that explores significant authors and themes in world literature. ENGL 2023 may be used to fulfill the general education humanities requirement.

**ENGL 2043  
INTRO/CREATIVE WRITING**

Prerequisite: ENGL 1023 or equivalent. Introduction to techniques of writing both fiction and poetry.

**ENGL 2053  
TECHNICAL WRITING**

Prerequisite: ENGL 1023 or equivalent. Practice in composing abstracts, instructions, visuals, proposals, questionnaires, letters, memos, and a variety of informal and formal reports.

**ENGL 2063  
ADV COMP:PRAC/THEORY**

Prerequisite: ENGL 1023 or equivalent. Practice with several types of expository writing. An introduction to research techniques and composition theory.

**ENGL 2173  
INTRO TO FILM**

Prerequisite ENGL 1013 or equivalent. A study of film as an art form with particular attention given to genres, stylistic technique and film's relation to popular culture. ENGL 2173 may be used to fulfill the General Education fine arts requirement. ENGL 2173 may not be repeated for credit after the completion of JOUR 2173.

**ENGL 2213  
INTRODUCTION TO DRAMA**

Prerequisite: ENGL 1013 or equivalent. A study of drama as literature; a study of terminology and elements of drama and the reading of selected works, including both classic and contemporary.

**ENGL 2223  
INTRODUCTION TO POETRY**

Prerequisite: ENGL 1013 or equivalent. A study of basic form, terminology and specific works.

**ENGL 2233  
INTRODUCTION TO FICTION**

Prerequisite: ENGL 1013 or equivalent. A study of form, terminology, and specific works of fiction.

**ENGL 2263  
MYTHOLOGY**

Prerequisite: ENGL 1013 or equivalent. An introduction to the Western mythologies and a study of their influence on Western literature.

**ENGL 2283  
SCIENCE FICTION AND FANTASY**

Prerequisite: ENGL 1013 or equivalent. A survey course which covers classics of the science fiction and fantasy genres. Approach to the works is both historical and thematic.

**ENGL 2881  
PRAC/LIT JOUR PUBL**

Prerequisite: ENGL 1013 or equivalent. Students will work as staff members of NEBO: A Literary Journal. May be repeated for a maximum of five semester hours. Cumulative hours in ENGL 2881 and ENGL 4881 4 may not exceed nine.

**ENGL 3013  
SYSTEMS OF GRAMMAR**

Prerequisite: ENGL 1023 or equivalent. Students are recommended to complete ENGL 3023 before enrolling in this course. A synthesis of the most useful elements of traditional, transformational, and structural grammar.

**ENGL 3023  
INTRO TO LINGUISTICS**

Prerequisite: ENGL 1023 or equivalent. A study of basic concepts in language, comparative characteristics of different languages, and the principles of linguistic investigation.

**ENGL 3043  
LITERARY EDITING/PUBLISHING**

Prerequisite: ENGL 1023. A study of literary editing and publishing in print and online.

**ENGL 3083  
FICTION WORKSHOP**

Prerequisite: ENGL 2043. Concentration in the writing and evaluation of fiction. May be repeated once for credit as ENGL 3083.

**ENGL 3093  
POETRY WORKSHOP**

Prerequisite: ENGL 2043. Concentration in the writing and evaluation of poetry. May be repeated once for credit as ENGL 3093.

**ENGL 3103  
LITERARY THEORY**

Prerequisite: ENGL 1023 or equivalent. A study of contemporary critical approaches to literature.

**ENGL 3173  
STUDIES IN FILM**

Prerequisite: ENGL 1023 or equivalent. A focused study of selected films. Course content will vary. May be repeated for credit as ENGL 3173 if course content differs.

**ENGL 3203  
MODERN NOVEL**

Prerequisite: ENGL 1023 or equivalent. Reading in representative novels written since 1900.

**ENGL 3223  
YOUNG ADULT LITERATURE**

Prerequisite: ENGL 1023 or equivalent. A survey of young adult literature.

**ENGL 3243  
EARLY NOVEL**

Prerequisite: ENGL 1023 or equivalent. Reading in representative novels written before 1900.

**ENGL 3293  
STUDIES/LITERATURE/LANG**

Prerequisite: ENGL 1023 or equivalent. A focused study of selected literary works or selected language topics. Course content will vary. May be repeated for credit as ENGL 3293 if course content differs.

**ENGL 3303  
LITERATURE OF SOUTH**

Prerequisite: ENGL 1023 or equivalent. Reading in representative works by writers in the South since the Civil War.

**ENGL 3313  
AMERICAN LIT TO 1900**

Prerequisite: ENGL 1023 or equivalent. Readings in the works of colonial and nineteenth century American authors.

**ENGL 3323  
MODERN AMERICAN LIT**

Prerequisite: ENGL 1023 or equivalent. Readings in the works of twentieth century American authors.

**ENGL 3413  
BRITISH LIT TO 1800**

Prerequisite: ENGL 1023 or equivalent. Readings in the works of selected early British authors.

**ENGL 3423  
BRITISH LIT SINCE 1800**

Prerequisite: ENGL 1023 or equivalent. Readings in the works of nineteenth-and twentieth-century British authors.

**ENGL 3453  
CHAUCER**

Prerequisite: ENGL 1023 or equivalent. A study of representative works.

**ENGL 3463  
SHAKESPEARE**

Prerequisite: ENGL 1023 or equivalent. A study of selected comedies, histories, and tragedies.

**ENGL 3513  
METHODS OF RESEARCH**

Prerequisite: ENGL 2063, equivalent, or consent. A study of techniques for research.

**ENGL 4013  
HISTORY/ENGL LANGUAGE**

Prerequisite: ENGL 3023, equivalent, or consent. The development of English sounds, inflections and vocabulary.

**ENGL 4023  
SECOND LANG ACQUISITION**

Prerequisite: ENGL 1023, equivalent, or permission of the instructor. An investigation and analysis of the theoretical foundations of learning a second language as a guide to the effective teaching of English to limited English proficiency (LEP) students.

**ENGL 4053  
SEMINAR/TECHNICAL COMM**

Prerequisite: ENGL 2053 or consent. Course content will vary. May be repeated for credit as ENGL 4053 if course content differs.

**ENGL 4083  
SEMINAR:ENGL LANGUAGE**

Prerequisite: ENGL 1023 or equivalent. Course content will vary. May be repeated for credit as ENGL 4083 or ENGL 5083 if course content differs.

**ENGL 4093  
SEM/CREATIVE WRITING:**

Prerequisite: ENGL 2043. Course content will vary. May be repeated for credit as ENGL 4093 if course content varies.

**ENGL 4173  
SEMINAR IN FILM STUDIES**

Prerequisite: ENGL 1023 or equivalent. Course content will vary. May be repeated for credit as ENGL 4173 or ENGL 5173 if course content differs.

**ENGL 4213  
AMERICAN FOLKLORE**

Prerequisite: ENGL 1023 or equivalent. A study of the forms and subjects of American folklore, folklore scholarship and bibliography; field work in collecting folklore. May not be repeated for credit as ENGL 5213.

**ENGL 4283  
SEMINAR:WORLD LIT**

Prerequisite: ENGL 1023 or equivalent. Course content will vary. May be repeated for credit as ENGL 4283 or ENGL 5283 if course content differs.

**ENGL 4383  
SEMINAR: AMERICAN LIT**

Prerequisite: ENGL 1023 or equivalent. Course content will vary. May be repeated for credit as ENGL 4383 or ENGL 5383 if course content differs.

**ENGL 4483  
SEMINAR: BRITISH LIT**

Prerequisite: ENGL 1023 or equivalent. Course content will vary. May be repeated for credit as ENGL 4483 or ENGL 5483 if course content differs.

**ENGL 4683  
SEM: GENDER STUDIES**

Prerequisite: ENGL 1023 or equivalent. Course content will vary. May be repeated for credit as ENGL 4683 or ENGL 5683 if course content differs.

**ENGL 4703  
TCH ENGL SECOND LANG**

Prerequisite: ENGL 1023, equivalent, or consent. An investigation and practice in teaching different levels of English grammar, oral communication, comprehension skills, reading, and composition to foreign students.

**ENGL 4713  
ESL ASSESSMENT**

Prerequisite: ENGL 1023, equivalent, or consent. An introduction to the tools, techniques, and procedures for evaluating the English proficiency and language development of ESL students.

**ENGL 4723  
TEACH PEOPLE/CULTURES**

Prerequisite: ENGL 1023, equivalent, or consent. An examination of cultural diversity in Arkansas and the United States, designed for prospective ESL teachers.

**ENGL 4733  
TCH/ENGL/SECONDARY/SCH**

Prerequisite: Admission to Stage II of the teacher education program. To be taken within one year before student teaching. An introduction to methods and materials used to teach secondary English.

**ENGL 4813  
SR PROJ/CREATIVE WRITING**

Prerequisite: completion or concurrent enrollment in ENGL 3083 and ENGL 3093. Completion of a significant creative writing project approved by the instructor.

**ENGL 4881  
PRAC/EDIT LIT JOUR**

Prerequisite: ENGL 3083, 3093, or consent. To select and edit writing for publication and to direct staff members in the production of NEBO: A Literary Journal. Candidates for editorial positions must apply to the English Department at the start of the spring semester. May be repeated for a maximum of six semester hours. Cumulative hours in ENGL 2881 and ENGL 4881 4 may not exceed nine.

**ENGL 4882  
PRAC/EDIT LIT JOUR**

Prerequisite: ENGL 3083, 3093, or consent. To select and edit writing for publication and to direct staff members in the production of NEBO: A Literary Journal. Candidates for editorial positions must apply to the English Department at the start of the spring semester. May be repeated for a maximum of six semester hours. Cumulative hours in ENGL 2881 and ENGL 4881 4 may not exceed nine.

**ENGL 4883  
PRAC/EDIT LIT JOUR**

Prerequisite: ENGL 3083, 3093, or consent. To select and edit writing for publication and to direct staff members in the production of NEBO: A Literary Journal. Candidates for editorial positions must apply to the English Department at the start of the spring semester. May be repeated for a maximum of six semester hours. Cumulative hours in ENGL 2881 and ENGL 4881 4 may not exceed nine.

**ENGL 4884  
PRAC/EDIT LIT JOUR**

Prerequisite: ENGL 3083, 3093, or consent. To select and edit writing for publication and to direct staff members in the production of NEBO: A Literary Journal. Candidates for editorial positions must apply to the English Department at the start of the spring semester. May be repeated for a maximum of six semester hours. Cumulative hours in ENGL 2881 and ENGL 4881 4 may not exceed nine.

**ENGL 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ENGL 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ENGL 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ENGL 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**ENGL 4991  
SPEC PROB/ENGL**

Prerequisite: English major or minor and consent of instructor and department head. Course content and credit are designed to meet the needs of the student.

**ENGL 4992  
SPEC PROB/ENGL**

Prerequisite: English major or minor and consent of instructor and department head. Course content and credit are designed to meet the needs of the student.

**ENGL 4993  
SPEC PROB/ENGL**

Prerequisite: English major or minor and consent of instructor and department head. Course content and credit are designed to meet the needs of the student.

**ENGL 4994  
SPEC PROB/ENGL**

Prerequisite: English major or minor and consent of instructor and department head. Course content and credit are designed to meet the needs of the student.

**FAC 2202  
CARPENTRY**

Students will learn basic carpentry skills, power and hand tool safety, the proper use of power and hand tools, framing, trim, and hanging doors and windows. Also covered will be dry wall basics, painting, and basic masonry. Some cabinet making and architectural blueprint reading will be discussed.

**FAC 2203  
FAC ANAL/TROUBLESHOOT**

Students will analyze configuration of facility structures such as roof pitches and metal beam structure support ratings using geometric figures. Students will also troubleshoot structural design flaws, facilities fixture design calculations, and load calculations of the facility units.

**FAC 2212  
PLUMBING**

Basic plumbing skills will be taught and will include: fixture repair and replacement; piping (water and gas piping); piping drops, angles, and sizes; and basic plumbing codes for commercial and residential facilities.

**FAC 2222  
GROUNDS MAINTENANCE**

Landscape management, chemical usage and storage, MSDS file care, ADA compliance, and safety and reliability topics will be covered.

**FAC 2903  
INTERNSHIP**

This course provides students with the experience of a job in the facilities management business. Students will participate in internship during the final phase of program completion. There will be contracts signed between the university, student, and training site stating the rules and objectives of the internship.

**FIN 2013  
PERSONAL FINANCE**

Prerequisites: sophomore standing. A course designed to provide students with the fundamental skills of personal financial planning and goal achievement. Topics covered include financial planning, cash and credit management, insurance, investment, and retirement and estate planning.

**FIN 3043  
INVESTMENTS I**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) This course provides the fundamental concepts of the investment area including markets, stocks and bonds, investment environments, economic, industry and security analysis, and portfolio concepts. May not be taken for credit after successful completion of ECON 3043.

**FIN 3063  
BUSINESS FINANCE**

Prerequisite: BUAD 2053. Nature of business finance and its relation to economics, accounting, and law; role of the financial manager and financial markets; financial forecasting, planning, and budgeting; securities valuation, capital budgeting, and cost of capital; capital structure and working capital management; international finance. May not be taken for credit after successful completion of ECON 3063.

**FIN 4023  
INVESTMENTS II**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: FIN 3043 (ECON 3043). This course provides further work with investment concepts involving derivative securities, specialized investment products, international investing, real estate, insurance products, construction of a portfolio, and work with computerized investment software. May not be taken for credit after successful completion of ECON 4023.

**FIN 4043  
PRINC/RISK/INSURANCE**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: FIN 3063 (ECON 3063). A course designed to provide an understanding of the insurance field. Course content includes a survey of the extent and types of risk in business; ways of dealing with business risk; and a survey of insurance for risk-bearing purposes. May not be taken for credit after successful completion of ECON 4043.

**FIN 4053  
INTERNSHIP I/ECON/FINAN**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Instructor, Department Head and Dean; Junior Standing; minimum 2.5 overall GPA. A supervised, practical experience providing undergraduate ECON/FIN majors with a hands-on, professional experience in a position relating to an area of career interest. The student will work in a local cooperating business establishment under the supervision of a member of management of that firm. A College of Business faculty member will observe and consult with the students and the management of the cooperating firm periodically during the period of the internship. Students will be required to make a classroom presentation, maintain an internship log, and prepare a final term paper. Note: Only three hours of internship may be used to satisfy the curriculum requirements for economics and finance electives. Additional hours may be used to satisfy the curriculum requirements for general electives.

**FIN 4063  
INTERNSHIP II/ECON/FINAN**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: Internship I, permission of the Instructor, Department Head and Dean; Junior Standing; minimum 2.5 overall GPA. To be taken following completion of Internship I. A supervised, practical experience providing undergraduate ECON/FIN majors with a hands-on, professional experience in a position relating to an area of career interest. The student will work in a local cooperating business establishment under the supervision of a member of management of that firm. A College of Business faculty member will observe and consult with the students and the management of the cooperating firm periodically during the period of the internship. Students will be required to make a classroom presentation, maintain an internship log, and prepare a final term paper. Note: Only three hours of internship may be used to satisfy the curriculum requirements for economics and finance electives. Additional hours may be used to satisfy the curriculum requirements for general electives.

**FIN 4103  
SPECIAL TOPICS IN FINANCE**

This course provides in-depth exploration of selected finance topics. The primary topic will vary from offering to offering; this, the course may be taken more than once.

**FR 1014  
BEGINNING FRENCH I**

Training in the elements of French communication and comprehension. Four hours of applied class work. One hour of foreign language lab per week is required. Advanced placement and credit by examination are available to students who have previously studied French.

**FR 1024  
BEGINNING FRENCH II**

Prerequisite: FR 1014 or equivalent. Training in basic French communication and comprehension skills to satisfy minimum survival needs in French-speaking countries. Four hours of applied class work. One hour of foreign language lab per week is required.

**FR 2014  
INTERMEDIATE FRENCH I**

Prerequisite: FR 1024 or equivalent. Development of the skills necessary to understand and communicate in everyday situations in French speaking countries. Four hours of applied class work. One hour of foreign language lab per week is required.

**FR 2024  
INTERMEDIATE FRENCH II**

Prerequisite: FR 2014 or equivalent. Further development of the skills necessary to understand and communicate in everyday situations in French-speaking countries. Four hours of applied class work. One hour of foreign language lab per week is required.

**FR 3003  
CONVERSATION/COMP I**

Prerequisite: FR 2024 or permission of instructor. Development of advanced control of French communication and comprehension through the study of French language media (radio broadcasts, television newscasts and commercials, prose texts, periodical articles) and through classroom debates and simulations. Laboratory work by arrangement.

**FR 3013  
CONVERSATION/COMP II**

Prerequisite: FR 3003 or permission of instructor. Continuation of FR 3003.

**FR 3023  
INTRO TO LINGUISTICS**

Prerequisite: ENGL 1023 or equivalent and FR 2024 or equivalent. A study of basic concepts in language, comparative characteristics of different languages, and the principles of linguistic investigation.

**FR 3113  
CULTURE/CIVILIZATION**

Prerequisite: FR 3013 or permission of instructor. Development of an understanding of French life through study and analysis of French history and geography texts, film, advertising, and mass media.

**FR 3143  
STUDY ABROAD**

Prerequisite: enrollment in a Tech-sanctioned study program in a French-speaking country, completion of FR 2024 or equivalent, and permission of the Study Abroad supervisor. Study of the contemporary language and culture in a French speaking country. May substitute for FR 3003 or FR 3013, depending on the student's proficiency level.

**FR 3163  
COMM INTERNSHIP EXPER**

Prerequisite: completion of FR 2024 or equivalent. Study of contemporary language and culture in a French-speaking community or setting. May be taken instead of FR 3143 to meet degree requirements.

**FR 3213  
ADVANCED GRAMMAR/USAGE**

Prerequisites: FR 3013 or permission of instructor. The course is designed to build writing competence and strengthen grammatical competence. Grammar will be studied within the context of writing assignments. The course will deepen the knowledge of the language through the usage of applied linguistics, syntax, grammar, and semantics.

**FR 3223  
SHORT STORY**

Prerequisites: FR 3013 or permission of instructor. The course is designed to build writing competence and strengthen grammatical competence. Grammar will be studied within the context of writing assignments. The course will deepen the knowledge of the language through the usage of applied linguistics, syntax, grammar, and semantics.

**FR 4003  
ORAL COMMUNICATION**

Prerequisite: FR 3013 or permission of instructor. This course is designed to strengthen students' oral communication skills by enabling them to converse easily with native speakers on everyday topics in preparation for the oral proficiency interview (OPI). \$134 interview fee.

**FR 4213  
FRENCH LIT TO 1800**

Prerequisite: FR 3223 or permission of instructor. Careful study of selected French texts to introduce students to various literary genres and general literary trends.

**FR 4223  
FRENCH LIT SINCE 1800**

Prerequisite: FR 3223 or permission of instructor. A study of representative texts from the period for understanding of genres, styles, and language.

**FR 4283  
SEMINAR IN FRENCH**

Prerequisite: FR 3013. Course content will vary. May be repeated for credit if course content varies.

**FR 4701  
FOREIGN LANG PEDAGOGY**

Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4909. Intensive on-campus exploration of the principles of curriculum construction, applied methods, professional collaboration, and evaluation as related to teaching French, German, or Spanish, followed by professional internship application of these principles under the supervision of a qualified departmental instructor.

**FR 4703  
FOREIGN LANG TCH METH**

Prerequisites: FR 3013 and 3113 or equivalent; admission to Stage II of the Secondary Education sequence or equivalent. Survey of instructional methods with discussions and demonstrations of practical techniques for the teaching of foreign language.

**FR 4801  
CULTURAL IMMER/RESEARCH**

Prerequisite: Enrollment in French Immersion Weekend and permission of instructor. Intensive study of French cultural topics followed by individual research projects. May be repeated for credit if content varies.

**FR 4901  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**FR 4902  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**FR 4903****FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**FR 4951****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**FR 4952****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**FR 4953****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**FR 4954****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**FR 4991****SPEC PROB/FRENCH**

Prerequisite: FR 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**FR 4992****SPEC PROB/FRENCH**

Prerequisite: FR 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**FR 4993  
SPEC PROB/FRENCH**

Prerequisite: FR 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**FR 4994  
SPEC PROB/FRENCH**

Prerequisite: FR 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**FW 1001  
ORIENTATION FW SCIENCE**

Fall. An introduction to professions in fisheries and wildlife science. Required of fisheries and wildlife students during their first fall term on the Tech campus. Lecture one hour.

**FW 2003  
ELEMENTS OF FW MANAGE**

Fall. Principles of fish and wildlife management for the non major, including fish and wildlife identification and the role of various natural resource organizations in conservation. Lecture three hours.

**FW 3001  
JUNIOR SEMINAR/FW BIOL**

Fall. Restricted to junior fisheries and wildlife biology majors or by consent of instructor. Instruction and practice in methods for scientific presentation and resume preparation. Assessment of career goals. Lecture one hour.

**FW 3053  
FISHERIES/WILDLIFE ADM**

Fall of even years. Prerequisites: FW 1001 and junior standing, or permission of instructor. Administration of fish and wildlife agencies, including organizational designs and policies, planning, directing, budgeting, personnel management, and public relations. Special consideration will be given to public, scientific, and economic considerations in the decision making process. Lecture three hours. FW 3074 Habitat Evaluation

**FW 3074  
HABITAT EVALUATION**

Fall of even years. Introduction to aquatic and terrestrial habitat mensuration and evaluation for field biologists, with emphasis on the description and demonstration of evaluation procedures and software. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**FW 3084  
ICHTHYOLOGY**

Fall. Prerequisite: BIOL 2124. Systematics, collection, identification, natural history, and importance of fishes. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**FW 3114  
PRINCIPLES OF ECOLOGY**

Fall and Spring. Prerequisites: BIOL 2124, 2134, and one semester of chemistry. Responses of organisms to environmental variables, bioenergetics, population dynamics, community interactions, ecosystem structure and function, and major biogeographical patterns. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**FW 3144  
ORNITHOLOGY**

Spring. Prerequisite: BIOL 2124. An introduction to the biology of birds. The course covers aspects of anatomy, physiology, behavior, natural history, evolution, and conservation of birds. Laboratories address field identification and natural history of the birds of Arkansas. Students will be expected to participate in an extended 5-7day field trip. Lecture two hours, lab four hours. \$20 laboratory fee.

**FW 3154  
MAMMALOGY**

Fall. Prerequisite: BIOL 2124. Taxonomy identification, ecology, and study natural history of the mammals. Lecture three hours, laboratory two hours. \$20 laboratory fee.

**FW 3163  
BIODIVERSITY/CONSERV BIO**

Fall of even years. Prerequisites: FW(BIOL) 3114 and one of the following: BIOL 3004, FW(BIOL) 3084, BIOL 3094, BIOL 3134, FW(BIOL) 3144, FW(BIOL) 3154, BIOL(FW) 3224, BIOL 4044, or permission of instructor. The concepts of, processes that produce, and factors that threaten biological diversity are introduced and examined. Further emphasis is placed on unique problems associated with small population size, management of endangered species, and practical applications of conservation biology. Lecture three hours

**FW 3173  
BIOSTATISTICS**

Fall. Prerequisite: one semester of statistics. An analysis and interpretation of fisheries and wildlife data including descriptive statistics, hypothesis testing, analysis of variance, simple linear regression, correlation, goodness of fit, and contingency tables.

**FW 3204  
AQUACULTURE**

Spring. Prerequisite: BIOL 2124 or permission of instructor. Course is designed to provide students with the essentials of successful warmwater aquaculture including crayfish and alligators. Basics of cool and coldwater aquaculture are also covered. Emphasis ranges from maintenance of brood stock and culture of fingerlings to production of market size fish. Lecture three hours, laboratory two hours plus several full-day field trips that may involve weekend or overnight travel. \$20 laboratory fee.

**FW 3224  
HERPETOLOGY**

Spring of odd years. Prerequisite: BIOL 2124. The phylogeny, classification, physiology, behavior, and distribution of reptiles and amphibians. The Laboratory will stress identification of the species found in Arkansas. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**FW 4001  
SENIOR SEMINAR/FW BIOL**

Fall. Restricted to senior fisheries and wildlife biology majors or by consent of instructor. Designed to integrate various aspects of fisheries and wildlife biology by covering current topics and to acquaint students with areas not covered elsewhere in the curriculum. Lecture one hour.

**FW 4003  
PRIN/WILDLIFE MANAGEMT**

Spring. Prerequisite: FW(BIOL) 3114 or permission of instructor. Principles of managing wildlife resources with emphasis on the history of wildlife resources in the United States, population ecology, wildlife values, and the administration of wildlife resources and resources agencies. Lecture three hours.

**FW 4013  
WILDLIFE TECHNIQUES**

Fall. Prerequisites: FW(BIOL) 3114 or permission of instructor. Instruction in current wildlife techniques including habitat evaluation and manipulation, estimation of wildlife abundance, capturing and marking, identification, aging, and scientific writing. Course is structured around a research project that requires use of popular wildlife techniques. Lecture one hour, laboratory four hours. \$20 laboratory fee.

**FW 4014  
FOREST ECOLOGY/MANAGEMT**

Fall. Prerequisite: FW(BIOL) 3114. An in-depth coverage of ecological interactions in forested ecosystems. Lectures cover biotic and abiotic factors that influence development and species compositions of forest stands. Wildlife habitat relationships in forested ecosystems will also be discussed. Laboratories will familiarize students with field techniques and management activities important in the major forest types of Arkansas. Lecture two hours, lab four hours. \$20 laboratory fee.

**FW 4024  
LIMNOLOGY**

Spring. Prerequisite: FW(BIOL) 3114. A study of physical and chemical processes in fresh water and their effects on organisms in lakes and streams. Laboratory sessions and field trips demonstrate limnological instrumentation and methodology. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**FW 4034  
GEOG INFO SYS/NAT RES**

Spring. Prerequisites: PSY(SOC) 2053 or MATH 2163 and Computer Science elective or GEOG 4833. Use of GIS technology in wildlife and fisheries management and research. Emphasis placed on creation, maintenance, and analysis of spatially explicit data. Two hours lecture, four hours lab. \$10 laboratory fee.

**FW 4043  
FISHERIES TECHNIQUES**

Spring. Prerequisites: FW(BIOL) 3114 and a computer science elective, or permission of instructor. The techniques and practices of warmwater fish management. Major emphasis will be placed on survey techniques, data collection, and data analysis techniques. Lecture one hour, laboratory four hours. \$20 laboratory fee.

**FW 4054  
WATERFOWL ECOLOGY MANAGEMENT**

Spring. Prerequisites: BIOL/FW 3114. Ecology and management of North American waterfowl and their habitats. Laboratory exercises will focus on identification, life histories, sex and age determination, and abundance survey methods. Lectures and discussions will cover behavioral ecology, reproductive ecology, winter ecology, harvest management, and habitat management and conservation. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**FW 4064  
WETLAND ECOLOGY MANAGEMENT**

Fall. Prerequisites: BIOL/FW 3114. An in-depth coverage of wetlands including occurrence, morphology, hydrology, soils, ecology, and regulation. The types of wetlands and their functions will be discussed, as will local, state and federal regulations pertaining to their use, management and protection. Laboratory will focus on identification of common wetland vegetation, delineation of wetland vegetation, delineation of wetland boundaries, as well as field techniques and management activities commonly used in Arkansas wetlands. Lecture three hours, laboratory two hours. \$20 laboratory fee

**FW 4083  
PRIN OF FISHERIES MGT**

Fall. Prerequisites: FW(BIOL) 3114, one semester of statistics, and one semester of calculus, or permission of instructor. The principles and theory of warmwater fish management with major emphasis on the human dimension in fisheries management, fishery assessment, population dynamics, and common management practices. Lecture three hours.

**FW 4103  
HUMAN DIMENSIONS OF FW MGMT**

Spring. Prerequisites: BIOL/FW 3114 (Ecology) or permission of instructor. Exploration of the complex interactions of social, political, institutional, economic and ecological processes that contribute to natural resource use and management. The primary focus is on interactions and conflict resolution among various stakeholders, resource management agencies, and wildlife and fisheries resources. Topics covered include public attitudes and expectations; agency structure and policy; values of fishes, wildlife; and public relations. Lecture three hours.

**FW 4112  
INTERNSHIP**

Each semester. Prerequisites: Consent of program director. A supervised, practical experience providing FW majors with a hands-on, professional experience related to their career interests. Approximately 200 clock hours, a proposal, a log book, and a written report are required. A maximum of four credit hours is allowed for FW internship.

**FW 4114  
INTERNSHIP**

Each semester. Prerequisites: Consent of program director. A supervised, practical experience providing FW majors with a hands-on, professional experience related to their career interests. Approximately 400 clock hours, a proposal, a log book, and a written and oral report are required. A maximum of four credit hours is allowed for FW internship.

**FW 4881**  
**ADVANCED TOPICS:**

On demand. Prerequisite: Consent of instructor. Open to junior and senior students only. Offers special instruction on fisheries and wildlife topics that are not otherwise covered in the curriculum. The primary focus of the course will vary from offering to offering, thus the course may be taken more than once. \$10 laboratory fee for four credit hour class only.

**FW 4882**  
**ADVANCED TOPICS:**

On demand. Prerequisite: Consent of instructor. Open to junior and senior students only. Offers special instruction on fisheries and wildlife topics that are not otherwise covered in the curriculum. The primary focus of the course will vary from offering to offering, thus the course may be taken more than once. \$10 laboratory fee for four credit hour class only.

**FW 4883**  
**ADVANCED TOPICS:**

On demand. Prerequisite: Consent of instructor. Open to junior and senior students only. Offers special instruction on fisheries and wildlife topics that are not otherwise covered in the curriculum. The primary focus of the course will vary from offering to offering, thus the course may be taken more than once. \$10 laboratory fee for four credit hour class only.

**FW 4884**  
**ADVANCED TOPICS:**

On demand. Prerequisite: Consent of instructor. Open to junior and senior students only. Offers special instruction on fisheries and wildlife topics that are not otherwise covered in the curriculum. The primary focus of the course will vary from offering to offering, thus the course may be taken more than once. \$10 laboratory fee for four credit hour class only.

**FW 4951**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**FW 4952**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**FW 4953**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**FW 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOG 2013  
REGIONAL GEOG/WORLD**

Prerequisite: Minimum score of 19 on the English and Reading portions of the ACT or successful completion of ENGL 1013 or equivalent. A survey of major regions with particular emphasis upon Europe, the Commonwealth of Independent States, the Orient, the Mid East, Africa, and Latin America.

**GEOG 2023  
HUMAN GEOGRAPHY**

A systematic treatment of the major concepts of human geography and their application to modern problems. consideration of population, cultural patterns and processes, political organization of space, agricultural and rural land use, industrialization and economic development, and cities and urban land use.

**GEOG 2833  
INTRO GEOGRAPHIC INFO SYSTEMS**

Prerequisite: COMS 2003 or permission of the instructor. An introductory course dealing with computer organized spatial and attribute data. GIS is a system of specialized computer programs with the capability to manipulate and analyze data for problem solving.

**GEOG 3033  
PHYSICAL GEOGRAPHY**

A description and interpretation of the physical features of the surface zone of the earth and how man interrelates with this complex natural environment.

**GEOG 3113  
GEOGRAPHY/US & CANADA**

A regional study emphasizing the physical and cultural aspects of Anglo America.

**GEOG 3303  
GEOG/LATIN AMERICA**

A regional study of the lands and people of Latin America and their interrelationships. Particular attention will be given to Mexico, Brazil, and Argentina.

**GEOG 3413  
GEOGRAPHY OF EUROPE**

A regional study of the physical and cultural aspects of Europe (including the C.I.S.) and their interrelationships.

**GEOG 3703  
GEOGRAPHY OF ASIA**

A regional study of the lands and peoples of Asia and their interrelationships with particular emphasis on India, China, and Japan.

**GEOG 3803  
HISTORICAL GEOGRAPHY**

Prerequisite: GEOG 2013. A study of how space and place is transformed through time. Through a focus on the geographies of the past throughout North America, this course examines the ways humans interact with the environment to create a material-cultural landscape.

**GEOG 4023  
ECONOMIC GEOGRAPHY**

A study of the resources at man's disposal and his economic activities in utilizing these resources. Special attention is given to industrial and agricultural resources of leading nations. May not be repeated for credit as GEOG 5023 or equivalent.

**GEOG 4203  
PLACE AND COLLECTIVE MEMORY**

Prerequisite: GEOG 2013. An examination of the way society remembers the past and portrays this collective memory through socially constructed monuments.

**GEOG 4803  
SEMINAR/GLOBAL STUDIES**

A seminar on current world geographic influences that affect the nations of the world, such as demographics, complex environmental and physical changes, and political and economic relationships.

**GEOG 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOG 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOG 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOG 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOG 4991  
SPEC PROB/GEOG**

Admission requires consent of department head.

**GEOG 4992  
SPEC PROB/GEOG**

Admission requires consent of department head.

**GEOG 4993  
SPEC PROB/GEOG**

Admission requires consent of department head.

**GEOG 4994  
SPEC PROB/GEOG**

Admission requires consent of department head.

**GEOL 1004  
ESSENTIALS/EARTH SCI**

An introduction to the fundamental topics of earth science including physical and historical geology, oceanography, and meteorology. Laboratory exercises include the study of minerals, rocks, fossils, topographic and geologic maps, and oceanographic and meteorological phenomena. Laboratory work will stress the use of the scientific method of problem solving. This course is designed as a general education science requirement and for prospective early childhood and middle level school teachers. Lecture three hours, laboratory three hours. \$10 laboratory fee. Duplicate credit for GEOL 1004 and GEOL 1014 will not be allowed.

**GEOL 1014**  
**PHYSICAL GEOLOGY**

A survey of the earth's features and forces which modify its surface and interior. Laboratory exercises include the study of minerals, rocks, and landforms through the use of topographic maps and aerial photography. Lecture three hours, laboratory three hours. \$10 laboratory fee. Duplicate credit for GEOL 1014 and GEOL 1004 will not be allowed.

**GEOL 2001**  
**SEMINAR:**

Prerequisites: GEOL 1014 and 2001. Participants will prepare oral and written reports and participate in discussions of the reports. Topics for the seminar will be determined by the instructors but will be subjects which are beyond the scope of other geology courses.

**GEOL 2024**  
**HISTORICAL GEOLOGY**

Prerequisite: GEOL 1014. A survey of the physical and biological history of the earth. Laboratory exercises include the study of fossils, geologic maps, and cross sections. Lecture three hours, laboratory three hours. \$20 laboratory fee.

**GEOL 2111**  
**ENVIRONMENTAL SEMINAR**

A seminar for students pursuing the environmental option of geology, biology, or chemistry and other students interested in environmental sciences.

**GEOL 3001**  
**SEMINAR:**

Prerequisites: GEOL 1014 and 2001. Participants will prepare oral and written reports and participate in discussions of the reports. Topics for the seminar will be determined by the instructors but will be subjects which are beyond the scope of other geology courses.

**GEOL 3004**  
**STRUCTURAL GEOLOGY**

Prerequisites: GEOL 1014, 2024, and MATH 1203 or 1914. A study and analysis of the structural features of the earth's crust. Lecture three hours, laboratory two hours. \$20 laboratory fee.

**GEOL 3014**  
**MINERALOGY**

Prerequisites: GEOL 1014, 2024; CHEM 1114 or 2124. A study of crystallography, physical and chemical properties, origin, occurrence, and structure theory of minerals. Lecture two hours, laboratory four hours. \$20 laboratory fee.

**GEOL 3023  
GEOLOGIC FIELD TECHNIQUE**

Prerequisites: GEOL 1014, 2024 and 3004. Interpretation of aerial photographs; mensuration techniques using the Brunton compass, hand level, and Jacob's staff, measurement and description of stratigraphic sections; construction of and geologic maps; collecting, sampling, and collation procedures. Lecture laboratory four hours. \$20 laboratory fee.

**GEOL 3044  
GEOMORPHOLOGY**

Prerequisites: GEOL 1014, 2024, 3004, and 3164. A study of land forms and the processes which shape the earth's surface. Special emphasis will be placed on slope forming and fluval processes. Lecture three hours, laboratory three hours. \$20 laboratory fee.

**GEOL 3053  
GEOL/ENERGY/METALLIC RES**

Prerequisites: GEOL 1014, 3014, and 3164. A study of the principal earth materials essential to local and national economies. Location, genesis, methods of extraction, and primary utilization and conservation are emphasized. Lecture three hours.

**GEOL 3083  
HYDROGEOLOGY**

Prerequisites: MATH 1113 and GEOL 1014 or permission of the instructor. The earth's hydrologic system is studied in terms of both empirical and quantitative aspects of the steady-state condition of groundwater and its interaction with surface water, as well as transient behavior from the influence of wells. Basic water chemistry is also covered along with transport and fate of pollutants in groundwater. Lecture 3 hours.

**GEOL 3111  
ENVIRONMENTAL SEMINAR**

A seminar for students pursuing the environmental option of geology, biology, or chemistry and other students interested in environmental sciences.

**GEOL 3124  
INVERT PALEONTOLOGY**

Prerequisite: GEOL 2024. A systematic study of invertebrate fossils and their geologic significance. Lecture laboratory six hours. \$20 laboratory fee.

**GEOL 3153  
ENVIRONMENTAL GEOLOGY**

Prerequisite: GEOL 1014. A study of the geological factors which influence the pollution of land, water, and biological resources; the role of rock and soil in the geobiological community; hydrology; land sliding and faulting in the human environment, natural resource problems; urban and land use planning based on geological data. Lecture three hours.

**GEOL 3164  
PETROLOGY**

Prerequisite: GEOL 3014. A study of the classification, origin, geologic occurrence, physical and chemical properties of igneous, sedimentary, and metamorphic rocks. Lecture three hours, laboratory three hours. \$20 laboratory fee.

**GEOL 3174  
COMPUTER APPL IN GEOLOGY**

Participants will focus on mastering common geotechnical, oil and gas, and Geographic Information Systems (GIS) software utilized throughout the geologic profession. Course will include techniques on GIS analysis; generating stratigraphic sections, cross-sections, structure contours, fence diagrams, rose diagrams, and other geologic documents; geologic data management. \$20 course fee.

**GEOL 4001  
SEMINAR:**

Prerequisites: GEOL 1014 and 2001. Participants will prepare oral and written reports and participate in discussions of the reports. Topics for the seminar will be determined by the instructors but will be subjects which are beyond the scope of other geology courses.

**GEOL 4006  
FIELD GEOLOGY**

Each summer by arrangement. Prerequisites: GEOL 1014, 2024, 3004, 3014, 3023, 3124, and 3164. A six week summer course of instruction in the use of geologic mapping instruments, interpretation of aerial photographs and their use in the construction of geologic maps, development of techniques necessary in geologic field work, and recognition and interpretation of geologic phenomena. \$10 laboratory fee. The course is offered in cooperation with the University of Arkansas and will be taught in the Dillon, Montana region. The fee for room and board is approximately \$900; cost of tuition and transportation is not included in this amount.

**GEOL 4013  
OPTICAL MINERALOGY**

Prerequisites: PHYS 2024, GEOL 3014, 3164. A study of minerals in thin sections with the petrographic microscope. Lecture laboratory four hours. \$10 laboratory fee.

**GEOL 4023  
PRIN/STRAT/SEDIMENT**

Prerequisites: GEOL 3124 and 3164. A study of sedimentary rocks and their stratigraphic relationships. Lecture three hours.

**GEOL 4034  
SUBSURFACE GEOLOGY**

Prerequisites: GEOL 3004, 3164, 4023, MATH 1113, PHYS 2014, 2024. A study of analytic procedures in selected topics in geophysics, well logging, and subsurface geological relationships. Lecture three hours, laboratory two hours. \$10 laboratory fee.

**GEOL 4111  
ENVIRONMENTAL SEMINAR**

A seminar for students pursuing the environmental option of geology, biology, or chemistry and other students interested in environmental sciences.

**GEOL 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOL 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOL 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOL 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GEOL 4991  
SPEC PROB/GEOLOGY**

Open to geology majors with the approval of the department head.

**GEOL 4992  
SPEC PROB/GEOLOGY**

Open to geology majors with the approval of the department head.

**GER 1014  
BEGINNING GERMAN I**

Introduction to conversation, basic grammar, reading, and writing. Four hours of classroom instruction. Advanced placement and credit by examination are available to students who have previously studied German. One hour of foreign language lab per week is required.

**GER 1024  
BEGINNING GERMAN II**

Prerequisite: GER 2014 or equivalent. Continued instruction in grammar and fundamental language skills. Four hours of classroom instruction. One hour of foreign language lab per week is required.

**GER 2014  
INTERMEDIATE GERMAN I**

Prerequisite: GER 1024 or equivalent. Instruction designed to develop greater facility in fundamental skills and more extensive knowledge of grammar. Four hours of classroom instruction. One hour of foreign language lab per week is required.

**GER 2024  
INTERMEDIATE GERMAN II**

Instruction intended to complete the survey of the basic grammar of the language and to provide the mastery of fundamental skills essential for enrollment in upper level German courses. Four hours of classroom instruction. One hour of foreign language lab per week is required.

**GER 3003  
CONVERSATION/COMP I**

Prerequisite: GER 2024 or permission of instructor. Further study of German based on analysis of short texts (newspaper articles, short stories, plays, poetry). Students are expected to use German in oral and written expression.

**GER 3013  
CONVERSATION/COMP II**

Prerequisite: GER 3003 or permission of instructor. Continuation of GER 3003.

**GER 3023  
INTRO TO LINGUISTICS**

Prerequisites: ENGL 1023 or equivalent and GER 2024 or equivalent. A study of basic concepts in language, comparative characteristics of different languages, and the principles of linguistic investigation.

**GER 3113  
CULTURE/CIVILIZATION**

Prerequisite: GER 3013 or permission of instructor. Study of the geography, history, arts, institutions, customs, and contemporary life of the German speaking peoples.

**GER 3143  
STUDY ABROAD**

Prerequisite: enrollment in a Tech-sanctioned study program in a German-speaking country, completion of GER 2024 or equivalent, and permission of the Study Abroad supervisor. Study of the contemporary language and culture in a German speaking country. May substitute for GER 3003 or GER 3013, depending on the student's proficiency level.

**GER 3163  
COMM INTERNSHIP EXPER**

Prerequisite: completion of GER 2024 or equivalent. Study of contemporary language and culture in a German- speaking community or setting. May be taken instead of GER 3143 to meet degree requirements.

**GER 3213  
ADVANCED GRAMMAR/USAGE**

Prerequisites: GER 3013 or permission of instructor. The course is designed to build writing competence and strengthen grammatical competence. Grammar will be studied within the context of writing assignments. The course will deepen the knowledge of the language through the usage of applied linguistics, syntax, grammar, and semantics.

**GER 3223  
SHORT STORY**

Prerequisite: GER 3013 or permission of instructor. An introductory study of German short stories. Students will analyze short texts to strengthen their reading and text interpretation skills and to increase their knowledge of vocabulary.

**GER 4003  
ORAL COMMUNICATION**

Prerequisite: GER 3013 or permission of instructor. This course is designed to strengthen students' oral communication skills by enabling them to converse easily with native speakers on everyday topics in preparation for the oral proficiency interview (OPI). \$134 interview fee.

**GER 4213  
GERMAN LIT TO 1832**

Prerequisite: GER 3223 or permission of instructor. A survey of major writers and representative works from early Middle Ages through the Age of Goethe.

**GER 4223  
GERMAN LIT SINCE 1832**

Prerequisite: GER 3223 or permission of instructor. A survey of major writers and representative works since the Age of Goethe.

**GER 4283  
SEMINAR IN GERMAN**

Prerequisite: GER 3013 or permission of instructor. Course content will vary. May be repeated for credit if course content varies.

**GER 4701  
FOREIGN LANG PEDAGOGY**

Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4909. Intensive on-campus exploration of the principles of curriculum construction, applied methods, professional collaboration, and evaluation as related to teaching French, German, or Spanish, followed by professional internship application of these principles under the supervision of a qualified departmental instructor.

**GER 4703  
FOREIGN LANG TCH METH**

Prerequisites: GER 3013 and GER 3113 or equivalent; admission to Stage II of the Secondary Education sequence or equivalent. Survey of instructional methods with discussions and demonstrations of practical techniques for teaching of foreign language.

**GER 4901  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**GER 4902  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**GER 4903  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**GER 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GER 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GER 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GER 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**GER 4991  
SPEC PROB/GERMAN**

Prerequisite: GER 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**GER 4992  
SPEC PROB/GERMAN**

Prerequisite: GER 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**GER 4993  
SPEC PROB/GERMAN**

Prerequisite: GER 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**GER 4994  
SPEC PROB/GERMAN**

Prerequisite: GER 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**GRK 1013  
BEGIN CLASSICAL GRK I**

Instruction in the fundamentals necessary to read and write classical Greek.

**GRK 1023  
BEGIN CLASSICAL GRK II**

A continuation of GRK 1013.

**GRK 2013  
INTER CLASSICAL GRK I**

Prerequisite: GRK 1023 or equivalent. A study designed to continue the development of fundamental skills and to give a general reading knowledge of classical Greek and acquaintance with classical Greek literature, history, and philosophy.

**GRK 2023  
INTER CLASSICAL GRK II**

A continuation of GRK 2013 which concentrates on the works of Homer, Plato, Herodotus, and selected Attic dramatists.

**GRK 3001  
GRK/LAT SCI TERMINOLOGY**

The course is designed to assist students with their understanding of English words which have their roots in Greek or Latin. Students who in their course of study need to know specialized vocabulary, such as science, math, pre-med, pre-law and nursing majors, will find this course extremely helpful.

**GTED 4003  
UNDERST GIFTED/H,SC,CO**

Prerequisite: Consent of instructor. GTED 5003 may not be taken for credit after completion of GTED 4003 or GTED 6833. A survey in gifted education providing basic knowledge and concepts of interest to parents, prospective teachers, and the community at large.

**HA 1013  
SANITATION SAFETY**

This course provides knowledge of food safety, potable water, bioterrorism and risk management particularly in the areas of food service and storage. The student will gain knowledge on safe food handling from; receiving and storage through preparing and serving food. This course will also analyze ethical considerations with regards to food and water safety and food service. ServSafe certification from the NRAEF will result upon successful completion of standardized exam.

**HA 1043  
INTRO HOSPITALITY MGMT**

The history and development of the hospitality industry which comprises food, lodging, and tourism management, an introduction to management principles and concepts used in the service industry, and career opportunities in the field.

**HA 1063  
HOSPITALITY TECHNOLOGY**

Prerequisite: COMS 1003. This course will focus on the fundamental features and components of computerized hotel, restaurant, and tourism management systems. The selection and implementation of technology applications to specific hotel, restaurant, and tourism management systems will be presented and discussed.

**HA 1923  
INTRO TO FOOD/BEVERAGE MGMT**

Prerequisite CUL (HA) 1013. This course introduces the practical skills and knowledge necessary for the effective management of food and beverage operations encompassing the historical timeline of food and beverage, non-alcoholic beverages, the identification of meats, fishes, fruits, vegetables, dairy products and proteins. This course also introduces the front-of-the-house essentials for food and beverage operations encompassing glassware, service ware and other front-of-the-house equipment.

**HA 2003  
COST CONTROLS**

This course will study the role of cost control management on overall profitability of hospitality entities. Basic principles of purchasing food, beverage, and non-food items with regards to maintaining an operation's competitive advantage within the industry will be covered.

**HA 2023  
HOSPITALITY SUPERVSN/LEADERSHP**

This course provides comprehensive coverage of the principles, theories, human-relations techniques, leadership styles, and decision-making skills that are required to manage a team to profitable results in the food service and lodging industries.

**HA 2043  
FRONT OFFICE MANAGEMENT**

A survey of the lodging industry to include its history, growth and development, and future direction. Emphasis on front office procedures and interpersonal dynamics from reservations through the night audit.

**HA 2053  
WORK EXPERIENCE**

Prerequisites: HA major, minor and/or culinary students. Sophomore standing or permission of instructor. Placement in selected hospitality settings as a student worker under professional guidance of both agency and faculty. Students are given the opportunity to take part in meaningful work experiences in actual work situations and managerial observation. Minimum of 200 clock hours of work experience.

**HA 2063  
GUEST SERVICES MGMT**

Prerequisite HA 1063. The analysis and development of guest services management skills including leadership behavior, motivation, communication, training, staffing, etiquette, and professional service. Lecture two hours, lab minimum of three hours depending on the special event requirements. \$100 lab fee which helps to cover your meal costs and/or travel.

### **HA 2133 TRAVEL AND TOURISM**

The introduction to travel and tourism, its components and relationship to the recreation and hospitality industry. The course will explore the current and future trends in travel and tourism and the effects on the economy, as well as the social and political impacts of travel and tourism.

### **HA 2813 BASIC HUMAN NUTRITION IN HA**

Study of the relationship between nutrition and health as a basis for food choices of all ages; the application of nutrient functions in human life processes and cycles; how balanced eating promotes healthy lifestyles. Current concepts and controversies are highlighted.

### **HA 2913 PRINC/FOOD PREPARATION**

Prerequisites: CUL (HA) 1013. Corequisite: CUL (HA) 2813 and CHEM 1114. Upon completion of this course the student should be able to demonstrate skills in basic cooking techniques and methods, recipe conversion, and professional food preparation and handling. Additionally, the student should be able to recognize and safely operate common foodservice equipment used in commercial kitchens and demonstrate proficient culinary knife skills. This course is 2 hours lecture and a 4 hour lab depending upon special event requirement(s), \$100 lab fee required. Additional costs: professional uniforms and knives are required and are to be considered additional out-of-pocket expenses to the student.

### **HA 3133 TOURISM PLANNING**

An examination of the tourism planning process and techniques. Topics include tourism as a system, levels of planning, environmental, cultural and economic components, attractions, transportation, infrastructure and marketing.

### **HA 3143 EXECUTIVE HOUSEKEEPING**

Prerequisite: HA 2043. This course evaluates the role of housekeeping, the planning and organization of various organizing tasks, and the importance of maintaining and training quality housekeeping staff. This course will evaluate managing inventories, controlling expenses and monitoring safety and security functions. This class is 2 hours lecture and 1 hour lab and will require students to have a minimum of 15 contact hours throughout the semester under supervision in a hotel housekeeping environment.

### **HA 4001 INTERNSHIP PREPARATION**

Prerequisites: PRHA major, senior standing, and completion of RP/HA 3043 (if required for major) or permission of department head. Preparation for the internship experience. This course is graded Pass/Fail.

**HA 4013  
HOSPITALITY MKT/SALES**

The organization of the marketing function and its role and responsibility in developing an integrated marketing program. Special attention to convention sales and management, and the role of travel related services to the marketing function.

**HA 4023  
HOSP FAC MGMT/DESIGN**

Prerequisites: Junior standing plus nine hours of HA courses or by permission. The fundamental principles of facilities planning, facilities management, and maintenance for all segments of the hospitality industry. Application principles in the preparation of a typical layout and design.

**HA 4033  
LEGAL ASPECTS OF HA**

Prerequisites: Senior standing or permission of instructor. Examination of the laws regulating the hospitality industry. Development of an appreciation of the interrelationship between the law and the hospitality industry. Exploration of how legal principles apply in the global environment of the hospitality industry.

**HA 4053  
MEET/CONVENTIONS MGMT**

Prerequisites: Junior standing plus nine hours of HA courses or by permission. Planning and managing meetings and conventions in the hospitality industry.

**HA 4063  
BEVERAGE MANAGEMENT**

Prerequisite: 21 years of age, HA major or permission of the instructor. Selection, storage, and service of beverages with emphasis on controls, merchandising, pricing, history, social and legal concerns. Successful completion of standardized exam results in Serv Safe Alcohol certification from the National Restaurant Association Educational Foundation. Lecture two hours, lab two hours. \$50.00 Lab fee required.

**HA 4073  
HOSP FINANC ANALYSIS**

Prerequisites: ACCT 2003 and 2013, HA major. Accounting principles and procedures for the Hospitality Industry as an aid in management planning, decision making and control, financial statements, statement analysis, flow of funds, cash analysis, accounting concepts, cost accounting budgets, capital expenditures, and pricing decisions.

**HA 4093  
RESORT MANAGEMENT**

Prerequisites: Junior standing and nine hours of RP or HA courses or by permission. An in-depth study of resorts with respect to their planning, development, organization, management, marketing, visitor characteristics, and environmental consequences.

**HA 4113  
PERSONNEL MGMT IN PRHA**

Prerequisites: Junior standing and nine hours of RP or HA courses. An overview of personnel considerations in various Recreation and Park agencies and the Hospitality industry. Laws, legal issues, structure, staffing, motivation, training, conduct, policies and other aspects of agency/industry personnel relations will be examined using case-studies, as well as other methods.

**HA 4116  
INTERNSHIP**

Fall, spring and summer semesters. Parks, Recreation, and Hospitality Administration majors only. Prerequisites: Senior standing, current certifications in CPR, Standard and Advanced First Aid, consent of department head and completion of all other courses applicable to degree. Placement in selected agency settings as a student intern under professional guidance of both agency supervisor and faculty. Emphasis will be placed on application of classroom theory to agency requirements which fulfill student's individual career interest. No prior experience credit will be granted. Minimum of 600 clock hours during a minimum of 15 weeks of supervised internship is required. Student cannot document more than 40 hours of work experience per week. A written report is required within two weeks of internship completion. \$100 supervisor travel fee required.

**HA 4203  
HOSPITALITY PROBLEM SOLVING**

Prerequisites: Senior standing, MGMT 3003, HA 4013. Solving practical hospitality and tourism management problems through planning, establishment of policy, analysis and application of qualitative and/or quantitative methods.

**HA 4243  
ADVANCED LODGING OPERATIONS**

Prerequisites HA 3143, HA 3243, HA 4113. An in-depth study of hotel and lodging operations management. The analysis of competitive strategies, leadership styles, teamwork, technology and creativity in the hotel and lodging industry.

**HA 4253  
CLUB MANAGEMENT**

Prerequisites: Junior standing and nine hours of HA courses, or permission of instructor. This course analyzes the organizational diversity of clubs exploring governance, management and operations of profit and non-profit clubs.

**HA 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HA 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HA 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HA 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HA 4983  
ADVANCED FOOD PRODUCTION**

Perequisite: HA 2913. Upon completion of this course the student should be able to demonstrate advanced level cooking techniques and methods, recipe conversion, and professional food preparation and handling as well as managerial competencies. This course is one hour lecture and a minimum five hour lab depending on the event requirements. Advanced preparation may be required the day before or the day of an event. \$100 lab fee required which helps to cover your meal costs.

**HA 4991  
SPEC PROBLEMS AND TOPICS**

On demand. Investigative studies and special problems and topics related to hospitality administration.

**HA 4992  
SPEC PROBLEMS AND TOPICS**

On demand. Investigative studies and special problems and topics related to hospitality administration.

**HA 4993  
SPEC PROBLEMS AND TOPICS**

On demand. Investigative studies and special problems and topics related to hospitality administration.

**HIM 1001  
HEALTH INFO MGMT ORIENT**

Fall. An introductory course with emphasis on the basics of health information management as related to career choices, giving the student a better understanding of opportunities in the field. The course will also focus on helping the student develop good study skills, career goals, and understand policies and information needed for a successful college career.

**HIM 2033  
CODING PRINC MEDICAL OFFICE**

Prerequisites: AHS 2013, 1023, BIOL 2004, or permission of instructor. A study of medical coding using ICD-9-CM and CPT codes in the medical office. Students will be taught to evaluate patients' medical records to correctly assign both diagnostic and procedural codes required for healthcare reimbursement in the medical office setting.

**HIM 3023  
INTRO HEALTH INFO MGMT**

Fall. Prerequisite: Admission to the HIM Program. A study of the history of health records, professional ethics, the functions of a health information department, retention of records, medical forms, health information practices, and responsibilities to healthcare administration, medical staff, and other medical professionals.

**HIM 3043  
ADV CONCEPTS/HLTH INFO**

Fall. Prerequisite: HIM 3024. A study of such advanced concepts as quality improvement, utilization review, licensure and accreditation standards, medical staff, and interdisciplinary relationships.

**HIM 3132  
HEALTH DATA/STATISTICS**

Spring. Prerequisite: HIM 3024 or permission of instructor. A study of the methods of recording diagnoses and operations by recognized systems of disease, procedural and pathological nomenclatures and classification systems, manual and computerized systems of indexing and abstracting, research and statistical techniques, and health information data handling.

**HIM 3133  
ALTERN HEALTH RECORDS**

Spring. Prerequisite: HIM 3024. A study of health record requirements in non-traditional settings such as cancer programs, ambulatory care facilities, mental health centers, and long term care facilities.

**HIM 3153  
CURRENT ISSUES IN HIM**

Prerequisite: HIM 3024. An in-depth study of the latest issues affecting the field of health information management. Specific topics will vary to reflect emerging technology including such topics as eHIM, electronic health records, personal health records and HIPAA privacy concepts.

**HIM 4034  
ADVANCED CODING PRINCIPLES**

Spring. Prerequisite: HIM 3033. A continuation of HIM 3033, dealing with advanced principles of coding using ICD-9-CM and CPT-4. Experience with coding of health records as well as DRG grouping and the administrative aspects of coding will be emphasized. May not be taken for credit after completion of HIM 4032. \$10 lab fee.

**HIM 4063  
ORGANIZATION/ADMIN**

Fall. Prerequisites: HIM 3024 and senior standing. A study of the application of the principles of organization, administration, supervision, human relations, work methods, and organizational patterns in the health information department. The duties and relationships of the health information manager and the social forces affecting the department and current trends in hospital and medical care are investigated.

**HIM 4073  
LEGAL CONCEPTS/HEAL FLD**

Spring. Prerequisites: HIM 3024 and senior standing, or permission of instructor. A study of the principles of law as applied to the health field. Consideration is given to the importance of health records as legal documents as well as a general introduction to the law, administration of the law, legal aspects of healthcare facility and medical staff organization, release of information, confidential communication and consents and authorizations.

**HIM 4083  
HEALTH ORGANIZ TRENDS**

Spring. Prerequisites: HIM 3024 and senior standing, or permission of instructor. A comprehensive review of the trends and changes in the healthcare field. Historical aspects of healthcare organization and governmental health agencies are reviewed. Emphasis is placed on current events in the healthcare arena.

**HIM 4092  
RESEARCH IN HIM**

Spring. Prerequisites: HIM 3024 and senior standing. A study of the specific research methodology used in a health information management setting. Emphasis will be given to hands on performance of research in conjunction with area health care facilities and agencies. Formal presentation of research will also be a component of the course.

**HIM 4153  
PRINCIPLES/DISEASE**

Spring. Prerequisites: AHS 2013, BIOL 2004, and permission of instructor. An introduction to medical science, including the etiology, treatment and prognosis of various diseases. Emphasis is given to the medical information as viewed from the standpoint of a health information management professional.

**HIM 4182  
PROF PRACTICE EXPER I**

Fall. Prerequisites: HIM 3024, HIM 3043, HIM 3133, HIM 3132 and HIM 3033. Active participation within an actual health information management department providing a supervised learning experience through which the student develops insight, understanding, and skills in health information procedures, accepts responsibilities and recognizes the need for confidentiality. \$10 laboratory fee.

**HIM 4292  
PROF PRACTICE EXPER II**

Spring. Prerequisites: HIM 4182. A supervised learning experience through which the student learns to recognize the contribution of and learns to work with other professional and non professional personnel, learns to recognize and deal with personnel problems in a health information department. \$10 laboratory fee.

**HIM 4892  
SEMINAR/HIM**

First summer term. Corequisite: HIM 4895. A seminar, utilizing the case method approach, on problem situations encountered in the field of health information management. This course includes discussion of problems that arise during their affiliation experience.

**HIM 4895  
AFFILIATION**

First summer term. Prerequisites: Successful completion of all required HIM courses except HIM 4892. Provides the student with a four-week management experience in the activities and responsibilities of the health information management professional. Augments theoretical instruction received during previous courses. Student is actively involved in the management process while under direct supervision of a qualified health information management professional. Although every effort is made to secure a convenient locale, the student must assume full financial responsibility for this assignment. \$10 laboratory fee.

**HIM 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIM 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIM 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIM 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIM 4983  
SYSTEMS ANALYSIS/HIM**

Fall. Prerequisites: COMS 1003, COMS 2003, HIM 3024, and senior standing. A course designed to provide a detailed study of the relationship between health information management departments and computerized information systems. Students will learn from a variety of projects related directly to the clinical setting.

**HIM 4991  
SPECIAL PROBLEMS IN HIM**

Each semester. Open to health information management senior students only. The problems will vary to fit the needs of the student and reflect the continual changes in the allied health field.

**HIM 4992  
SPECIAL PROBLEMS IN HIM**

Each semester. Open to health information management senior students only. The problems will vary to fit the needs of the student and reflect the continual changes in the allied health field.

**HIM 4993  
SPECIAL PROBLEMS IN HIM**

Each semester. Open to health information management senior students only. The problems will vary to fit the needs of the student and reflect the continual changes in the allied health field.

**HIM 4994  
SPECIAL PROBLEMS IN HIM**

Each semester. Open to health information management senior students only. The problems will vary to fit the needs of the student and reflect the continual changes in the allied health field.

**HIST 1503  
WORLD CIVILIZATION I**

The history of humanity from prehistoric times to the sixteenth century.

**HIST 1513  
WORLD CIVILIZATION II**

The history of humanity from the sixteenth century to the present.

**HIST 1543  
HONORS WORLD CIVILIZATION I**

Prerequisites: Admission to University Honors or permission of Honors Director. The history of humanity from prehistoric times to the sixteenth century with an emphasis on the critical analysis of primary source documents and the methods by which historians and other scholars interpret historical evidence.

**HIST 1903  
SURVEY OF AMERICAN HISTORY**

Survey of American History. An overview of American history from the pre-colonial period to the present. May not be taken for credit after completion of HIST 2003 or 2013.

**HIST 2003  
UNITED STATES HISTORY I**

Prerequisite: Minimum scores of 19 on the English and Reading portions of the ACT or successful completion of ENGL 1013 or equivalent. The study of the development of the American nation to the Civil War and Reconstruction Era.

**HIST 2013  
UNITED STATES HISTORY II**

Prerequisite: Minimum score of 19 on the English and Reading portions of the ACT or successful completion of ENGL 1013 or equivalent. The study of the development of the American nation since the Civil War and Reconstruction Era.

**HIST 2043  
HONORS US HISTORY I**

Prerequisites: Admission to University Honors or permission of Honors Director. History 2043 concentrates on the development of the American nation with emphasis upon the winning of independence, the origin of the Constitution, the rise of Jeffersonian Democracy, European influence up America, Jacksonian Democracy, westward expansion, the emergence of sectionalism, and the Civil War.

**HIST 2153  
INTRO/ARKANSAS HISTORY**

Prerequisite: HIST 2003 or HIST 2013. An introductory course on the history of Arkansas. Lectures, discussions, and applied activities will be central to this course. This course is a professional education requirement for Early Childhood and Middle Level Education majors, and may not be counted toward the History and Political Science nor the History and Political Science Education degree. Students may not take this course after completion of HIST 4153.

**HIST 2203  
INTRODUCTION TO PUBLIC HISTORY**

An introduction to the theory and disciplines of public history, including museum studies, historic preservation, archive and manuscript management, and historical editing. The course also explores the current theoretical and practical issues confronting public historians.

**HIST 2513  
SOURCES/METHODS IN HIST**

This course is designed as an introduction to the field of historical research. This course introduces techniques and methods of historical research, basic historiography, bibliographical aids, and the study and writing of history. It is a hands-on course where students will use the skills learned to evaluate social science research.

**HIST 3013  
COLONIAL AMERICA**

The European background, the settlement of British colonies, the development of provincial institutions, and the emergence of an American civilization in the seventeenth and eighteenth centuries.

**HIST 3023  
ERA OF AMER REVOLUTION**

The deterioration of empire relationships from 1763 to 1776, with an examination of the causes and consequences of the American Revolution and the post war problems leading to the establishment of a new government under the Constitution in 1789.

**HIST 3033  
EARLY AMERICAN REPUBLIC**

The social, cultural, economic, and political climate in which Jeffersonian Jacksonian democracy developed.

**HIST 3043  
CIVIL WAR/RECONSTRUCTION**

Prerequisites: HIST 2003 or permission of department head. The social, political, economic, and intellectual backgrounds of the war; the military operations; analysis of Reconstruction.

**HIST 3063  
GILD AGE/PROG 1877-1914**

Explores the major issues associated with Gilded Age America (immigration, industrialization, urbanization, imperialism, rise of organized labor) and examines the origins, goals, and legacies of the Populist and Progressive reform movements. May not be taken for credit after completion of HIST 3053.

**HIST 3073  
UNITED STATES, 1914-1945**

Examines the American entry and contribution in World War One; the post-war settlement; the various social, economic, and political trends of the 1920s; the Great Depression; the New Deal; American foreign policy in the inter-war era; and the American role in World War Two, and its effects on American society and culture.

**HIST 3083  
THE US: 1945-PRESENT**

Explores the origins of and American responses to the Cold War, the rise of various reform movements in the 1950s- 60s, the New Frontier and Great Society programs, the Vietnam War, and the rise of the New Right. May not be taken for credit after completion of HIST 4003.

**HIST 3103  
THE OLD SOUTH, 1607-1865**

Prerequisites: HIST 2003 or permission of department head. A survey of the political, social, and economic development of the American South before the Civil War.

**HIST 3123  
THE NEW SOUTH**

Prerequisites: HIST 2013 or permission of department head. A survey of the political, social, and economic development of the American South from the end of the Civil War to the present.

**HIST 3223  
LOCAL AND ORAL HISTORY**

The course has two main, inter-related themes, local history and oral history. This course examines the nature and practice of local history and explores the various methods and approaches central to local history research. In addition, this course introduces students to the literature and theory of oral history and trains them in related fieldwork methodologies.

**HIST 3243  
ARCHIVE AND MANUSCRIPT MGMT**

Prerequisites: HIST 2203 or permission of department head. An introduction to the administration of archival and manuscript collections in various types of institutions. This course explores the basic theoretical principles and archival practices of appraisal, acquisition, accessioning, arrangement, description, preservation, and user services. Topics will include: records management programs, collecting archives programs, legal and ethical issues, public programming and advocacy, and the impact of the new information technologies for preservation and access.

**HIST 3281  
GRANT WRITING FOR HISTORIANS**

Prerequisites: HIST 2203 or permission of department head. An introductory course designed to provide students with the basic tools necessary to successfully compete for external grant funds. The focus of the course is public history grants, although the skills and knowledge presented will also benefit historians who propose professional development proposals on research and study plans.

**HIST 3283  
HISTORICAL EDITING**

Prerequisites: HIST 2203 or permission of department head. An introduction to historical editing in both print and electronic applications. Students will gain practical experience by editing documents and surveying the relevant literature.

**HIST 3291  
PRACTICUM IN PUBLIC HISTORY**

Prerequisite: HIST 2203. Practicum facilitating the integration, synthesis, and application of theories, concepts, and skills associated with public history. Course requires 75 clock hours of supervision in the museum.

**HIST 3313  
COLONIAL LATIN AMERICA**

A survey of the political, economic, social and cultural aspects of Latin America to 1825. Emphasis is on cross-cultural accommodation and the role of indigenous, African, and European cultures in shaping Latin American development.

**HIST 3323  
MODERN LATIN AMERICA**

A survey of the political, economic, social and cultural aspects of Latin America since 1825. Emphasis is on cultural values and structures from the colonial period, continuing patterns of authoritarianism, the struggle to establish democratic institutions, and Latin America's role in world affairs.

**HIST 3413  
HIST CLASS GREECE/ROME**

The origins and development of Classical civilization in ancient Greece, the rise of the Roman Republic, and the ascendancy and decline of the Roman Empire.

**HIST 3423  
HIST MID AGES, 300-1300**

Decline of the ancient Roman civilization; rise, ascendancy, and decline of medieval civilization; emphasis upon the Christian church and the rise of national monarchies.

**HIST 3433  
RENAISSANCE/EUR EXPANSION**

Fuelled by a growing urban economy and despite the setbacks of the Black Death, Europeans during the Renaissance revived and adapted models of classical learning, created new forms of artistic and vernacular expression, forged national identities, opened up new trade routes, and encountered a New World.

**HIST 3443  
REFORM/EARLY MOD EUROPE**

A study of the social, political, intellectual and cultural impact of the Protestant Reformation, the Roman Catholic response, the sixteenth and seventeenth-century Wars of Religion, the development of confessional cultures, and the continued rise of the European nation-state in both its absolutist and constitutional forms.

**HIST 3463  
ENLIGHTEN/FRENCH/REV/NAPOLEON**

Prerequisites: HIST 1503 and 1513. This upper-division course will address the intellectual, social, and political events of the turbulent eighteenth century in Europe, a period known for the Enlightenment, as well as for the French Revolution and the rise and fall of Napoleon's Empire. Historians often argue that this period ushered in many of the hallmarks of the modern world, including nationalism, open class conflict, and popular democracy. The intent of this course is to examine the period in the context of its long-lasting influence upon world events.

**HIST 3483  
REACT/REFORM, 1815-1871**

A study of the changes in the political, cultural, intellectual, and social environments which characterized Europe during the period between the Congress of Vienna through the rise of the modern nation states.

**HIST 3493  
AGE OF EMPIRE, 1871-1919**

A study of the changes in the political, cultural, intellectual, and social environments which characterized Europe during the period between the rise of the modern nation states to the end of the First World War.

**HIST 3503  
EUR BETWEEN WARS 1919-39**

A study of the changes in the political, cultural, intellectual, and social environments which characterized Europe during the period between the end of the First World War to the beginning of the Second World War.

**HIST 3513  
EUROPE SINCE 1939**

A study of the changes in the political, cultural, intellectual, and social environments which characterized Europe during the period between the beginning of the Second World War to the present.

**HIST 3533  
HISTORY OF RUSSIA**

A study of the cultural and political history of Russia from the reign of Peter the Great to the present, emphasizing trends in the nineteenth century which culminated in the Bolshevik Revolution. May not be repeated for credit as HIST 5463 or equivalent.

**HIST 3563  
HISTORY OF ENGLAND**

A study of the history of England from national origins to modern times.

**HIST 3573  
HISTORY OF EASTERN EUROPE**

Prerequisites: HIST 1503 and 1513. A study of the cultural and political history of eastern Europe from the Napoleonic Wars to the present.

**HIST 3603  
HISTORY OF MODERN EAST ASIA**

This course deals with the history of East Asia after 1800. The major stress is placed upon the history of China, Korea, and Japan.

**HIST 3703  
HISTORY OF MODERN AFRICA**

A treatment of African history since 1600, dealing with the development of African states in sub Saharan Africa up to present African nations. May not be repeated for credit as HIST 5703 or equivalent.

**HIST 3803  
HISTORY OF THE MIDDLE EAST**

Political, social, and cultural survey of the history of the Middle East from the rise of Islam to modern times.

**HIST 4013  
AMERICAN MILITARY HIST**

A study of the American military from its colonial origins to the present, including the development of the military establishment and its relationship with American society. May not be repeated for credit as HIST 5013 or equivalent.

**HIST 4023  
VIETNAM WAR**

A study of the American involvement in Vietnam, from 1945 until 1975. Emphasis will rest on the actual period of war in Vietnam. May not be taken for credit after completion of the equivalent course under HIST/POLS 4983 nor be repeated for credit as HIST 5023.

**HIST 4033  
THE FRONTIER/AMER HIST**

Prerequisites: HIST 2003 and 2013, or permission of department head. Study of the American frontier as a place, as a process, and as a state of mind influential in shaping institutions and attitudes during the expansion of this nation westward from Atlantic to Pacific. May not be repeated for credit as HIST 5033 or equivalent.

**HIST 4043  
AMER CONSTITUTIONAL DEV**

An historical analysis of American Constitutionalism and constitutional law from earliest antecedents to the present time, as seen in the leading documents and cases dealing with judicial review, separation of powers, the federal system, commerce taxation, civil rights, and civil liberties.

**HIST 4053  
ECONOMIC HISTORY OF US**

A study of the major economic forces which have helped influence, and been influenced by, United States history. Particular emphasis will be given to the development of agriculture, business, industry, and labor in their American setting. May not be repeated for credit as HIST 5053 or equivalent.

**HIST 4073  
AMER DPL HIST TO 1912**

Prerequisite: HIST 2003. This course is a study of America's diplomatic relationships with other nations and peoples from 1776 to 1912. Of particular emphasis will be the changes in international affairs brought about by the evolving economic and political conditions. This course follows the United States' early struggles in diplomacy through its expansion and eventual emergence as a world power.

**HIST 4083  
AMER DPL HIST SNCE 1912**

Prerequisite: HIST 2013. This course is a study of America's diplomatic relationships with other nations and peoples from 1912 to the present. Of particular emphasis will be the changes in international affairs brought about by the evolving economic and political conditions. This course follows the United States from its emergence as a world power through two world wars, a cold war, and a war on terrorism.

**HIST 4103  
AMERICAN POLITICAL IDEAS**

The background and development of American political ideas from the colonial period to the present. Emphasis is placed on colonial political theory, the Founding, conflict and consensus prior to the Civil War, the response to industrialization, the rise of the positive state, nationalism, the New Left and New Right, and current trends.

**HIST 4123  
AFRICAN AMERICAN HISTORY**

Prerequisites: HIST 2003 or HIST 2013. This course examines the unique role and contribution of African Americans in the overall development of American history from the colonial era to the present. Topics include African societies; black colonial life; the institution of slavery, and African American responses to slavery; the free black community; African American cultural, political, and economic development; issues of assimilation, separatism, and African American responses to institutional racism; the Civil Rights Movement, and recent developments. May not be repeated for credit as HIST 5123.

**HIST 4133  
LATINOS IN THE U.S.**

This course is an analysis of the historical and cultural heritage of Latinos who have lived or are currently living in the United States. This course includes the colonial origins of Latino groups and their general migration patterns to the United States. This course also explores the development of Latino communities as well as the relationship between Latinos and social institutions. May not be repeated for credit as HIST 5133 or equivalent.

**HIST 4143  
NATIVE AMERICAN HISTORY**

Prerequisites: HIST 2003 or HIST 2013. A survey of Native American history from the Archaic period to the present. This course will present an interpretation of the historical experience of the diverse nations native to North America utilizing an ethno- historical approach. Some emphasis will be placed on the formation and operation of United States government policy regarding Native Americans in both the 19th and 20th centuries. May not be repeated for credit as HIST 5143.

**HIST 4153  
HISTORY OF ARKANSAS**

A study of the history of Arkansas from prehistoric times to the present, noting political, social, economic, and cultural trends. May not be taken for credit after completion of HIST 3153 nor repeated for credit as HIST 5153 or equivalent

**HIST 4163  
AMERICAN HISTORY THROUGH FILM**

Prerequisite: HIST 2013. This course examines 20th century American history through the study of American film, and film as cultural and historical text. Subjects for analysis include the Great Depression, World War II, the Cold War and Cold War culture, the 1960s, Vietnam, and the Reagan era. Emphasis will be on the uses of film as both primary and secondary source material for the study of history.

**HIST 4173  
HISTORY OF AMERICAN DISASTERS**

A comparative examination of the greatest disasters in American history, the response to them, and how they affected the future of the nation.

**HIST 4183  
AMERICAN LEGAL HISTORY**

This course concerns the history and development of law, legal institutions, and legal culture in the United States from its colonial origins to the present day, with emphasis on the interaction of law with the overall development of American society.

**HIST 4193  
AMERICAN LABOR HISTORY**

This course examines the history of working people-men and women, paid and unpaid, of various racial and ethnic groups, in diverse geographic regions-primary from the Early Republic to the present. This study will include a review of changes in work environments due to industrialization, unionization, and legal decisions.

**HIST 4203  
WOMEN IN AMERICAN HIST**

A treatment of women in Western and American social history in their lifestyles and economic and family roles. May not be taken for credit after completion of HIST 3203 nor repeated for credit as HIST 5203 or equivalent.

**HIST 4213  
SOUTHERN WOMEN'S HISTORY**

A social history of the lives of women in the American South from approximately 1700 to the present which examines their lifestyles, economic, and family roles. This study includes, but is not limited to, experiences of Arkansas women.

**HIST 4293  
HISTORIC PRESERVATION**

Prerequisites: HIST 2203 or permission of department head. Upper-level survey of historic preservation in the United States. Course examines the theory, philosophy, and methods of maintaining the culture of the past. An introduction to the wide range of ideas underpinning the practice of preservation is covered through readings, discussions, presentations, class projects and field trips.

**HIST 4403**  
**INTERP/EDUC/MUSEUM/METH**

Prerequisites: Senior or Graduate standing, or permission of instructor. Museum perspectives and approaches to care and interpretation of cultural resources, including interpretive techniques of exhibit and education-outreach materials, and integrating museum interpretation/education into public school and general public programming. Class projects focus on special problems for managing interpretive materials in a museum setting.

**HIST 4483**  
**WORLD ECONOMIC HISTORY**

World Economic History traces the development of the modern global economy from the late middle ages to the present. Special attention is given to the emergence of capitalism in Europe and its migration to other parts of the world. May not be repeated for credit as HIST 5483 or equivalent.

**HIST 4503**  
**HISTORY OF CHRISTIANITY**

A study of Christianity, from its beginnings to the present day, focusing especially on ancient Mediterranean, medieval European, and modern American Christian traditions. Emphasis will be on the interaction between individual beliefs, group identity, and institutional forces, how each have been shaped by broader social, political and cultural contexts, and finally how these interactions have resulted in profound changes for the Christian religion.

**HIST 4513**  
**HISTORY OF SCIENCE**

A study of the origins, nature, and development of Western science and its social, economic, and cultural context. May not be repeated for credit as HIST 5513.

**HIST 4713**  
**SOC STUDIES METH/SEC TEA**

Prerequisites: SEED 2002 and the completion of 36 hours in the Social Sciences. A course in subject-matter applications for secondary teacher education candidates (grades 7-12) in social studies. The course will incorporate a variety of instructional models, activities, and examples, as well as the integration of traditional and non-traditional resource materials. Must be completed prior to student teaching.

**HIST 4813**  
**WORLD WAR II**

A study of World War II, 1939 through 1945, in its origins and spread through world theaters. May not be taken for credit after completion of the equivalent course under HIST/POLS 4983 nor repeated for credit as HIST 5813.

**HIST 4823**  
**NATIONALISM**

Prerequisites: HIST 1503 and 1513. The course looks at the development of the idea of nation in European and World history in the last two centuries. By using historical examples the course will introduce the students to the current theoretical debate on ethnicity and nationalism. The special attention will be placed on the relationship between state power and the nation. The course will look at ethnicity in history before and after the emergence of effective means of communication, such as the printing press, radio, and television. It will also look at the role culture plays in the formation of national consciousness and how the past was used and abused to drum-up political support.

**HIST 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIST 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIST 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIST 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**HIST 4963  
SENIOR SEMINAR**

Prerequisites: HIST 1503, 1513, 2003, and 2013. Required course for History/Political Science and History Education majors. Course content will cover a directed seminar in specified American or European History. Research techniques will be emphasized.

**HIST 4971  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**HIST 4972  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**HIST 4973  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**HIST 4974  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**HIST 4975  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**HIST 4976  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**HIST 4981  
SOCIAL SCIENCES SEMINAR**

A directed seminar in an area of social sciences. The specific focus will depend upon research under way, community or student need, and the unique educational opportunity available. May be repeated for credit if course content changes.

**HIST 4982  
SOCIAL SCIENCES SEMINAR**

A directed seminar in an area of social sciences. The specific focus will depend upon research under way, community or student need, and the unique educational opportunity available. May be repeated for credit if course content changes.

**HIST 4983  
SOCIAL SCIENCES SEMINAR**

A directed seminar in an area of social sciences. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content changes.

**HIST 4991  
SPEC PROB/HISTORY**

A course for majors and minors only. Admission requires consent by department head.

**HIST 4992  
SPEC PROB/HISTORY**

A course for majors and minors only. Admission requires consent by department head.

**HIST 4993  
SPEC PROB/HISTORY**

A course for majors and minors only. Admission requires consent by department head.

**HIST 4994  
SPEC PROB/HISTORY**

A course for majors and minors only. Admission requires consent by department head.

**HLED 1513  
PERS HEALTH/WELLNESS**

Each semester. The course is designed to motivate students toward an individual responsibility for their health status and an improved quality of life. An introspective study of personal lifestyle behavior is encouraged. The interrelationship of the multi causal factors which directly affect health status and the various dimensions of personal health are addressed.

**HLED 3203  
CONSUMER HEALTH PROGRAMS**

A study of current health services and the products offered by health providers to the health consumer and an examination of various diseases and disorders.

**HLED 4303  
METH/MAT HLTH/GR K-12**

Exploration of teaching methods and strategies, use of school and community resources, and evaluation related to teaching health in grades K-12.

**HLED 4403  
NUTRITION/PHY FITNESS**

Prerequisite: PE 2653. A health education course which is designed to familiarize students with food as it relates to optimal health and performance. Focus is on nutrition as it affects the physical work capacity of humans from resting states to high output performance.

**HLED 4991  
SPEC PROBLEMS IN HEALTH**

Independent work on approved health topics under the individual guidance of a faculty member. Admission requires consent of department head.

**HLED 4992  
SPEC PROBLEMS IN HEALTH**

Independent work on approved health topics under the individual guidance of a faculty member. Admission requires consent of department head.

**HLED 4993  
SPEC PROBLEMS IN HEALTH**

Independent work on approved health topics under the individual guidance of a faculty member. Admission requires consent of department head.

**HONR 1001  
FRESHMAN HONORS SEMINAR**

Prerequisite: Acceptance into the honors program, approval of Honors Program Director. An introductory course to the honors program, teamwork and multidisciplinary problem solving.

**HONR 4093  
SENIOR HONORS PROJECT**

Prerequisites: Approval of the Director of Honors Program (if used for departmental requirement, all applicable prerequisites also apply). A team or individual independent research project will be completed. Projects will include some aspect of academic investigation appropriate to the subject area chosen. Presentation of project findings at annual Senior Honors Symposium will be required.

**ICS 1103  
PROGRAMMING I**

This course is designed to give the student an understanding of established and new methodologies using Microsoft Visual Basic programming. Emphasis is placed on developing logical thinking skills.

**ICS 1104  
FUNDAMENTALS OF ELECTRICITY**

This course is an overall study of the fundamental principles of D.C. and A.C. circuits. A basic study of Ohm's Law, series, parallel and series parallel resistor circuits. The fundamental concepts form the basis for the study of advanced applications of electronic systems. It is necessary for the electronic technician to be able to understand the basic concepts to function as an Electronic Technician.

**ICS 1123  
SEMICONDUCTORS I**

This course introduces semiconductors or solid-state components. Topics covered include the diode and applications, transistors, and amplifiers.

**ICS 1143  
INTRODUCTION TO DIGITAL LOGIC**

An introductory course in the study of digital logic systems. Basic digital logic gates, truth tables, numbering systems, and different types of TTL integrated circuits are studied.

**ICS 1153  
NETWORKING I**

Designed as a foundation course that provides the theory and basic understanding of the hardware and software that comes together to build local area and wide area networks.

**ICS 1253  
NETWORKING II**

Prerequisite: ICS 1153. Builds upon the skills and concepts learned in Networking I. Emphasis will be on the hands-on aspects of personal computer networks using Microsoft and Linux based networking products, including installations and/or expanding a networking system and troubleshooting problems.

**ICS 1303  
PC MAINTENANCE**

This course is designed to prepare individuals to troubleshoot, build, and repair personal computers, workstations, printers, and other computer peripherals. The student will also learn to install, debug, diagnose, and repair software problems associated with PCs.

**ICS 2115  
PROGRAMMABLE CONTROLLERS**

Deals with the subject of programmable controllers (PCs). The PC is a microprocessor-based programmable device used in controlling mechanical machinery, energy management systems, computer integrated manufacturing, and other applications. Lecture: 3 hours, laboratory: 6 hours.

**ICS 2116  
BASIC INDUSTRIAL AUTOMATION**

An illustrated study of circuit configurations used in industry. Topics to be covered are: solid-state systems used to control D.C. and A.C. motors, electro-mechanical devices, three-phase power, open and closed loop motor control, robotic input and output transducers, various instrumentation and process control classes. Lecture: 9 hours, laboratory: 5 hours.

**ICS 2123  
INDUSTRIAL FLUID POWER**

This course is designed to provide the basic knowledge and application of physical principles involving pumps, cylinders, valves, motors, design, assembly, graphic symbols, and the operation of hydraulic and pneumatic control circuits based on logic principles. Lecture: 4 hours, laboratory: 1 hour.

**ICS 2203  
COMPUTER SYSTEM COMPONENTS**

A study of the internal structure of the microprocessor. The full computer system is analyzed from both aspects of hardware and software. Many of the principles studied apply to computer troubleshooting and computer interfacing. Many of the computer support circuits are studied. Many of the skills learned from Programming I, Operating Systems, and Digital Logic are brought together and enhanced.

**ICS 2213  
SEMICONDUCTORS II**

A continuation of ICS 1123, this course is a study of field effect transistors, thrists, and linear integrated circuits.

**ICS 2303  
PC MAINTENANCE II**

Prerequisite: ICS/CIS 1303. This course is designed to teach individuals core elements of computer repair based on the A+ Certification exams. The student will build on the knowledge acquired from PC Maintenance I, allowing them to be more prepared to diagnose, and repair computers in the working environment.

**ICS 2903  
INTERNSHIP**

Provides students with experience in a business setting. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, student, and training site stating the rules and objectives of the internship.

**ICS 2991  
SPECIAL TOPICS FOR ICS**

This course is designed to introduce students to specific areas in Industrial Control Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ICS 2992****SPECIAL TOPICS FOR ICS**

This course is designed to introduce students to specific areas in Industrial Control Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ICS 2993****SPECIAL TOPICS FOR ICS**

This course is designed to introduce students to specific areas in Industrial Control Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ICS 2994****SPECIAL TOPICS FOR ICS**

This course is designed to introduce students to specific areas in Industrial Control Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ICS 2995****SPECIAL TOPICS FOR ICS**

This course is designed to introduce students to specific areas in Industrial Control Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**ICS 2996****SPECIAL TOPICS FOR ICS**

This course is designed to introduce students to specific areas in Industrial Control Systems. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**INT 1903****INTERNSHIP**

Provides students with the experience of a job in a business. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of internship.

**INT 2903****INTERNSHIP**

Provides students with experience in a business setting. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of the internship.

**INT 2904  
INTERNSHIP**

Provides students with experience in a business setting. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, students, and training site stating the rules and objectives of the internship.

**ITAL 1014  
BEGINNING ITALIAN I**

Emphasis on conversation; introduction to basic grammar, reading, writing, and culture.

**ITAL 1024  
BEGINNING ITALIAN II**

Continued emphasis on conversation and fundamental language skills.

**ITAL 2014  
INTERMEDIATE ITALIAN I**

Prerequisite: Beginning Italian II (ITAL 1024) or equivalent. Instruction designed to develop communication skills and knowledge of grammar, reading, writing, and culture.

**ITAL 2024  
INTERMEDIATE ITALIAN II**

Prerequisite: Intermediate Italian I (ITAL 2014) or equivalent. Instruction designed to enhance communication skills and knowledge of grammar, reading, writing, and culture.

**ITAL 3113  
CULTURE AND CIVILIZATION**

Prerequisite: ITAL 2024 or equivalent. Course will be geared towards students at the intermediate or above level of linguistic competence. The course will introduce students to Italian culture through the use of authentic written texts, videos and Internet materials. Although historical background information will be provided whenever necessary, the focus will be on contemporary Italian society. Students will examine current cultural issues presented on Italian TV or in newspapers and magazines.

**JOUR 1163  
BASIC PHOTOGRAPHY**

A study of the use of the camera, films, equipment, and the basics of black and white processing and printing. Includes introduction to lighting techniques, composition, and color photography.

**JOUR 1411  
PRINT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 1421  
PRINT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 1811  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions. Only four hours count for the journalism major.

**JOUR 1821  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions. Only four hours count for the journalism major.

**JOUR 1911  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 1921  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 2133  
INTRO/MASS COMMUNICAT**

An introduction to the mass communication process and industry.

**JOUR 2143  
NEWS WRITING**

A study of and practice in writing news stories.

**JOUR 2153  
INTRO/TELECOMMUNICATION**

A study of the technical, legal, programming, advertising and journalistic aspects of the telecommunication industry with practical exercises in radio, television and the Internet.

**JOUR 2173  
INTRO TO FILM**

Perequisite: ENGL 1013 or equivalent. A study of film as an art form with particular attention to genres, stylistic technique and film's relation to popular culture. JOUR 2173 may be used to fulfill the fine arts General Education requirement. JOUR 2173 may not be repeated for credit after the completion of ENGL 2173.

**JOUR 2411  
PRINT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 2421  
PRINT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 2811  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions. Only four hours count for the journalism major.

**JOUR 2821  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions. Only four hours count for the journalism major.

**JOUR 2911  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 2921  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 3111  
EDITORIAL CONFERENCE**

Prerequisite: Permission of instructor. Student news executives meet regularly with faculty to critique publication and broadcast products.

**JOUR 3114  
NEWS EDITING**

Prerequisite: JOUR 2143, 3143. A study of copy reading, headline writing, makeup, and problems and policies of editing the news. Three hours lecture, two hours laboratory arranged.

**JOUR 3121  
EDITORIAL CONFERENCE**

Prerequisite: Permission of instructor. Student news executives meet regularly with faculty to critique publication and broadcast products.

**JOUR 3133  
PUBLICATIONS MANAGEMENT**

An analysis of the problems in managing newspapers, magazines and other mass media.

**JOUR 3143  
NEWS REPORTING**

Prerequisite: ENGL 1013 or 1043 and JOUR 2143. A study of news gathering and writing techniques.

**JOUR 3153  
FEATURE WRITING**

Prerequisite: Permission of the instructor. A study of and practice in writing of newspaper features and magazine articles.

**JOUR 3163  
NEWS PHOTOGRAPHY**

Prerequisite: ENGL 1013 or 1043. A study of the use of the camera, communication through pictures, news value in pictures, and the history of photojournalism.

**JOUR 3173  
PUBLIC RELATIONS PRINCIP**

A study of public opinion and the role of the mass media in shaping it, including practice in public opinion research, communications techniques and solving public relations problems.

**JOUR 3183  
BROADCAST NEWS WRITING**

Prerequisite: JOUR 2143 or 3143. Principles and techniques of writing and production of radio and television news. Two hour class, two hour laboratory.

**JOUR 3193  
TELEVISION NEWS PROD**

Prerequisite: JOUR 2143 or 3143 or consent of instructor. Study and practice in directing and producing television news programs, including experience in announcing, preparing scripts and video tape, and operating cameras and other studio equipment. One hour lecture, three hours laboratory.

**JOUR 3273  
PUBLIC RELATIONS WRITING**

Prerequisites: JOUR 3173. Provides the knowledge and skill training for students to become effective public relations writers. The course will focus on style and content of writing news releases, speeches, newsletters, brochures, annual reports and other public relations communications.

**JOUR 3411  
PRINT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 3421  
PRINT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 3811  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions, including work as manager, producer, or director. Only four hours count for the journalism major

**JOUR 3821  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions, including work as manager, producer, or director. Only four hours count for the journalism major

**JOUR 3911  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 3921  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 4011  
PRACTICAL EDITING**

Actual experience editing news. Arranged with an instructor. May be taken for a maximum of three hours.

**JOUR 4012  
PRACTICAL EDITING**

Actual experience editing news. Arranged with an instructor. May be taken for a maximum of three hours.

**JOUR 4013  
PRACTICAL EDITING**

Actual experience editing news. Arranged with an instructor. May be taken for a maximum of three hours.

**JOUR 4033  
COMMUNITY JOURNALISM**

A study of journalism as practiced in weeklies, small dailies, and broadcast stations in small towns and cities, including the relationship of the media to the community. For majors and non-majors.

**JOUR 4053  
MASS COMM SEMINAR:**

Prerequisite: Permission of instructor. Studies of the relationship of mass communication to social, political, technical, and economic issues. Course content will vary. May be repeated for credit as JOUR 4053 or 5053 when course content changes.

**JOUR 4073  
GRAPHIC COMMUNICATION**

Prerequisites: JOUR 3173 and JOUR 3273. Presents the elements of effective print design as well as the other decision making processes involved with creating an effective visual communication (type, art and illustration, basic design principles, paper and ink, printing processes, etc.). Students will create visually appealing projects using the industry standard design and photo manipulation software programs.

**JOUR 4083  
NEW COMMUNICAT/TECHNOLOG**

A study of and practice in the use of the developing technology in mass communication, including the social, legal, and economic effects.

**JOUR 4091  
INTERNSHIP**

Credit for work in professional journalistic settings. Credit hours will be based on hours on the job. May be taken for a total of four hours.

**JOUR 4092  
INTERNSHIP**

Credit for work in professional journalistic settings. Credit hours will be based on hours on the job. May be taken for a total of four hours.

**JOUR 4093  
INTERNSHIP**

Credit for work in professional journalistic settings. Credit hours will be based on hours on the job. May be taken for a total of four hours.

**JOUR 4094  
INTERNSHIP**

Credit for work in professional journalistic settings. Credit hours will be based on hours on the job. May be taken for a total of four hours.

**JOUR 4111  
EDITORIAL CONFERENCE**

Prerequisite: Permission of instructor. Student news executives meet regularly with faculty to critique publication and broadcast product.

**JOUR 4113  
HISTORY/AMERICAN JOUR**

Prerequisite: Permission of instructor. A survey of the history of American journalism and mass media and their relationships to technical, economic, political, and other aspects of American society. May not be repeated for credit as JOUR 5113.

**JOUR 4121  
EDITORIAL CONFERENCE**

Prerequisite: Permission of instructor. Student news executives meet regularly with faculty to critique publication and broadcast product.

**JOUR 4123  
LAWS OF COMMUNICATION**

A study of the development of freedom of press and speech, laws of libel, contempt, privacy and copyright in their relation to press, radio, television, and films.

**JOUR 4133  
TV PROGRAM PRODUCTION**

Prerequisite: JOUR 3183 or 3193 or consent of instructor. Study and practice in writing, editing, and producing dramatic, musical and documentary programs for television, including experience in writing and editing scripts, making and editing videotape, and operating cameras and other studio equipment for non news programs, with each student producing a program during the semester. One hour class, three hours laboratory.

**JOUR 4143  
ADVANCED REPORTING**

Prerequisites: JOUR 2143 and 3143 or permission of instructor. Study of advanced news gathering techniques and practice in researching and writing difficult types of stories.

**JOUR 4153  
EDITORIAL COL REV WRIT**

Study of and practice in writing editorials, columns, and reviews. Includes research and discussion of the function of opinion writing in the mass media.

**JOUR 4163  
ADVANCED PHOTOGRAPHY/VIDEO**

Prerequisite: JOUR (ART) 1163 or consent of instructor. An introduction to advanced photographic techniques including digital photography and nonlinear editing. Various historic and current theories of visual journalism provide a substantive base for the application of techniques.

**JOUR 4173  
PUBLIC RELATIONS PROJ**

Prerequisites: JOUR 3173, JOUR 3273, JOUR 4073, or consent of instructor. Planning, preparation and execution of a public relations program for a specific project.

**JOUR 4193  
COMM RESEARCH METHODS**

Introduction to the methodologies of behavioral science applied to communication research including design, measurement, data collection, and analysis. Explores the use of surveys, content analysis, focus groups, and experiments in studies of communication processes and effects.

**JOUR 4243  
JOUR WRITING SEMINAR**

A concentrated fundamentals writing course that deals with traditional techniques and various formats for journalistic writing such as editorials, feature stories, columns, reporting, press releases, and interviews.

**JOUR 4411  
PRNT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 4421  
PRINT PRACTICUM**

Students will learn practical skills in the areas of writing, layout and design and photography while working an assigned number of hours each week for the student newspaper.

**JOUR 4811  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions, including work as manager, producer, or director. Only four hours count for the journalism major.

**JOUR 4821  
BROADCAST PRACTICUM**

Practical work experience in the studios of KXRJ FM and Tech television productions, including work as manager, producer, or director. Only four hours count for the journalism major.

**JOUR 4883  
MASS COMM THEORY**

Prerequisites: 15 semester hours of Journalism. This course provides an examination of the major theories and domains of mass communication research, emphasizing mass media effects. Students are acquainted with the assumptions, propositions, and empirical research foundations of these theories. The

course covers the historical evolution and recent trends in mass communication theory as well as the application of theories to specific contexts such as marketing or organizational communication.

**JOUR 4911  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 4921  
MULTIMEDIA PRACTICUM**

Practical work experience in the multimedia lab including work as Web news manager, producer, Web content director.

**JOUR 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**JOUR 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**JOUR 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**JOUR 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**JOUR 4991  
SPEC PROB/JOUR**

This course, for majors only, requires advanced approval by the instructor and is restricted to second semester juniors and seniors. It is designed to provide certain advanced students with further concentration in a particular area. One, two, three, or four hours may be taken as appropriate.

**JOUR 4992  
SPEC PROB/JOUR**

This course, for majors only, requires advanced approval by the instructor and is restricted to second semester juniors and seniors. It is designed to provide certain advanced students with further concentration in a particular area. One, two, three, or four hours may be taken as appropriate.

**JOUR 4993  
SPEC PROB/JOUR**

This course, for majors only, requires advanced approval by the instructor and is restricted to second semester juniors and seniors. It is designed to provide certain advanced students with further concentration in a particular area. One, two, three, or four hours may be taken as appropriate.

**JOUR 4994  
SPEC PROB/JOUR**

This course, for majors only, requires advanced approval by the instructor and is restricted to second semester juniors and seniors. It is designed to provide certain advanced students with further concentration in a particular area. One, two, three, or four hours may be taken as appropriate.

**JPN 1014  
BEGINNING JAPANESE I**

No prerequisite. Introduction to the oral and written forms of the Japanese language.

**JPN 1024  
BEGINNING JAPANESE II**

Prerequisite: JPN 1014 or equivalent. A continuation of JPN 1014.

**JPN 2014  
INTERMED JAPANESE I**

Prerequisite: JPN 1014 or equivalent. Instruction designed to develop greater facility in fundamental skills. Four hours of classroom instruction.

**JPN 2024  
INTERMED JAPANESE II**

Prerequisite: JPN 2014 or equivalent. A continuation of JPN 2014. Four hours of classroom instruction.

**JPN 3003  
CONV/COMPOSITION I**

Prerequisite: JPN 2024 or equivalent. Further study of Japanese. concentrating on grammar, reading, comprehension, essays, conversation, and kanji.

**JPN 3013  
CONV/COMPOSITION II**

Prerequisite: JPN 3003 or equivalent. Continuation of JPN 3003.

**JPN 3113  
CULTURE/CIVILIZATION**

Prerequisite: JPN 2024 or equivalent. Study of the economic, political, and social structure of Japan and an introduction to Japanese history and culture.

**JPN 3143  
STUDY ABROAD**

Prerequisite: enrollment in a Tech-sanctioned study program in Japan, completion of JPN 2024 or equivalent, and permission of the Study Abroad supervisor and Department Head. Study of the contemporary language and culture in Japan. May substitute for JPN 3003 or JPN 3013, depending on the student's proficiency level.

**JPN 4283  
SEM: LANGUAGE/CULTURE**

Prerequisite: JPN 3003 or equivalent. Specialized studies in Japanese literature, art, or social customs.

**JPN 4901  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**JPN 4902  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**JPN 4903  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language

proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**JPN 4991  
SPECIAL PROBLEMS IN JAPANESE**

Prerequisite: completion of JPN 2024 or equivalent, permission of the instructor and Department Head. This course is designed to provide advanced Japanese students with a course of study in an area not covered by the departmental course offerings.

**JPN 4992  
SPECIAL PROBLEMS IN JAPANESE**

Prerequisite: completion of JPN 2024 or equivalent, permission of the instructor and Department Head. This course is designed to provide advanced Japanese students with a course of study in an area not covered by the departmental course offerings.

**JPN 4993  
SPECIAL PROBLEMS IN JAPANESE**

Prerequisite: completion of JPN 2024 or equivalent, permission of the instructor and Department Head. This course is designed to provide advanced Japanese students with a course of study in an area not covered by the departmental course offerings.

**JPN 4994  
SPECIAL PROBLEMS IN JAPANESE**

Prerequisite: completion of JPN 2024 or equivalent, permission of the instructor and Department Head. This course is designed to provide advanced Japanese students with a course of study in an area not covered by the departmental course offerings.

**LAT 1013  
BEGINNING LATIN I**

Instruction in the fundamentals necessary to read and write the language. Advanced placement and credit by examination are available to students who have previously studied Latin.

**LAT 1023  
BEGINNING LATIN II**

A continuation of LAT 1013.

**LAT 2013  
INTERMEDIATE LATIN I**

Prerequisite: LAT 1023 or equivalent. A study designed to continue the development of fundamental skills and to give a general reading knowledge of Latin and acquaintance with classical Latin literature, history, and philosophy.

**LAT 2023  
INTERMEDIATE LATIN II**

A continuation of LAT 2013.

**LAT 3001  
GRK/LAT SCI TERMINOLOGY**

The course is designed to assist students with their understanding of English words which have their roots in Greek or Latin. Students who in their course of study need to know specialized vocabulary, such as science, math, pre-med, pre-law and nursing majors, will find this course extremely helpful.

**LBMD 2001  
INTRO/LIBRARY RESOURCES**

An introduction to the organization and function of resource collections, with practical experience in location, retrieval, and use of reference and research materials; emphasis placed on subject materials. Course will not count toward licensure.

**LE 1003  
INTRO TO LAW ENFORCEMENT**

This course covers the basics of law enforcement including the responsibilities, opportunities, and advances in the field of law enforcement. The instructor selects pertinent and current topics as the focus of the course.

**LE 1013  
AMERICAN LEGAL SYSTEM**

A survey of basic framework of the American legal system, including a brief history, civil procedure, constitutional law, common law, administrative regulation with particular emphasis on the ethical, sociocultural, and political influences affecting such environments.

**LE 1023  
JUDICIAL PROCESS**

A comprehensive study of judicial process, criminal procedure, and behavior in criminal and civil law as well as the structure and operations of the local, state, and national court systems.

**LE 1033  
PUBLIC RELATION/LAW ENFRCMNT**

A study of proper law enforcement conduct in the public forum including public opinion, mass media, and solving public relations problems.

**LE 1043  
CRIMINAL, CIVIL, JUVENILE LAW**

An in-depth look at state and local law including structure, statuses, and roles.

**LE 1053  
SPANISH FOR LAW ENFORCEMENT**

Useful terminology and expressions for the law enforcement situation with a minimum of grammar.

**LE 2003  
INTERVIEW/INTERROGAT/TESTIMONY**

Designed to develop interviewing and interrogation techniques, critical thinking, and persuasive speaking ability. Includes lecture, discussion, research, study of courtroom testimony, classroom debates, and presentations.

**LE 2013  
INTRO TO COMPUTER CRIME**

Prerequisite: BUS 1303 Intro to Computers. This course examines the use of computers in the commission of crimes and civil wrongs and basic computer forensic investigation techniques. The course emphasizes techniques for identifying financial fraud, identity theft, locating and picking victims and offenders with a survey of associated laws, regulations, and international standards.

**LE 2903  
INTERNSHIP**

Provides students with experience in a business setting. Students will participate in internship during the final phase of program completion. There will be contracts signed between the school, student, and training site stating the rules and objectives of the internship.

**LPN 1101  
VOC/LEGAL/ETHIC CONCEPTS**

Teaches vocational responsibilities of the Practical Nurse to the patient, family community, and coworkers. Nursing organizations, local, state and national health resources, and concepts of delegation appropriate to the level of practice are also covered.

**LPN 1102  
PHARMACOLOGY I**

Pharmacology I is an introduction to the history of drugs, use of drug references, principles of drug actions and interaction, principles of drug administration, and their legal implications for the nurse.

**LPN 1103  
BODY STRUCTURE/FUNCTION**

This course is the study of anatomy and physiology of the human body and all of its systems. Medical terminology is integrated and an introduction to disease processes is included with each unit.

**LPN 1111  
NURS/GERIATRIC PATIENT**

This course covers the normal aging processes, characteristics of aging, special problems associated with aging and caring for the aging adult.

**LPN 1114  
BASIC NURS PRIN/SKILL I**

Co-requisite: LPN 1115. This course covers the fundamental principles, skills, and attitudes needed to give nursing care and prevent the spread of disease. Procedures used in the care of the sick and the ability to adapt them to various situations are discussed. Students will learn to document their observations and interventions.

**LPN 1115  
CLINICAL I**

Co-requisite: LPN 1114. Clinical skills will be practiced, observed, and evaluated by the instructors in the lab and clinical settings.

**LPN 1121  
NUTRITION HEALTH/ILLNESS**

The importance of nutrition and its relation to proper growth and functioning and the maintenance of health are covered.

**LPN 1202  
NUR ADLT/MED SUR CON I**

Students will study common conditions of illness and the nursing care of patients in acute, sub-acute, or convalescent stages of illness. This course includes aspects and principles of Nutrition; Basic Nursing; Pharmacology; Vocational, Legal, and Ethical concepts with attention to cultural diversity.

**LPN 1203  
NURSING MOTHERS/INFANTS**

Nutrition for the mother and the developing fetus and the basic nursing skills to care for the mother during antepartum, intrapartum, and postpartum periods are studied.

**LPN 1210  
CLINICAL II**

Prerequisite: LPN 1115. This course focuses on the skills needed by the nurse to provide the care in a safe and comforting manner.

**LPN 1211  
BASIC NUR PRIN/SKILL II**

Prerequisite: LPN 1114. This course covers the advanced skills and procedures concerned with administrating safe patient care. Skills related to the maternal-child and pediatric patients are included.

**LPN 1221  
PHARMACOLOGY II**

Prerequisite: LPN 1102. A continuation of LPN 1102. The preparation of drugs by enteral, parenteral, and percutaneous administration is continued. Intravenous medications, delivery systems, and techniques for administration are included in this course.

**LPN 1302  
NURSING OF CHILDREN**

Principles of growth and development, nursing of the infant through adolescence and the behavior of well and sick children are studied in this course. Differences in the functioning of the child=s body systems are contrasted with that of the adult patient as well as differences in the child=s response to illness.

**LPN 1303  
NUR ADLT/MED SUR CON II**

Prerequisite: LPN 1202. This course covers the body system disorders, their diagnostic methods, treatment or surgical procedures, therapeutic nutrition, and pharmacological modalities.

**LPN 1312  
CLINICAL III**

Prerequisite: LPN 1115. Includes clinical areas in the mental health, pediatric, and specialty areas of the clinical facilities. The opportunity to practice advanced basic nursing and pediatric procedures will be offered during these rotations.

**LPN 1322  
MENTAL HEALTH**

This course presents topics such as personality development patterns, developmental task throughout the life-cycle, mental disease, and emotional problems as well as chemical dependency. Geriatric, maternal, and pediatric problems are included. Therapeutic communication techniques are stressed.

**MATH 0803  
BEGINNING ALGEBRA**

Content of this course is as follows: the language of algebra, fundamental operations, signed numbers, equations and problem solving. The grade in the course will be computed in semester and cumulative grade point averages, but the course may not be used to satisfy general education requirements nor provide credit toward any degree. A student who makes a D or F in MATH 0803 must repeat the course in each subsequent semester until he or she earns a grade of C or better. Students who make a grade of C or better in MATH 0803 must enroll in MATH 0903 the following semester.

**MATH 0903  
INTERMEDIATE ALGEBRA**

Prerequisites: One unit of high school algebra, grade of C or better in MATH 0803, or consent of the Mathematics Department. The purpose of this course is to prepare for college level mathematics those students whose mathematics background is inadequate. Content of the course is fundamental operations, linear equations, special products and factoring, fractions, functions, graphs, and systems of linear equations. The grade in the course will be computed in semester and cumulative grade point averages, but the course may not be used to satisfy general education requirements nor provide credit toward any degree. A student who makes a D or F in MATH 0903 must repeat the course in each subsequent semester until he or she earns a grade of C or better.

**MATH 1003  
COLLEGE MATHEMATICS**

(A grade of C or better must be earned in this course if being used to satisfy the general education mathematics requirement.) Prerequisite: Score of 19 or above on the mathematics subscore of the Enhanced ACT, score of 460 or above on the quantitative portion of SAT, score of 41 or above on the quantitative portion of the COMPASS mathematics section, or make a grade of C or higher in Math 0903. The course focuses upon the mathematics of contemporary life. Topics include Planning and Scheduling schemes from Management Science, Data Analysis, Probability and Inference from Statistics, Voting Systems and Division Schemes from the science of Social Choice, and various Growth Models.

**MATH 1113  
COLLEGE ALGEBRA**

(A grade of C or better must be earned in this course if being used to satisfy the general education mathematics requirement.) Prerequisite: Score of 19 or above on the mathematics portion of the ACTE exam, or score of 460 or above on the quantitative portion of SAT, or score of 41 or above on the COMPASS mathematics section, or grade of "C" or better in MATH 0903. Exponents and radicals, introduction to quadratic equations, systems of equations involving quadratics, ratio, proportion, variation, progressions, the binomial theorem, inequalities, logarithms, and partial fractions. May not be taken for credit after completion of MATH 2703 or any higher level mathematics course.

**MATH 1203  
PLANE TRIGONOMETRY**

Prerequisite: MATH 1113 or consent of Mathematics Department. A study of the properties of the trigonometric functions and their graphs, solution of right and oblique triangles, formulas and identities, inverse functions, and trigonometric equations.

**MATH 1914  
PRECALCULUS**

(A grade of C or better must be earned in this course if being used to satisfy the general education mathematics requirement.) Prerequisites: Completion of high school algebra I and II with a grade of C or better and a score of 19 or above on the mathematics portion of the ACTE exam, or score of 460 or above on the quantitative portion of the SAT, or score of 41 or above on the COMPASS mathematics section, or MATH 1113 and MATH 1203, or a grade of C or better in MATH 0903. This course is designed to provide additional mathematical background before enrolling in the calculus sequence.

**MATH 2033  
MATH CONCEPTS I**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 1113. For elementary education majors. Elementary set theory, numeration systems, elementary number theory and the real number system.

**MATH 2043  
MATH CONCEPTS II**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2033. For elementary education majors. A continuation of MATH 2033, including a study of the elementary concepts of probability and statistics, and an informal study of geometry.

**MATH 2163  
INTRO/STATISTICAL METH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 1113 or consent of the instructor. Descriptive statistics, random variables, probability and sampling distributions, estimation, hypothesis testing, regression, analysis of variance, non parametric techniques. May not be taken for credit after completion of MATH 3153.

**MATH 2183  
STATISTICAL PROC CONTROL**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2163 or equivalent. This is a course in statistical process control using Deming's philosophy for the improvement of quality, productivity, and competitive position.

**MATH 2223  
QUANTITATIVE BUSINESS ANALYSIS**

(A grade of C or better must be earned in this course if being used to satisfy the general education mathematics requirement.) Prerequisite: MATH 1113. This course is designed to develop the ability to use quantitative methods in accounting, business, and economics; it includes models of cost, revenue, and profit, linear programming, and probability.

**MATH 2243  
CALCULUS-BUSINESS/ECON**

(A grade of C or better must be earned in this course if being used to satisfy the general education mathematics requirement.) Prerequisite: Completion of high school algebra I and II with a grade of C or better and a score of 22 or higher on the mathematics portion of the ACTE exam or MATH 1113. An introduction to the concepts of differentiation and integration. Emphasis will be placed on applications of calculus in business, economics, accounting, social sciences, and life sciences. May not be taken for credit after completion of MATH 2914 or equivalent.

**MATH 2703  
DISCRETE MATHEMATICS**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 1113. A study of graph theory, trees, combinatorics, logic, and Boolean Algebra.

**MATH 2914  
CALCULUS I**

Prerequisites: Math ACTE score of 24 or higher, or a grade of C or higher in MATH 1914 or MATH 1203 or consent of instructor. This is the first of two courses covering the calculus of functions of a single variable. The content covers differentiation of all single variable functions and introduces integration of functions.

**MATH 2924  
CALCULUS II**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2914 or equivalent. This is the second of two courses covering the calculus of functions of a single variable.

**MATH 2934  
CALCULUS III**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2924 or equivalent. This is the third course in the elementary calculus sequence. It covers the calculus of functions of several variables.

**MATH 2981  
SPECIAL TOPICS IN MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: Math ACTE score of 22 or higher, or MATH 1113, or consent of instructor. This course will be offered on an as-needed basis to cover topics in mathematics that are not otherwise covered in the curriculum. The content and credit for this course will vary according to the interests and needs of the student. This course may be repeated for credit if the course content differs.

**MATH 2982  
SPECIAL TOPICS IN MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: Math ACTE score of 22 or higher, or MATH 1113, or consent of instructor. This course will be offered on an as-needed basis to cover topics in mathematics that are not otherwise covered in the curriculum. The content and credit for this course will vary according to the interests and needs of the student. This course may be repeated for credit if the course content differs.

**MATH 2983  
SPECIAL TOPICS IN MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: Math ACTE score of 22 or higher, or MATH 1113, or consent of instructor. This course will be offered on an as-needed basis to cover topics in mathematics that are not otherwise covered in the curriculum. The content and credit for this course will vary according to the interests and needs of the student. This course may be repeated for credit if the course content differs.

**MATH 3003  
FOUNDATIONS OF NUMBERS**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2703. A brief review of elementary set theory, followed by the construction of the natural numbers, the integers, the rational numbers, the real numbers and the complex numbers accompanied by a development of the order and field properties.

**MATH 3033  
METH TEACH ELEM MATH**

Prerequisite: MATH 2043 and admission to Stage II. A course on methods of teaching the mathematics of the elementary school using mathematical concepts and principles taught in these grades

**MATH 3123  
COLLEGE GEOMETRY**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2924. A formal approach to plane geometry with coordinates; sets, points, lines, planes, distance, and coordinate systems; angles, congruence, parallelism, and similarity.

**MATH 3153  
APPL STATISTICS I**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2924. A balanced approach emphasizing both theory and applications will be taken. Topics include descriptive statistics, exploratory data analysis, probability and probability models, discrete and continuous random variables, confidence intervals, hypothesis testing, and control charts. Students will be required to collect data, use a current statistical software package to analyze the data, and make inferences based upon the data analysis as part of an individual and/or group project.

**MATH 3203  
INTRO TO ANALYSIS**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisites: MATH 3003. A careful development of the real number system and the theory of calculus on the real line.

**MATH 3243  
DIFF EQUATIONS I**

Corequisite: MATH 2924. A study of differential equations of the first order; linear equations of higher order including the methods of undetermined coefficients and variation of parameters; linear equations with constant coefficients; special equations of order two and systems of linear first-order differential equations using matrices.

**MATH 4003  
LINEAR ALGEBRA I**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2924. Matrices and matrix algebra, systems of linear equations, determinants, eigenvalues, eigenvectors, general vector spaces, linear transformations.

**MATH 4033  
ABSTRACT ALGEBRA I**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 3003. A study of Groups and other algebraic structures. Topics include sub-groups, normal sub-groups, abelian groups, groups of permutations, homomorphisms, kernels, and range.

**MATH 4103  
LINEAR ALGEBRA II**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 4003 or the consent of the Department of Mathematics. A continuation of MATH 4003 with emphasis on abstract vector spaces, inner product spaces, linear transformations, kernel and range, and applications of linear algebra. MATH 5103 may not be taken for credit after completion of MATH 4103 or equivalent.

**MATH 4113**  
**HISTORY OF MATHEMATICS**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2934. A study of selected topics from the history and nature of mathematics from ancient to modern times. Emphasis will be placed on the historical development of mathematics through a study of biographies of prominent mathematicians and the evolution of some important mathematical concepts. The fundamental role of mathematics in the rise, maintenance, and extension modern civilization will be considered. MATH 5113 may not be taken for credit after completion of this course.

**MATH 4123**  
**MATHEMATICAL MODELING**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisites: MATH 2703 and MATH 3243. This course provides an introduction to the mathematical modeling process and applies this process to problems that may be modeled with pre senior level mathematics. Emphasis will be placed on connections of mathematics to application areas such as business, industry, economics, physical sciences, biological sciences, medicine and social sciences.

**MATH 4133**  
**ABSTRACT ALGEBRA II**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 4033. Groups, subgroups, homomorphisms, isomorphisms, complex numbers, finite groups.

**MATH 4153**  
**APPLIED STATISTICS II**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 3153. This course is a continuation of MATH 3153 with emphasis on experimental design, analysis of variance, and multiple regression analysis. Students will be required to design and carry out an experiment, use a current statistical software package to analyze the data, and make inferences based upon the analysis.

**MATH 4173**  
**ADVANCED BIOSTATISTICS**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: An introductory statistics course or permission of instructor. This course will include analysis of variance, one factor experiments, experimental design with two or more factors, linear and multiple regression analysis, and categorical data analysis.

**MATH 4243**  
**DIFF EQUATIONS II**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisites: MATH 3243 and MATH 4003 or consent of the instructor. A continuation of MATH 3243 with emphasis on higher order and systems of differential equations.

**MATH 4253  
ADVANCED CALCULUS I**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 3203. The real numbers, the topology of cartesian spaces and convergence of continuous functions.

**MATH 4263  
MATHEMATICAL STATISTICS**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 3153. This is an introductory course in mathematical statistics. Topics include distribution functions (both discrete and continuous), multivariate distributions, distributions of functions of random variables, and statistical inference.

**MATH 4273  
COMPLEX VARIABLES**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 2934. An introduction to complex variables. This course will emphasize the subject matter and skills needed for applications of complex variables in science, engineering, and mathematics. Topics will include complex numbers, analytic functions, elementary functions of a complex variable, mapping by elementary functions, integrals, series, residues and poles and conformal mapping. MATH 5273 may not be taken for credit after completion of this course.

**MATH 4283  
ADVANCED CALCULUS II**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 4253. Differentiation, integration and infinite series.

**MATH 4293  
INTRODUCTORY TOPOLOGY**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisite: MATH 4253. Metric spaces, topological spaces, mappings, limit point, continuity, connectedness, and compactness. MATH 5293 may not be taken for credit after completion of this course.

**MATH 4343  
INTRO PARTIAL DIFFERENTIAL EQU**

Prerequisites: MATH 2934 and MATH 3243. This course is an introduction to partial differential equations with emphasis on applications to physical science and engineering. Analysis covers the equations of heat, wave, diffusion, Laplace, Dirichlet and Neumann equations. Course is suitable for senior level or first year graduate students in Mathematics, Physics, and Engineering.

**MATH 4703  
SPEC MEHODS IN MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) Prerequisites: SEED 2002 and junior standing or permission of the instructor. This course, designed for prospective junior and senior high mathematics teachers, will provide the student with

knowledge of current research and practice in mathematics education, a setting in which to apply that knowledge, and the opportunity to assess their teaching performance and formulate a plan for improvement.

**MATH 4772**  
**MATH TEACHING PRACTICUM**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) A course designed to provide mathematics education majors with experience in teaching mathematics and assessing student performance.

**MATH 4951**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MATH 4952**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MATH 4953**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MATH 4954**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MATH 4991**  
**SPEC PROB/MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) The content and credit for this course will be designed to meet the needs of the student.

**MATH 4992**  
**SPEC PROB/MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) The content and credit for this course will be designed to meet the needs of the student.

**MATH 4993**  
**SPEC PROB/MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) The content and credit for this course will be designed to meet the needs of the student.

**MATH 4994**  
**SPEC PROB/MATH**

(A grade of C or better must be earned in the course used to satisfy the general education mathematics requirement.) The content and credit for this course will be designed to meet the needs of the student.

**MCEG 1002**  
**ENGINEERING GRAPHICS**

General course in the most important types of engineering drawings. A foundation course in lettering, geometrical exercises, orthographic projections, including auxiliary views, sections, pictorial representation. The computer is introduced as a drafting tool. Lecture and laboratory four hours.

**MCEG 1012**  
**INTRO TO ENGINEERING**

Prerequisite: MATH 1113 or any higher level mathematics course. An introductory course to acquaint students with the technical and social aspects of engineering, the analytic approach to problem solving, measurements and calculations, including application of computer techniques. Lecture one hour, laboratory two hours.

**MCEG 2013**  
**STATICS**

Prerequisites: MATH 2924. and PHYS 2114. Principles of statics, resultants, equilibrium, and analysis of force systems. Structure analysis, forces in space, friction, centroids, and moments of inertia. Lecture three hours.

**MCEG 2023**  
**ENGINEERING MATERIALS**

Prerequisite: CHEM 2124. A study of the mechanical and physical properties, micro structure, and the various testings of engineering materials (metals, plastics, woods, and concrete) from the viewpoint of manufacture and construction. Lecture three hours.

**MCEG 2033**  
**DYNAMICS**

Prerequisites: MCEG 2013. Prerequisite or Corequisite: MATH 3243. A continuation of MCEG 2013. Study of problems of unbalanced force systems. Kinematics and kinetics of rigid bodies. Work and energy, impulse and momentum. Lecture three hours.

**MCEG 2203  
COMPUTATIONAL METH/ENGR**

Prerequisite: MCEG 1012 and MATH 2914. An introduction to common computational methods, tools, and procedures used in the solution of common engineering problems. A standard solution methodology is introduced along with instruction in units systems, spreadsheet and calculator computations and the use of engineering software. Lecture two hours.

**MCEG 3003  
ENGR MODELING/DESIGN**

Prerequisites: COMS 2803 or MCEG 2203 and MATH 3243. Reduction of engineering systems to mathematical models; methods of analysis using computers; interpretation of numerical results; optimization of design variables. Examples are drawn from various engineering disciplines. Lecture three hours.

**MCEG 3013  
MECHANICS OF MATERIALS**

Prerequisite: MCEG 2013. Fundamental stress and strain relationships, torsion, shear and bending moments, stresses and deflections in beams; introduction to statically indeterminate beams, columns, combined stresses, and safety factors. Lecture three hours.

**MCEG 3023  
MANUFACTURING PROCESSES**

Prerequisites: MCEG 2023 and 3013. Morphological aspects of manufacturing processes, testing of engineering metals, metal working processes, metal forming processes, machining, non-destructive inspection methods, statistical process control, control charts, and total quality management concepts.

**MCEG 3313  
THERMODYNAMICS I**

Prerequisites: MATH 2924 and PHYS 2114. An introduction to thermodynamics, including thermodynamic properties of pure substances, heat and work, the first and second laws of thermodynamics, and entropy with applications to power and refrigeration cycles. Lecture three hours.

**MCEG 3403  
MACHINE DYNAMICS**

Prerequisite: MCEG 2033 and MATH 3243. The study of the relative motion of machine components, force systems applied to these components, the motions resulting from these forces, and their effect on machine design criteria. Lecture 3 hours.

**MCEG 3413  
FUNDAMENT MECH DESIGN**

Prerequisites: MCEG 2033 and 3013. Analysis of machines and components through application of basic fundamentals and principles. Lecture three hours.

**MCEG 3442  
MECHANICAL LABORATORY I**

Prerequisites: MCEG 2023 and MCEG 3013. A study of the basic materials testing procedures and instrumentation. Emphasis will be placed on proper laboratory techniques including data collection, data reduction, and report preparation. Lecture one hour, laboratory three hours.

**MCEG 3503  
BASIC NUCLEAR ENGR**

Prerequisites: MATH 2924, CHEM 2124 and PHYS 2114. An introduction to atomic and nuclear processes and to nuclear science and engineering fundamentals, including the nature of nuclear radiation, the nuclear chain reaction, criticality, power reactor types, and applications of nuclear technology. Lecture three hours.

**MCEG 3512  
RADIATION DETECT LAB**

Prerequisite: MATH 2914, CHEM 2124 or consent. A study of each of the common kinds of nuclear radiation, including the detection and analysis methods and applications to nondestructive assays. Use of computers in analyses. Lecture one hour, laboratory three hours.

**MCEG 3523  
RADIATION HEALTH PHYSICS**

Prerequisites: MATH 2914, CHEM 2124, or consent. A study of the protection of individuals and population groups against the harmful effects of ionizing radiation. Included in the study is: (1) radiation detection and measurement, (2) relationships between exposure and biological damage, (3) radiation and the environment, (4) design criteria for processes, equipment, and facilities so that radiation exposure is minimized, and (5) environmental impact of nuclear power plants. Lecture three hours per week.

**MCEG 3991  
SPEC PROB IN ENGINEERING**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual or specialized study in advanced area under the direction of a faculty advisor.

**MCEG 3992  
SPEC PROB IN ENGINEERING**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual or specialized study in advanced area under the direction of a faculty advisor.

**MCEG 3993  
SPEC PROB IN ENGINEERING**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual or specialized study in advanced area under the direction of a faculty advisor.

**MCEG 3994  
SPEC PROB IN ENGINEERING**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual or specialized study in advanced area under the direction of a faculty advisor.

**MCEG 4042  
METALLURGY LABORATORY**

Corequisite: MCEG 4043. Laboratory experiments in heat treating, phase transformation, plastic deformation, work hardening and creep. Concepts and topics from MCEG 4043 are emphasized in the lab exercises. Failure analysis modes and examples are included. Lecture one hour, lab three hours.

**MCEG 4043  
PHYSICAL METALLURGY**

Prerequisites: MCEG 2023, 3013, 3313. This course provides the student with an in-depth background to the mechanisms and applications of dislocation motion, crystal plasticity, phase transformations and solidification processes. Common industrial and experimental processes are studied for both ferrous and non-ferrous materials. Lecture three hours.

**MCEG 4053  
CORROSION PRINCIPLES**

Prerequisites: MCEG 2023, 3013, 3313. A study of the fundamental causes of corrosion and corrosion damage in metals and metallic components. Electrochemistry is used to explore the basic reactions governing environmental corrosion while thermodynamics and kinetics are used to investigate the rate of controlling steps of environmental attack. Includes an overview of techniques commonly used to control corrosion damage in industry and architecture. Lecture three hours.

**MCEG 4202  
ENGINEERING DESIGN**

(MCEG majors) prerequisite: Senior standing and MCEG 3413. This course serves as the first part of a two course sequence in which the student completes a senior design project. Design methodologies and tools including real world design considerations such as environmental impact, engineering ethics, economics, safety, product costing and liability are introduced. Design for manufacture, project management, scheduling and proposal writing will be covered. Successful completion of this course shall require completion of a proposal for a senior design project being accepted by the faculty design project review process.

**MCEG 4323  
POWER PLANT SYSTEMS**

Prerequisite: MCEG 3313 or consent. Prerequisite or corequisite: MCEG 4403. A study of the design and operation of steam electric power plant components and systems. Fossil and renewable energy plants are emphasized. Lecture three hours.

**MCEG 4332  
THERMAL SYSTEMS LAB**

Prerequisites: MCEG 3313, 4403. Corequisites: MCEG 4433, 4443. Advanced laboratory experiments in heat transfer and thermal systems. Conduction, convection and radiation heat transfer phenomena, power and refrigeration cycle operation, psychometrics. Lecture one hour, laboratory three hours.

**MCEG 4343  
INTERNAL COMB ENGINEES**

Prerequisites: MCEG 3313 and MCEG 4403. A study of the operating and design principles of internal combustion engines. The course will cover combustion cycles, emissions, and performance analysis and testing. Lecture three hours with lab exercises.

**MCEG 4403  
MECH/FLUIDS/HYDRAULICS**

Prerequisites: MCEG 2033 and 3313. A study of statics and dynamics of incompressible fluids. Major topics include the basic fluid flow concepts of continuity, energy and momentum, dimensional analysis, viscosity, laminar and turbulent flows, and flow in pipes. Lecture three hours.

**MCEG 4413  
FINITE ELEMENT ANALYSIS**

Prerequisites: ELEG 2103, MCEG(ELEG)3003, and MCEG 3013. Introduction to approximate methods using finite elements. Development of the finite element method using variational formulations. Applications include machine design, mechanical vibrations, heat transfer, fluid flow and electromagnetics.

**MCEG 4423  
MACH COMPONENT DESIGN**

Prerequisite: MCEG 3413 and MATH 3153. Design and analysis of specific machine components including gears, clutches, springs, and bearings. Lecture three hours.

**MCEG 4433  
THERMODYNAMICS II**

Prerequisites: MATH 2934, 3243 and MCEG 3313. A continuation of MCEG 3313. The study of thermodynamics is extended to the investigation of relations for simple substances, non-reacting mixtures, reacting mixtures, chemical reactions and a study of availability analysis. Power and refrigeration cycles are studied in more depth. Lecture three hours.

**MCEG 4442  
MECH LABORATORY II**

Prerequisites: MCEG 3442 and 4403. A study of fluid mechanics, thermodynamics, and heat transfer experimentation techniques. Laboratory projects will be assigned with student responsibility for procedure development and test program implementation. Formal laboratory reports will be required. Lecture one hour, laboratory three hours.

**MCEG 4443  
HEAT TRANSFER**

Prerequisites: MCEG 3313 and MCEG 4403. Basic thermal energy transport processes, conduction, convection, and radiation, and the mathematical analysis of systems involving these processes in steady state and time dependent cases. Lecture three hours.

**MCEG 4453  
ENERGY MANAGEMENT**

Prerequisite: MCEG 3313. Energy management in commercial building and industrial plants. Utility rate structures. Sources of primary energy. Energy conversion devices. Prime movers of energy. Heat. Electricity. Lighting. HVAC Equipment. Building envelope. Electric motors. Estimating energy savings. Economic justification. Energy auditing.

**MCEG 4463  
HEAT/VENT/AIR-COND DESIG**

Prerequisites: MCEG 3313 or permission of instructor. A study of the principles of human thermal comfort including applied psychometrics and air-conditioning processes. Fundamentals of analysis of heating and cooling loads and design of HVAC systems. Lecture 3 hours.

**MCEG 4473  
MECHANICAL VIBRATIONS**

Prerequisites: MCEG 2033, MATH 3243. The study of free and forced vibration of single degree-of-freedom systems, response to harmonic, periodic and non-periodic excitations. Multi-degree-of-freedom systems and matrix methods are explored. Computational techniques for predicting system response continuous systems are introduced. Lecture three hours.

**MCEG 4493  
MECH DESIGN PROJECT**

Prerequisite: MCEG(ELEG) 3003, 4202, MCEG 4423, senior standing and consent of instructor. An independent or group project in mechanical engineering design. Where appropriate, a team approach will be employed. Emphasis will be placed on designing a mechanical system or sub system with due regard for: safety, environmental concerns, reliability, longevity, ease of manufacturing, maintainability, and cost effectiveness. Both a written and oral report are required.

**MCEG 4503  
NUCLEAR POWER PLANTS I**

Prerequisites: MCEG 3503, MCEG 4403. A study of the various types of nuclear reactor plants including the methods used for energy conversion. Relative advantages/disadvantages of various plant types investigated. Lecture three hours.

**MCEG 4991  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**MCEG 4992  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**MCEG 4993  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**MCEG 4994  
SPEC PROB/ENGR**

Prerequisite: Minimum of three hours at the junior level in area of study. Individual study in advanced area of the student's choice under the direction of a faculty advisor.

**MEDT 4012  
CL MICROSCOPY/BODY FL**

(Medical Technology courses are offered at affiliated institutions.) Use of the microscope in laboratory diagnostic procedures and introduction to body fluid chemistry, particularly blood, urine and spinal fluids. Emphasis on pathological conditions resulting from abnormal concentrations of substances.

**MEDT 4013  
CL MICROSCOPY/BODY FL**

(Medical Technology courses are offered at affiliated institutions.) Use of the microscope in laboratory diagnostic procedures and introduction to body fluid chemistry, particularly blood, urine and spinal fluids. Emphasis on pathological conditions resulting from abnormal concentrations of substances.

**MEDT 4029  
HEMATOLOGY**

(Medical Technology courses are offered at affiliated institutions.) Consideration of typical and atypical medical laboratory procedures in hematology with emphasis on principles, methodology, sources of error, and clinical application. Supervised training in standard and special laboratory techniques.

**MEDT 4035  
IMMUNO-HEMATOLOGY**

(Medical Technology courses are offered at affiliated institutions.) Consideration of typical and atypical medical laboratory procedures in immuno hematology and blood banking with emphasis on principles, methodology, sources of error, and clinical application. Supervised training in standard and special laboratory techniques.

**MEDT 4048  
CLINICAL CHEM/INSTRUM**

(Medical Technology courses are offered at affiliated institutions.) Consideration of methods of determining chemical composition of body fluids and analysis using standard and special laboratory instruments. Study of design, construction, and operation of instruments such as balances, centrifuges, pH meters, autoanalyzers, null balances, others.

**MEDT 4049  
CLINICAL CHEM/INSTRUM**

(Medical Technology courses are offered at affiliated institutions.) Consideration of methods of determining chemical composition of body fluids and analysis using standard and special laboratory instruments. Study of design, construction, and operation of instruments such as balances, centrifuges, pH meters, autoanalyzers, null balances, others.

**MEDT 4056  
MICROBIOLOGY**

(Medical Technology courses are offered at affiliated institutions.) Consideration of typical and atypical medical laboratory procedures in microbiology with emphasis on diagnostic medical bacteriology virology, and mycology. Supervised training in standard and special laboratory techniques.

**MEDT 4057  
MICROBIOLOGY**

(Medical Technology courses are offered at affiliated institutions.) Consideration of typical and atypical medical laboratory procedures in microbiology with emphasis on diagnostic medical bacteriology virology, and mycology. Supervised training in standard and special laboratory techniques.

**MEDT 4064  
PARASITOLOGY**

(Medical Technology courses are offered at affiliated institutions.) Consideration of typical and atypical medical laboratory procedures in parasitology with emphasis on methodology and clinical application. Supervised training in standard and special laboratory techniques.

**MEDT 4073  
SEROLOGY**

(Medical Technology courses are offered at affiliated institutions.) Consideration of typical and atypical medical laboratory procedures in serology with emphasis on methodology, sources of error, and clinical application. Supervised training in standard and special laboratory techniques.

**MEDT 4081  
SPECIAL TOPICS**

(Medical Technology courses are offered at affiliated institutions.) Subject matter may include the following: hospital orientation, laboratory management, radioisotope techniques, laboratory safety, special projects, special techniques, quality control procedures, and seminars on various subjects deemed necessary by hospital personnel.

**MEDT 4082  
SPECIAL TOPICS**

(Medical Technology courses are offered at affiliated institutions.) Subject matter may include the following: hospital orientation, laboratory management, radioisotope techniques, laboratory safety, special projects, special techniques, quality control procedures, and seminars on various subjects deemed necessary by hospital personnel.

**MGMT 2013  
MGT PRODUCTIVITY TOOLS**

Prerequisites: COMS 1003 or BUAD 2003. A course designed to provide students with advanced training in the use of information technology for solving business problems. Students will work in groups on a variety of projects and with a variety of tools.

**MGMT 3003  
MGT/ORGANIZ BEHAVIOR**

(Additional prerequisites for 3000- and 4000-level courses are listed in the College of Business section of this catalog.) Each semester. Basic principles of management and organizational behavior including planning, organizing, leading, controlling, staffing, decision making, ethics, interpersonal influence, and group behavior; conflict management; job design; and organizational change and development.

**MGMT 3103  
OPERATIONS MANAGEMENT**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Each semester. Prerequisites: MGMT 2013, BUAD 2053, and MGMT 3003. A study of the overall operations management task. Critical issues include its integration of market issues, the development of operations strategies, and the management of people. Specific attention is given to the design and development of services and products and the systems by which they are produced and delivered. Factors central to the operations management task include capacity, technology, scheduling and execution, quality, inventory, the significant role of managing the supply chain, and process and delivery system reliability and maintenance.

**MGMT 3113  
MANAGERIAL PROCESS ANALYSIS**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) This course is a study of the analysis, mapping, and improvement of business processes using standard symbols, popular software tools, metrics, and general systems theory. Examples of sample business processes and topics include customer service, sales management, scheduling, manufacturing, supply chain management, logistics, hiring/job search, process mapping diagrams, organizational charts, workflow and environment layout, cause and effect analysis, systems analysis and design, collection and analysis of process data, and optimization. Software tools are used for process diagramming, concept mapping, physical facilities layout, project planning and management, and data filtering and analysis.

**MGMT 3123  
BUSINESS ETHICS**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) This course is an interdisciplinary study of business ethics and the social responsibility of business organizations in society. The course will consider professional and applied ethics, law and organizational behavior. The focus of the course is on the individual managerial decision making process in response to ethical issues arising in the business context. Students will explore the role of business in society; discuss general theories of ethics; explain and apply key ethical theories in business; and develop and defend their own ethical positions.

**MGMT 4013  
MANAGEMENT INFO SYSTEMS**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Each semester. Prerequisites: COMS 1003 or BUAD 2003, and BUAD 2053, MGMT 2013, MGMT 3003, and MKT 3043. A study of information processing, the systems concept, the analysis and design of information systems, and database hardware and software technology as they apply to producing information to be used in business decision making. Emphasis will be given to practical application for business.

### **MGMT 4023 PER/HUMAN RESOURCE MGT**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: MGMT 3003. A study of that function performed in organizations which facilitates the most effective use of people (employees) to achieve organizational and individual goals. Topics covered include the law and personnel/human resource management, personnel analysis, planning, and staffing; performance evaluation and compensation, training and developing of human resources; labor relations, employee safety and health; work scheduling; evaluation of personnel/ human resources management.

### **MGMT 4033 INTERNSHIP I IN MGMT**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Instructor, Department Head and Dean; Junior Standing; minimum 2.5 overall GPA. A supervised, practical experience providing undergraduate MGMK majors with a hands-on professional management/ marketing experience in a position relating to an area of career interest. The student will work in a local cooperating business establishment under the supervision of a member of management of that firm. A College of Business faculty member will observe and consult with the students and the management of the cooperating firm periodically during the period of the internship. Students will be required to make oral reports in the classroom, maintain an internship log, and prepare a final term paper. Note: Only three hours of internship may be used to satisfy the curriculum requirements for management or marketing electives. Additional hours may be used to satisfy the curriculum requirements for general electives.

### **MGMT 4043 INTERNSHIP II IN MGMT**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: Internship I, permission of the Instructor, Department Head and Dean; Junior Standing; minimum 2.5 overall GPA. To be taken after completion of Internship I. A supervised, practical experience providing undergraduate MGMK majors with a hands-on professional management/marketing experience in a position relating to an area of career interest. The student will work in a local cooperating business establishment under the supervision of a member of management of that firm. A College of Business faculty member will observe and consult with the students and the management of the cooperating firm periodically during the period of the internship. Students will be required to make oral reports in the classroom, maintain an internship log, and prepare a final term paper. Note: Only three hours of internship may be used to satisfy the curriculum requirements for management or marketing electives. Additional hours may be used to satisfy the curriculum requirements for general electives.

### **MGMT 4053 SMALL BUSINESS MGMT**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisites: MGMT 3003, MKT 3043, and senior standing. Application of business management principles to the creation and operation of small scale enterprises. Emphasis on the preparation and implementation of business plans for such enterprises.

### **MGMT 4063 ENTREPRENEURIAL DEVELOPMENT**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: approval from instructor. The course is designed to increase the students' understanding of critical entrepreneurial and venture creation concepts through practical applications and through textual readings. Specifically, students will take preliminary small business plans and develop and formalize plans that will be submitted for competition consideration at the annual Donald W. Reynolds Governor's Cup business plan competitions.

**MGMT 4073  
SPECIAL TOPICS IN MGM**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: MGMT 3003. In-depth exploration of selected management topics. The primary topic will vary from offering to offering; thus, the course may be taken more than once.

**MGMT 4083  
BUSINESS POLICY**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Each semester. Prerequisites: Senior standing and completion of all junior-level College of Business core courses except FIN 3063 and MGMT 3103, which may be taken concurrently. As the capstone course in the College of Business core, this course examines the application of strategic management processes, including top management's role in situational analysis, strategy selection, strategy implementation, and strategic control, under conditions of uncertainty.

**MGMT 4093  
HUMAN BEHAVIOR/ORGANIZ**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: MGMT 3003. A study of individual and group behavior in organizations. Topics covered include personality and individual differences, personal systems, values and ethics, perception, attribution theory, goal setting, reinforcement theory, theories of motivation and leadership, group systems, power and social influence, and organizational structure.

**MGMT 4113  
MGMT ISSUES/E-COMMERCE**

Prerequisites: MGMT 2013, MGMT 3003, and MKT 3043. A study of managerial issues and strategies involved in Internet-based buying and selling activities. The course examines appropriate business models and best practices in generating revenue, market share, and profit from wholesaling and retailing activities in business-to-consumer, business-to-business, and consumer-to-consumer venues. Topics include initiation and management of electronic commerce operations, technological infrastructure and tools, marketing, customer relationship management, electronic payment, security, staffing, social impacts, ethics, regulation, and international markets.

**MGMT 4203  
PROJECT MANAGEMENT**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisites: COMS 1003, BUAD 2053, MGMT 3003, MGMT 4013, MKT 3043, or instructor approval. Project Management is studied from a practical perspective. In this course, students explore techniques of organizing the three main elements of project management: cost, schedule and scope, as well as how to manage the most important aspect of Project Management: PEOPLE. Students will learn to utilize software that aids in the visualization of the project management process. The emphasis of this special topic in management will be aimed toward an understanding of Project Management for future business leaders and engineers. The course will culminate with a month-long, graded, practical exercise with industry where students will be organized into teams or as individual developers and sent to explore all aspects of a problem, conduct a project initiation workshop, and then present a project management plan to the leadership of that participating industry.

**MGMT 4213  
BUSINESS LEADERSHIP**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisites: MGMT 3003, MKT 3043, or instructor approval. The course is an overview of the concepts and issues associated with contemporary leadership. It outlines the challenges, methods, and responsibilities of leading in our society. It covers what every informed citizen should know about leading in a variety of settings: the processes, styles, and pitfalls. We will address leader development, and discuss ethical issues related to leading. Guest speakers and student presentations will provide real world contemporary experiences for comparison to the text materials. Students are expected to be active participants in class. The final paper will serve as a roadmap for leadership development for each student for the next ten years.

**MGMT 4223****LEADERSHIP: ART/FILM/HIST/LIT**

Prerequisites: Junior standing or instructor permission. This course probes the definition, meaning, practice, and paradox of leadership by exploring ideas and images found in diverse domains such as film, art, literature, and history. These ideas and images are used as a platform for examining leadership challenges and for developing personal insights into leadership practice, issues and values.

**MKT 3043****PRINCIPLES/MARKETING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Each semester. Marketing fundamentals, the ultimate consumer, the retailing and wholesaling systems, marketing functions, marketing policies, marketing costs, critical appraisal of marketing, marketing and the government.

**MKT 3163****CONSUMER BEHAVIOR**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: MKT 3043. A study of the development of consumer decision making processes and the factors which influence them. Psychological, sociological, economic, cultural, and situational factors are examined. Their impact on marketing formulation, both domestic and international, is emphasized.

**MKT 4033****INTERNSHIP I IN MKT**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Permission of the Instructor, Department Head and Dean; Junior Standing; minimum 2.5 overall GPA. A supervised, practical experience providing undergraduate MGMT majors with a hands-on professional management/ marketing experience in a position relating to an area of career interest. The student will work in a local cooperating business establishment under the supervision of a member of management of that firm. A College of Business faculty member will observe and consult with the students and the management of the cooperating firm periodically during the period of the internship. Students will be required to make oral reports in the classroom, maintain an internship log, and prepare a final term paper. Note: Only three hours of internship may be used to satisfy the curriculum requirements for management or marketing electives. Additional hours may be used to satisfy the curriculum requirements for general electives.

**MKT 4043****INTERNSHIP II IN MKT**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: Internship I, permission of the instructor, Department Head and Dean; Junior Standing; minimum 2.5 overall GPA. To be taken following completion of Internship I. A supervised, practical experience providing undergraduate MGMT majors with a hands-on professional management/marketing experience in a position relating to an area of career interest. The student will work in a local cooperating business establishment under the supervision of a member of management of that firm. A College of Business faculty member will observe and consult with the students and the management of the cooperating firm periodically during the period of the internship. Students will be required to make oral reports in the classroom, maintain an internship log, and prepare a final term paper. Note: Only three hours of internship may be used to satisfy the curriculum requirements for management or marketing electives. Additional hours may be used to satisfy the curriculum requirements for general electives.

**MKT 4053****SPORT/EVENT MARKETING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisites: MKT 3043, or instructor approval. To apply marketing concepts to sporting, cultural, historical, and charitable activities and events. To examine the performance, production, and promotional segments of the sport and event markets.

**MKT 4063  
ADVERTISING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: MKT 3043. The "how" and "why" of advertising: principal problems faced by advertisers and advertising agencies, approaches, policies, and procedures as related to successful marketing techniques.

**MKT 4073  
SERVICE MARKETING MGMT**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: MKT 3043. The course offers an in-depth exploration of the differences between tangible goods and services, the problems created by those differences, and the ways in which marketing managers can overcome these problems. The primary focus of the course will be on differences in consumer evaluation processes between goods and services, and specific issues that marketers have to address when dealing with services.

**MKT 4093  
INTERNATIONAL MARKETING**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: MKT 3043. Analysis of opportunities, distinctive characteristics and emerging trends in foreign markets, including exploration of alternative methods and strategies for entering foreign markets; organizational planning and control; impact of social, cultural, economic and political differences; and problems of adapting American marketing concepts and methods.

**MKT 4103  
SPECIAL TOPICS IN MKT**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Prerequisite: MKT 3043. In-depth exploration of selected marketing topics. The primary topic will vary from offering to offering, thus, the course may be taken more than once.

**MKT 4143  
MARKETING MANAGEMENT**

Fall. Prerequisites: MKT 3043, MGMT 3003, MKT 3163 and senior standing. Advanced study of decisions facing a marketing executive. Topics covered include product planning, consumer behavior, promotion, sales management, and pricing.

**MKT 4153  
MARKETING RESEARCH**

(Additional prerequisites for 3000- and 4000- level courses are listed in the College of Business section of this catalog.) Spring. Prerequisites: BUAD 2053, MKT 3043. A study of the development of the basic methodology in research design for primary and secondary data, including requirements for collection, analysis, editing, coding, and presentation of data to support marketing decisions.

**MLED 2003  
INTRO TO EDUCATION**

Prerequisite: Stage I course and will be taken before admittance to the Middle Level Teacher Education Program. Introduction to philosophy of education and to the concept of education as a career with an emphasis on middle-level education. The format will include a weekly lecture and on-site field experiences in

a public school setting. This course will also provide potential middle-level teachers with an overview of the social and historical aspect of the American Education System.

**MLED 3012  
RESEARCH FOUNDATIONS**

Prerequisite: Admission of Stage II to the Middle Level Teacher Education Program. Presentation of the knowledge base and practice in the skills needed to locate educational research information; analyze, synthesize, and evaluate the compiled materials; and write a professional research report based on the composite findings.

**MLED 3024  
PSY FND/NATURE/NEEDS MLS**

Prerequisite: Admission to Stage II of the Middle Level Teacher Education Program. General principles of the physical, social, emotional, intellectual, and moral development of early adolescents and the developmental implications on curriculum and instruction, learning, the learner's potentialities with attention to individual differences, the environment of effective learning, application of psychology to educational problems.

**MLED 3034  
LITERACY DEVELOPMENT**

Prerequisite: Admission to Stage II of the Middle Level Teacher Program. Presentation of the knowledge base and methodology needed to guide students in the middle grades toward competency and maturity as readers and writers and practice in the teaching/learning strategies related to reading in all content area disciplines.

**MLED 3041  
SCHOOL TO HOME COMM**

Prerequisite: Admission to Stage II of the Middle Level Teacher Education Program. Presentation of methods of communication between the home and school for the classroom teacher will be explored. The use of classroom management software for school reports, student information sheets, newsletters, electronic mail, and letters to home as well as telephone skills will be practice. Exploration of the use of community resources and evaluation as related to meeting the needs of middle level students and families.

**MLED 3062  
TESTS/EDUC MEASUREMENTS**

Prerequisite: Admission to Stage II of the Middle Level Program. A survey of test theory with particular emphasis upon the use of assessment techniques in the middle level classroom as an educational decision-making tool.

**MLED 3072  
DIVERSITY IN CLASSROOM**

Prerequisite: Admission to Stage II of the Middle Level Teacher Education Program. A study of the major areas of exceptionalities including the learning disabled, mentally retarded, physically handicapped, and the gifted, and their special needs in a school program.

**MLED 3102  
READ THRU LIT/MIDDLE AGE**

Prerequisite: Admission to Stage II of the Middle Level Teacher Education Program. A study of the development and source of literature for the middle childhood/early adolescent student. Emphasis will be on integrating literature across the curriculum and on methods of encouraging reading as a lifelong pleasurable pursuit.

#### **MLED 4004 MID LEVEL CURR/PEDAGOGY**

Prerequisite: Admission to Stage II of the Middle Level Teacher Program. A study of the developmental curriculum, instruction and pedagogy for teaching the middle level student. Emphasis will be on an interdisciplinary approach to curriculum design.

#### **MLED 4013 TCHING/YOUNG ADOLESCENT**

Hold ECED P-4 licensure and passing Praxis II score on Middle Childhood Generalist test or permission of Instructor. A study of developmentally appropriate curriculum, instruction and pedagogy for teaching the young adolescent with understanding of the historical perspective of middle schools and programs.

#### **MLED 4023 GUIDED FIELD EXPERIENCES**

Prerequisite: Admission to Stage II of the Middle Level Teacher Education Program and concurrent enrollment in MLED 3012 and MLED 3034. MLED 4023 Guided Field Experiences is a series of 45 hours of observation, participation, and teaching experiences ranging from individual to large group settings conducted in selected middle level settings designed to prepare the teacher candidate for a smooth transition to internship in a clinical setting. A survey of school law designed to give teacher candidates an awareness of legal rights and responsibilities of teachers, students, and public schools is presented at the beginning of the course before students begin practicum hours.

#### **MLED 4033 YOUNG ADOL GROWTH/DEVEL**

Prerequisite: Hold ECED P-4 licensure and passing Praxis II score on Middle Childhood Generalist test or permission of instructor. Prospective middle level teachers will study the educational implications of the developmental period of the young adolescent. An emphasis is placed on developmental characteristics of the young adolescent highlighting the role of the middle level teacher in promoting the healthy development of the young adolescent.

#### **MLED 4043 DIVERSITY/MID LEVEL CLRM**

Prerequisite: Hold ECED P-4 licensure and passing Praxis II score on Middle Childhood Generalist test or permission of instructor. Prospective middle level teachers will study the educational implications of the economic, cultural, racial and intellectually diverse middle level classroom.

#### **MLED 4912 INTERNSHIP**

(Twelve hour course.) Prerequisites: Admission to and Internship. MLED 4912 Internship is a minimum of fifteen weeks of reflective clinical internship at the middle level. In a select setting under supervision of experienced middle level professionals, teacher candidates will prepare, facilitate, and evaluate an appropriate curriculum experience for instruction of the early adolescent. Fee \$100.00.

**MS 1101  
LEADERSHIP I**

Fall. A study of the importance of communications, decision making, and the understanding of human behavior as it affects leadership situations. Includes introduction to basic military skills.

**MS 1102  
LEADERSHIP II**

Fall. A study of the importance of communications, decision making, and the understanding of human behavior as it affects leadership situations. Includes introduction to basic military skills.

**MS 1111  
LEADERSHIP II**

Spring. Introduction to leadership and development and basic tactical skills. Includes introduction to basic military skills.

**MS 2312  
MIL ORGANIZ/TACTICS I**

Fall. Emphasis on the development of effective leadership skills, basic rifle marksmanship training, and on understanding how the leadership process works in organizational situations.

**MS 2402  
MIL ORGANIZ/TACTICS II**

Spring. Continuation of leadership development training from MS 2312. Introduction to practical work in map reading, CPR course and basic lifesaving steps for first aid.

**MS 3503  
ADV LEADERSHIP/TACT I**

Fall. An in-depth study of unit tactics and related individual skills, advanced map reading and their practical application. Emphasis on person to person leadership skill development.

**MS 3603  
ADV LEADERSHIP/TACT II**

Spring. A continuation of MS 3503.

**MS 4013  
U.S. MILITARY HISTORY**

A study of the American military from its colonial origins to the present, including the development of the military establishment and its relationship with American society.

**MS 4703  
APPL LEADERSHIP/MGMT I**

Fall. A study of command and staff functions and practical exercises in planning, organizing, and supervising. Students in this course plan and administer all activities of the cadet corps. Emphasis is placed on leadership and management of larger organizations.

**MS 4803  
APPL LEADERSHIP/MGMT II**

Spring. A continuation of MS 4703.

**MS 4903  
ADVANCED OFFICERSHIP I**

Prerequisite: MS 3503 or MS 4703 and approval of the Professor of Military Science. Advanced Officership I is a special problems course on professional military related topics. The course will emphasize personal and professional goals for officers and related tactics involved in military history.

**MS 4913  
ADVANCED OFFICERSHIP II**

Prerequisite: MS 3503 or MS 4703 and approval of the Professor of Military Science. Advanced Officership II is a special problems course on professional military topics specifically related to the branches of the US Army. The course will emphasize personal and professional goals for each officer by enhancing their knowledge of their assigned branch and component.

**MUS 1000  
RECITAL ATTENDANCE**

Offered on a pass/fail basis. Students are required to attend a specified number of recitals each semester and must pass at least six semesters to receive the B.A. degree in music or bachelor of music education.

**MUS 1001  
APPL MUSIC/TRUMPET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1002  
APPL MUSIC/TRUMPET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1011  
APPL MUSIC/FR HORN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1012  
APPL MUSIC/FR HORN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1021  
APPL MUS/TROMBONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1022  
APPL MUS/TROMBONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1031  
APPL MUS/EUPHONIUM**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1032  
APPL MUS/EUPHONIUM**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1041  
APPL MUS/TUBA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1042  
APPL MUSIC/TUBA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1051  
APPL MUS/CLARINET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1052  
APPL MUS/CLARINET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1061  
APPL MUSIC/OBOE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1062  
APPL MUSIC/OBOE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1071  
APPL MUSIC/FLUTE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1072  
APPL MUSIC/FLUTE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1081  
APPL MUS/SAXOPHONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1082  
APPL MUS/SAXOPHONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1091  
APPL MUSIC/BASSOON**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1092  
APPL MUSIC/BASSOON**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1101  
APPL MUSIC/VIOLIN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1102  
APPL MUSIC/VIOLIN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1111  
APPL MUSIC/VIOLA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1112  
APPL MUSIC/VIOLA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1121  
APPL MUSIC/CELLO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1122  
APPL MUSIC/CELLO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1131  
APPL MUS/STR BASS**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1132  
APPL MUS/STR BASS**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1141  
APPL MUS/PERCUSSION**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1142  
APPL MUS/PERCUSSION**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1151  
CLASS GUITAR I**

For music majors. Introductory class instruction in folk and popular styles of guitar playing with emphasis on guitar as a teaching tool for classroom music instruction.

**MUS 1201  
APPL MUSIC/PIANO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1202  
APPL MUSIC/PIANO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1211  
APPL MUSIC/HARPSICHORD**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1212  
APPL MUSIC/HARPSICHORD**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles

are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1221  
APPL MUSIC/ORGAN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1222  
APPL MUSIC/ORGAN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1231  
APPL MUSIC/VOICE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1232  
APPL MUSIC/VOICE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 1241  
ITALIAN DICTION**

For vocal majors. Study of the rules of pronunciation for Italian lyric diction. Must be taken concurrently with MUS 1232.

**MUS 1301  
OPERA WORKSHOP**

Prerequisite: Permission of instructor. The course of study will involve selected scenes from standard opera literature prepared for dramatic presentation. Research will be required pertaining to the historical setting, appropriate costumes, and mannerisms of the period being studied. Staging techniques and set building will be included as deemed necessary to each presentation.

**MUS 1311  
JAZZ ENSEMBLE**

Membership selected by audition. Study and performance of big band jazz styles from the 1930's to present.

**MUS 1321  
JAZZ PIANO**

As needed. Prerequisites: MUS 1713, MUS 1201 or 1441, or instructor approval. Materials and practices for typical jazz keyboard playing. One hour per week.

**MUS 1431  
CLASS PIANO**

Non music majors. For students who have little or no music reading skills, this course concentrates on basic piano skills while learning to read music. At the end of the course students will play pieces using a chord based approach in several keys and styles.

**MUS 1441  
CLASS PIANO**

For music majors. A development of the fundamental skills of the piano, emphasizing those aspects most useful to non piano majors. A knowledge of chords is stressed, as is sight reading, improvising, playing in all keys and harmonizing melodies. The second year of class piano extends these skills adding the reading of multiple score parts, modulation, harmonizing with secondary chords, improvising in various composers' styles, playing a wide variety of literature, and accompanying. \$10 fee.

**MUS 1501  
BAND**

Open to students who can satisfy audition requirements. Marching Band, fall semester, or permission of instructor is a prerequisite for Concert Band, spring semester. Fall semester stresses marching band. Spring semester stresses symphonic and concert bands in the study and performance of quality literature.

**MUS 1511  
BRASS CHOIR**

Membership selected by audition. Study and performance of representative brass literature. Rehearsal 3 hours weekly.

**MUS 1521  
WOODWIND ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 1531  
BRASS ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 1541  
PERCUSSION ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 1551  
STRING ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 1571  
UNIVERSITY CHOIR**

Open to all students. A select vocal group of approximately sixty members selected by audition. Study and performance of choral literature of all periods.

**MUS 1581  
CHAMBER CHOIR**

Open to all students by audition. A select choral ensemble of approximately sixteen voices specializing in the performance of chamber choral music from all historical periods. Two or three concerts are presented on campus each semester. Off-campus performances include tours and public relations functions for the university.

**MUS 1591  
SM VOCAL ENSEMBLES**

As needed. Open to all students. Participation in the various ensemble groups such as trios and quartets: study of selected music literature. Membership selected by audition. Two hours weekly.

**MUS 1601  
ORCHESTRAL REPERTOIRE**

Prerequisite: permission of instructor. A study of the landmarks of orchestral repertoire for winds and percussion sections through the preparation and rehearsal of the literature. Each course may be repeated three times.

**MUS 1611  
MUSIC THEATRE WORKSHOP**

Prerequisite: permission of instructor. Selected songs from standard musical theatre literature will be prepared for public performance with an emphasis on popular professional performance techniques. Credit will be given for one leading part or for a series of supporting parts. Two hours weekly.

**MUS 1621  
MUSIC THEATRE PRACTICUM**

As needed. Prerequisite: permission of instructor. Credit will be given for participation that results in a public performance of a major production. Vocal, instrumental, and/or audiovisual technological participation will be accepted. A minimum of 28 hours participation is required.

**MUS 1671  
UNIV-COMMUNITY CHOIR**

Evening rehearsals. Open to all students and other interested persons. Assignments made on the basis of voice classification. Study and performance of choral literature of all historical periods. One and one half hours weekly.

**MUS 1681  
CONCERT CHORALE**

Open to all students by audition. A select choral ensemble of choral music from all historical periods. Two or three major concerts are presented each semester.

**MUS 1703  
MUSIC FUNDAMENTALS**

As needed. Music fundamentals to be included are reading pitch and rhythm, basic notation, rudimentary music theory information about scales, harmony, dynamics, tempo; playing a melody instrument; rudimentary ear training, music composition, and music listening skills.

**MUS 1713  
THEORY I**

To be taken concurrently with MUS 1731, 1741. Study of scales, triads, seventh chords, diatonic harmonies, simple modulation. Introduction to small forms.

**MUS 1723  
THEORY II**

To be taken concurrently with MUS 1731, 1741. Study of scales, triads, seventh chords, diatonic harmonies, simple modulation. Introduction to small forms.

**MUS 1731  
EAR TRAINING I**

The elements of music fundamentals, both written and aural.

**MUS 1741  
EAR TRAINING II**

The elements of music fundamentals, both written and aural.

**MUS 2003  
INTRODUCTION TO MUSIC**

Prerequisite: None. An overall view of music history from Medieval to Contemporary times with a focus on relating musical happenings and concepts to the other arts.

**MUS 2201  
ACCOMPANYING SEMINAR**

For piano majors, or by permission of instructor. Development of basic accompanying techniques. Class coaching and presentation one hour weekly, plus assigned accompanying responsibilities in a variety of media. May be repeated three times.

**MUS 2241  
GERMAN DICTION**

For vocal majors. Study of the rules of pronunciation for German lyric diction. Must be taken concurrently with MUS 1232.

**MUS 2251  
FRENCH DICTION**

For vocal majors. Study of the rules of pronunciation for French lyric diction. Must be taken concurrently with MUS 1232.

**MUS 2441  
CLASS VOICE**

(Music majors). Fall. Development of basic vocal techniques through group participation and solo singing. Emphasis is placed on understanding of vocal pedagogy. Supervised practice two hours per week.

**MUS 2451  
CLASS VOICE**

(Non music majors). Fall. Development of basic vocal techniques through group participation and solo singing. Supervised practice two hours per week.

**MUS 2713  
THEORY III**

To be taken concurrently with MUS 2731, 2741. More advanced harmonic concepts, modulation, chromatic harmonies. Further study of larger forms.

**MUS 2723  
THEORY IV**

To be taken concurrently with MUS 2731, 2741. More advanced harmonic concepts, modulation, chromatic harmonies. Further study of larger forms.

**MUS 2731  
EAR TRAINING III**

Further work in more advanced ear training and sight singing.

**MUS 2741  
EAR TRAINING IV**

Further work in more advanced ear training and sight singing.

**MUS 3000  
RECITAL ATTENDANCE**

Offered on a pass/fail basis. Students are required to attend a specified number of recitals each semester and must pass at least six semesters to receive the B.A. degree in music or bachelor of music education.

**MUS 3001  
APPL MUSIC/TRUMPET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3002  
APPL MUSIC/TRUMPET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3003  
APPL MUSIC/TRUMPET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3011  
APPL MUSIC/FR HORN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3012  
APPL MUSIC/FR HORN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3013  
APPL MUSIC/FR HORN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3021  
APPL MUS/TROMBONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3022  
APPL MUS/TROMBONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is

required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3023  
APPL MUS/TROMBONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3031  
APPL MUS/EUPHONIUM**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3032  
APPL MUS/EUPHONIUM**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3033  
APPL MUS/EUPHONIUM**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3041  
APPL MUSIC/TUBA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3042  
APPL MUSIC/TUBA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3043  
APPL MUSIC/TUBA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3051  
APPL MUS/CLARINET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3052  
APPL MUS/CLARINET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3053  
APPL MUS/CLARINET**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3061  
APPLIED MUSIC/OBOE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is

required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3062  
APPLIED MUSIC/OBOE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3063  
APPLIED MUSIC/OBOE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3071  
APPL MUSIC/FLUTE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3072  
APPL MUSIC/FLUTE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3073  
APPL MUSIC/FLUTE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3081  
APPL MUS/SAXOPHONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3082  
APPL MUS/SAXOPHONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3083  
APPL MUS/SAXOPHONE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3091  
APPL MUSIC/BASSOON**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3092  
APPL MUSIC/BASSOON**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3093  
APPL MUSIC/BASSOON**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is

required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3101  
APPL MUSIC/VIOLIN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3102  
APPL MUSIC/VIOLIN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3103  
APPL MUSIC/VIOLIN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3111  
APPL MUSIC/VIOLA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3112  
APPL MUSIC/VIOLA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3113  
APPL MUSIC/VIOLA**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3121  
APPL MUSIC/CELLO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3122  
APPL MUSIC/CELLO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3123  
APPL MUSIC/CELLO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3131  
APPL MUS/STR BASS**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3132  
APPL MUS/STR BASS**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is

required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3133**  
**APPL MUS/STR BASS**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3141**  
**APPL MUS/PERCUSSION**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3142**  
**APPL MUS/PERCUSSION**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3143**  
**APP MUS/PERCUSSION**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3151**  
**CLASS GUITAR II**

For music majors. Prerequisite: MUS 1151 or permission of instructor. Advanced class instruction in guitar playing with emphasis on guitar as a teaching tool for classroom music instruction.

**MUS 3201**  
**APPL MUSIC/PIANO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3202  
APPL MUSIC/PIANO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3203  
APPL MUSIC/PIANO**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3211  
APPL MUSIC/HARPSICHORD**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3212  
APPL MUSIC/HARPSICHORD**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3213  
APPL MUSIC/HARPSICHORD**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3221  
APPL MUSIC/ORGAN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3222  
APPL MUSIC/ORGAN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3223  
APPL MUSIC/ORGAN**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3231  
APPL MUSIC/VOICE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3232  
APPL MUSIC/VOICE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3233  
APPL MUSIC/VOICE**

Musical performance includes private study, class piano, class voice, and ensembles. In numbering applied music courses, the first digit, numeral 1, is used for freshman and sophomore level courses; the numeral 3 for junior and senior level courses. The second and third digits indicate applied concentration area (e.g. 20 = piano) and the final digit indicates hours of semester credit. Applied Music (private instruction) requires permission of the department head and is required of all music majors. Applied music students may be assigned participation in designated ensembles in addition to required ensembles. Ensembles are given in the curricula in Music and Music Education. To qualify for three hours per semester, a student must have a minimum 3.50 cumulative GPA in applied music, a 3.00 cumulative GPA in total hours, junior standing and recommendation of the instructor.

**MUS 3281  
SEC INSTR METH/MAT I**

Laboratory experience in conducting and performance of materials appropriate to teaching band in the public school.

**MUS 3301  
OPERA WORKSHOP**

Prerequisite: Permission of instructor. The course of study will involve selected scenes from standard opera literature prepared for dramatic presentation. Research will be required pertaining to the historical setting, appropriate costumes, and mannerisms of the period being studied. Staging techniques and set building will be included as deemed necessary to each presentation.

**MUS 3311  
JAZZ ENSEMBLE**

Membership selected by audition. Study and performance of big band jazz styles from the 1930's to present.

**MUS 3321  
PRACTICE/IMPROV**

Prerequisite: successful completion of MUS 3332 or instructor approval. Laboratory experience in improvisation in all jazz styles. This course may be repeated for credit.

**MUS 3322  
THEORY OF IMPROVISATION**

Prerequisite: MUS 1713, 1723, 1441, and/or instructor approval. Music theory, materials and practices for improvising or extemporaneous playing. One hour class, two hour laboratory per week. May not be repeated for credit. May not be taken for credit after completion of MUS 3332.

**MUS 3332  
THEORY OF IMPROVISATION**

Prerequisite: Successful completion of MUS 3322. Advanced music theory, materials and practices for improvising or extemporaneous playing. One hour class, two hour laboratory per week. May not be repeated for credit.

**MUS 3401  
BRASS INSTRUMENTS**

For music majors. A study of the instruments of the brass family to the extent that scales and grade one and two solos can be played on selected instruments. Class two hours, practice two hours.

**MUS 3421  
WOODWIND INSTR, DBL REED**

For music majors. A study of playing and teaching techniques of the woodwind family (oboe, bassoon). Playing of selected instruments will be developed through major scales and grade one and two solos or methods.

**MUS 3431  
WOODWIND INSTR, SGL REED**

For music majors. A study of playing and teaching techniques of the woodwind family (flute, clarinet, saxophone). Playing of selected instruments will be developed through major scales and grade one and two solos or methods.

**MUS 3441  
INSTRUMENTAL CONCEPTS**

For vocal and keyboard majors. A study designed to give non-instrumental music education majors functional knowledge of band and orchestral instruments.

**MUS 3442  
PIANO PEDAGOGY**

Spring. A study of pedagogical principles involved in the teaching of private and class piano, with emphasis on outside reading, class discussion, and observation of actual lessons and classes.

**MUS 3481  
STRINGED INSTRUMENTS**

For music majors only. A study of instruments of the string family (violin, viola, cello, and string bass) with emphasis on the fundamentals of good tone production and bowing techniques to the extent that scales and grade one and two orchestra music can be played on selected instruments.

**MUS 3501  
BAND**

Open to students who can satisfy audition requirements. Marching Band, fall semester, or permission of instructor is a prerequisite for Concert Band, spring semester. Fall semester stresses marching band. Spring semester stresses symphonic and concert bands in the study and performance of quality literature.

**MUS 3511  
BRASS CHOIR**

Membership selected by audition. Study and performance of representative brass literature. Rehearsal 3 hours weekly.

**MUS 3521  
WOODWIND ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 3531  
BRASS ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 3541  
PERCUSSION ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 3551  
STRING ENSEMBLES**

Open to all students. Membership selected by audition. Two hours weekly.

**MUS 3571  
UNIVERSITY CHOIR**

Open to all students. A select vocal group of approximately sixty members selected by audition. Study and performance of choral literature of all periods.

**MUS 3581  
CHAMBER CHOIR**

Open to all students by audition. A select choral ensemble of approximately sixteen voices specializing in the performance of chamber choral music from all historical periods. Two or three concerts are presented on campus each semester. Off-campus performances include tours and public relations functions for the university.

**MUS 3591  
SM VOCAL ENSEMBLES**

As needed. Open to all students. Participation in the various ensemble groups such as trios and quartets: study of selected music literature. Membership selected by audition. Two hours weekly.

**MUS 3601  
ORCHESTRAL REPERTOIRE**

Prerequisite: permission of instructor. A study of the landmarks of orchestral repertoire for winds and percussion sections through the preparation and rehearsal of the literature. Each course may be repeated three times.

**MUS 3611  
MUSIC THEATRE WORKSHOP**

Prerequisite: permission of instructor. Selected songs from standard musical theatre literature will be prepared for public performance with an emphasis on popular professional performance techniques. Credit will be given for one leading part or for a series of supporting parts. Two hours weekly.

**MUS 3621  
MUSIC THEATRE PRACTICUM**

As needed. Prerequisite: permission of instructor. Credit will be given for participation that results in a public performance of a major production. Vocal, instrumental, and/or audiovisual technological participation will be accepted. A minimum of 28 hours participation is required.

**MUS 3632  
SURVEY OF MUSIC THEATRE**

As needed. Survey of Music Theatre is a historical survey of the literature, content and performances practices of music theatre. These proficiencies will be surveyed in terms of broadly defined chronological and style periods.

**MUS 3671  
UNIV-COMMUNITY CHOIR**

Evening rehearsals. Open to all students and other interested persons. Assignments made on the basis of voice classification. Study and performance of choral literature of all historical periods. One and one half hours weekly.

**MUS 3681  
CONCERT CHORALE**

Open to all students by audition. A select choral ensemble of choral music from all historical periods. Two or three major concerts are presented each semester.

**MUS 3692  
HISTORY OF MUSIC III**

Prerequisite: MUS 2723, music major or permission of instructor. A study of 20th century music. Includes one unit of non-western music.

**MUS 3702  
MUSIC TECHNOLOGY**

For music majors with junior standing only. Applications of Technology in Music Education. An overview of current technologies to enhance music instruction, assessment, and productivity by the music educator.

**MUS 3712  
COUNTERPOINT**

As needed. Prerequisite: MUS 2723. The contrapuntal techniques and forms of the Baroque era. Analysis of Canons, two and three part Inventions, and fugues of J.S. Bach plus written exercises in two voice counterpoint.

**MUS 3762  
INSTRU/CHORAL ARRANGING**

An introduction to scoring for instrumental and choral groups to meet the needs of adapting music to meet the needs and ability levels of school performing groups and classroom situations.

**MUS 3771  
COMPOSITION**

As needed. Prerequisites: 16 hours of music theory and senior standing or consent of instructor. Offered as demand warrants. The study of basic compositional techniques of twentieth-century works and completion of composition project.

**MUS 3772  
COMPOSITION**

Fall. Prerequisite: MUS 2723 (Theory IV) or permission of instructor. A study of Western Art music from ancient civilization to A.D. 1750.

**MUS 3773  
HISTORY OF MUSIC I**

Fall. Prerequisite: MUS 2723 (Theory IV) or permission of instructor. A study of Western Art music from ancient civilization to A.D. 1750.

**MUS 3783  
HISTORY OF MUSIC II**

Prerequisite: MUS 2723 or permission of instructor. A study of classical and 19th century music.

**MUS 3802  
PRIN/CONDUCTING**

Fall. Principles and practices of conducting; a study of music terminology and transpositions; development of baton techniques based on the practice of outstanding choral and instrumental conductors.

**MUS 3821  
SEC CHORAL METH/MAT I**

Choral conducting techniques, tone and diction styles and interpretation, rehearsal techniques, programs and concerts, planning and organization, and service information. Conducting of student ensembles and organizations. Methods and materials I will include review of literature for large and small ensembles appropriate for middle school, junior high, and smaller high school teaching situations.

**MUS 3853  
MUSIC/ELEM CLASSROOM**

Prerequisites: MUS 2723, successful completion of Keyboard Exit Exam, and SEED 2002 or permission of instructor. A study of current practices, methods, and materials for teaching general music to elementary school children with emphasis on curriculum development and diversity in the classroom.

**MUS 4001  
SENIOR RECITAL**

Prerequisite: Six semesters of major applied study. Required of all music education majors. \$175 Applied Music fee.

**MUS 4201  
ACCOMPANYING SEMINAR**

Prerequisite: Two semesters of MUS 2201 and/or permission of instructor. Advanced accompanying techniques for piano majors. Class coaching and presentation one hour weekly, plus assigned responsibilities in a variety of media. May be repeated three times. May substitute for required 3000 level hour of major ensemble enrollment with assignment by instructor to successfully accompany major ensemble or recital.

**MUS 4281  
SEC INSTR METH/MAT II**

Laboratory experience in conducting and performance of materials appropriate to teaching band in the public school.

**MUS 4461  
PERCUSSION INSTR**

For music majors. A study of the instruments of the percussion family to the extent that scales and/or rudiments and grade one and two solos can be played on selected instruments. Designed as a practical preparation for public school teachers. Two hours weekly.

**MUS 4581  
VOCAL ENSEMBLES**

As needed. Membership selected by audition. Study and performance of representative vocal literature. Ensembles may be small ensembles such as trios or quartets, or may be large ensembles such as choir or chamber choir. Six hours weekly.

**MUS 4701  
SPECIAL METHODS/MUSIC**

Spring. Prerequisites: Admission to Stage II of the Teacher Education program. Intensive on campus exploration of the principles of curriculum construction, teaching methods, use of community resources, evaluation as related to teaching music, and dealing with diversity in the classroom.

**MUS 4712  
FORM ANALYSIS**

Fall. Prerequisite: MUS 2723. A study of the standard forms of the Classical period with emphasis on instrumental forms and genres developed in the period 1750- 1825 and the continuation and expansion of those forms in the nineteenth century.

**MUS 4771  
COMPOSITION**

As needed. Prerequisites: 16 hours of music theory and senior standing or consent of instructor. Offered as demand warrants. The study of basic compositional techniques of twentieth-century works and completion of composition project.

**MUS 4772  
COMPOSITION**

As needed. Prerequisites: 16 hours of music theory and senior standing or consent of instructor. Offered as demand warrants. The study of basic compositional techniques of twentieth-century works and completion of composition project.

**MUS 4803  
HIST AM MUS:JAZZ/FOLK**

Open to all students. An in-depth study of folk music and the relationship between these forms and American life. Research, aural activity, and analysis are used to explore a variety of musical forms, composers, and performers.

**MUS 4811  
KEYBOARD LITERATURE**

Fall. A survey of piano or organ literature with emphasis on historical development, analysis of selected compositions, and listings of suitable pedagogical materials.

**MUS 4821  
SEC CHORAL METH/MAT II**

Choral conducting techniques, tone and diction styles and interpretation, rehearsal techniques, programs and concerts, planning and organization, and service information. Conducting of student ensembles and organizations. Methods and materials II will include a review of historically important choral works and the music of the master composers of each musical epoch. Sight singing methods for group sight reading will be reviewed.

**MUS 4832  
VOC SOLO LIT/PEDAGOGY**

Spring. Prerequisite: Junior standing. Introduction to and comparison of vocal solo literature and the teaching of vocal technique.

**MUS 4842  
SURVEY OF OPERA**

As needed. A history of opera including events which helped in the creation of this art form. Course will include major developments beginning with the Italians and incorporating the French, English and German contributions and styles.

**MUS 4853  
MUSIC OF THE WORLD'S PEOPLE**

A survey of predominantly non-Western world music cultures with attention to sonic structures, musicians, musical instruments, and socio-cultural contexts of music making. Open to students in all majors. Listening emphasized.

**MUS 4881  
WORKSHOP IN MUSIC**

As needed. Prerequisite: Permission of instructor. Course with variable credit designed to meet specific needs of participants. Each credit hour will require fifteen clock hours of instruction.

**MUS 4882  
WORKSHOP IN MUSIC**

As needed. Prerequisite: Permission of instructor. Course with variable credit designed to meet specific needs of participants. Each credit hour will require fifteen clock hours of instruction.

**MUS 4883  
WORKSHOP IN MUSIC**

As needed. Prerequisite: Permission of instructor. Course with variable credit designed to meet specific needs of participants. Each credit hour will require fifteen clock hours of instruction.

**MUS 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MUS 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MUS 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MUS 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MUS 4972  
MARCHING BAND TECH**

Fall. For music majors only. A study of the problems, practices, techniques, and the organization and administration of the marching band.

**MUS 4991  
SPEC PROB/MUSIC**

As needed. Prerequisites: Senior standing and permission of the instructor. Additional work in an area of the student's choice under the direction of the faculty member competent in that area.

**MUS 4992  
SPEC PROB/MUSIC**

As needed. Prerequisites: Senior standing and permission of the instructor. Additional work in an area of the student's choice under the direction of the faculty member competent in that area.

**MUS 4993  
SPEC PROB/MUSIC**

As needed. Prerequisites: Senior standing and permission of the instructor. Additional work in an area of the student's choice under the direction of the faculty member competent in that area.

**MUS 4994  
SPEC PROB/MUSIC**

As needed. Prerequisites: Senior standing and permission of the instructor. Additional work in an area of the student's choice under the direction of the faculty member competent in that area.

**MUSM 4403  
INTERP/EDUC/MUSEUM/METH**

Prerequisites: Senior or Graduate standing, or permission of instructor. Museum perspectives and approaches to care and interpretation of cultural resources, including interpretive techniques of exhibit and education-outreach materials, and integrating museum interpretation/education into public school and general public programming. Class projects focus on special problems for managing interpretive materials in a museum setting.

**MUSM 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MUSM 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MUSM 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**MUSM 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**NUR 1001  
ORIENTATION TO NURSING**

A one hour elective course for students interested in pursuing nursing as a professional career. The student is introduced to the history of nursing, issues and trends, basic nursing education, advanced education for nurses, and nursing career opportunities. Students interested in nursing or a career in science are encouraged to take this course during the fall semester of their freshman year. Lecture 1 hour.

**NUR 2023  
INTRO/PROFESSIONAL NURS**

Summer or fall prior to Junior year. Prerequisite: MATH 1113 and permission of Admission and Progression Committee. A non clinical, three hour course which introduces the student to selected basic concepts in professional nursing. Purpose of the course is to introduce nursing concepts to nursing majors. The course focuses on nursing as a caring profession, nurses' roles and functions, ethics, standards, legal aspects, holism, wellness, health care settings, communication, teaching/ learning, critical thinking, and the nursing process. The Conceptual Framework and Philosophy of Tech's Department of Nursing will be explored. Lecture 3 hours.

**NUR 2303  
NUTRITION**

Principles of normal nutrition at all stages of the life cycle are emphasized. Growth and development needs are incorporated into the maintenance, restoration of nutritional health, and in the prevention of nutritional deficit. Exploration is conducted of the social, religious, and cultural factors which affect the family's nutritional health. Lecture 3 hours.

**NUR 3003  
ALTERNATIVE THERAPIES**

Prerequisite: Admission to Upper Division Nursing or consent of instructor. This course focuses on the principles and concepts of alternative therapies for clients of all ages in a variety of health care settings. Alternative therapies are explored in relationship to conventional medicine in the prevention of negative health conditions, promotion of health practices, and support and restoration of wellness.

**NUR 3102  
NUR SKLS THEOR/MED INT I**

Summer and Fall. Prerequisite: Open to students majoring in Spanish with a concentration in Medical Interpretation. The course provides the student with theory of basic psychomotor and math nursing skills. Lecture 2 hours.

**NUR 3103  
NURSING SKILLS I**

Summer or fall session prior to junior year. Prerequisite: Admission into upper level junior nursing courses. The course provides the student with theory and guided practice of basic psychomotor and math nursing skills in a multimedia simulated laboratory setting. \$60 course fee. Lecture 2 hours. Laboratory 3 hours equal to one credit hour.

**NUR 3204  
THEOR/CONCEPTS NURS I**

Prerequisite: NUR 2023, 3103, 3303, 3803 and admission into upper level junior nursing courses. Corequisites: NUR 3513 and 3404. This course is an introduction to the cognitive framework of the curriculum which emphasizes holistic man, environment, and nursing as an interacting system. The course focuses on bio psycho social and spiritual behaviors as indicators of health throughout the life cycle. The nursing process and the scientific method of problem solving are presented as systematic approaches to nursing care. Further emphasis is placed on assessment of health needs and health practices of individuals in structured episodic health care settings. Beginning concepts of professionalism and care of clients with self-limiting alterations to health are integral parts of this course. Lecture 4 hours. \$25 testing fee.

**NUR 3213  
CARE OF THE OLDER ADULT**

Prerequisites: NUR 3103, NUR 2023, and PSY 3813. This course will include a study of communication with individuals, families and groups. It will also provide the foundational basis for the professional care of older adults and their families. Care of the older adult introduces trends, theories and multidimensional changes of aging and addresses issues related to wellness, health promotion, and disease prevention in older adults.

**NUR 3302  
HLTH ASSESS THEOR/MED IN**

Prerequisite: NUR 3102. The student uses the nursing process to assess the client by the utilization of observation, palpation, percussion, and auscultation skills. The language of Health Assessment is taught and methods of proper documentation are emphasized. The course provides guidance in specific assessment techniques and enables the student to recognize normal findings throughout the life cycle. Lecture 2 hours.

**NUR 3303  
HEALTH ASSESSMENT**

Prerequisite: Departmental permission. The student uses the nursing process to assess the client by the utilization of observation, palpation, percussion, and auscultation skills. The language of Health Assessment is taught and methods of proper documentation are emphasized. The course provides guidance in specific assessment techniques and enables the student to recognize normal findings throughout the life cycle. The student collaborates with members of the healthcare team in the sharing of health findings in order to make a specific nursing diagnosis. \$10 laboratory fee. Lecture 2 hours. Laboratory 3 hours equal to one credit hour.

**NUR 3304  
HEALTH ASSESSMENT**

Prerequisite: Departmental permission. The student uses the nursing process to assess the client by the utilization of observation, palpation, percussion, and auscultation skills. The language of Health Assessment is taught and methods of proper documentation are emphasized. The course provides guidance in specific assessment techniques and enables the student to recognize normal findings throughout the life cycle. The student collaborates with members of the healthcare team in the sharing of health findings in order to make a specific nursing diagnosis. \$10 laboratory fee. Lecture 3 hours. Laboratory 3 hours equal to one credit hour.

**NUR 3402  
PHARMACOLOGY I**

Prerequisites: NUR 2303 and 3103. Corequisites: NUR 3204 and 3404. This course focuses on the relationships between the action of drugs, their effects and the contraindications for their administration. The relationship between specific patient needs and the type of drugs that would be effective to meet those needs will be analyzed. The nursing care related to each type of drug and the rationales for care will be included.

**NUR 3404  
PRAC/NUR I/INDV CLIENT**

Prerequisite: NUR 2023 and NUR 3103. Co-requisites: NUR 3204 and 3304. Practicum facilitating the integration, synthesis, and application of theories, concepts, and psychomotor nursing skills taught in NUR 3103, 3204, 3304 and 3513. The student uses maintenance nursing behaviors to assist individuals to reach functional adaptation. 12 Clinical hours equal to 4 credit hours. \$20 laboratory fee.

**NUR 3501  
NUR SKL THEOR/MED INT II**

Prerequisite: NUR 3102. A continuation of NUR 3102. The course provides the student with theory of intermediate-level psychomotor nursing skills. Lecture 1 hour.

**NUR 3503  
END-OF-LIFE CARE**

This course is designed to offer basic skills and knowledge needed to recognize and intervene with a client at the end of life. Emphasis is to implement the nursing process with clients at the end of life. Students will apply concepts, theories, principals and techniques gained from their general education and previous nursing courses.

**NUR 3513  
NURSING SKILLS II**

Prerequisites: NUR 3103. A continuation of NUR 3103. A guided practice of intermediate level theory and skills in a multimedia simulation laboratory. \$20 course fee. Lecture 1 hour. Laboratory 3 hours equal to one credit hour.

**NUR 3603  
PERSONAL/PROF SELF-CARE**

Prerequisite: Admission to Upper Division Nursing or consent of instructor. This course provides the RN-BSN student with the opportunity to assess one's own current health, lifestyle, and professional career and consider where one is, where one has been, and where one wants to be in the future. This class will provide a mechanism for change by actively involving the student in a self-analysis and establishment of a course of action for changes that are assessed to be needed.

**NUR 3606  
THEOR/CONCEPT/NURS II**

Prerequisites: NUR 3204, 3304, 3404, 3513. This course, utilizing the nursing process, builds upon NUR 3204 and includes the bio psycho social and spiritual needs of the family. The course emphasizes family development, the childbearing experience, and the child's unique response to the internal and external environment. Lecture 6 hours. \$25 testing fee.

**NUR 3703  
NURSING PHARMACOLOGY**

Prerequisites: NUR 3204, 3304, 3404, 3513. This course focuses on the relationships between the action of drugs, their effects and the contraindications for their administration. The relationship between specific patient needs and the type of drugs that would be effective to meet that need will be analyzed. The nursing care related each type of drug and the rationales for the care will be included. Lecture 3 hours.

**NUR 3802  
PHARMACOLOGY II**

Prerequisites: NUR 3204, NUR 3402, NUR 3404. Corequisites: NUR 3606 and NUR 3805. This course is a continuation of Pharmacology I and focuses on the relationships between the action of drugs, their effects and the contraindications for their administration. the relationship between specific patient needs and the type of drugs that would be effective to meet those needs will be analyzed. The nursing care related to each type of drug and the rationales for the care will be included.

**NUR 3803  
APPLIED PATHOPHYSIOLOGY**

Each semester. Prerequisites: BIOL 2014 and BIOL 3074. This course focuses on the mechanisms and concepts of selected pathological disturbances in the human body. Emphasis is placed on how the specific pathological condition effects the functioning of the system involved, as well as its impact on all other body systems. Lecture 3 hours.

**NUR 3805  
PRAC/NURS II/NURS FAM**

Prerequisites: NUR 3103, 3204, 3304, 3404, 3513. Corequisites: NUR 3606 and 3703. A practicum course which facilitates the integration, synthesis, and application of the theories, concepts, and skills taught in NUR 3103, NUR 3513, NUR 3606 and NUR 3703. 15 clinical hours equal to 5 credit hours. \$20 laboratory fee.

### **NUR 3892 CLINICAL COMPETENCY I**

These courses are practicum courses designed to enable a student to prove clinical competence. Students who have failed a junior or senior level theories and concepts course but have passed the accompanying practicum course must prove clinical competence in order to progress to the next level. For the student who failed, NUR 3892 or NUR 4892 would be taken the same semester that the student is repeating the accompanying theories and concepts course. Students who have been absent from the upper division of the nursing curriculum must prove clinical competence at the level of the last practicum course they successfully completed before they can reenter upper division. \$20 laboratory fee.

### **NUR 4202 SELECTED TOPICS**

Prerequisite: Departmental permission. This course is designed to offer a selection of topics which will meet student needs and interests. The course provides the student with the opportunity to expand and improve knowledge in a carefully selected topic of relevance to nursing and/or health care. General demand will play a part in the topics offered. May be repeated for credit if course content differs. Lecture 2 hours.

### **NUR 4206 THEOR/CONCEPT/NUR III**

Prerequisite: NUR 3606, 3703, 3805. The course focuses on the prevention of illness, maintenance of health and the restoration of wellness in the care of clients and families experiencing major dysfunctions in adaptation. The nursing process is the methodology used to assist clients and families toward achieving optimal health. Principles of growth and development throughout the life cycle, utilization of research findings, principles of communication in crisis, and the role of the nurse in crises situations are included in the course. Psycho social theories and concepts relevant to the care of the emotionally disturbed client and family are explored in depth. Lecture 6 hours. \$25 testing fee.

### **NUR 4303 NURSING RESEARCH**

Prerequisite: Admission to Upper Division Nursing, senior standing or consent of instructor. This introductory research course focuses on the validity and applicability of research findings for the improvement of nursing practice. Emphasis is on scientific inquiry and the role of the nurse as an intelligent consumer of research.

### **NUR 4405 PRAC/NUR III/CLIENT CR**

Prerequisites: NUR 3103, 3304, 3513, 3606, 3703, and 3805. Corequisites: NUR 4206. This is a clinical nursing course which provides the opportunity for the integration of theories and concepts in the application of the nursing process in the care of the emotionally and/or physically dysfunctional client, family or group who are undergoing adaptation difficulties due to major deviations from wellness. The health care is delivered according to scientific principles, research findings, and accepted standards of care. Nursing behaviors and nursing roles are emphasized which are appropriate to the level of the students. Learning experiences are gained through caring for clients. 15 clinical hours equal to 5 credit hours. \$20 laboratory fee.

### **NUR 4502 PRINCIPLES OF ACLS**

Prerequisite: Departmental permission or consent of the instructor. This course is designed to offer the student the knowledge and skills necessary to provide appropriate early treatment for cardiopulmonary arrest in the adult patient utilizing current ACLS protocols as guidelines for emergency care.

**NUR 4606  
THEOR/CONCEPTS/NUR IV**

Prerequisites: NUR 4202, 4206, 4303, and 4405. The course focuses on the prevention of illness, maintenance of health, and the restoration of wellness of individuals, families, and communities. Concepts of epidemiology, prevention, decision making, and collaboration are utilized to organize and deliver distributive nursing care in complex situations. Theories and techniques of management are studied which relate to self, team members, and care of groups of clients. The emerging role of the professional nurse is explored. Lecture 6 hours. \$25 testing fee.

**NUR 4804  
PRAC/NUR IV/NURS COMM**

Prerequisites: NUR 4206 and 4405. Corequisites: NUR 4606 and 4903. A clinical course which integrates theories and concepts from all nursing courses and provisions for practice in predominantly distributive healthcare settings. Emphasis is on the utilization of the nursing process, the prevention of illness, maintenance of health, and the restoration of wellness of individuals, families, and communities, experiencing adaptation to complex health problems. Management skills and techniques are utilized in the delivery of holistic nursing care. Activities are provided which facilitate the role transition from student to professional nurse. Clinical experiences occur in a variety of distributive healthcare settings. 12 clinical hours. \$20 laboratory fee. \$64 testing fee.

**NUR 4892  
CLINICAL COMPETENCY II**

These courses are practicum courses designed to enable a student to prove clinical competence. Students who have failed a junior or senior level theories and concepts course but have passed the accompanying practicum course must prove clinical competence in order to progress to the next level. For the student who failed, NUR 3892 or NUR 4892 would be taken the same semester that the student is repeating the accompanying theories and concepts course. Students who have been absent from the upper division of the nursing curriculum must prove clinical competence at the level of the last practicum course they successfully completed before they can reenter upper division. \$20 laboratory fee.

**NUR 4903  
SYNTHESIS/CLIN/THEOR/NUR**

Synthesis of clinical and theoretical nursing knowledge occurs throughout the course. Students will be required to use all previously learned clinical and theoretical knowledge in the management of a diverse client population for which they are planning and providing a full-range of needed health care. Theory and clinical application of nursing knowledge must be integrated in order to prioritize, delegate, and ensure the delivery of comprehensive health care to clients in a variety of institutional and community-based settings. Students work closely with designate professional nurse preceptors and faculty in carrying out these learning activities. \$40 testing fee.

**NUR 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**NUR 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**NUR 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**NUR 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**NUR 4991  
INDEPEND STUDY/NURSING**

Prerequisites: Departmental permission or NUR 4303. Faculty and student collaborate on the selection, development, and evaluation of an individual project or topic in an area of nursing or health. 15 clock hours per credit hour.

**NUR 4992  
INDEPEND STUDY/NURSING**

Prerequisites: Departmental permission or NUR 4303. Faculty and student collaborate on the selection, development, and evaluation of an individual project or topic in an area of nursing or health. 15 clock hours per credit hour.

**NUR 4993  
INDEPEND STUDY/NURSING**

Prerequisites: Departmental permission or NUR 4303. Faculty and student collaborate on the selection, development, and evaluation of an individual project or topic in an area of nursing or health. 15 clock hours per credit hour.

**NUR 4994  
INDEPEND STUDY/NURSING**

Prerequisites: Departmental permission or NUR 4303. Faculty and student collaborate on the selection, development, and evaluation of an individual project or topic in an area of nursing or health. 15 clock hours per credit hour.

**NURN 4002  
NURSING INFORMATICS**

Prerequisite: Admission to Upper Division or consent of instructor. This practicum course establishes competency in using information resources within a professional nursing context. The course incorporates utilizing online resources available at ATU, Arkansas state, federal, and organizational web sites. In addition to becoming familiar with these resources, the student will identify and utilize online health-related resources.

**NURN 4003  
SCOPE/PROFESSIONAL PRACT**

Prerequisite: Admission to Upper Division or consent of instructor. This course will enable the RN-BSN student to recognize how history and modern economic forces have shaped current professional practice. The student will examine the development of Nurse Practice Acts and how states use these Acts to manage professional licenses and scope of professional practice. The student will examine the variety of roles and setting in which the professional nurse can work.

**NURN 4013  
LAW/ETHIC/ISS/PROF/NURS**

Prerequisite: Admission to Upper Division or consent of instructor. This course will enable the RN-BSN student to examine the legal, ethical, and policy-making traditions that frame the health care industry. This course will emphasize the integration of personal values, institutional cultures, law, and ethical decision-making in professional practice.

**NURN 4024  
COMMUNITY HEALTH NURSING**

Prerequisite: Admission to Upper Division or consent of instructor. This course will introduce the RN-BSN student to the concepts and principles relevant to the promotion, support, and restoration of health for clients of all ages in a variety of settings with particular emphasis upon the health of populations or groups. The student will perform a community assessment which involves the collection and analysis of data from a selected community to plan appropriate educational interventions.

**NURN 4034  
LEADERSHIP & MANAGEMENT**

Prerequisite: Admission to Upper Division or consent of instructor. This course will enable the RN-BSN student to recognize the principles and concepts of change theory and leadership/management strategies in professional practice. The student will examine how current leadership and management strategies are implemented within the health care settings and how effective and efficient these strategies are to health care delivery and consumer health. Management and leadership issues significant to nurse managers will be examined and discussed.

**NURN 4045  
PROF PRACTICUM SYNTHESIS**

Prerequisite: NURN 4024 and admission to Upper Division or consent of instructor. This practicum course enables the RN-BSN student to integrate the skills and insights gained from this program in a population or group-based application. This capstone course demonstrates the cognitive and affective growth achieved while in the RN-BSN Completion Program.

**NURN 4303  
NURSING RESEARCH**

Prerequisite: NUR 3606, 3703, and 3805. This introductory research course focuses on the validity and applicability of research findings for the improvement of nursing practice. Emphasis is on scientific inquiry and the role of the nurse as an intelligent consumer of research.

**PE 1051  
VOLLEYBALL**

Designed for beginning volleyball players. The student will learn the fundamental skills, knowledge of the rules, and terminology associated with volleyball.

**PE 1101  
FOLK/SQUARE DANCE**

Course content will include the origin and factors which influence development of folk and square dance. Basic steps, basic positions, and dance movements will be introduced to the students.

**PE 1121  
SOCIAL DANCE**

Techniques of leading and following, basic positions, and a variety of dance steps will be introduced throughout the course.

**PE 1201  
ORIENTATION/HPE AND WS**

This course provides an introduction to the HPE/WS curriculum, as it affects the student. Emphasis will be given to resources, services and opportunities available to the student through the University, which will help him or her grow as a professional. This is a pass or fail class.

**PE 1301  
BEGINNING BALLET I**

These courses are designed for those students that have little or no ballet training but have an interest in pursuing dance. Ballet forms the basis for all dance arts and offers specific training in all muscle groups of the body. These courses offer students beginning-level technical and performance training in ballet. Flexibility, strength, body alignment and coordination lay a foundation for the introduction of more advanced aspects of dance artistry including more difficult steps, musicality, mobility, and balance.

**PE 1311  
BEGINNING BALLET II**

These courses are designed for those students that have little or no ballet training but have an interest in pursuing dance. Ballet forms the basis for all dance arts and offers specific training in all muscle groups of the body. These courses offer students beginning-level technical and performance training in ballet. Flexibility, strength, body alignment and coordination lay a foundation for the introduction of more advanced aspects of dance artistry including more difficult steps, musicality, mobility, and balance.

**PE 1321  
INTERMEDIATE BALLET I**

These courses offer intermediate level training in ballet technique and performance for proficient dancers. It stresses the physical and mental skills necessary to make the transition to more advanced dance work. These include physical stamina, strength, flexibility, articulation, coordination, musicality, and phrasing; an understanding of basic physical concepts underlying clear and efficient movement; the capacity to assimilate new movement material; and an awareness of the center of gravity and its role in the mobilization and control of the body.

**PE 1331  
INTERMEDIATE BALLET II**

These courses offer intermediate level training in ballet technique and performance for proficient dancers. It stresses the physical and mental skills necessary to make the transition to more advanced dance work. These include physical stamina, strength, flexibility, articulation, coordination, musicality, and phrasing; an understanding of basic physical concepts underlying clear and efficient movement; the capacity to assimilate new movement material; and an awareness of the center of gravity and its role in the mobilization and control of the body.

**PE 1341  
INTERMEDIATE BALLET III**

These courses offer intermediate level training in ballet technique and performance for proficient dancers. It stresses the physical and mental skills necessary to make the transition to more advanced dance work. These include physical stamina, strength, flexibility, articulation, coordination, musicality, and phrasing; an understanding of basic physical concepts underlying clear and efficient movement; the capacity to assimilate new movement material; and an awareness of the center of gravity and its role in the mobilization and control of the body.

**PE 1351  
INTERMEDIATE BALLET IV**

These courses offer intermediate level training in ballet technique and performance for proficient dancers. It stresses the physical and mental skills necessary to make the transition to more advanced dance work. These include physical stamina, strength, flexibility, articulation, coordination, musicality, and phrasing; an understanding of basic physical concepts underlying clear and efficient movement; the capacity to assimilate new movement material; and an awareness of the center of gravity and its role in the mobilization and control of the body.

**PE 1361  
ADVANCED BALLET I**

These courses are a continuation and refinement of the skills achieved in Intermediate Ballet I-IV. The courses offer advanced level training in ballet technique and performance for proficient dancers. They stress the physical and mental skills necessary to make the transition to professional dance work. These include physical stamina, strength, flexibility, articulation, coordination, musicality, and phrasing; an understanding of basic physical concepts underlying clear and efficient movement; the capacity to assimilate new movement material; and an awareness of the center of gravity and its role in the mobilization and control of the body.

**PE 1371  
ADVANCED BALLET II**

These courses are a continuation and refinement of the skills achieved in Intermediate Ballet I-IV. The courses offer advanced level training in ballet technique and performance for proficient dancers. They stress the physical and mental skills necessary to make the transition to professional dance work. These include physical stamina, strength, flexibility, articulation, coordination, musicality, and phrasing; an understanding of basic physical concepts underlying clear and efficient movement; the capacity to assimilate new movement material; and an awareness of the center of gravity and its role in the mobilization and control of the body.

**PE 1401  
ARCHERY/RECREATION GAMES**

The student will learn the fundamental skills in archery, including care and selection of archery tackle. Recreational games will include table tennis, giant volleyball, three way volleyball, box hockey, pin ball, scooter soccer, variety ball, indoor soccer, and horse shoes.

**PE 1411  
BADMINTON**

Designed for beginning badminton players. The student will learn the fundamental skills and a knowledge of the rules and terminology associated with badminton.

**PE 1431  
BOWLING**

The bowling classes are structured for the beginning bowler. Fundamental skills and general bowling knowledge and etiquette will be introduced to the student. (\$77.50 fee).

**PE 1481  
TENNIS**

Constructed to aid the beginning tennis player to learn the fundamental skills for tennis. The student will gain a knowledge of the rules and strategy in tennis.

**PE 1851  
TENNIS/BASKETBALL**

Designed for the average student. Fundamentals in basketball and tennis will be introduced along with knowledge of the rules and strategies of play.

**PE 1901  
BEGINNING SWIMMING**

This course is designed for students who cannot swim 25 yards on front and 25 yards on back (any form), and/or students who are afraid of water. Introduction to various aquatic activities is included.

**PE 1911  
INTERMEDIATE SWIMMING**

Students who are comfortable in deep water and are able to swim 25 yards on front and 25 yards on back (any form) may enroll in this course. Application of intermediate skills through various forms of aquatic activities is included.

**PE 1991  
RACQUETBALL**

Designed to introduce the rules and strategy of racquetball and develop the basic skills needed to play racquetball successfully.

**PE 2101  
METH TEACHING TEAM ACTV**

This course is designed to assist in teaching students to be skilled and knowledgeable in selected team activities. Emphasis will be placed on developing and evaluating the student's skills and knowledge.

**PE 2111  
METH TEACHING/INDIV ACTV**

This course is designed to assist in teaching students to be skilled and knowledgeable in selected individual activities. Emphasis will be placed on developing and evaluating the student's skills and knowledge.

**PE 2301  
BEGINNING GOLF**

Designed for individuals who wish to learn the basic fundamentals in golf. Course includes the fundamentals of the full swing and the fractional swing in golf. It also includes the knowledge of rules and courtesies of golf.

**PE 2513  
FIRST AID**

Each semester. Standard and advanced course in first aid. This course includes CPR instruction.

**PE 2523  
FOUNDATIONS HEALTH/PE**

A study of history, philosophy, and principles of health and physical education in grades K 12 as applied to each area.

**PE 2653  
ANATOMY/PHYSIOLOGY**

Prerequisite: BIOL 1014 or permission of department head. The structure and function of the human body with emphasis on the bodily systems important to teachers and practitioners of wellness, fitness, and physical education.

**PE 2861  
RHYTHMIC AEROBICS ACTV**

This course will include motor skills put to music, rope jumping, step aerobics, kickboxing, senior fitness, childrens fitness, sport aerobics, sculpting, and aerobic dance activities.

**PE 2921  
WATER SAFETY INSTRUCT**

Prerequisite: PE 1911 or equivalent skills. This course is designed to train and certify students as American Red Cross swim instructors.

**PE 2932  
LIFEGUARD TRAINING**

Prerequisite PE 1911 or equivalent skills. This course is designed to train students as lifeguards.

**PE 2941  
SCUBA DIVING I**

This course is designed to serve as an introduction to scuba. Course will include classroom work and laboratory (pool) practice. Student must provide mask, snorkel, fins, weight belt, and weights. (Rental fee paid to rental company for use of scuba equipment including tank, regulator, alternate air source, submersible pressure gauge, depth gauge, underwater compass, buoyancy control device with automatic inflator, and air fills. Rental fee is currently \$100 and is subject to change.)

**PE 2951  
SCUBA DIVING II**

Prerequisite: Open Water Diver certified or equivalent (see instructor for equivalency). This course will contain the advanced scuba skills set forth by the Professional Association of Diving Instructors (PADI). The course will include techniques for; diving at night, in limited visibility, in deeper waters, and underwater search and light salvage. Field trips (lake dives) are required for certification as an Advanced Open Water Diver. Students must provide all equipment. (See instructor for equipment list). (Rental fee paid to rental company for use of scuba equipment including tank, regulator, alternate air source, submersible pressure gauge, depth gauge, underwater compass, buoyancy control device with automatic inflator, and air fills. Rental fee is currently \$100 and is subject to change.) (\$50 fee includes certification processing and open water training.)

**PE 3051  
METH TCH FIT/WELL CONCEP**

This course is designed to provide the student with knowledge needed to implement a sound fitness and wellness program that will yield the desired results. The emphasis is on teaching students how to take control of their own personal health and lifestyle habits so that they can make a deliberate effort to stay healthy and achieve the highest potential for well-being. \$10 Tech Fit fee.

**PE 3101  
METH TCH RHYTHM GYM MOV**

Methods and activities to develop rhythm, folk dance, and gymnastic skills related to teaching physical education. Laboratory two hours.

**PE 3103  
METH TCH MOV PA ACT CHIL**

Prerequisite: Admission to Stage II or permission of department head. Methods and activities to develop basic movement patterns, primary and lead-up game skills, and knowledge related to teaching elementary physical education. Lecture one hour, laboratory four hours.

**PE 3413  
COACHING THEORY**

The course exposes students to the theory of coaching, relevant to athletics. Emphasis is placed on organization, management, and content involved in coaching a variety of sports.

**PE 3512  
COACH STR: FTBALL/BASEBL**

Principles of coaching football and baseball, including off-season training programs, team organization, offense, defense, scouting, and use of visual aids. One hour lecture and one hour laboratory.

**PE 3522  
COACH STR:BKTBAL/TRK/FLD**

Principles of in-season and off-season training programs and team organization for track and field. Additionally, the course is designed to provide a systematic process for teaching basketball skill development and team strategies. Emphasis on fundamental skills and drills, rules and evolution of the game, offensive and defensive strategies used by various successful coaches are introduced. Extensive use of floor demonstrations and video presentations enhance the course content. One hour lecture and one hour laboratory.

**PE 3532  
COACH STR: SFTBAL/VOLBAL**

This course will offer information relative to the following topics for both volleyball and softball: in-season and off-season training programs, team organization, offense, defense, special situations, scouting, and use of visual aids. One hour lecture and one hour laboratory.

**PE 3573  
PREVENT/CARE/ATHLE INJUR**

Prerequisites: PE 2653, 3663. Development of techniques in prevention and treatment of athletic injuries.

**PE 3583  
MET/MAT PE/REC K & EL**

Prerequisite: PE 3103. Methods, materials, supervision, school problems, rhythmical activities, movements exploration, and group games for kindergarten and elementary teachers. Lecture two hours, laboratory two hours.

**PE 3603  
METH/MAT/PE SEC SCHOOLS**

Prerequisites: PE 2101, PE 2111 and admission to Stage II. A course in program planning and techniques of teaching physical education in the secondary schools, critical analysis of methods now in use in physical education, and criteria for evaluation of programs. Lecture two hours, laboratory two hours.

**PE 3661  
LAB EX ANAT/PHYSIO/KIN**

Prerequisite: PE 2653 or permission of department head. The laboratory experience supplements Anatomy/ Physiology and Kinesiology by providing practical experiences which enable students to bridge the gap between theory and practice.

**PE 3663  
KINESIOLOGY**

Prerequisite: PE 2653. Study of human movement and the physical and physiological principles upon which it depends. Body mechanics, posture, motor efficiency and the influence of growth and development upon motor performance.

**PE 4033  
BASIC EXER PHYSIOLOGY**

Prerequisites: PE 2653, 3663, and 3661, or permission of the department head. Introduction to the basic effects of exercise on physiology of the systems of the body, and the principles of exercise prescriptions and programs.

**PE 4103  
PRIN/METH/ADAPT PHY ED**

Principles and methods of teaching special students with various types of physical and mental disabilities which require adapting the learning process.

**PE 4203  
METH/TCH ADAPTED PE/SCH**

Prerequisites: PE 3103, PE 3583 or permission of the department head. Principles and methods of teaching students with disabilities in the schools. Lecture two hours, laboratory two hours.

**PE 4513  
ORG/ADMIN OF HEALTH/PE**

Organization and administration problems in grades K 12 to be treated as a single administrative unit.

**PE 4523  
MEAS/EVAL/HEALTH & PE**

Prerequisite: Admission to Stage II or permission from department head. Research methods, measurement, and evaluation in health, physical education, and recreation with an analysis of their practical application.

**PE 4701  
SPECIAL METHODS/HPE**

Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4809. Intensive on campus exploration of the principles of curriculum construction, teaching methods, use of community resources, and evaluation as related to teaching health and physical education.

**PE 4991  
SPEC PROB/PE**

Prerequisite: PE 4523. Open to physical education majors and minors of outstanding ability. Course content will include readings and research and the setting up and carrying out of a piece of research which will include review of literature, the problem, and conclusion.

**PE 4992  
SPEC PROB/PE**

Prerequisite: PE 4523. Open to physical education majors and minors of outstanding ability. Course content will include readings and research and the setting up and carrying out of a piece of research which will include review of literature, the problem, and conclusion.

**PE 4993  
SPEC PROB/PE**

Prerequisite: PE 4523. Open to physical education majors and minors of outstanding ability. Course content will include readings and research and the setting up and carrying out of a piece of research which will include review of literature, the problem, and conclusion.

**PE 4994  
SPEC PROB/PE**

Prerequisite: PE 4523. Open to physical education majors and minors of outstanding ability. Course content will include readings and research and the setting up and carrying out of a piece of research which will include review of literature, the problem, and conclusion.

**PHIL 2003  
INTRO TO PHILOSOPHY**

A survey of basic problems in the major areas of philosophical inquiry-metaphysics, epistemology, ethics, esthetics, and philosophy of religion.

**PHIL 2013  
RELIGIONS OF THE WORLD**

An examination of the major historical religions according to their basic scripture, their historical development, and their contemporary ideas and practices.

**PHIL 2043  
HONORS INTRO TO PHILOSOPHY**

Prerequisites: Admission to University Honors or permission of University Honors Director. A survey of basic problems in the major areas of philosophical inquiry-metaphysics, epistemology, ethics, esthetics, and philosophy of religion. Special emphasis will be placed on critical thinking and in-class discussion.

**PHIL 3003  
ANCIENT PHILOSOPHY**

An examination of the thought of the leading philosophers of ancient Greece and Rome - the Pre Socratics, Socrates, Plato, Aristotle, and representatives of the Stoic and Epicurean traditions.

**PHIL 3013  
MODERN PHILOSOPHY**

A survey of the history of philosophical thought and its impact upon western civilization from the Renaissance to the twentieth century.

**PHIL 3023  
ETHICS**

An introduction to the problems of formulating and validating principle definitive of "the good" in respect to ends, means, and norms of human behavior.

**PHIL 3033  
ESTHETICS**

An investigation of representative historical theories of beauty, the nature and social significance of art, standards of criticism, and epistemological aspects of the creative process.

**PHIL 3053  
PHILOSOPHY OF RELIGION**

A consideration of historical and contemporary studies in religious thought basic conceptions of the divine, the human engagement with the divine, and the nature and destiny of man within diverse eschatological perspectives.

**PHIL 3063  
MODERN POLITICAL THOUGHT**

An examination of the major contributions to political thought during the Modern Era. Completion of POLS 2253 recommended.

**PHIL 3103  
LOGIC**

A study of the principles of deductive reasoning. Topics include immediate inference, the syllogism, truth functions, natural deduction, quantification, and fallacies.

**PHIL 3113  
CONTEMPORARY PHIL**

A survey of some of the major philosophical trends of the twentieth century.

**PHIL 3203  
MEDIEVAL PHILOSOPHY**

Historical study of the main philosophical ideas of the period from St. Augustine to the Renaissance.

**PHIL 3253**  
**CLASSICAL POLITICAL THOUGHT**

An examination of the major contributions to political thought during the Classical Age, the Medieval Era, and the Renaissance. Completion of POLS 2253 recommended.

**PHIL 4093**  
**AMERICAN PHILOSOPHY**

An examination of the main currents of American philosophical and religious thought from the earliest times to the present.

**PHIL 4103**  
**ADVANCED LOGIC**

Prerequisite: PHIL 3103. A study of selected topics in advanced logic. Emphasis will be placed on proof theory, quantification theory, semantic tableaux, logicism, theories of completeness and consistency, and some consideration of the logical foundations mathematics.

**PHIL 4951**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHIL 4952**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHIL 4953**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHIL 4954**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHIL 4991  
SPEC PROB/PHIL**

Admission requires consent of department head.

**PHIL 4992  
SPEC PROB/PHIL**

Admission requires consent of department head.

**PHIL 4993  
SPEC PROB/PHIL**

Admission requires consent of department head.

**PHIL 4994  
SPEC PROB/PHIL**

Admission requires consent of department head.

**PHSC 1001  
ORIENT/PHYSICAL SCIENCE**

Introduction to vital university affairs, department and university resources and curriculum. The course emphasizes information and skills that increase a student's likelihood of a successful college career. All students majoring in programs within the Department of Physical Sciences are strongly encouraged to take this course during their first fall semester on the Arkansas Tech University campus. Lecture one hour.

**PHSC 1004  
PRIN ENVIRONMENTAL SCI**

This course is designed to bring the student to a basic but informed awareness of and responsible behavior toward our environment and the role of the human race therein. The content will include a study of the philosophical and scientific basis for the study of ecosystems and the environment, the nature of ecosystems, the techniques used to study the environment, the origin and development of current environmental problems, the interdisciplinary nature of environmental studies, the processes of critical thinking and problem solving, and the moral and ethical implications of environmentally-mandated decisions. Lecture three hours, Lab three hours. \$20 laboratory fee.

**PHSC 1011  
ORIENT/PHYSICAL SCIENCE II**

Continuation of PHSC 1001. Introduction to programs of study and employment opportunities for students of the physical sciences. All students majoring in programs within the Department of Physical Sciences are strongly encouraged to take this course during their spring semester on the Arkansas Tech University campus.

**PHSC 1013  
INTRO PHYSICAL SCIENCE**

Each semester. Prerequisite: A score of 19 or above on the mathematics section of the ACTE exam or completion of MATH 0903, Intermediate Algebra, with a grade of ?C? or better. An introduction to the natural laws governing the physical world, with emphasis upon the discovery and development of these laws and their effect upon man. Includes topics in physics and chemistry and may include other topics from other disciplines in physical science such as astronomy, meteorology, and/or geology. May not be taken for credit after completion of two laboratory courses in the physical science disciplines. Lecture three hours. Note: To enroll in an internet section (TC1) of this course, the prerequisite COMS 1003 or equivalent is required.

**PHSC 1021  
PHYSICAL SCIENCE LAB**

Each semester. To be taken concurrent with or following completion of PHSC 1013. An introduction to laboratory experiences in the physical sciences, including physics, chemistry, earth sciences, and astronomy. Laboratory two hours. \$10 laboratory fee. Note: To enroll in an internet section (TC1) of this course, the prerequisite COMS 1003 or equivalent is required.

**PHSC 1031  
HONORS PHYSICAL SCIENCE LAB**

Introduction to Physical Sciences for the Honors program including topics from physics, chemistry, geology, astronomy and meteorology. Must be accepted into ATU Honors program to enroll. \$10 lab fee.

**PHSC 1033  
HONORS INTRO PHYSICAL SCIENCE**

Prerequisites: Admission to University Honors or permission of instructor. An introduction to the natural laws governing the physical world, with emphasis upon the discovery and development of these laws and their effect upon man. Specific topics are selected from disciplines of physics, chemistry, astronomy, geology, and meteorology.

**PHSC 1051  
OBSERVATIO/ASTRONOMY LAB**

Fall. Prerequisite: A score of 19 or above on the mathematics section of the ACTE exam or completion of MATH 0903 with a grade of "C" or better. Corequisite: PHSC 1053 or consent of instructor. An introduction to astronomical observations and techniques. Students will have the opportunity to use telescopes at the ATU astronomical observatory (weather permitting) to make observations and collect scientific data for analysis. This course includes telescope orientation, constellation recognition, identifying celestial objects, and interpreting astronomical data. When taken concurrently with PHSC 1053, this course satisfies the general education physical science laboratory requirement upon successful completion of both courses. Course PHSC 1051 will run simultaneously with PHSC 3051 and duplicate credit will not be allowed. Credit for PHSC 3051 requires completion of an observational research project for upper division students, but is not required of students enrolled in PHSC 1051. Laboratory 3 hours; 1 credit hour. \$10 laboratory fee.

**PHSC 1053  
ASTRONOMY**

Fall. Prerequisite: A score of 19 or above on the mathematics section of the ACTE exam or completion of MATH 0903 with a grade of "C" or better. Corequisite: PHSC 1051 or consent of instructor. A study of our universe; constellations, celestial motions, tools and methods of astronomical observations, the solar system, properties of stars and the interstellar medium, the birth, life and death of stars, our Milky Way galaxy, dynamics of stellar systems and other galaxies, and cosmology. When taken concurrently with PHSC 1051, satisfies general education physical science laboratory requirement upon successful completion of both courses. Course PHSC 1053 will run simultaneously with PHSC 3053 and duplicate credit will not be allowed. Credit for PHSC 3053 requires completion of several assignments, a term paper and a research project for upper division students, but is not required of students enrolled in PHSC 1053. Lecture three hours.

**PHSC 1074  
PHYSICAL SCIENCE INQUIRY**

Each Semester. Prerequisite: A score of 19 or above on the mathematics section of the ACTE exam or the completion of MATH 0903, Intermediate Algebra, with a grade of "C" or better. This course is designed to model physical science teaching and learning through the process of inquiry. Topics explored are Interactions and Energy, Forces, Systems, Behavior of Gases, Physical Changes, and Chemical Changes. The focus is upon the construction of knowledge regarding science content and process skills essential to the preparation of teachers of physical science in early childhood education. It is recommended for early childhood education majors seeking to fulfill undergraduate requirements in preparation for upper level science methods courses and is equivalent to 3 hours of lecture and 3 hours of laboratory experience in physical science. However, the course requires that students participate as active learners in an activity-based, cooperative learning style curriculum. \$10 laboratory fee.

**PHSC 3033  
METEOROLOGY**

Fall. Prerequisite: PHSC 1013 or PHYS 2014 or CHEM 1114 or CHEM 2124. A study of the weather, the physics of the atmosphere, and associated phenomena. Lecture three hours.

**PHSC 3051  
OBSERVATIO/ASTRONOMY LAB**

Spring. Prerequisite: MATH 1113; Corequisite: PHSC 3053 or consent of instructor. An introduction to astronomical observations and techniques. Students will have the opportunity to use telescopes at the ATU astronomical observatory (weather permitting) to make observations and collect scientific data for analysis. This course includes telescope orientation, constellation recognition, identifying celestial objects, and interpreting astronomical data. When taken concurrently with PHSC 3053, this course satisfies the general education physical science laboratory requirement upon successful completion of both courses. Credit for PHSC 3051 requires completion of an observational research project for upper division students. Laboratory 3 hours; 1 credit hour. \$10 laboratory fee.

**PHSC 3053  
ASTRONOMY**

Spring. Prerequisite: MATH 1113; Optional corequisite; PHSC 3051 or consent of instructor. A study of our universe; constellations, celestial motions, tools and methods of astronomical observations, the solar system, properties of stars and the interstellar medium, the birth, life and death of stars, our Milky Way galaxy, dynamics of stellar systems and other galaxies, and cosmology. When taken concurrently with PHSC 3051, satisfies general education physical science laboratory requirement upon successful completion of both courses. Credit for PHSC 3053 requires completion of a term paper and a research project for upper division students. Duplicate credit for previously offered PHSC 3043 is not allowed. Lecture three hours.

**PHSC 3213  
SCI EDUC IN ELEM SCHOOL**

Each semester. Prerequisites: Junior standing, ECED 2001, ECED 2002, and at least six credit hours in science. An overview of the most recent and research-based strategies and techniques for planning, teaching, and assessing elementary science. Inquiry-based methods and other constructivist approaches as described in the National Science Education Standards will be emphasized. Design and execution of learning activities for an elementary school setting are required. Lecture two hours, laboratory two hours; three credit hours. \$10 laboratory fee. Note: To enroll in an internet section (TC1 or AT1) of this course, one of these prerequisite courses is required: COMS 1003, EDMD 3013, or equivalent.

**PHSC 3223  
SCI ED MIDDLE LEVEL**

Spring. Prerequisites: 16 hours in science and MLED 2001. This course is designed to provide pre-service teachers with an integrated approach to the teaching of science in the middle grades. Theoretical and practical aspects of teaching science will be explored and students will develop curricular materials based on their explorations. Lecture two hours, laboratory 2 hours. \$10 laboratory fee.

**PHSC 3233  
SCI EDUC IN SEC SCHOOL**

Fall. Prerequisites: 16 hours in biology or 16 hours in physical science and SEED 2002. This course will examine the issues of nature and history of science, developing lessons and assessments, and science education standards for the prospective secondary school teacher. Curriculum development, including assessment and planning skills, utilizing various instructional media and inquiry methodology are emphasized. Design and execution of learning activities for a secondary school setting are required. Lecture two hours and lab two hours. \$10 laboratory fee.

**PHSC 3252  
NATURE/CONTEXT OF SCI**

Prerequisite: At least 12 hours of science courses. This seminar course examines science from a holistic perspective. It will concentrate on examining how current science develops scientific knowledge including unifying concepts across scientific disciplines, the place of science within modern society, technology and its role in science and society, and current scientific methodology.

**PHSC 4003  
HISTORY/PHIL SCIENCE**

Prerequisite: a Sophomore-level science course (or higher). A course in the historical development and philosophical basis of modern science. May not be repeated for credit as PHSC (BIOL) 5003 or equivalent. Lecture two hours.

**PHSC 4013  
MULTICULTURAL SCIENCE ED**

On demand. Prerequisites: Junior standing or admission to teacher education program. A course designed to familiarize prospective teachers with the materials, methods, and procedures to meet the needs of culturally diverse learners in the science classroom. This course includes the discussion of equity issues, the limitations of Eurocentric and androcentric science worldviews, how culturally diverse students learn science, instructional strategies, technology, and alternative assessment. Lecture three hours for three credit hours.

**PHSC 4701  
SPECIAL METHODS/PHSC**

Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4909. Intensive on campus exploration of the principles of curriculum construction, teaching methods, use of community resources, and evaluation as related to teaching physical science.

**PHYS 1114  
APPLIED PHYSICS**

Fall. A survey of selected topics in physics. The "scientific method", mechanics, fluid mechanics, heat, electricity, sound, light, and nuclear radiation will be studied. May not be taken for credit after completion of PHYS 2014, PHYS 2024, PHYS 2114, or PHYS 2124. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**PHYS 2000  
PHYSICS LABORATORY I**

Corequisite: PHYS 2014 or PHYS 2114.

**PHYS 2010**  
**PHYSICS LABORATORY II**

Corequisite: PHYS 2024 or PHYS 2124.

**PHYS 2014**  
**PHYSICAL PRINCIPLES I**

Fall, and summer (On demand). Concurrent enrollment in PHYS 2000 is required. Prerequisite: A grade of C or better in MATH 1113 or consent of the instructor. Open to freshmen. A broad survey course emphasizing the understanding of the principles of physics necessary for students not specifically interested in advanced work in physics, chemistry or engineering. Topics include mechanics, heat, sound, wave motion, and fluid mechanics. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**PHYS 2024**  
**PHYSICAL PRINCIPLE II**

Spring, and summer (On demand). Concurrent enrollment in PHYS 2010 is required. Prerequisite: PHYS 2014 or permission of instructor. Continuation of PHYS 2014, covering electricity and magnetism, light, relativity, particle physics, and quantum effects. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**PHYS 2114**  
**GENERAL PHYSICS I**

Fall. Concurrent enrollment in PHYS 2000 is required. Pre or co requisite: MATH 2924. Introductory mechanics, heat and thermodynamics, kinetic theory, and sound. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**PHYS 2124**  
**GENERAL PHYSICS II**

Spring. Concurrent enrollment in PHYS 2010 is required. Prerequisite: Permission of instructor; pre or corequisite: MATH 2934. Introductory electricity and magnetism, wave motion, optics, and elementary quantum concepts. Lecture three hours, laboratory three hours. \$10 laboratory fee.

**PHYS 3001**  
**COLLOQUIUM**

On demand. Prerequisite: Junior standing. Attendance required of students interested in physics concentration. Discussion of advanced topics in current physical theory. Student presentations are required. Lecture discussion one hour.

**PHYS 3003**  
**OPTICS**

Spring even years. Prerequisite: PHYS 2124 or consent of instructor. Introduction to geometrical and physical optics. Lecture two hours, laboratory two hours. \$10 laboratory fee.

**PHYS 3011  
COLLOQUIUM**

On demand. Prerequisite: Junior standing. Attendance required of students interested in physics concentration. Discussion of advanced topics in current physical theory. Student presentations are required. Lecture discussion one hour.

**PHYS 3023  
MECHANICS**

Fall even years. Prerequisite: PHYS 2114. Co requisite: MATH 3243. The conservation laws. Euler's angles. Lagrange's and Hamilton's equations. Lecture three hours.

**PHYS 3033  
RADIATION HEALTH PHYSICS**

On demand. Prerequisites: PHSC 1013, PHYS 2014 or CHEM 2124. Theory and exercises in radiological monitoring techniques, neutron activation analysis, and environmental effects of nuclear reactors. Lecture three hours.

**PHYS 3042  
INTERMEDIATE PHYSICS LAB**

Fall odd years. Prerequisite: PHYS 2114 and 2124. For physical science education majors. This course expands and refines essential content and laboratory skills through the modeling and experimental investigation of topics in both classical and modern physics. Will not satisfy the physics elective requirement for students majoring in physical science. Laboratory three hours. \$10 laboratory fee.

**PHYS 3133  
THEORY/ELEC/MAGNETISM I**

Spring even years. Prerequisite: PHYS 2124. Gauss's law, potential, Laplace's and Poisson's equations in rectangular, cylindrical, and spherical coordinates, inductance, capacitance, moving charges, dielectric phenomena, and Maxwell's equations. Lecture three hours.

**PHYS 3143  
ELECTRONICS**

On demand. Prerequisite: PHYS 2124 or ELEG 2113. Amplifiers, power supplies, oscillators, trigger circuits, modulation, and demodulation. Intended to acquaint students with the working principles of the equipment they will use as a physicist. Lecture two hours, laboratory three hours. \$10 laboratory fee.

**PHYS 3153  
SOLID STATE PHYSICS**

Fall odd years. Prerequisites: PHYS 2114, 2124; CHEM 2124. Corequisite: MATH 3243. An introduction to the physics governing the crystalline state of matter. Modern theories describing lattice vibrations, energy bands, crystal binding, and optical properties are presented. These ideas are then applied to the understanding of technologically important areas such as superconductivity, doped semiconductors, ferroelectric materials, and photorefractivity. Lecture 3 hours.

**PHYS 3213  
MODERN PHYSICS**

Spring odd years. Prerequisite: PHYS 2124. Introduction to relativity, wave-particle interactions, atomic structure, quantum mechanics, quantum theory of the hydrogen atom, statistical mechanics, nuclear structure, and elementary particles. Lecture 3 hours.

**PHYS 3991  
SP PROB/PHYSIC/ASTRONOMY**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to significant problems in physics and astronomy. Supervised by faculty member. Formal report and presentation required. One to three credits depending on problem selected and effort made.

**PHYS 3992  
SP PROB/PHYSIC/ASTRONOMY**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to significant problems in physics and astronomy. Supervised by faculty member. Formal report and presentation required. One to three credits depending on problem selected and effort made.

**PHYS 3993  
SP PROB/PHYSIC/ASTRONOMY**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to significant problems in physics and astronomy. Supervised by faculty member. Formal report and presentation required. One to three credits depending on problem selected and effort made.

**PHYS 4001  
COLLOQUIUM**

On demand. Prerequisite: Junior standing. Attendance required of students interested in physics concentration. Discussion of advanced topics in current physical theory. Student presentations are required. Lecture discussion one hour.

**PHYS 4003  
THERMODYNAM/STAT MECH**

Fall even years. Prerequisite: PHYS 2124, Pre or corequisite: MATH 3243. Applications of the three laws of thermodynamics, partition functions and transport phenomena. Lecture three hours.

**PHYS 4011  
COLLOQUIUM**

On demand. Prerequisite: Junior standing. Attendance required of students interested in physics concentration. Discussion of advanced topics in current physical theory. Student presentations are required. Lecture discussion one hour.

**PHYS 4013**  
**QUANTUM MECHANICS**

Fall odd years. Prerequisites: PHYS 3213 and MATH 3243, A formal course in wave and matrix mechanics, designed to enable a student to set up and solve the elementary practical problems of quantum mechanics. Lecture three hours.

**PHYS 4113**  
**ADV PHYSICS LABORATORY**

Spring odd years. Prerequisite: PHYS 3213. An application and investigation of advanced physical topics in the laboratory. Techniques of experimental [engineering] physics, such as computerized instrumentation, vacuum technology, optics, and electron optics will be applied to investigate various areas of advanced physics. Proper data reduction and analysis will be used to yield meaningful measurements. Intended as a culminating course, previous course work is applied to solve problems in the laboratory. Lecture 1 hour, Lab 5 hours. \$10 laboratory fee.

**PHYS 4213**  
**ADV TOPIC/PHYSIC/ASTRONO**

Fall even years. Prerequisite: PHYS 2024 or PHYS 2124. Introduction to relativity, elementary particle physics, quantum dynamics, big-bang cosmology, atomic nucleosynthesis, and large scale structure and exotic states of matter such as black holes. Forces and interactions between the building blocks of matter in addition to cosmological models will be studied to gain insight into the complex universe we observe today. Lecture two hours, laboratory two hours. \$10 laboratory fee.

**PHYS 4951**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHYS 4952**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHYS 4953**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHYS 4954**  
**UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHYS 4991  
SP PROB/PHYSIC/ASTRONOMY**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to significant problems in physics and astronomy. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHYS 4992  
SP PROB/PHYSIC/ASTRONOMY**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to significant problems in physics and astronomy. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHYS 4993  
SP PROB/PHYSIC/ASTRONOMY**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to significant problems in physics and astronomy. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PHYS 4994  
SP PROB/PHYSIC/ASTRONOMY**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to significant problems in physics and astronomy. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**POLS 2003  
AMERICAN GOVERNMENT**

Prerequisite: Minimum score of 19 on the English and Reading portions of the ACT or successful completion of ENGL 1013 or equivalent. A study of the principles and practices of American Government, explaining the origin and purpose of our governmental institutions in a broad sense, with consideration given to interstate and national state relations.

**POLS 2013  
INTRO TO POLITICAL SCIENCE**

The basic terms and concepts for the study of political science, including an understanding of democratic and authoritarian political systems and the methods for researching and writing a political science paper. This course is highly recommended for all students interested in political science.

**POLS 2153  
INTRO/STRATEGIC STUDIES**

An introduction to strategic studies focusing on the key theoretical principles that have played a major role in shaping Western understandings of strategy, with particular focus on the United States.

**POLS 2253  
SURV WESTERN POLITICAL THOUGHT**

An introduction to the subfield of political theory, examining the works of major political thinkers from ancient Greece to the present.

**POLS 2421  
MODEL UN WORKSHOP**

Prerequisite: POLS 3433. Participation in the state or regional Model United Nations. Only one of these courses may be taken for credit during a semester. POLS 3421 may be repeated for credit three times.

**POLS 2431  
MODEL UN WORKSHOP**

Prerequisite: POLS 3433. Participation in the state or regional Model United Nations. Only one of these courses may be taken for credit during a semester. POLS 3421 may be repeated for credit three times.

**POLS 2513  
RESEARCH METHODS I**

This course is designed as an introduction to the field of political science research. This course teaches the scientific method as applied to political science, bibliographical aids, and the study and writing of political science. It is a hands-on course where students will use the skills learned to evaluate social science research.

**POLS 3013  
REC AMER FOR/MIL POL**

Prerequisites: POLS 2013 and 3413 recommended. The post World War II environment in which U.S. foreign and military policy functions; emphasis is on the formulation of policy, relationship of foreign policy and domestic affairs, problems of foreign and military policy coordination and control, and the military industrial complex.

**POLS 3023  
JUDICIAL PROCESS**

The structure and operation of the state and national court systems. Emphasis upon the role of the criminal courts in the political system and the consequences of judicial policy making.

**POLS 3033  
AMER STATE/LOCAL GOVT**

A comparative study of the nature of the organization and operation of state and local governments in the United States with emphasis on state and local government in Arkansas.

**POLS 3053  
INTRO TO PUBLIC ADMIN**

A study of public administration with attention devoted to organizational problems and pathology, leadership, communication, control, and the hiring, training, compensating, motivating, and firing of personnel. Numerous case studies are considered.

**POLS 3063  
MODERN POLITICAL THOUGHT**

An examination of the major contributions to political thought during the Modern Era. Completion of POLS 2253 recommended.

**POLS 3083  
POL PARTIES/INT GROUPS**

Prerequisite: POLS 2013. A study of American political parties and interest groups with emphasis on such topics as public opinion, the nature and history of parties and interest groups, organizational structures and procedures, public policy interest, nominations, and elections.

**POLS 3093  
AMERICAN MUNICIPAL GOVT**

A comparative study of the structure, functions, politics, and problems of urban, suburban, and metropolitan governments in the United States, with emphasis on municipal governments in Arkansas.

**POLS 3123  
AM POLITICAL BEHAVIOR**

A study of the individual's decision to participate in American political life and the impact those decisions have on policy formation. The course aims to understand the influences that lead to or retard individual political participation.

**POLS 3133  
UNITED STATES CONGRESS**

Examination of the U.S. Congress in terms of its functions as both a lawmaking institution and a representative institution. Attention to the legislative process, congressional elections, party leadership, and executive-legislative relations.

**POLS 3143  
THE UNITED STATES PRESIDENCY**

Analysis of the role of the presidency in the American political system. Topics include the theoretical and constitutional foundations of the president, the growth of the presidency as an institution, the evolving constitutional, political, and environmental restraints to presidential action, presidential leadership, and historical trends in the relationship between the presidency and the legislative and judicial branches of government.

**POLS 3253  
CLASSICAL POLITICAL THOUGHT**

An examination of the major contributions to political thought during the Classical Age, the Medieval Era, and the Renaissance. Completion of POLS 2253 recommended.

**POLS 3403  
COMPARATIVE GOVERNMENT**

Prerequisite: POLS 2013 recommended. A study of various political systems of the world, such as the governments of Western Europe, socialist or communist systems, and developing world governments. The focus of this course is often adjusted to deal with real world circumstances.

**POLS 3413  
INTL RELATIONS**

Prerequisite: POLS 2013 recommended. A study of the theory and practice of international politics, with special emphasis upon decision making, policy making, the state system, war and arms control, ideology and nationalism, the ecological system, interdependence, the multinationals, and human rights.

**POLS 3421  
MODEL UN WORKSHOP**

Prerequisite: POLS 3433. Participation in the state or regional Model United Nations. Only one of these courses may be taken for credit during a semester. POLS 3421 may be repeated for credit three times.

**POLS 3433  
UNITED NATIONS**

Study of the organization and functioning of the United Nations, significant problems confronting world organization, weaknesses of the UN, and the future of world organization. Students will conduct research and write papers on significant international issues confronting the UN and on the foreign policy of selected members of the UN. Students will participate each week in a mock session of the UN and will attend, at their own expense, the annual session of the Arkansas Model United Nations, which normally meets on Friday and Saturday of the first week in December. Only one Model United Nations course may be taken for credit during a semester Course offered in fall semester only.

**POLS 3473  
NATL SECURITY POLICY**

Prerequisite: POLS 2013 and 3013 recommended. A study of national security policy making, with an emphasis on current national security issues.

**POLS 3513  
RESEARCH METHODS II**

Prerequisite: POLS 2003 and POLS/HIST 2153 or PSY/SOC 2053. Completion of MATH 1113 recommended. Introduction to elementary descriptive and inferential statistics, with an emphasis on applications in political science.

**POLS 4043  
AMER CONSTITUTIONAL LAW**

A comprehensive study of the United States Supreme Court's decisions in the evolution of American Government as seen in the leading cases dealing with judicial review, separation of powers, and federal systems; protection of personal rights, interstate commerce, taxation, and due process of law in economic regulation and control; and civil liberties and civil rights.

**POLS 4103  
ENVIRONMENTAL POLITICS**

Prerequisite: POLS 2013 recommended. An examination of environmental issues from a policy perspective. Although scientific questions are involved, emphasis is on the political process of environmental issues. Topics discussed include the actors, their power, limits to their power, and their impact on the environmental policy process. May not be taken after completion of POLS 5103 or equivalent.

**POLS 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**POLS 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**POLS 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**POLS 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**POLS 4963  
SENIOR SEMINAR**

A required course for senior History and Political Science majors. Course content will cover a directed seminar in a specified area of Political Science. Research techniques will be emphasized.

**POLS 4971  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**POLS 4972  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**POLS 4973  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**POLS 4974  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**POLS 4975  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**POLS 4976  
INTERNSHIP**

Prerequisites: Junior or Senior standing, 2.75 grade point average, and consent of department head. A supervised placement in selected agency settings in student/ trainee status under professional guidance of both an agency supervisor and a faculty member. Emphasis will be on providing hands-on experience in research, editing, cultural management, public service, or some other area related to the discipline. Written report required and minimum of 100 clock hours of supervision required per credit hour. May be repeated for a maximum of 6 hours credit.

**POLS 4981  
SOC SCIENCES SEMINAR**

A directed seminar in an area of social sciences. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. This course may be repeated for credit if course content differs.

**POLS 4982**  
**SOC SCIENCES SEMINAR**

A directed seminar in an area of social sciences. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. This course may be repeated for credit if course content differs.

**POLS 4983**  
**SOC SCIENCES SEMINAR**

A directed seminar in an area of social sciences. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. This course may be repeated for credit if course content differs.

**POLS 4991**  
**SPEC PROB/POLSC**

Admission requires consent of department head.

**POLS 4992**  
**SPEC PROB/POLSC**

Admission requires consent of department head.

**POLS 4993**  
**SPEC PROB/POLSC**

Admission requires consent of department head.

**POLS 4994**  
**SPEC PROB/POLSC**

Admission requires consent of department head.

**PS 3001**  
**PORTFOLIO DEV FOR PLA**

Perequisite: the student must have successfully completed 60 hours of credit which includes all general education requirements and 12 hours of coursework after being admitted to the Professional Studies degree. The basis for requesting credit for prior learning is the development of a portfolio with assistance from a faculty advisor. Every student requesting credit for prior learning must enroll in this course and complete a portfolio which demonstrates the college-level learning that has resulted from experiences outside a formal academic framework. The student utilizes this method to document knowledge acquired

which is equivalent to upper-division college-level credit. Credit for PS 3001 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

### **PS 3003 SPECIAL PROBLEMS**

Prerequisites: Completion of the BPS Professional Core and permission of the program advisor. This course will provide an opportunity for the student to facilitate a process for identifying a specific problem in an actual industry or business environment relevant to the student's specialty area. The student will outline a formal plan of action for identifying the problem. The plan must include a broad scan of the specific area/operation selected including the names and titles of the individuals surveyed for input. The end product will be the development of a formal needs assessment which identifies deficiencies or areas of improvement. The needs should be prioritized on the basis of feasibility, cost, and urgency.

### **PS 3023 PROFESSIONAL COMMUNICATION**

Prerequisites: 6 hours of English Composition and COMS 1003 or BUAD 2003. This course supports career fields which require competencies in advanced professional communication. Course includes principles of effective professional communication using technology to generate professionally-prepared materials including formal correspondence, brochures, public relations materials, graphics, and technical documents.

### **PS 3133 APPL PRIN PERSONNEL MGMT**

This course supports the needs of professionals whose career fields require competencies in the area of human resources/personnel management. The focus of the course is on the practical application, essential theories, and process of personnel management from the perspective of a generalist. Course content will include the essential aspects of recruitment, selection, training, legal rights and responsibilities, compensation and appraisal.

### **PS 4006 CAPSTONE PROJECT**

Prerequisite: PS 3003. This course capstones the process conducted in PS 3003 by requiring the student to demonstrate competencies required of a professional in the student's specialty area in an actual business or industry setting. The student will assume a leadership role in presenting the outcomes of the needs assessment to a group of company stakeholders. On the basis of empirical research conducted throughout the assessment process, the student will recommend relevant strategies for addressing the identified problem/s. A review of the literature will serve to either validate or reject the strategies selected. A continuous process improvement model will be developed along with a detailed continuous process improvement plan which must be approved and accepted by all relevant stakeholders. The final component of the course will require the student to demonstrate presentation ability, appropriate leadership styles, critical thinking, and communications skills in a formal presentation of the strategic plan to the group responsible for implementing the strategies.

### **PS 4201 PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

### **PS 4202 PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course

provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4203  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4204  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4205  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4206  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4207  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4208  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4209  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4210  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4211  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4212  
PLA CREDIT**

Prerequisite: PS 3001. Based on a recommendation from the BPS Director/instructor and reviewed by the dean of Community Education and the Registrar, the portfolio assessment completed in PS 3001 will determine the number of hours that can be awarded for prior learning. This variable-credit course provides the opportunity for the student to enroll in the number of hours that were approved through the portfolio up to a maximum of 12 hours. Regular tuition charges will be applied. Credit for PS 4201-12 applies only to the Bachelor of Professional Studies degree and cannot be applied toward any other program. Grading is on a Pass/Fail basis.

**PS 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PS 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PS 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PS 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PSY 2003  
GENERAL PSYCHOLOGY**

An introduction to basic concepts in the study of behavior and to elementary principles of genetics, individual differences, motivation, emotion, personality, sensation, and perception.

**PSY 2023  
CONSUMER PSYCHOLOGY**

An introduction to the application of psychological principles to the study of the acts of individuals involved in obtaining and using economic goods and services, including the decision making processes that precede and determine these acts. Emphasis is placed on the role of perception, learning, personality, and attitude change.

**PSY 2033  
PSY OF ADJUSTMENT**

A course to provide a broad introduction to psychology as applied to human behavior. Focus is on the theoretical and experimental issues underlying the development and function of mental and emotional states. Emphasis is on normal functioning. \$20 testing fee.

**PSY 2053  
STATISTICS/BEHAV SCI**

Prerequisites: MATH 1113 and PSY 2003 or SOC 1003, or consent. An introduction to descriptive and inferential statistical methods pertinent to behavioral sciences research, including correlation, sampling distributions, t-tests, chi square and analysis of variance. Emphasis is upon the logical and applied aspects.

**PSY 2063  
RESEARCH DESIGN BEHAVIORAL SCI**

Prerequisites: PSY 2003 or SOC 1003. This course is designed to introduce you to the foundations of behavioral science, the logic of research design and the many possible modes of operation. This class focuses on teaching students in the behavioral sciences the basic principles that guide the research process, the elements of research design, how to read and critique research articles, and how to write a literature review for a research project.

**PSY 2074**  
**EXPERIMENTAL PSYCHOLOGY**

Prerequisite: PSY 2003 and PSY(SOC) 2053. A study of research methods in psychology. Emphasis is placed upon developing skills in data gathering and analysis, report writing and application of basic research strategies. Three hours lecture, two hours laboratory per week.

**PSY 2093**  
**HUMAN SEXUALITY**

A survey of the psychological themes associated with human sexuality. Topics include, but are not limited to: love and intimacy, sexual behaviors, sexual problems, gender, and sexual orientation.

**PSY 2133**  
**CROSS-CULTURAL PSYCHOLOGY**

This course is designed to link basic principles in cross-cultural developmental psychology and practical everyday events and questions as above ones together to help students cultivate a global and multicultural perspective on human behavior and gain an understanding of, and appreciation for, human development as it takes place in diverse cultural settings throughout the world. Experiential learning will be an important component of this course. Each student will have a chance to observe the behavior of a child/adolescent of different ethnic background from his or her own and develop their own cross-cultural viewpoint on human development.

**PSY 3003**  
**ABNORMAL PSYCHOLOGY**

Prerequisite: PSY 2003. Emphasis will be placed upon the etiology, symptoms, and treatment of the neuroses, psychoses, and personality disorders.

**PSY 3013**  
**PSYSOC/ASPECTS/DEATH/DYI**

Prerequisite: Upper division standing. This course studies the psychosocial and sociological aspects of death. The course will provide a basic insight into the dynamics surrounding death from the individual and societal level, its impact on survivors, and the effect death has on the living. This course cannot be taken for credit after completion of PSY 4003.

**PSY 3033**  
**THE CRIMINAL MIND**

Prerequisite: PSY 2003 and CJ(SOC) 2003 or CJ(SOC) 2043. The course familiarizes students with various models, theories, and research regarding criminality from a psychological perspective. Genetic, constitutional, and biological factors will be emphasized, and some practical applications to dealing with criminals will be considered.

**PSY 3043**  
**ENVIRONMENTAL PSY**

Prerequisite: PSY 2003. This course is designed to provide students with information on the reciprocal relationship between humans and their environment, both natural and man-made. Major topics to be considered include (but are not limited to) the following: noise, pollution, temperature, density, architectural influences on human behavior, cognitive mapping, and crowding.

**PSY 3053**  
**PHYSIOLOGICAL PSY**

Prerequisites: PSY 2003, BIOL 2124, or BIOL 1014. An introduction to the physiological correlates of behavior, with emphasis upon the nervous system.

**PSY 3063**  
**DEVELOPMENTAL PSY I**

Prerequisite: PSY 2003. A study of how the maturation process affects an individual's physical and psychological state from conception through adolescence. Representative topics include (but not limited to) genetic influences, child cognitive processes, moral reasoning, and testing.

**PSY 3073**  
**PSYCHOLOGY OF LEARNING**

Prerequisite: Twelve hours of psychology. An introduction to the basic processes in learning and conditioning, including human and animal experimental findings. Emphasis will be placed on conditioning paradigms, reinforcement principles, memory functions and their use in behavior change.

**PSY 3083**  
**PSYCHOLOGY OF WOMEN**

The purpose of this course is to examine the lives of girls and women, including topics such as gender stereotypes, the development of gender roles, gender comparisons, women and work, love relationships, women's physical and mental health, violence against women, and women in later adulthood. Students who take this course should acquire an understanding of what it means to be female in North America.

**PSY 3093**  
**INDUSTRIAL PSYCHOLOGY**

Prerequisite: PSY 2003. A survey of psychological applications in industrial settings with emphasis upon selection, placement, and training techniques; organizational theory; and decision making processes.

**PSY 3133**  
**SELF AND SOCIETY**

Prerequisite: SOC 1003 or PSY 2003. A sociological survey of the ways in which social structure and personality interact. Topics typically covered are: socialization, attitudes and value formation and change, and group influences upon self concept and self esteem.

**PSY 3141**  
**SEMINAR IN PSYCHOLOGY**

A directed seminar in an area of psychology. The specific focus will depend upon research underway, student need, and current developments in the field of psychology. May be repeated for credit if course content differs.

**PSY 3142  
SEMINAR IN PSYCHOLOGY**

A directed seminar in an area of psychology. The specific focus will depend upon research underway, student need, and current developments in the field of psychology. May be repeated for credit if course content differs.

**PSY 3143  
SEMINAR IN PSYCHOLOGY**

A directed seminar in an area of psychology. The specific focus will depend upon research underway, student need, and current developments in the field of psychology. May be repeated for credit if course content differs.

**PSY 3144  
SEMINAR IN PSYCHOLOGY**

A directed seminar in an area of psychology. The specific focus will depend upon research underway, student need, and current developments in the field of psychology. May be repeated for credit if course content differs.

**PSY 3153  
THEORIES OF PERSONALITY**

Prerequisite: Six hours of psychology. An introduction to the various theoretical viewpoints of the normal personality structure and its development.

**PSY 3163  
DEVELOPMENTAL PSY II**

Prerequisite: PSY 2003. The study of how the maturation process affects an individual's physical and psychological state from adolescence through old age. Representative topics include (but not limited to) early, middle, and late adulthood biological, psychosocial and cognitive development.

**PSY 3173  
PSYCHOLOGY OF CONSCIOUSNESS**

Prerequisite: Upper division standing. An introduction to the various theoretical viewpoints as to the topic of consciousness and how it is investigated.

**PSY 3184  
ANIMAL BEHAVIOR**

Spring of even years. Prerequisites: sophomore standing in biology or psychology, or approval of instructor. An introductory course in animal behavior covering behavioral responses in primitive and advanced animals exposed to a wide range of environmental and social conditions. Laboratory exercises will

include field as well as in-lab exercises and will focus on observational techniques and analyses of behavioral patterns in vertebrates and invertebrates. Lecture three hours, laboratory two hours. \$20 laboratory fee.

**PSY 3813  
LIFESPAN DEVELOPMENT**

Prerequisites: NURS major, PSY major with 90 earned hours, or instructor permission. A study of the processes of human development from conception through the lifespan. Research, application, and other considerations for Nursing majors will be emphasized. Topics include, but are not limited to: how the maturation process affects an individual's physical and psychological state, genetic influences, child cognitive processes, moral reasoning, and early, middle, and late adulthood biological, psychosocial, and cognitive developmental processes.

**PSY 4003  
ADV RESEARCH METHOD/LAB PSY**

Prerequisites: PSY 2003, 2053, and 2063. A study of research methods in psychology. Emphasis is placed upon developing skills in data gathering and analysis, report writing and application of basic research strategies.

**PSY 4013  
HISTORY OF PSYCHOLOGY**

Prerequisite: PSY 2003. A survey of the developments in psychology from the ancient Greeks to the emergence of psychology as a modern experimental science.

**PSY 4033  
PSY TESTS/MEASUREMENTS**

Prerequisites: Twelve hours of psychology and PSY(SOC) 2053. Theory of psychological testing, statistical procedures, and training in administration, scoring and profiling of various tests of ability, achievement, interests, and personality. \$20 testing fee.

**PSY 4043  
SOCIAL PSYCHOLOGY**

Prerequisite: 9 hours of Sociology or permission. The study of how individuals are influenced by the actual or implied presence of other persons. Emphasis is placed on attitudes, social cognition, social influence, aggression, altruism, self and other perception.

**PSY 4053  
PSY OF PERCEPTION**

Prerequisite: Nine hours of psychology or consent. The study of general perceptual process. While the main senses will be covered, emphasis will be placed on visual functioning. The role of perception in organismic adaptation will be explored.

**PSY 4073  
COGNITIVE PSYCHOLOGY**

Prerequisite: 60 hours including 9 hours of psychology or permission of instructor. A study of the basic principles of mental processes, and their influence on behavior. Specifically, the course focuses on the conscious and unconscious processes involved in the acquisition, storage, transformation, and use of knowledge.

**PSY 4133  
PSYCHOPHARMACOLOGY**

Prerequisites: PSY 2003, 2053, or permission of instructor. An introduction to the field of psychopharmacology. Representative topics include (but are not limited to) neuronal structures and processes, neurochemicals and neurotransmission, and the biological basis and pharmacological treatment of neurodegenerative diseases and mental illness.

**PSY 4234  
FIELD PLACEMENT**

Prerequisites: PSY 2023 or 3093, and PSY(SOC) 2053 and PSY 2074 (or comparable), senior major, and mutual consent of advisor, supervising faculty and industry supervisor. This course is a jointly supervised field placement in an area business or industry. Emphasis is placed on integration of theory and classroom work with on the job experience. The placement is designed for students who are considering work in the area of industrial/organizational or consumer psychology. The purchase of professional liability insurance is required.

**PSY 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PSY 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PSY 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PSY 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**PSY 4991  
SPEC PROB/PSY**

Prerequisite: Eighteen hours of psychology and prior permission of instructor. Independent work under individual guidance of a faculty member.

**PSY 4992  
SPEC PROB/PSY**

Prerequisite: Eighteen hours of psychology and prior permission of instructor. Independent work under individual guidance of a faculty member.

**PSY 4993  
SPEC PROB/PSY**

Prerequisite: Eighteen hours of psychology and prior permission of instructor. Independent work under individual guidance of a faculty member.

**PSY 4994  
SPEC PROB/PSY**

Prerequisite: Eighteen hours of psychology and prior permission of instructor. Independent work under individual guidance of a faculty member.

**PTA 1111  
PRINCIPLES OF PHYSICAL THERAPY**

Course credit: 1 hour lecture. This course provides an introduction and orientation to the field of physical therapy. The course includes historical background, medical-professional ethics and conduct, and the role of the PTA as part of the health care team.

**PTA 1121  
CLINICAL KINESIOLOGY LAB**

Co-requisite: PTA 1122. Lab skills practice to apply concepts presented in PTA 1122. Laboratory: 1 hour.

**PTA 1122  
CLINICAL KINESIOLOGY**

Course credit: 2 hours. Co-requisite: PTA 1121. This course provides an introduction to the musculoskeletal anatomy, human movement, and clinical assessment. Students will learn to locate and identify muscles, joints, and boney landmarks of the spine and extremities. Students will also learn to assess range of motion and muscle strength.

**PTA 1132  
PATHOLOGICAL CONDITIONS**

Course credit: 2 hours lecture. This course will examine the mechanisms and concepts of selected pathological conditions in the human body. Emphasis is placed on how the specific pathological condition affects the functioning of the system involved, as well as its impact on other body systems. This course includes general pathology with emphasis on the study of diseases and disorders commonly seen in physical therapy practice.

**PTA 1221  
PRINCIPLES OF PATIENT CARE LAB**

Course credit: 1 hour laboratory. Co-requisite: PTA 1222. Lab skills practice to apply concepts presented in PTA 1222.

**PTA 1222  
PRINCIPLES OF PATIENT CARE**

Course credit: 2 hours lecture. Co-requisite: PTA 1221. This course will introduce students to the theory, principles, and techniques of patient care including, but not limited to: documentation, patient preparation and handling, gathering of vital signs, use of universal precautions, and mobility training using the wheelchair and other assistive devices. Students will also receive an orientation to the psychological and social needs of the ill and disabled.

**PTA 1231  
THERAPEUTIC PROCEDURES I LAB**

Course credit: 1 hour laboratory. Co-requisite: PTA 1232. Lab skills practice to apply concepts presented in PTA 1232.

**PTA 1232  
THERAPEUTIC PROCEDURES I**

Course credit: 2 hours lecture. Co-requisite: PTA 1231. Students will learn physical therapy interventions using specific physical agents.

**PTA 1241  
PRINCIPLES OF PHYSICAL THERAPY LAB**

Co-requisite: PTA 1243 This lab will cover concepts and techniques presented in PTA 1243 Principles of Physical Therapy. Course credit: 1 hour laboratory.

**PTA 1243  
PRINCIPLES OF PHYSICAL THERAPY**

This course provides an introduction and orientation to the field of physical therapy. This course will introduce students to the theory, principles, and techniques of patient care. Students will be introduced to concepts of professional ethics and conduct in the delivery of patient care. Course credit: 3 hours lecture

**PTA 1251  
DATA COLLECTION IN PT LAB**

This lab will cover data collection and compilation as it relates to Physical Therapy. Course credit: 1 hour laboratory.

**PTA 2112  
THERAPEUTIC PROCEDURES II LAB**

Co-requisite: PTA 2113. Lab skills practice to apply concepts presented in PTA 2113.

**PTA 2113  
THERAPEUTIC PROCEDURES II**

Co-requisite: PTA 2112. This course is a continuation of physical therapy interventions using specific physical agents. Course credit: 2 hours lecture.

**PTA 2121  
NEUROLOGICAL DEV/MOTOR CONTROL**

This course will examine the principles of normal motor development across the lifespan from infancy to adulthood.

**PTA 2142  
THERAPEUTIC EX/CARD REHAB LAB**

Co-requisite: PTA 2143. Lab skills practice to apply to concepts presented in PTA 2143.

**PTA 2143  
THERAPEUTIC EXER/CARDIO REHAB**

Co-requisite: PTA 2142 This course will examine the theory and application of physical therapy procedures for the management of patients with cardiovascular and pulmonary conditions. This course will also examine the theory and application of therapeutic exercise.

**PTA 2151  
ADMINISTRATIVE PROCEDURES**

This course will examine the administrative aspects of providing physical therapy services including reimbursement, quality improvement, laws and professional liability regarding the delivery of physical therapy services, administrative principles, and organizational patterns. Course credit: 1 hour lecture.

**PTA 2152  
ADMINISTRATIVE PROCEDURES**

This course will examine the administrative aspects of providing physical therapy services including reimbursement, quality improvement, laws and professional liability regarding the delivery of physical therapy services, administrative principles, and organizational patterns.

**PTA 2164  
CLINICAL EXPERIENCE I**

This course is the first clinical experience in the PTA program curriculum. Students will perform 200 hours of clinical practice in a physical therapy setting while under the supervision of a licensed physical therapist and/or licensed physical therapist assistant. Students will apply the knowledge and skills acquired from previous didactic learning as deemed appropriate by the clinical instructor.

**PTA 2211  
MUSCULOSKELETAL REHAB LAB**

Co-requisite(s): PTA 2212 Lab skills practice to apply concepts presented in PTA 2212.

**PTA 2212  
MUSCULOSKELETAL REHABILITATION**

Co-requisite(s): PTA 2211 This course will examine the theory and application of physical therapy interventions for the management of patients with specific musculoskeletal conditions. A review of basic assessment and treatment procedures will be included.

**PTA 2221  
NEUROLOGICAL REHAB LAB**

Lab skills practice to apply concepts presented in PTA 2222.

**PTA 2222  
NEUROLOGICAL REHABILITATION**

Co-Requisite(s): PTA 2221 This course will examine the theory and application of physical therapy interventions for the management of specific neurological disorders. A review of basic assessment and treatment procedures will be included.

**PTA 2234  
CLINICAL EXPERIENCE II**

Pre-requisite: PTA 2164 This course is the second clinical experience in the PTA program curriculum. Students will perform 200 hours of clinical practice in a physical therapy setting while under the supervision of a licensed physical therapist and/or licensed physical therapist assistant. Students will apply the knowledge and skills acquired from previous didactic learning as deemed appropriate by the clinical instructor.

**PTA 2235  
CLINICAL EXPERIENCE III**

Pre-requisite: PTA 2234 This course is the third clinical experience in the PTA program curriculum. Students will perform 240 hours of clinical practice in a physical therapy setting while under the supervision of a licensed physical therapist and/or licensed physical therapist assistant. Students will apply the knowledge and skills acquired from previous didactic learning as deemed appropriate by the clinical instructor.

**PTA 2303  
DIRECTED STUDY**

Pre-requisite: Program Director approval An individualized course of study which includes topics related to physical therapy.

**READ 0103  
COLLEGE READING SKILLS**

A course designed to develop reading skills through perception training, vocabulary building, comprehension training, and active listening exercises. Individual diagnosis and prescription is emphasized. The grade in the course will be computed in semester and cumulative grade point averages, but the course may not be used to satisfy general education requirements nor provide credit toward any degree. A student who is placed in READ 0103 must repeat the course until he or she earns a grade of "C" or better. A student who makes a "D" or "F" in READ 0103 must repeat the course in each subsequent semester until he or she earns a grade of "C" or better.

**RP 1002  
BACKPACKING**

This course is an introduction to basic backpacking skills, equipment, food, and backcountry travel. Day hikes and overnight hikes. Students will need to provide own personal equipment (backpack, sleeping bag, etc.) and be willing to share tents, stoves, cooking gear, etc. with other students in the course. Some students may need to borrow or purchase such gear depending on the equipment owned by members of the class. \$50 course fee required.

**RP 1011  
SPORT HUNTING**

An introduction to the fundamentals of sport hunting, materials, and personal skills. Emphasis on state game laws, personal equipment and usage, game species and their natural habitats, and firearm safety. Arkansas Hunter Safety certification awarded with successful completion.

**RP 1013  
PRIN RECREATION/PARKS**

A study of the history of the recreation and park profession and the basic sociological and ecological intermix of contemporary recreation and park services.

**RP 1021  
BOATING EDUCATION**

This course will take students through the Arkansas Game and Fish Commission Boating Guide. Those who successfully complete the course will be awarded Boating Safety Certification. A variety of audio visual presentations will be used, and participation in one weekend day of actual boating experience is required. Certification is awarded upon completion.

**RP 1031  
INTRODUCTION TO CYCLING**

Introduction to Cycling is designed to introduce the beginner biker to the basics needed for lifelong enjoyment of this recreational activity and sport. Students will be introduced to techniques of road cycling and off-road cycling. Emphasis on choosing clothing and equipment, maintenance, and riding skills. Students will have riding opportunities at area trails, as well as classroom instruction. Participants are expected to provide their own bikes and associated gear and equipment. \$50 fee required to cover transportation to area trails.

**RP 1041  
PRINCIPLES OF FISHING**

This course provides an introduction to the sport of fishing. Students will learn to identify species of freshwater fish, emphasizing fish inhabiting Arkansas streams and lakes. Students will learn casting techniques, ethics, catch-and-release techniques, knot tying, and lure and bait selection. Cleaning and cooking your catch of the day will be covered. Arkansas fishing license required. Bring your own pole and tackle. \$10 lab fee required. Field trips to area fishing holes.

**RP 1993****BASIC FOREST FIREFIGHT**

This class is taught jointly by the U.S. Forest Service and ATU using classroom theory and weekend field exercises which will enable successful candidates to obtain the "Red Card" recognized by most federal and many state firefighting agencies as a minimum requirement for wildland fire firefighting certification. This class consists of the following wildland fire training courses recognized by the National Wildland Coordinating Group (NWCG): S-130 Basic Firefighting; S-190 Introduction to Fire Behavior; S-110 Wildland Fire Suppression Orientation; I-100 Introduction to Incident Command System; and Standards for Survival. These courses will be taught together to provide a complete picture of the basics of forest firefighting. This training is required before any person can participate on a wildland fire suppression crew for the U.S. Forest Service, other federal agencies and most other state wildland fire agencies. Instruction will be by U.S. Forest Service certified instructors and RP faculty.

**RP 2003****RECREATION PROGRAMMING**

Recreation program planning, supervision, and evaluation. This course examines the theory, principles, and leadership techniques of programming for individuals and groups in a variety of recreation settings, including community, institutions, and camps. May not be taken for credit after completion of RP 2002 and RP 2012.

**RP 2013****LANDSCAPE PLANNING/DESIGN**

An introduction to the use of plants and other materials in the landscape planning process and environmental design.

**RP 2033****RECREATION LEADERSHIP**

A study of the processes, methods, and characteristics of leadership and supervision in the delivery of leisure services.

**RP 2133****TRAVEL AND TOURISM**

The introduction to travel and tourism, its components and relationship to the recreation and hospitality industry. The course will explore the current and future trends in travel and tourism and the effects on the economy, as well as the social and political impacts of travel and tourism.

**RP 3013****REC/SPECIAL POPULATIONS**

Development of an understanding of disabled sub populations and its relationship to recreation programming and administration for agencies at the local, state, and federal level of responsibilities.

**RP 3023****CAMP ADMINISTRATION**

Prerequisite: Junior standing. Theory and principles of camp administration, programming, leadership, and supervision in public, private, and school camps. Field trips, school camp.

**RP 3033  
COMMERCIAL RECREATION**

An introduction to the spectrum of planning, delivery and assessment of goods and services in the commercial sector of recreation.

**RP 3034  
SITE PLANNING/DESIGN**

Fundamentals of the site planning process and application to park and recreation development, including consideration of factors both external (user preferences) and internal to the site (function, organization and aesthetic treatment). Emphasis on resource capabilities and potentials. Lecture two hours, laboratory four hours.

**RP 3043  
WORK EXPERIENCE**

By permission. Supervised field application of class skills and knowledge in Parks and Recreation work situations. Students are given the opportunity to take part in meaningful management and work experiences in actual work situations under the supervision of both university faculty and professionals in the field. Minimum of 100 clock hours of work experience is required.

**RP 3053  
NAT RESOURCE/MGT/PLAN**

Study of the economic, social, political, and physical factors of the natural environment and methods to guide, direct, and influence orderly growth and development.

**RP 3063  
OUTDOOR EDUCATION**

An introduction to outdoor education foundations, methods, and practice. Preparation and planning for teaching in, about and for the outdoors. Leadership of outdoor education programs. \$25 transportation and supplies fee.

**RP 3093  
INTERPRETIVE METHODS**

An analysis of various interpretive techniques, interpretive planning, and utilization of interpretation to obtain management goals. Students will plan, design and implement interpretive programs using various media.

**RP 3133  
TOURISM PLANNING**

An examination of the tourism planning process and techniques. Topics include tourism as a system, levels of planning, environmental, cultural and economic components, attractions, transportation, infrastructure and marketing.

**RP 3403  
FINANCING RECREATION AND PARKS**

Prerequisites: Junior standing and Recreation and Park Administration major. An introduction to recreation and park Financial management including revenue and expenditure management.

**RP 3503  
RECREATIONAL SPORT MGMT**

An overview of recreational sport and event management in various settings. Topics include informal, intramural, club, extramural, instructional sports, and sporting events programming; values of recreational sports; administration and operation of recreational sports and sporting events; terminology and career opportunities in various sport settings.

**RP 3763  
INTRO TURFGRASS MANAGEMENT**

An introduction to turf management emphasizing structure, growth, adaptation, and management of turfgrass. Methods for establishment, fertilization, mowing, cultivation, irrigation and pest management.

**RP 3791  
TURFGRASS MGMT: EQUIPMENT**

An introduction to turfgrass equipment. Visits to golf course or other turfgrass sites where students will examine and operate various types of turf equipment. Equipment maintenance discussed. Equipment design and selection discussed. \$25 travel fee.

**RP 3793  
TURFGRASS PEST CONTROL**

An introduction to the integrated management of pests affecting turfgrass. Maintenance practices related to pest and abiotic turfgrass problems, safety, and materials.

**RP 3993  
WILDLAND FIRE PRAC/NRMGT**

Prerequisites: RP 1993 or permission. Advanced study of the organization, deployment, and techniques of fire suppression applicable to wildfires affecting residences, outbuildings, and other human-structure barriers in remote areas and outlying suburban locales. Particular emphasis on wildland structure and urban interface fire suppression problems. This is a science-based course. Emphasis is placed on: (1) uncontrolled wildland fire and the many positive and negative impacts with which fire personnel must deal; (2) planning and implementing controlled burn projects to attain desired future conditions and reduce fire hazards, and (3) the dilemma of ever-expanding wildland/urban interface issues. The overall purpose of this course is to provide the student with integral fire knowledge and skills necessary to become an effective member of a fire/natural resource management team. Weekend field exercises required.

**RP 4001  
INTERNSHIP PREPARATION**

Prerequisites: PRHA major, senior standing, and completion of RP/HA 3043 (if required for major) or permission of department head. Preparation for the internship experience. This course is graded Pass/Fail.

**RP 4013  
RECREATION/PARK ADMIN**

Prerequisite: Six hours of RP courses. A study of the administrative process of planning, organizing, staffing, directing, evaluating, budgeting, and coordinating of recreation and park agencies.

**RP 4023  
RESEARCH METHODS**

Prerequisite: Twelve hours of RP courses. An introduction to the spirit and theory of research including the scientific method and its application to the recreation and parks profession.

**RP 4042  
FIELD SEM/INTERPRE METH**

This off-campus course will be of one-week duration conducted at recreation and park facilities in Arkansas and the nearby region. The course will center on discussion of interpretive facilities, techniques, problems and innovations with leading professionals on site. A fee of \$100 will be assessed to cover transportation, food and entry fees for some sites. Lodging is usually provided by park agencies at the site free or at a very low cost.

**RP 4053  
WATER RESOURCES DEVEL**

A study of water resources with emphasis on surface supply and small watershed and reservoir recreation. Supply and pollution in federal, state, local and private water use allocation will be considered.

**RP 4063  
PARK OPERATIONS**

Prerequisite: COMS 1003 or equivalent. Basic principles, practices, and problems pertaining to the management of public park systems with emphasis on maintenance and operation schedules, construction and maintenance equipment, employee safety, office procedures, law enforcement, personnel management, and public relations.

**RP 4073  
PRIN/TECH/THERAPEUT/REC**

Prerequisite: RP 3013 or permission of instructor. A professional course which examines the foundation, theory, philosophy, and historical significance of therapeutic recreation. Emphasis on the therapeutic recreation process as it relates to program development and service delivery for individuals with illnesses and/or disabilities in various clinical and community settings.

**RP 4093  
RESORT MANAGEMENT**

Prerequisites: Junior standing and nine hours of RP or HA courses or by permission. An in-depth study of resorts with respect to their planning, development, organization, management, marketing, visitor characteristics, and environmental consequences.

**RP 4103  
RECREATION LAW/POLICY**

An examination of the relationship between recreation and the law. Specific topics include liability negligence, contracts, safety codes, law enforcement, insurance, and administration policy. Identification of legal decision making organizations and the court system, including the policy dimensions of land acquisition, personnel disputes, and current issues in land use.

**RP 4113  
PERSONNEL MGMT IN PRHA**

Prerequisites: Junior standing and nine hours of RP or HA courses. An overview of personnel considerations in various Recreation and Park agencies and the Hospitality industry. Laws, legal issues, structure, staffing, motivation, training, conduct, policies and other aspects of agency/industry personnel relations will be examined using case studies, as well as other methods.

**RP 4116  
INTERNSHIP**

Fall, spring and summer semesters. Parks, Recreation, and Hospitality Administration majors only. Prerequisites: Senior standing, current certifications in CPR, Standard and Advanced First Aid, consent of department head and completion of all other courses applicable to degree. Placement in selected agency settings as a student intern under professional guidance of both agency supervisor and faculty. Emphasis will be placed on application of classroom theory to agency requirements which fulfill student's individual career interest. No prior experience credit will be granted. Minimum of 600 clock hours during a minimum of 15 weeks of supervised internship is required. Student cannot document more than 40 hours of work experience per week. A written report is required within two weeks of internship completion. \$100 supervisor travel fee required.

**RP 4173  
THERAPEUT REC ASSESS/DOC**

Prerequisites: RP 4073 or permission of instructor. This course is an examination of the various assessment tools, styles of documentation, and methods of assessment and documentation utilized in therapeutic recreation services. The purpose of this course is to provide students with the basic skills and knowledge necessary to conduct therapeutic recreation assessments and to properly document health care information.

**RP 4273  
ADM/OP THERAPEUTIC REC**

Prerequisites: RP 3013 and 4073 or permission of instructor. Program design and planning for effective administration of client centered services for special populations. Management of therapeutic recreation services including standards of practice, clinical supervision, reimbursement, marketing, budgeting, and writing policies and procedures.

**RP 4373  
INTERVENT/THERAPEUT/REC**

Prerequisites: RP 3013, RP 4073, or permission of instructor. This course is designed to provide an understanding of the various interventions utilized in therapeutic recreation services and to develop technical competencies necessary for the provision of quality therapeutic recreation services. Emphasis will be placed on the skillful application of various processes and techniques utilized to facilitate therapeutic changes in the client.

**RP 4753  
SPORTS FIELD MANAGEMENT DESIGN**

A survey of design and management practices for turfgrass sports fields. Personnel and budgeting requirements for operations and maintenance. \$25 travel fee.

**RP 4763  
GOLF COURSE OPERATIONS DESIGN**

Golf course turfgrass management as influenced by golf course design, including operations, financial analysis, personnel, and environment. \$25.00 travel fee.

**RP 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RP 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RP 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RP 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RP 4991  
SPECIAL PROBLEM/TOPICS**

On demand. Investigative studies and special problems and topics related to parks, recreation, and hospitality administration.

**RP 4992  
SPECIAL PROBLEM/TOPICS**

On demand. Investigative studies and special problems and topics related to parks, recreation, and hospitality administration.

**RP 4993****SPECIAL PROBLEM/TOPICS**

On demand. Investigative studies and special problems and topics related to parks, recreation, and hospitality administration.

**RS 2003****INTRO/REHAB SERVICES**

A survey of the history, philosophy, and roles of the rehabilitation and social services movement. In addition, the course will focus on public attitudes toward people with disability, adjustment to disability, and an orientation to the various community resources which can be utilized toward the rehabilitation of people with disabilities.

**RS 3004****MED/PSY ASPECTS/DIS**

A study of the etiology, treatment and prognosis of various disabling conditions. Emphasis will be placed on medical information as received in medical reports, and as related to vocational functioning and to the everyday psychological and social adjustment problems associated with disability. This course may not be taken for credit after completion of RS 3003.

**RS 3013****THE WORLD OF WORK**

A survey of the world of work emphasizing the role of work in our society, how disability changes one's work role, how career choices are made, and placement techniques. \$20 testing fee.

**RS 3023****PRIN/TECH OF REHAB SCI**

Prerequisite: Junior standing and RS 2003. An introduction to the casework process emphasizing principles of case management, interagency relations and interviewing skills.

**RS 3033****INTRO/VOC REHAB/PROCESS**

An overview of the history, philosophy, and legal basis of vocational rehabilitation plus an in-depth study of the case process. This class will emphasize the vocational rehabilitation process through studying closed case files and case recording procedures.

**RS 3043****INTRO/SOCIAL SERVICES**

An introduction to the history, philosophy, and legal basis of the social services movement. This class will also emphasize the social service case process and case management practices.

**RS 3053  
REHAB APPR/CORR SET**

Prerequisite: SOC(CJ) 2043 or consent of the instructor. A comparative study of rehabilitation approaches in working with adult and juvenile public offenders. Approaches to be studied include: prisons, training schools, camps, halfway houses, work release, study release, preparole classes, vocational training.

**RS 3073  
ORG/STRUCT/REHAB-HUMAN**

This course will provide the student with an overview of organizational and administrative structure in the rehabilitation human services setting. Additionally, it will focus on the dynamics involved in developing a successful managerial style.

**RS 3083  
SUPPORT EMPLOY/SP POPL**

Prerequisite: RS 3013 or consent. An introduction to the ideas, philosophies, models, concepts, and issues that characterize supported employment. Applications with different disability populations will be reviewed.

**RS 3093  
REHAB PROGRAM/ELDERLY**

Prerequisite: SOC 3173 or consent of the instructor. A study of aging and the elderly from a rehabilitation viewpoint. This course will focus on intervention strategies, actual and potential, that might enable other people to maximize their potential and affect the needs for institutionalization.

**RS 3123  
ETHICS IN HUMAN SERVICES**

A study of personal values, CRCC, ACA, and APA professional guidelines, and decision making models that will assist future human service practitioners to effectively deal with ethical dilemmas. This course will emphasize critical thinking and problem solving, and will utilize instructor and student generated dilemmas.

**RS 3133  
MULTICULTURAL ISSUES/HS**

An introduction to issues of multiculturalism and diversity and the importance of understanding these issues when working with individuals. This class will emphasize understanding one's own culture, examine various cultures including disability, and stress the importance of understanding each individual in relationship to his/her culture.

**RS 3141  
REHAB SCI SEM: RESEARCH**

A directed seminar in an area of rehabilitation science. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**RS 3142  
REHAB SCI SEM: RESEARCH**

A directed seminar in an area of rehabilitation science. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**RS 3143  
REHAB SCI SEM: RESEARCH**

A directed seminar in an area of rehabilitation science. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**RS 3144  
REHAB SCI SEM: RESEARCH**

A directed seminar in an area of rehabilitation science. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**RS 3153  
ASSISTIVE TECH/REHAB SETTINGS**

Prerequisite: RS 2003 or consent. A study of the types of technology devices and services available to individuals with disabilities. Emphasis will be placed on knowledge of resources, assessment of individual needs, funding of devices and services, and methods to use assistive technology to improve the quality of life for all individuals.

**RS 3163  
ADDCTN ASSESS/PLAN/TREAT STRAT**

Prerequisites: RS 2003 or consent of instructor. A study and assessment of addiction disorders and related treatment planning approaches with an overview of evidence based intervention techniques and strategies. Group facilitation skills and meeting cultural issues in the group setting will be addressed.

**RS 3173  
ADDICTIONS AND THE FAMILY**

Prerequisites: RS 2003 or consent of instructor. A study of the impact of addictions upon families, the social fabric of the nation. The course includes a review of family systems theory and family addictions counseling models.

**RS 3243  
SOC SER/INDV FAMILIES**

Prerequisite: RS 3043 or consent of instructor. A study of the varied and numerous services offered by federal, state, and privately funded social service programs with an emphasis on protective services, foster care, and adoption services.

**RS 4012  
INTERNSHIP/REHAB SERV**

(Twelve hour course.) Prerequisite: RS 2003, grade of C or higher in RS 3023, rehab major, senior standing, 2.00 cumulative grade point average, and consent of the instructor. A full-time, one semester supervised internship in a rehabilitation or social services setting, either public or private. Emphasis will be placed on the student acquiring first hand experience and entry level skills in practitioner roles such as case management, interviewing and counseling, and coordination of client services among the various community helping services. The purchase of professional liability insurance is required.

**RS 4024  
FIELD PLACEMT/REHAB SC**

Prerequisites: RS 2003, grade of C or higher in RS 3023, junior standing, 2.00 grade point average and consent of the instructor. A supervised 14 week field placement in which the student may either be placed in one agency setting or if a broader experience is desired may rotate among several agencies. Emphasis will be placed upon gaining an understanding of the community context and coordination of client services among the various rehabilitation and helping agencies. The purchase of professional liability insurance is required.

**RS 4034  
FIELD PLACEMENT/VOC RS**

Prerequisite: RS 2003, grade of C or higher in RS 3023, junior standing, completion of at least six hours in the related emphasis area, 2.00 grade point average, and consent of the instructor. A supervised 14 week field placement in a setting related to vocational rehabilitation. Emphasis will be placed on the student's acquiring first hand experience in practitioner roles such as case management, interviewing and counseling, and coordination of client services among the various community helping services. The purchase of professional liability insurance is required.

**RS 4044  
FIELD PLACEMENT/AGING**

Prerequisite: RS 2003, grade of C or higher in RS 3023, junior standing, completion of at least six hours in the related emphasis area, 2.00 grade point average, and consent of the instructor. A supervised 14 week field placement in a setting related to aging. Emphasis will be placed on the student's acquiring first hand experience in practitioner roles such as case management, interviewing and counseling, and coordination of client services among the various community helping services. The purchase of professional liability insurance is required.

**RS 4054  
FIELD PLACEMENT/CORRECT**

Prerequisite: RS 2003, grade of C or higher in RS 3023, junior standing, completion of at least six hours in the related emphasis area, 2.00 grade point average, and consent of the instructor. A supervised 14 week field placement in setting related to corrections and delinquency. Emphasis will be placed on management, interviewing and counseling, and coordination of client services among the various community helping services. The purchase of professional liability insurance is required.

**RS 4064  
FIELD PLACEMNT/SOC SER**

Prerequisite: RS 2003, grade of C or higher in RS 3023, junior standing, completion of at least six hours in the related emphasis area, 2.00 grade point average, and consent of the instructor. A supervised 14 week field placement in a setting related to social services. Emphasis will be placed on the student's acquiring first hand experiences in practitioner roles such as case management, interviewing and counseling, and coordination of client services among the various community helping services. The purchase of professional liability insurance is required.

**RS 4074  
FLD PLAC/PSY/SOC MAJORS**

Prerequisite: RS 2003, grade of C or higher in RS 3023, fifteen hours in major, senior standing, 2.00 grade point average, and mutual consent of the student's advisor, the supervising faculty member, and the director of Rehabilitation Science. A jointly supervised field placement in a human services agency setting, either public or private, Emphasis will be placed on the student's acquiring first hand experience in practitioner roles as they relate to his major and special interest. The purchase of professional liability insurance is required.

**RS 4084  
FLD PLAC/CHILD WELFARE**

Prerequisite: RS 3043, RS 3243, grade of C or higher in RS 3023, senior standing, completion of at least six hours in the related emphasis area, 2.50 grade point average, and consent of the instructor. A supervised 14-week field placement in a Division of Children and Family Services setting. Emphasis will be placed on the student's acquiring first-hand experiences in practitioner roles such as case management, interviewing, risk assessment, interagency collaboration, crisis management, and problem solving. The purchase of professional liability insurance is required.

**RS 4094  
FIELD PLACEMENT IN ADDICTIONS**

Prerequisites: RS 2003, RS 3023 (C or better), junior standing, completion of six hours in emphasis area (except RS 4024), 2.0 GPA and consent of instructor. A supervised 10-14 weeks field placement in a setting related to addiction services. Emphasis will be placed on the student's acquiring first-hand experiences in practitioner roles such as case management, interviewing, risk assessment, interagency collaboration, crisis management, group services, motivational interviewing approaches, and client solution/change strategies.

**RS 4123  
SURVEY COUNSEL THEORIES**

Prerequisites: Nine hours of psychology to include PSY 2003, PSY 3063, and PSY 3003, or PSY 3153, senior standing, or consent of the instructor. A comparative study of the major theories of counseling, stressing their philosophical views of mankind, assumptions, techniques, strengths, and weaknesses.

**RS 4133  
SEMINAR/SEVERE DISABIL**

A study of what makes a disabling condition a severe disability. This course will stress independent research and class presentations by the students dealing with the various severe disabilities.

**RS 4143  
REHAB/DEVELOP DISABLED**

Prerequisite: PSY 2003, RS 2003, or consent. A study of the delivery of services to, and the rehabilitation of, those handicapped individuals classified as being developmentally disabled, i.e., mental retardation, cerebral palsy, and epilepsy. Emphasis will be placed on prevocational, vocational, and community-living training for such individuals and the planning required for the provision of such services.

**RS 4153  
WORK EVALUATION IN REHAB**

Prerequisite: RS 3013 or consent. A study of the use of work evaluation as a part of the rehabilitation process, emphasizing the philosophy, development and application of work evaluation methods, and use of work evaluation results in rehabilitation services. \$20 testing fee.

**RS 4163  
SUBSTANCE ABUSE**

Prerequisite: RS 2003, PSY 2003, SOC 1003, or consent of the instructor. A study of drug abuse emphasizing etiology, patterns of use and abuse, and problems related to research and approaches to treatment.

**RS 4173  
FAMILY CENTERED SERVICES**

Prerequisite: RS 3023 and 3243 or consent of the instructor. An advanced course focusing upon family and community strengths and child welfare practice.

**RS 4183  
FAMILY SERVICES SEMINAR**

Prerequisite: RS 3023 and 3243 or consent of the instructor. A capstone course for students emphasizing child welfare services.

**RS 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RS 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RS 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RS 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**RS 4991  
SPEC PROB/RS**

Prerequisites: Twelve hours of rehabilitation science and prior approval of the Director of Rehabilitation Science. Independent work under individual guidance of a staff member.

**RS 4992  
SPEC PROB/RS**

Prerequisites: Twelve hours of rehabilitation science and prior approval of the Director of Rehabilitation Science. Independent work under individual guidance of a staff member.

**RS 4993  
SPEC PROB/RS**

Prerequisites: Twelve hours of rehabilitation science and prior approval of the Director of Rehabilitation Science. Independent work under individual guidance of a staff member.

**RS 4994  
SPEC PROB/RS**

Prerequisites: Twelve hours of rehabilitation science and prior approval of the Director of Rehabilitation Science. Independent work under individual guidance of a staff member.

**RUSS 1014  
BEGINNING RUSSIAN I**

Emphasis on conversation; introduction to basic grammar, reading, writing, and culture.

**RUSS 1024  
BEGINNING RUSSIAN II**

Continued emphasis on conversation and fundamental language skills.

**RUSS 2014  
INTERMEDIATE RUSSIAN I**

Prerequisite: Beginning Russian II (RUSS 1024) or equivalent. Instruction designed to develop communication skills and basic knowledge of grammar, reading, writing, and culture.

**RUSS 2024  
INTERMEDIATE RUSSIAN II**

Prerequisite: Intermediate Russian I or equivalent. Instruction designed to enhance communication skills and knowledge of grammar, reading, writing, and culture.

**SEED 2002  
INTRO SECONDARY EDUC**

Prerequisite: Sophomore standing or departmental approval. This course is designed to help secondary teacher candidates understand the field of education systemically and to understand the professional roles and ethical responsibilities required of the professional secondary educator. The course consists of classroom instruction and a guided field component. A grade of "C" or higher in the course is required in order to be eligible for admission into Stage II of Teacher Education.

**SEED 3552  
ADOLESCENT DEVELOPMENT**

The primary purpose of this course is to prepare teacher education candidates for classroom interaction by tracing influences of normal human development in all domains and showing how heredity and environmental factors affect the individuals' capacity to learn and function in a school environment. The teacher candidate will examine current research, concepts and issues related to normal adolescent development as well as exceptionalities that may be present. A range of cultural, social, and cognitive factors will be explored through reading, discussion, observation, literature search, interviews and case studies.

**SEED 3702  
INTRO/EDUC/TECHNOLOGY**

This is a research-based course involving applications of media techniques to facilitate learning. Media presentations are planned and implemented using practical and theoretical considerations about learning characteristics, exceptionalities, and cultural differences. Various projection techniques as well as microcomputer applications are utilized.

**SEED 4052  
ADOLESCENT EXCEPTIONALITIES**

Prerequisite: Admission to Stage II of the teacher education program. A study of the major areas of diversity including the mentally retarded, learning disabled, gifted, emotionally disturbed, children from economically disadvantaged homes, and their special needs in a school program. May not be taken for credit after completion of EDFD 5053, EDFD 4052 or repeated for credit as EDFD 5052 or equivalent.

**SEED 4063  
EDUCATORS-IN-INDUSTRY**

Each semester on demand. A course devoted to career awareness in relation to the modern workplace. It is conducted in cooperation with local businesses and industries. The course involves research, on-site instruction, and work experience.

**SEED 4503  
SEM/SECONDARY EDUCATION**

Prerequisites: Admission to Stage II and Student Teaching. This course is to be taken concurrently with SEED 4909/4809. This course is designed to provide secondary teacher candidates with knowledge and understanding of the history of American Education, school law, and other contemporary education issues. This course will also address teaching/ learning strategies for content area learning and assessment.

**SEED 4556  
CLASSROOM/APPL/EDUC/PSY**

Prerequisite: Admission to Stage II of the Teacher Education Program. This course introduces secondary teacher candidates to educational psychology as a research-oriented discipline and a science of practical application. The course also requires that students apply the theories and principles to instructional planning, teaching, managing and assessing students. The course consists of classroom instruction and a field component.

**SEED 4809  
TEACH/ELEM/SEC SCHOOL**

Prerequisites: Admission to Stage II and student teaching and concurrent enrollment in SEED 4503. A minimum of twelve weeks of supervised full-time student teaching at both the elementary and secondary levels. Meets requirements for K 12 licensure in art and music and licensure at both the elementary and secondary levels for physical education. Fee \$100.

**SEED 4909  
TEACHING/SECONDARY SCH**

Prerequisites: Admission to Stage II and student teaching and concurrent enrollment in SEED 4503. A minimum of twelve weeks of supervised full-time student teaching at the secondary level. Fee \$100.

**SEED 4991  
SPEC PROB/SEC ED**

Each semester on demand. Prerequisite: Senior standing and approval of department head. Individual study of significant topics or problems relating to education under the guidance of an assigned faculty member.

**SEED 4992  
SPEC PROB/SEC ED**

Each semester on demand. Prerequisite: Senior standing and approval of department head. Individual study of significant topics or problems relating to education under the guidance of an assigned faculty member.

**SEED 4993  
SPEC PROB/SEC ED**

Each semester on demand. Prerequisite: Senior standing and approval of department head. Individual study of significant topics or problems relating to education under the guidance of an assigned faculty member.

**SEED 4994  
SPEC PROB/SEC ED**

Each semester on demand. Prerequisite: Senior standing and approval of department head. Individual study of significant topics or problems relating to education under the guidance of an assigned faculty member.

**SOC 1003  
INTRODUCTORY SOCIOLOGY**

An introduction to the nature of society, social groups, processes of interaction, social change, and the relationship of behavior to culture.

**SOC 2003  
INTRO/CRIMINAL JUSTICE**

An overview of the criminal justice system and the workings of each component. Topics include the history, structure and functions of law enforcement, judicial and correctional organizations, their interrelationship and effectiveness, and the future trends in each.

**SOC 2033  
SOCIAL PROBLEMS**

Prerequisite: SOC 1003. A sociological analysis of contemporary social problems including inequalities, deviance, population changes, and troubled institutions.

**SOC 2043  
CRIME AND DELINQUENCY**

Prerequisite: SOC 1003 or SOC(CJ) 2003. A study of the major areas of crime and delinquency; with emphasis on theories of crime and the nature of criminal behavior.

**SOC 2053  
STATS/BEHAVIORAL SCI**

Prerequisite: MATH 1113 and PSY 2003 or SOC 1003, or consent. An introduction to descriptive and inferential statistical methods pertinent to behavioral science research, including correlation, sampling distributions, t-tests, chi square and analysis of variance. Emphasis is upon the logical and applied aspects.

**SOC 2063  
RESEARCH DESIGN BEHAVIORAL SCI**

Prerequisites: SOC 1003 or PSY 2003. This course is designed to introduce you to the foundations of behavioral science, the logic of research design and the many possible modes of operation. This class focuses on teaching students in the behavioral sciences the basic principles that guide the research process, the elements of research design, how to read and critique research articles, and how to write a literature review for a research project.

**SOC 2073  
HISTORY/SOCIAL THOUGHT**

A study of the historical development of social thought. May not be taken for credit after completion of SOC 4023, PHIL 4053, or equivalent.

**SOC 2083  
SOCIOLOGICAL THEORY**

A survey course of sociological theories and theory development from the classical period to post-modernism.

**SOC 3013  
PSYSOC/ASPECTS/DEATH/DYI**

Prerequisite: Upper division standing. This course studies the psychological and sociological aspects of death. The course will provide a basic insight into the dynamics surrounding death from the individual and societal level, its impact on survivors, and the effect death has on the living. This course cannot be taken for credit after completion of PSY 4003.

**SOC 3023  
THE FAMILY**

Prerequisite: SOC 1003. A study of the American family institution with emphasis upon role relationships, norms, and models. Some attention is given to cross cultural comparisons.

**SOC 3033  
ENVIRONMENT AND SOCIETY**

Prerequisite: SOC 1003. This course focuses on the study of interrelationships between society and the natural environment from traditional to postindustrial forms. Topics in this class will include economic approaches to the natural environment, philosophical/ethical approaches to the natural environment, public opinion on the natural environment, the importance of the environmental movement and policy development on environmental issues.

**SOC 3063  
COMMUNITIES**

Prerequisite: SOC 1003. An exploration and analysis of the sociological concept of community from classical approaches to recent debates. May not be taken for credit after completion of SOC 2063.

**SOC 3083  
SOCIAL DEVIANCE**

Prerequisite SOC 1003 or SOC(CJ) 2003. An introduction to the sociological and criminological study of human deviance. Various theories of deviance will be examined and applied to real life examples.

**SOC 3093  
SOCIOLOGY OF EDUCATION**

Prerequisite: SOC 1003. A study of education as a social system, its organizational characteristics, and its inter relationships with other social systems such as the family, religion, economics, government, and politics.

**SOC 3103  
JUVENILE JUSTICE SYSTEM**

Prerequisite: SOC(CJ) 2003. An in-depth look at the juvenile justice system including the structure, statuses and roles as well as current issues, problems, and trends.

**SOC 3113  
SOC MOVEMENTS/CHANGE**

Prerequisite: SOC 1003. An examination of past and current social movements and their effects on social policy and social change. Topics will include classical and contemporary theories of social movements and social change.

**SOC 3133  
SELF AND SOCIETY**

Prerequisite: SOC 1003 or PSY 2003. A sociological survey of the ways in which social structure and personality interact. Topics typically covered are: socialization, attitudes and value formation and change, and group influences upon self concept and self esteem.

**SOC 3153  
PRISONS AND CORRECTIONS**

Prerequisite: SOC 1003 and SOC(CJ) 2033. An introduction to and analysis of contemporary American corrections. Emphasis will be on current and past correctional philosophy, traditional and modern correctional facilities, correctional personnel and offenders, new approaches in corrections, and the relationship of corrections to the criminal justice field.

**SOC 3163  
INTRO TO SOC RESEARCH**

Prerequisite: SOC 1003 and SOC(PSY) 2053. An introduction to research methodology, with emphasis upon conceptualization, design, and processes.

**SOC 3173  
SOCIAL GERONTOLOGY**

Prerequisite: SOC 1003. An introduction to the sociology of aging: content provides general and specific knowledge regarding the aging process. Implications for economic, political, and family institutions are emphasized.

**SOC 4003  
MINORITY RELATIONS**

Prerequisite: SOC 1003. A study of minority groups with emphasis upon discrimination, socio historical characteristics and processes of change. Minorities considered include racial, ethnic, and gender.

**SOC 4013  
DRUGS IN SOCIETY**

Prerequisites: SOC 1003 or CJ 2003. This course presents a comprehensive study of the history and prohibition of drug use in the United States, as well as the effects of drugs on society in the form of crime, prison and treatment. The main focus of this class is on the history of drug use, how certain drugs become illegal, and the intended and unintended consequences of drug prohibition for communities and society.

**SOC 4023  
SOCIOLOGY OF GENDER**

Prerequisite: SOC 1003. This course addresses definitions of gender, gendered identities, how gender is created and maintained as a social construct, and the importance of gender in our daily lives. This class mainly focuses on the theoretical and empirical literature that encourages critical thinking about gender and challenges students to move beyond their preconceived notions/assumptions about gender.

**SOC 4043  
SOCIAL PSYCHOLOGY**

Prerequisite: 9 hours of Sociology or permission. The study of how individuals are influenced by the actual or implied presence of other persons. Emphasis is placed on attitudes, social cognition, social influence, aggression, altruism, self and other perception.

**SOC 4053  
SOCIOLOGY HEALTH/ILLNESS**

Prerequisite: SOC 1003. An in-depth look at the sociology of health and illness including an examination of the social structures related to the medical system, the social psychology of health and illness, a comparative analysis of sick role behavior as well as the study of social causes and consequences of health and illness.

**SOC 4063  
SOCIAL STRATIFICATION**

Prerequisite: SOC 1003. A study of social class and consequences for society and individuals.

**SOC 4073  
SOCIOLOGY OF RELIGION**

Prerequisite: SOC 1003. A study of the various theoretical explanations of religion, including its relationship to the larger society and the world system.

**SOC 4141  
SEMINAR IN SOCIOLOGY:**

A directed seminar in an area of sociology. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**SOC 4142  
SEMINAR IN SOC: RESEARCH**

A directed seminar in an area of sociology. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**SOC 4143****SEMINAR IN SOCIOLOGY:**

A directed seminar in an area of sociology. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**SOC 4144****SEMINAR IN SOC: RESEARCH**

A directed seminar in an area of sociology. The specific focus will depend upon research underway, community or student need, and the unique educational opportunity available. May be repeated for credit if course content differs.

**SOC 4206****THE LAW IN ACTION**

Prerequisite: SOC/CJ 2043, 9 hours of Criminal Justice coursework, senior classification, and instructor permission. Offered only in the summer. An examination of sociological theories of law and main currents of legal philosophy is followed by participant observation of actual community legal agencies, including police, courts, and others as available.

**SOC 4283****SOCIOLOGY CAPSTONE**

Prerequisites: All required sociology courses (lower and upper division) and 9 hours of upper division electives in sociology, or consent of instructor. This course must be completed by all sociology majors prior to graduation. The course content/topic is determined by the professor and current issues in the local community, which may vary semester to semester. Emphasis will be placed on linking theory, research methods, and social action to community defined problems in the form of applied sociology.

**SOC 4951****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SOC 4952****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SOC 4953****UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SOC 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SOC 4991  
SPEC PROB/SOC**

Prerequisite: Prior approval by instructor. Content will be determined by specific curriculum review and student need.

**SOC 4992  
SPEC PROB/SOC**

Prerequisite: Prior approval by instructor. Content will be determined by specific curriculum review and student need.

**SOC 4993  
SPEC PROB/SOC**

Prerequisite: Prior approval by instructor. Content will be determined by specific curriculum review and student need.

**SOC 4994  
SPEC PROB/SOC**

Prerequisite: Prior approval by instructor. Content will be determined by specific curriculum review and student need.

**SPAN 1014  
BEGINNING SPANISH I**

Introduction to conversation, basic grammar, reading, and writing. Four hours of classroom instruction. Advanced placement and credit by examination are available to students who have previously studied Spanish. One hour of foreign language lab per week is required.

**SPAN 1024  
BEGINNING SPANISH II**

Continued instruction in grammar and fundamental language skills. Four hours of classroom instruction. One hour of foreign language lab per week is required.

**SPAN 1063  
BASIC SPAN MEDICAL/SOC**

Prerequisite: SPAN 1014 and 1024. Useful terminology and expressions for the medical and social service situation, with a minimum of grammar.

**SPAN 2014  
INTERMEDIATE SPAN I**

Prerequisite: SPAN 1024 or equivalent. Instruction designed to develop greater facility in fundamental skills and more extensive knowledge of grammar. Four hours of classroom instruction. One hour of foreign language lab per week is required.

**SPAN 2024  
INTERMEDIATE SPAN II**

Prerequisite: SPAN 2014 or equivalent. Instruction intended to complete the survey of the basic grammar of the language and to provide the mastery of fundamental skills essential for enrollment in upper level Spanish courses. Four hours of classroom instruction. One hour of foreign language lab per week is required.

**SPAN 3003  
CONVERSATION/COMP I**

Prerequisite: SPAN 2024 or permission of instructor. Further study of Spanish grammatical systems with practice in composition and conversation based on analysis of short texts (newspaper articles, short stories, plays, poetry). Students are expected to use Spanish in oral and written expression.

**SPAN 3013  
CONVERSATION/COMP II**

Prerequisite: SPAN 3003 or permission of instructor. Continuation of SPAN 3003.

**SPAN 3023  
INTRO TO LINGUISTICS**

Prerequisites: ENGL 1023 or equivalent and SPAN 2024 or equivalent. A study of basic concepts in language, comparative characteristics of different languages, and the principles of linguistic investigation.

**SPAN 3113  
BUSINESS SPANISH**

Prerequisite: SPAN 3003 or permission of instructor. The study of business culture, terminology, presentations and cases in the Hispanic world. This course will present a detailed examination of business practices in Latin America and other Spanish speaking countries. Emphasis will be given to business protocols when conducting business correspondence, personal interviews, and appointments, among others. Attention will also be given to the use of technology in business.

**SPAN 3123  
SPAN CIVILIZ/CULTURE**

Prerequisite: SPAN 3013 or permission of instructor. Study of the geography, history, arts, institutions, customs and contemporary life of the Spanish people.

**SPAN 3133  
SPAN-AMER CIV/CULTURE**

Prerequisite: SPAN 3013 or permission of instructor. Study of the geography, history, arts, institutions, customs, and contemporary life of the peoples of Spanish America, with some attention to the major pre-Colombian civilizations.

**SPAN 3143  
STUDY ABROAD**

Prerequisite: enrollment in a Tech-sanctioned study program in a Spanish-speaking country, completion of SPAN 2024 or equivalent, and permission of the Study Abroad supervisor. Study of the contemporary language and culture in a Spanish speaking country. May substitute for SPAN 3003 or SPAN 3013, depending on the student's proficiency level.

**SPAN 3163  
COMM INTERNSHIP EXPER**

Prerequisite: completion of SPAN 2024 or equivalent. Study of contemporary language and culture in a Spanish- speaking community or setting. May be taken instead of SPAN 3143 to meet degree requirements.

**SPAN 3213  
ADVANCED GRAMMAR/USAGE**

Prerequisites: SPAN 3013 or permission of instructor. The course is designed to build writing competence and strengthen grammatical competence. Grammar will be studied within the context of writing assignments. The course will deepen the knowledge of the language through the usage of applied linguistics, syntax, grammar, and semantics.

**SPAN 3223  
SHORT STORY**

Prerequisite: SPAN 3013 or permission of instructor. An introductory study of French, German, or Spanish American short stories. Students will analyze short texts to strengthen their reading and text interpretation skills and to increase their knowledge of vocabulary.

**SPAN 4003  
ORAL COMMUNICATIONS**

Prerequisite: SPAN 3013 or permission of instructor. This course is designed to strengthen students' oral communication skills by enabling them to converse easily with native speakers on everyday topics in preparation for the oral proficiency interview (OPI). \$134 interview fee.

**SPAN 4023  
INTRO TO SPANISH LINGUISTICS**

Prerequisites: SPAN 3013, 3023, 3213. The purpose of this course is to provide students with the fundamental knowledge of Spanish linguistics as the basis for future application of linguistic principles. This course explores Spanish phonetics, phonology, morphology, syntax and semantics.

**SPAN 4213**  
**SPANISH LITERATURE**

Prerequisite: SPAN 3223 or permission of instructor. A survey of the literature of Spain with readings from representative works.

**SPAN 4223**  
**SPANISH-AMERICAN LIT**

Prerequisite: SPAN 3223 or permission of instructor. A survey of Spanish American literature with readings from representative works.

**SPAN 4283**  
**SEMINAR IN SPANISH:**

Prerequisite: SPAN 3013 or equivalent. Course content will vary. May be repeated for credit if course content varies.

**SPAN 4384**  
**MEDICAL INTERP THEORY**

Prerequisite: Must be taken in the senior year prior to SPAN 4809, Practicum II. Fall. This course prepares students with the necessary theory and medical terminology to function effectively as interpreters in a variety of medical settings. \$134 OPI fee.

**SPAN 4701**  
**FOREIGN LANG PEDAGOGY**

Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4909. Intensive on-campus exploration of the principles of curriculum construction, applied methods, professional collaboration, and evaluation as related to teaching French, German, or Spanish, followed by professional internship application of these principles under the supervision of a qualified departmental instructor.

**SPAN 4703**  
**FOREIGN LANG TCH METH**

Prerequisite: SPAN 3013 and 3113 or equivalent; admission to Stage II of the Secondary Education sequence or equivalent. Survey of instructional methods and discussions and demonstration of practical techniques for the teaching of a foreign language.

**SPAN 4801**  
**CULTURAL IMMER/RESEARCH**

Fall. Prerequisite: SPAN 4801 must be taken in the senior year prior to SPAN 4809, Practicum II. This course provides students with initial experiences into the issues, challenges, and rewards of the Medical Interpretation profession by the first-hand observation and analysis of healthcare encounters between

physicians and families with limited English proficiency. Written reflections based on conversations with patients, physicians, nurses and other staff are also expected. Field experience, one credit hour.

**SPAN 4803  
LATIN AMER FILM THEORY**

Prerequisites: Completion of Spanish- American Civilization and Culture or equivalent. An introduction to Latin American film theory and major films. The course traces the development of film and film theories in Latin America covering from its earliest initiatives in the 1950s in Peru, Venezuela, and Uruguay to the present.

**SPAN 4809  
PRACTICUM MED INTERP II**

Prerequisite: SPAN 4801and 4384. Spring. This course aims at creating a synthesis of theory and practice in Medical Interpretation by providing students with in-depth, practical experiences into the issues, challenges, and rewards of their profession. Students will provide interpretation services between physicians and/or staff and families with limited English proficiency during healthcare encounters at an approved medical facility. Field experience, (6-8 contact hours per day), nine credit hours.

**SPAN 4813  
US LATINO/A LIT AND CULTURE**

Prerequisite: SPAN 1024. This survey course offers an overview of the history of U.S. Latino/a literature, introducing the major trends and placing them into a historical framework stretching from the nineteenth century to today. Topics to be discussed include the construction of identity in terms of race, gender, sexuality, and class; bilingualism and code-switching; the experiences of exile, the immigrant, the marketing of the Latino/a identity; and the relationship of the artist to his or her community.

**SPAN 4901  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**SPAN 4902  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**SPAN 4903  
FOREIGN LANG INTERNSHIP**

Prerequisites: Advanced foreign language proficiency; permission of the instructor and the department head. The Foreign Language Internship is intended primarily for majors in foreign languages or international studies. It is designed to provide outstanding students the opportunity to perfect their language proficiency and to acquire specific training and skills overseas. The overseas sponsor and the foreign language instructor of record will supervise the intern. Performance evaluations and a research paper will be required.

**SPAN 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SPAN 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SPAN 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SPAN 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**SPAN 4991  
SPEC PROB/SPANISH**

Prerequisite: SPAN 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**SPAN 4992  
SPEC PROB/SPANISH**

Prerequisite: SPAN 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**SPAN 4993  
SPEC PROB/SPANISH**

Prerequisite: SPAN 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**SPAN 4994  
SPEC PROB/SPANISH**

Prerequisite: SPAN 2024 and consent of the instructor and the department head. Designed to provide advanced students with a course of study in an area not covered by departmental course offerings.

**SPH 1003  
INTRO SPEECH-COMM**

The purpose of this course is to develop within each individual an understanding of the utilitarian and aesthetic dimensions of speech communication and to increase ability to function effectively with others in a variety of communication situations.

**SPH 1111  
INDIV EVENTS PRACTICUM**

Preparation and performance of a variety of public speaking events.

**SPH 1121  
INDIV EVENTS PRACTICUM**

Preparation and performance of a variety of public speaking events.

**SPH 2003  
PUBLIC SPEAKING**

Each semester. Prerequisites: ENGL 1013 or equivalent. Fundamentals of composition, delivery, and logical reasoning. Effective utilization of basic visual aids will be included.

**SPH 2013  
VOICE AND DICTION**

A course for majors and non majors. A study of the effective use of the voice, improvement of diction, development of vocabulary, use of the dialects, techniques of radio television announcing, recognition of basic speech disorders.

**SPH 2111  
DEBATE PRACTICUM**

Case research and participation in public debate.

**SPH 2121  
DEBATE PRACTICUM**

Case research and participation in public debate.

**SPH 2173  
BUSINESS/PROF SPEAKING**

An oral communication course for individuals in business, industry and the professions. Human communication theories and behavioral research are used as a framework for generating competencies in interviewing, briefings, conference leadership, and intergroup coordination.

**SPH 3003  
INTERPERSONAL COMM**

This course emphasizes interpersonal aspects of communication. Central topics are choice making, personal knowledge, creativity and interpersonal relationships. Increased self awareness, understanding of interpersonal relationships and improvement of interpersonal skills are primary goals.

**SPH 3013  
INTERCULTURAL COMMUNICAT**

Prerequisite: SPH 1003, or SPH 2003, or consent of instructor. An examination of communication variables in different cultures and how to better understand and more effectively communicate across diverse cultures.

**SPH 3023  
INTRO TO LINGUISTICS**

Fall. Prerequisite: ENGL 1023 or equivalent. A study of basic concepts of language, comparative characteristics of different languages, and the principles of linguistic investigation.

**SPH 3033  
INTERVIEW PRINC/PRACTICE**

Prerequisite: SPH 2003 or consent of instructor. A course for both majors and nonmajors that uses interviewing theory as a framework for developing skills in preparing for and practicing various types of interviews.

**SPH 3043  
ADVANCED PUBLIC SPEAKING**

Prerequisite: SPH 2003 or consent of the instructor. Focuses on enhanced preparation and delivery of advanced forms of public address. Critical analysis of various forms of public discourse and effective utilization of multi-media speech aids will be stressed.

**SPH 3063  
ORAL INTERPRETATION**

Theory and practice of intelligent and effective oral reading of prose and poetry.

**SPH 3073  
GROUP COMMUNICATION**

Examines theory and procedures used when communicating in groups and teams. Areas of inquiry include principles of group formation and development, working in teams, leadership, conflict management, and discussion methods involving decision-making and policy implementation.

**SPH 3083  
COMM/CLASSROOM TEACHER**

Prerequisites: Junior standing and completion of ENGL 1023 or equivalent. A study of the relationship between communication theory and instructional processes. Practical classroom experiences are stressed.

**SPH 3111  
DEBATE PRACTICUM**

Case preparation, brief writing, and participation in public debate.

**SPH 3121  
DEBATE PRACTICUM**

Case preparation, brief writing, and participation in public debate.

**SPH 3123  
ARGUMENTATION**

Prerequisites: SPH 1003, SPH 2003 or equivalent, or consent of instructor. Designed to develop research, critical thinking, and persuasive speaking ability. Includes lecture, discussion, research, study of debates, classroom debates, and presentations.

**SPH 3163  
WRITING FOR PERFORMANCE**

Students will learn to communicate orally through the medium of aesthetic texts such as monologues and plays. This course teaches skills necessary to all forms of dramatic writing, with emphasis on plot structure, character development, and dialogue.

**SPH 3223  
NONVERBAL COMMUNICATION**

This course provides an examination of the various methods in which nonverbal communication is utilized in the communication process. Included in the examination will be historical contexts, as well as the effects of physical appearance, touch, proxemics, eye contact, kinesics, and voice.

**SPH 4003  
HUMAN COMMUNIC THEORY**

Prerequisite: 18 hours in Speech Communication, consent of instructor. This capstone theory class integrates learning about speech communication in various contexts. It is an in-depth study of contemporary and traditional perspectives of human communication, and synthesizes major concepts in human communication theory development.

**SPH 4053  
SPEECH-COMM SEMINAR**

Prerequisite: Junior standing. A course for both majors and non majors who want to investigate the relationship between human communication and contemporary social, political, and economic issues.

**SPH 4063  
ORGANIZATIONAL COMM**

Prerequisites: SPH 1003 and SPH 3003 or SPH 3073 or equivalent, or consent of instructor. Theories of organizational communication are examined in terms of their practical application to various organizational contexts, including social, political, profit, and nonprofit organizations. Includes lecture, discussion, research, and group projects.

**SPH 4073  
DIRECTING FORENSICS**

Prerequisites: SPH 2003, SPH 3063, SPH 3123, and/or consent of the instructor. Practical study and training to lead to the planning of activities, directing competitive events, and administration of a forensic program on the high school level.

**SPH 4111  
INDIV EVENTS PRACTICUM**

Preparation and performance of a variety of interpretive events.

**SPH 4121  
INDIV EVENTS PRACTICUM**

Preparation and performance of a variety of interpretive events.

**SPH 4123  
RHETORICAL CRITICISM**

Prerequisite: SPH 1003, or SPH 2003, or consent of the instructor. This course will provide the principles of rhetorical theories as they have developed throughout history, and apply them to the critical analysis of various communication events.

**SPH 4153  
PERSUAS/THEORY/AUD/ANALY**

Survey of classical and social science theories of persuasion. Particular emphasis is given to analysis of persuasive strategies, preparation of persuasive appeals, ethics of persuasion, and audience analysis. A consideration of social movements and persuasive campaigns is also included.

**SPH 4173  
INTERNSHIP SPH COMMUNICA**

Prerequisites: Fifteen semester hours of Speech and SPH 4063, which can be taken concurrently; university grade point average of at least 2.50. A course that focuses on career goals of students through classroom discussions and places students in communication positions within public and private organizations.

**SPH 4701  
SPECIAL METHODS/SPH**

Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4909. Intensive on campus exploration of the principles of curriculum construction, teaching methods, use of community resources, and evaluation as related to teaching speech.

**SPH 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made

**SPH 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made

**SPH 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made

**SPH 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made

**SPH 4991  
SPEC PROB/SPH-COM**

A course for majors only. Students are accepted by invitation of the instructor.

**SPH 4992  
SPEC PROB/SPH-COM**

A course for majors only. Students are accepted by invitation of the instructor.

**SPH 4993  
SPEC PROB/SPH-COM**

A course for majors only. Students are accepted by invitation of the instructor.

**SPH 4994  
SPEC PROB/SPH-COM**

A course for majors only. Students are accepted by invitation of the instructor.

**TACR 2013  
INTRO AIR CONDITION SYST**

This course is designed to teach the principles of the basic refrigeration cycle, including temperature-pressure relationships, evaporation, condensation, heat transfer, and refrigerants. The identification and use of hand tools, as well as safety principles and practices will be taught. Practical application is provided through laboratory activities.

**TACR 2213  
INTRO BOILER/STEAM GENER**

This course is designed to teach the components, operation, and design characteristics of steam generation systems. Upon completion of this course, students will possess the knowledge needed to sit for the Arkansas Boiler License Exam. Students will gain experience on actual industrial equipment.

**TACR 2223  
AMMONIA REFRIGERATION SY**

This course is designed to teach the components, operations, and design characteristics of commercial ammonia refrigeration systems. Applications of these principles combined with practical experience on actual commercial equipment should provide the student with the knowledge and skills to diagnose and repair normal equipment malfunctions.

**TDFT 1013  
BLUEPRINT READING**

This course is designed to develop basic skills in reading blueprints and introduces the student to various types of working drawings for engineering and manufacturing purposes. Emphasis is placed on understanding basic concepts of orthographic projection and the ability to visualize objects.

**TECH 1001  
ORIENTATION TO UNIVERSITY**

A course designed to provide information and enhance skills that will enable students to take responsibility for a successful transition to college. The course will expose students to college resources and requirements and promote the development of practical skills for college success.

**TELT 1013  
FUNDAMENTALS/ELECTRICITY**

This course is a program cornerstone presenting the concepts of electricity and magnetism. AC and DC currents and voltages are explained. Ohm's law and the power equation are used to analyze series, parallel, and series-parallel resistive circuits. Fundamental theorems are used in the analysis of resistor networks. It is a study of various combinations of resistors, capacitors, and inductors into circuits that contain both resistance and reactance.

**TELT 1123  
INDUSTRIAL ELECTRICITY**

Prerequisites: TELT 1013. This course is a study of the fundamentals of motors and motor control. The National Electrical Code standards for all circuits are emphasized. Content includes industrial applications of electronics. Subjects studied include relay ladder logic and troubleshooting, SCRs, Triacs, UJT, polyphase rectifiers, AC/DC motor speed control, inverters, and advanced control systems.

**TELT 1223  
SOLID STATE**

Prerequisite: TELT 1123. Semiconductor theory will explain the P.N. junction and its application in transistors and diodes. The principles of DC power supplies, amplifiers, and oscillators will be studied, ending with the application of field effect transistors. Positive and negative feedback circuits are covered including operational amplifiers, tuned amplifiers, Class A, B, and C amplifiers

**TELT 2013  
PROGRAM/LOGIC CONTROL/AP**

Prerequisite: TELT 1123. This course provides the student with an overview of the selection, programming, operation, and capabilities/limitations of programmable logic controllers. Application examples presented will define design requirements for input/output cards, memory requirements, scan time, update time, documentation, data highway/host computer interface, etc.

**TELT 2233  
ADVANCED PLC SYSTEMS**

Prerequisite: TELT 2013. This course should provide the student with the comprehensive procedures needed to design and program a PLC System. Design and installation specifications will be examined to provide the student with a first experience in implementing process control systems. Hardware and software selection, as well as, Man to Machine Interface (MMI) will also be discussed. An emphasis will be given to advanced ladder logic programming techniques. Practical programming applications will be provided through laboratory activities.

**TELT 2503  
IND SYS: SPECIAL TOPICS**

Prerequisites TELT 1013, 1313. This course is designed to provide special instruction on new and emerging topics in electronics and mechanical technology that are not otherwise covered in this curriculum. Topics for this course will be determined by the industry, the technology and the equipment to which the

students are exposed. This instruction is designed to provide the student with the knowledge and skills to diagnose and repair complex equipment malfunctions.

**TELT 2991  
ADV PROB/INDUSTRIAL SYS**

Prerequisites: TELT 2503 or consent of advisor. This course is designed to provide advanced instruction to INDS majors in handling and solving special problems associated with unique and advanced systems in the industrial mechanical and electronic environment to which the students are exposed. It is designed to provide advanced students with further study and practical hands-on experience in a particular area. Variable credit from one to five hours may be assigned depending on the course topic and content.

**TELT 2992  
ADV PROB/INDUSTRIAL SYS**

Prerequisites: TELT 2503 or consent of advisor. This course is designed to provide advanced instruction to INDS majors in handling and solving special problems associated with unique and advanced systems in the industrial mechanical and electronic environment to which the students are exposed. It is designed to provide advanced students with further study and practical hands-on experience in a particular area. Variable credit from one to five hours may be assigned depending on the course topic and content.

**TELT 2993  
ADV PROB/INDUSTRIAL SYS**

Prerequisites: TELT 2503 or consent of advisor. This course is designed to provide advanced instruction to INDS majors in handling and solving special problems associated with unique and advanced systems in the industrial mechanical and electronic environment to which the students are exposed. It is designed to provide advanced students with further study and practical hands-on experience in a particular area. Variable credit from one to five hours may be assigned depending on the course topic and content.

**TELT 2994  
ADV PROB/INDUSTRIAL SYS**

Prerequisites: TELT 2503 or consent of advisor. This course is designed to provide advanced instruction to INDS majors in handling and solving special problems associated with unique and advanced systems in the industrial mechanical and electronic environment to which the students are exposed. It is designed to provide advanced students with further study and practical hands-on experience in a particular area. Variable credit from one to five hours may be assigned depending on the course topic and content.

**TELT 2995  
ADV PROB/INDUSTRIAL SYS**

Prerequisites: TELT 2503 or consent of advisor. This course is designed to provide advanced instruction to INDS majors in handling and solving special problems associated with unique and advanced systems in the industrial mechanical and electronic environment to which the students are exposed. It is designed to provide advanced students with further study and practical hands-on experience in a particular area. Variable credit from one to five hours may be assigned depending on the course topic and content.

**TESL 4023  
TESOL SEC LANG ACQUISITI**

This course provides an introduction to the major theories of language acquisition and their application to the instruction of diverse groups of ESL students.

**TESL 4703  
TESOL MET:TCH ENG SEC LA**

This course introduces students to the methodology in teaching listening, speaking, reading and writing English, as well as core content, to diverse groups of ESL students.

**TESL 4713  
TESOL ASSESSMENT**

This course is an introduction to ESL assessment practices, including the design and evaluation of classroom tests and other assessment tools.

**TESL 4723  
TESOL TCH PEOPLE OTH CUL**

This course provides an introduction to issues in language and culture, including sociolinguistic variations due to age, sex, social class and ethnicity.

**TH 2203  
PLAY ANALYSIS**

A course designed for the theatre major. Contains techniques and vocabulary essential for doing a production-based analysis for the student actor, designer or director.

**TH 2273  
INTRO TO THEATRE**

Prerequisite: ENGL 1013 or equivalent. TH 2273 may be used to fulfill the fine arts general education requirement. A study of theatre as an art form with particular attention to scenic, dramatic, literary and historic elements.

**TH 2301  
INTRO/THEATRICAL DANCE**

An introduction to the basic skills and discipline of stage movement and the steps and vocabulary of jazz, tap and ballet. This course counts as a PE activity credit in degree programs that are not intended for teacher licensure.

**TH 2331  
ADV THEATRICAL DANCE**

Prerequisite: TH 2301. This course provides a continuation of the skills development for stage movement, and the steps, vocabulary, and discipline of ballet, tap, jazz, modern dance, and basic partnering. This course counts as a PE activity credit in degree programs that are not intended for teacher licensure.

**TH 2511  
PRAC/SET CONS/LIGHT**

Credit will be given for forty hours of participation in these elements of stagecraft.

**TH 2513  
INTRO THEATRIC DESIGN**

An introduction to the field of technical theatre.

**TH 2521  
PRAC/SET CONS/LIGHT**

Credit will be given for forty hours of participation in these elements of stagecraft.

**TH 2611  
PRAC/COSTUME/MAKEUP**

Credit will be given for forty hours of participation in these elements of stagecraft.

**TH 2621  
PRAC/COSTUME/MAKEUP**

Credit will be given for forty hours of participation in these elements of stagecraft.

**TH 2703  
ACTING THEORIES/TECH**

An introduction to standard acting techniques, including method acting.

**TH 2711  
ACTING PRACTICUM**

Prerequisite: Consent of instructor. Credit will be given for a large part in a major production or for a small part preceded by a series of smaller parts in previous productions.

**TH 2713  
INTERMEDIATE ACTING**

Prerequisite: TH 2703 or equivalent. Emphasis on character development, character interaction, and scene work, with special attention to comedy.

**TH 2721  
ACTING PRACTICUM**

Prerequisite: Consent of instructor. Credit will be given for a large part in a major production or for a small part preceded by a series of smaller parts in previous productions.

**TH 3513  
STAGECRAFT TECHNIQUES**

An introductory course for both majors and non majors who want to learn the technical aspects of dramatic productions. A study of construction fundamentals and skills involved in scenic art. This course also introduces the student to the production process, theatre job descriptions, professional hierarchy, and technical specialist collaboration. This course requires a weekly lab in addition to the class for supervised practice of class skills.

**TH 3523  
PRIN/THEATRICAL LIGHT**

Prerequisite: TH 3513, or consent of instructor. An introduction to lighting design, including the history of theatrical lighting, electrical theory and practice, lighting control systems, color theory and creative process. This course requires a weekly lab in addition to the class for supervised practice of class skills and familiarization with the production process.

**TH 3703  
ADVANCED ACTING: STYLES**

Prerequisite: TH 2713 or equivalent. The analysis and performance of scenes from plays from various historical periods, with attention to vocal and kinesthetic qualities appropriate to different styles.

**TH 3711  
PRAC-STAGE MANAGEMENT**

Prerequisite: Consent of Instructor. Student will be given credit for stage- managing a full-length production or a slate of one-acts. Each number may be taken for credit one time with a maximum of 7 practicum credits counted toward the major.

**TH 3721  
PRAC-STAGE MANAGEMENT**

Prerequisite: Consent of Instructor. Student will be given credit for stage- managing a full-length production or a slate of one-acts. Each number may be taken for credit one time with a maximum of 7 practicum credits counted toward the major.

**TH 3731  
PRACTICUM IN ACTING**

Prerequisite: Consent of Instructor. Credit will be given for a large part in a major production or for a small part preceded by a series of smaller parts in previous productions.

**TH 3741  
PRACTICUM IN ACTING**

Prerequisite: Consent of Instructor. Credit will be given for a large part in a major production or for a small part preceded by a series of smaller parts in previous productions.

**TH 3803  
DIRECT THEORIES/TECH**

An introduction to standard directing techniques.

**TH 3811  
DIRECTING PRACTICUM**

Prerequisite: Consent of instructor. Credit will be given for directing a one act play.

**TH 3821  
DIRECTING PRACTICUM**

Prerequisite: Consent of instructor. Credit will be given for directing a one act play.

**TH 3833  
ADVANCED DIRECTING**

Prerequisites: TH 3811, and consent of instructor. Credit will be given for directing a full length play.

**TH 4243  
SENIOR PROJ/THEATRE HIST**

Research project approved by the department to facilitate graduate school application.

**TH 4263  
TH HIST I/ANTIQUITY/1564**

A historical survey of the development of drama and theatre from classical Greece through the sixteenth century.

**TH 4273  
TH HIST II/1564 TO 1900**

A historical survey of the development of drama and theatre from the seventeenth to the nineteenth centuries.

**TH 4283  
CHILD TH: TECHNIQ/PRAC**

Prerequisites: Consent of instructor. The philosophy of teaching acting to children, in theory and in practice. The course is designed for theatre majors, teachers, and others interested in child development. The semester equivalent of two hours of class lecture is combined with the semester equivalent of two hours of supervised laboratory experience in a children's theatre setting. May not be taken for credit after completion of SPH 5283 or equivalent.

**TH 4313  
TH HIST III/1900-1960**

The development of theatre during the first part of the twentieth century, including realism, expressionism, symbolism, epic theatre, and theatre of the absurd. May not be repeated for credit.

**TH 4323  
TH HIST IV: 1960-PRESENT**

The development of theatre during the latter part of the twentieth century, including neo realism, post modernism, feminism, political theatre, and collective creation. May not be repeated for credit as TH 5323.

**TH 4503  
SCENE DESIGN**

Prerequisites: TH 3513, or permission of instructor. A study of the elements of design for the stage, from conception to finished production models, focusing on line, form, mass, and color. May not be repeated for credit as TH 5503 or equivalent.

**TH 4506  
HS PLAY PRODUCTION**

This course provides essential information about high school play production. The course will provide basic information in lighting, sound design, set design and construction, makeup, costume design and construction, stage management, directing, and improvisational techniques. May not be repeated for credit as TH 5506 or equivalent.

**TH 4511  
PRAC SET CONSTRUCT/LIGHTING**

Prerequisite: Consent of Instructor. Student will be given credit for 40 hours of set construction participation.

**TH 4513  
DRAFTING FOR THE STAGE**

Prerequisite: TH 3513 or permission of the Instructor. Introduction to the United States Institute for Technical Theatre drafting techniques and language. Production of floor plans, elevations, construction drawings and perspectives for theatrical construction. This course requires a weekly lab in addition to the class skills and familiarization with the production process.

**TH 4521  
PRAC SET CONSTRUCT/LIGHTING**

Prerequisite: Consent of Instructor. Student will be given credit for 40 hours of set construction participation.

**TH 4523  
ADVANCED STAGECRAFT**

Prerequisite: TH 3513, TH 4513 or permission of instructor. A course for technical theatre emphasis majors that trains the student for managing a theatre shop. Teaches advanced construction techniques, welding, pyrotechnics, and people managing skills. This course requires a weekly lab in addition to the class for supervised practice of class skills and production process.

**TH 4543  
SENIOR PROJECT IN DESIGN**

Portfolio creation project approved by the department to facilitate graduate school application process or professional placement.

**TH 4611  
PRAC/COSTUME AND MAKEUP**

Prerequisite: Consent of Instructor. Student will be given credit for 40 hours in costume or makeup participation. Each course number may only be taken for credit 1 time with a maximum of 7 practicum hours counting toward the major.

**TH 4613  
INTRO TO COSTUMING**

An examination of the history, theory and practice of costume design. It makes use of lecture, practical experience and personal exploration through a variety of artistic media to help each student understand both the art and technology of costume design.

**TH 4621  
PRAC/COSTUME AND MAKEUP**

Prerequisite: Consent of Instructor. Student will be given credit for 40 hours in costume or makeup participation. Each course number may only be taken for credit 1 time with a maximum of 7 practicum hours counting toward the major.

**TH 4711  
PRAC/STAGE MANAGEMENT**

Prerequisite: Consent of Instructor. Student will be given credit for stage- managing a full-length production or a slate of one-acts. Each number may be taken for credit one time with a maximum of 7 practicum credits counted toward the major.

**TH 4721  
PRAC/STAGE MANAGEMENT**

Prerequisite: Consent of Instructor. Student will be given credit for stage- managing a full-length production or a slate of one-acts. Each number may be taken for credit one time with a maximum of 7 practicum credits counted toward the major.

**TH 4731  
PRACTICUM IN ACTING**

Prerequisite: Consent of Instructor. Credit will be given for a large part in a major production or for a small part preceded by a series of smaller parts in previous productions.

**TH 4741  
PRACTICUM IN ACTING**

Prerequisite: Consent of Instructor. Credit will be given for a large part in a major production or for a small part preceded by a series of smaller parts in previous productions.

**TH 4821  
PRACTICUM IN DIRECTING**

Prerequisite: Consent of Instructor. Student will be given credit for the assistance in the directing of a full-length production or for the independent directing of a one-act.

**TH 4831  
PRACTICUM IN DIRECTING**

Prerequisite: Consent of Instructor. Student will be given credit for the assistance in the directing of a full-length production or for the independent directing of a one-act.

**TH 4843  
SR PROJ/TH PERFORMANCE**

Portfolio creation project approved by the department to facilitate graduate school application or professional placement.

**TH 4951  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**TH 4952  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**TH 4953  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**TH 4954  
UNDERGRADUATE RESEARCH**

On demand. Requires departmental approval. Advanced students carry out independent research activity relating to a significant problem in a major field of study. Supervised by faculty member. Formal report and presentation required. One to four credits depending on problem selected and effort made.

**TH 4983  
THEATRE SEMINAR:**

Prerequisites: Twelve credits in theatre and junior standing. A directed seminar dealing with a selected topic in theatre studies. May be repeated for credit for different topics. May not be repeated for credit as TH 5983 unless topic is different.

**TH 4991  
SPEC PROB: THEATRE**

For majors only. Students are accepted by invitation of the instructor.

**TH 4992  
SPEC PROB: THEATRE**

For majors only. Students are accepted by invitation of the instructor.

**TH 4993  
SPEC PROB: THEATRE**

For majors only. Students are accepted by invitation of the instructor.

**TH 4994  
SPEC PROB: THEATRE**

For majors only. Students are accepted by invitation of the instructor.

**TIPM 1103  
HYDRAULICS/PNEUMATICS**

This course is a study of the basic industrial fluid power systems common to the field of automation, including basic principles, components, standards, symbols, circuits, and troubleshooting of hydraulic and pneumatic systems.

**TIPM 1203  
MAINTENANCE PLUMBING SYS**

This course is designed to provide special instruction in the process of identifying tubing and piping with practical applications in sizing and fitting to different configurations using mechanical fittings, soft soldering, silver brazing and aluminum soldering. The course also provides the student with the knowledge and skills to diagnose and repair commercial plumbing systems.

**TMAC 1013  
BASIC MACHINE SHOP**

Prerequisite: TMAT 1003. This course covers the use of hand tools, drills, lathe cutting tools, and tapers, and study the methods of machining them. Instructions are given in the care and operation of basic machine tools, measuring instruments, and shop safety procedures. Shop projects are designed to provide practice in accurate turning, knurling, threading, and other operation on the lathe.

**TMAC 1023  
MACHINE SET-UP AND OPER**

Prerequisite: TMAC 1013. This course covers the set-up and operation of drilling machines, milling machines and grinders. Students learn abrasives, precision part layout and inspection, drilling, tapping, reaming and boring, as well as the care and used of precision measuring instruments.

**TMAC 1133  
WELDING OPTION**

This course is comprised of in-depth study and practice of the gas tungsten arc welding process. The student's experience begins with the development of manipulative skills through the media of oxyacetylene welding, then progresses to similar applications with TIG welds in the standard positions. Joint designs are mastered on carbon steel, aluminum, and stainless steel.

**TMAT 1003  
TECHNICAL MATHEMATICS**

Prerequisite: MATH 0903 or required placement score. Designed for students in occupational and technical programs, this course includes measurement, operations with polynomial expressions, use of equations and formulas, systems of linear equations, basic geometry, basic trigonometry, and basic statistics, with emphasis on industrial and other practical applications. This course requires a calculator capable of doing arithmetic with fractions.

**VIN 1113  
INTRO VITICULTURE/VINE ESTAB**

This course is designed to introduce students to viticulture in general and to current practices for establishing a commercial vineyard. Topics covered include varietal selection, site preparation, equipment, site selection, first season establishment, vine growth development and training, trellis systems, weed control, vine disease control, and pruning for training purposes. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course.

**VIN 1132  
WINTER VITICULTURE/VINE ESTAB**

Pre-requisite: VIN 1113 This course is designed to provide students initiated in the field of viticulture practical experience in winter vineyard operations. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course which will serve as work experience for those seeking employment in commercial viticulture.

**VIN 1142  
SPRING VITICULTURE TECHNOLOGY**

Pre-requisite: VIN 1113 This course is designed to provide students initiated in the field of viticulture personal experience in spring vineyard operations. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course which will serve as work experience for those seeking employment in commercial viticulture.

**VIN 1152  
SUMMER/FALL VITICULTURE TECH**

Pre-requisite: VIN 1113, VIN 1132 recommended This course is designed to provide students initiated in the field of viticulture personal experience in spring vineyard operations. Students are required to partner with an approved vineyard to participate in the required field experience portion of the course which will serve as work experience for those seeking employment in commercial viticulture.

**VIN 1463  
INTRODUCTION TO ENOLOGY**

This is an introductory course in the basic science and technology of winemaking. It is intended for the entrepreneur exploring business opportunities in the grape wine industry, and/or the prospective small winery employee interested in career development. The home winemaker that has never undergone any formal training on the subject may also benefit from this basic course. Students will make wine at home from a kit, track fermentation, make varioius chemical measurements and provide one bottle of finished wine to the instructor for evaluation at the conclusion of the course.

**VIN 2112  
INTEGRATED PEST MANAGEMENT**

Effective grape production depends on the grower developing a system of grape management that is appropriate for each vineyard. Decisions need to be made for how to manage all of the normal cultural practices such as planting, fertility, harvesting, and pruning as well as managing the insect, disease, and weed problems that occur either regularly or sporadically. The information in this course will address management issues related to common, expected pest problems as well as the occasional appearance of minor pest problems.

**VIN 2132  
MIDWEST VINEYARD MANAGEMENT**

Pre-requisite: VIN 1113 and VIN 1132 This course is a study of commercial grape growing in the Midwest of the United States. Topics include cultivars, vine nutrition, irrigation, canopy managment, pests, maturity sampling and harvest, balanced pruning/cropping and cold injury.

**VIN 2363  
GRAPE VARIETIES OF MID AMERICA**

Pre-requisite: VIN 1113 This course is designed to introduce students to the grape varieties best suited to the Mid American region with an emphasis on the Arkansas grape growing region. Students will benefit from in depth analysis of the regional factors which contribute to Midwest grape production.

**VIN 2933  
SOILS FOR VITICULTURE**

The course will explore soil properties and behavior and their influence on wines. The course focuses not only on growth and production, but on the long-term effects of viticulture on soil quality and the wider environment.

**VOBE 4023  
METH TCH VOC BUSINESS**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) A methods course designed to prepare the beginning business educator for effective teaching in the contemporary vocational business education classroom. Teaching methodologies for the business education occupational clusters are presented and practiced.

**VOBE 4043  
OCCUPATIONAL ANALYSIS**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.)

**VOBE 4053  
TECHNOLOGY METHODS BUED**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) A course in technology education focusing on methods and hands-on activities utilized in secondary Business Education programs with emphasis on hardware, software, and program development. May not be repeated for credit as VOBE 5053 or equivalent.

**VOBE 4063  
EDUCATORS-IN-INDUSTRY**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) A course devoted to career awareness in relation to the modern workplace. It is conducted in cooperation with local businesses and industries. The course involves research, on-site instruction, and work experience.

**VOBE 4093  
DIR VOC WORK EXPER**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: Consent of instructor and advisor's recommendation. A course for business teachers or business education students who desire or need practical, on-the-job experience in areas related to the vocational business education curriculum; designed to provide practical experience in a structured, supervised setting.

**VOBE 4556  
CLASSROOM/APPL/EDUC/PSY**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisite: Admission to Stage II of the teacher education program. Application of educational psychology principles to middle level and secondary classroom practices. The course may not be taken after completion of EDFD 3042, EDFD 3045.

**VOBE 4701**  
**SPECIAL METHODS/VOBE**

(Additional prerequisites for 3000 and 4000 level courses are listed in the College of Business section of this catalog.) Prerequisites: Admission to student teaching phase of the teacher education program and concurrent enrollment in SEED 4909. Intensive on-campus exploration of the principles of curriculum construction, teaching methods, use of community resources, and evaluation as related to teaching vocational business.

**WLD 1103**  
**INTRO TO THERMAL CUTTING**

Students will learn the principles and procedures for oxyfuel cutting, plasma cutting, and carbon arc gouging. Safe shop practices will be emphasized.

**WLD 1202**  
**BLUEPRINT READING**

Students will learn to read and interpret various kinds of blueprints and working drawings. AWS welding symbols and their meanings will be taught.

**WLD 1212**  
**INDUSTRIAL SAFETY IN WLD**

The study of safe and industry accepted practices and equipment necessary for the safe use of all existing manual methods of welding. Student will learn to identify common industrial and occupational hazards and means to avoid accidents.

**WLD 1224**  
**INTRO TO ARC WELDING**

This course is intended to teach theory and application of basic Astick® welding (SMAW). It will cover safety, correct selection of electrodes, practicing beds and the application of correct welds on actual structures.

**WLD 1302**  
**METALLURGY**

An elementary and practical approach to the structure, marking classifications, machinability and identification of metals and their properties. This will require the use of various manufacturer catalogs, bulletins and charts. Basic heat treatment and how metals are affected will be discussed.

**WLD 1402**  
**WELDING FOR TRADE/INDUST**

This course is intended to teach theory and application of Welding for trade and industry. This course will be specific to the needs and applicable to each area of interest. It will cover basic welding safety, correct cutting torch handling, basic Gas Metal Arc Welding, Gas Tungsten Arc Welding and Shielded Metal Arc Welding. Specific applications will be deemed by the appropriate advisor.

**WLD 1403**  
**WELDING FOR TRADE & INDUSTRY**

This course is intended to teach theory and application of welding for trades and industry. This course will be specific to the needs and applicable to each area of interest. It will cover basic welding safety, correct cutting torch handling, basic gas metal arc welding (MIG), gas tungsten arc welding (TIG), and shielded metal arc welding. Specific applications will be deemed by the appropriate advisor.

**WLD 1405**  
**POSITION WELDING**

Pre-requisite: WLD 1224 or permission of instructor. A continuation of the study of Arc welding concentrating on more advanced weld positions and varied electrodes. This course will also discuss hardfacing, padding, and the techniques for welding pipe.

**WLD 1503**  
**GAS METAL ARC (MIG) WELD**

Pre-requisite: WLD 1405 or permission of instructor. Provides student with theory and application of wire feed processes also known as MIG Welding or semi-automatic and automatic processes. The student also gains an understanding of the basic gases and mixtures used for different materials.

**WLD 1603**  
**GAS TUNGSTON ARC (TIG) WELD**

Pre-requisite: WLD 1405 or permission of instructor. Study of Gas Tungsten Arc (TIG) Welding commonly referred to as TIG or Heliarc. This course will focus on shielding gases, equipment and feasible use situations. Safety will be addressed and demonstrated in a lab experience.

**WLD 1702**  
**WELDMENT TESTING**

Covers different types of testing such as destructive and nondestructive. Students will study guided bend, radiographic, ultrasonic, magnetic particle and dye penetrant tests, and take practical tests that are designed according to AWS D1.1 and ASME Section IX industry standard codes.

**WLD 1804**  
**CERTIFICATION WELDING I**

Student practices with projects that are designed according to AWS D1.1 and ASME Section IX industry standard codes. The implementation and approval of the codes in accordance with AWS D1.1 and ASME section IX will be addressed. Documentation of procedure will also be covered.

**WLD 2904**  
**INTERNSHIP**

This course is intended to teach theory and application of Welding for trade and industry. This course will be specific to the needs and applicable to each area of interest. It will cover basic welding safety, correct cutting torch handling, basic Gas Metal Arc Welding, Gas Tungsten Arc Welding and Shielded Metal Arc Welding. Specific applications will be deemed by the appropriate advisor.

**WLD 2991**  
**SPECIAL TOPICS IN WELDING**

This course is designed to introduce students to specific areas in Welding Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**WLD 2992**  
**SPECIAL TOPICS IN WELDING**

This course is designed to introduce students to specific areas in Welding Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**WLD 2993**  
**SPECIAL TOPICS IN WELDING**

This course is designed to introduce students to specific areas in Welding Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**WLD 2994**  
**SPECIAL TOPICS FOR WELDING**

This course is designed to introduce students to specific areas in Welding Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**WLD 2995**  
**SPECIAL TOPICS IN WELDING**

This course is designed to introduce students to specific areas in Welding Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**WLD 2996**  
**SPECIAL TOPICS IN WELDING**

This course is designed to introduce students to specific areas in Welding Technology. Course content and credit are designed to meet the needs of the student. The topic will vary from offering to offering; thus, the course may be taken more than once for a total of 6 hours. This course requires 15 clock hours per one semester credit hour.

**WS 1002  
PHYS WELLNESS/FITNESS**

The course provides students with the opportunity to assess their current lifestyle and consider the possible consequences for the present and the future. The class provides a mechanism for change by actively involving the student in self-analysis and a trial exercise program. Two scheduled class meetings and two hours arranged. This course will satisfy two credit hours of PE activity. \$10 laboratory fee.

**WS 1031  
FOOD/EXER/BODY COMPOSIT**

The course provides the student with the opportunity to assess their current lifestyle pertaining to the nutrients consumed in the diet and the amount and type of aerobic exercise participation. Special emphasis is placed on developing an internal locus of control by actively involving the student in self-analysis activities, developing an understanding of nutrient intake and the culminating effects on personal health, and participation in an appropriate aerobic exercise program. \$10 laboratory fee.

**WS 1061  
MUSCLE FITNESS FOR WOMEN**

Structured to provide for the development of insights and practices associated with resistive activity as the student accomplishes an individually predicted level of muscle fitness. \$10 laboratory fee.

**WS 1081  
MUSCLE FITNESS FOR MEN**

Structured to provide for the development of insights and practices associated with resistive activity as the student accomplishes an individually predicted level of muscle fitness. \$10 laboratory fee.

**WS 1091  
FITNESS WALKING/JOGGING**

The course provides the student with the opportunity to assess his or her personal physical fitness level with trained personnel. Special emphasis is placed on improving the physical fitness level of the student through participation in appropriately designed walking or jogging activity. Students who enroll in the class will submit themselves to the physical fitness protocol administered by the HPE and Wellness faculty members and upper-level majors. \$10 laboratory fee.

**WS 2003  
FIELD-BASED EXPER/WELLNE**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) The class provides the prospective Wellness/Fitness professional with an opportunity to observe on-site a community-based wellness/fitness agency or business. A combination of classroom and on-site experiences will direct the student's focus to various aspects of commercial or institutional programs and services aimed at lifestyle enhancement. Specific lecture-class meetings and at least 30 hours of observation in an agency or business setting will be required.

**WS 2031  
DIRECTING FOOD/EXER/BODY**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) The course provides the student with the opportunity to assess their current lifestyle pertaining to the nutrients consumed in the diet and the amount and type of aerobic exercise participation. Special emphasis is placed on the methodology of teaching about the development of an internal locus of

control by actively involving the student in self-analysis activities, developing an understanding of nutrient intake and the culminating effects on personal health, and participation in an appropriate aerobic exercise program. The course is structured to provide for the development of knowledge and practices of directing food, exercise, and body composition programs employed to accomplish an individually predicted level of physical fitness. \$10 laboratory fee.

**WS 2043  
APPL FITNESS ASSESS/DEV**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) Prerequisites: PE 2653 and PE 3663. A survey and application of the knowledge and experiences in assessing and developing all components of physical fitness.

**WS 2081  
DIRECT MUSCLE FITNESS PR**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) Structured to provide for the development of knowledge and practices of directing resistance training activities used to accomplish an individually predicted level of muscle fitness. \$10 laboratory fee.

**WS 2091  
DIR FITNESS/WALK/JOGGING**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) The course provides the Wellness/Fitness major student with the opportunity to assess the physical fitness level of individuals under the supervision of trained personnel. The course is structured to provide for the development of knowledge and practices of directing fitness walking and jogging activities employed to accomplish an individually predicted level of aerobic fitness. Students who enroll in the class will submit themselves to the physical fitness protocol as well as help administer various evaluation measures to members of a corresponding wellness activity class. \$10 laboratory fee.

**WS 3003  
EXERCISE PRESCRIPTION**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) Prerequisite: WS 2043 or consent of department head. A course designed to expose the student to the aspects of health-related and skill-related physical fitness, with particular attention given to prescribing exercise programs. Attention will be given to choosing appropriate fitness assessments, along with development of appropriate goals for clientele.

**WS 3023  
EXERCISE BEHAV.ADHERANCE**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) The course provides the student with the opportunity to learn about the components which impact exercise behaviors and adherence to physical exercise programs. Emphasis is placed on the identification of components which directly impact on personal motivation for the development of appropriate exercise behaviors, and the development of incentives which assist in adherence to health enhancement programs.

**WS 4003  
ADV PROFESSIONAL SEMINAR**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) Prerequisite: Completion of all 1000- and 2000-level Wellness Science required classes. This course provides the advanced wellness/fitness

major with a setting in which research and contemporary topics critical to the profession may be explored. The student will perform literature research, data gathering, and professional writing/presentation throughout the class.

**WS 4012  
WLL/FIT PROG MANG INT**

(Level 3 requires completion of all WS, PE, and HLED content area courses with a grade of C or better and a cumulative GPA of 2.00 or better.) (Twelve hour course.) Prerequisites: Admission to internship program and 2.00 grade point average. Intensive on-campus classroom exploration of professional principles and procedures used in the areas of health and fitness promotion for the first three weeks of the semester. The remaining portion of the semester is spent in a supervised full-time internship at a designated site. Fee \$25.

**WS 4063  
WELLNESS/FITNESS PROGRAM**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) The course is designed to provide the student with the opportunity to discover various methods employed in planning and implementing wellness and fitness programs in multiple settings. Special emphasis is placed on the administration of client-specific health enhancement programs designed for persons in corporate settings, fitness center clientele, and patients in physical rehabilitation.

**WS 4991  
SPEC PROB/WS**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) Independent work on approved wellness science topics under the individual guidance of a faculty member. Admission requires the consent of the department head.

**WS 4992  
SPEC PROB/WS**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) Independent work on approved wellness science topics under the individual guidance of a faculty member. Admission requires the consent of the department head.

**WS 4993  
SPEC PROB/WS**

(Level 2 courses require completion of the following with a grade of C or better: PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173.) Independent work on approved wellness science topics under the individual guidance of a faculty member. Admission requires the consent of the department head.

**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**Arkansas Center for Energy, Natural Resources, and Environmental Studies**

Dr. Jason Patton, Interim Director

The Center, with the cooperation of various components of Arkansas Tech University, other state agencies and institutions, and professional staff, has the responsibility of planning and conducting competent research, investigations, demonstrations, and experiments of either a basic or applied nature, or both, in relation to energy, natural resources and the environment. The Center is committed to providing Arkansas Tech University students opportunities for involvement in these various projects.

Additional information may be obtained by writing or calling Dr. Jason Patton at the Arkansas Center for Energy, Natural Resources and Environmental Studies, 1701 N. Boulder Avenue, Russellville, Arkansas 72801; telephone (479) 968-0676."

**eTECH (The Distance and Electronic Learning Program of Arkansas Tech University)**

Ken Wester, Director  
Ross Pendergraft Library and Technology Center  
Room 322 (479) 964-0567  
[kwester@atu.edu](mailto:kwester@atu.edu)

The distance and electronic learning program of Arkansas Tech University (eTECH) was established in response to the changing higher education environment. The distance and electronic learning programs that comprise eTECH are an integral part of the overall academic program at Arkansas Tech University. The goal of eTECH is to provide a single focal point for On-Line Resources that are made available to extend the instructional programs of Arkansas Tech University. Courses offered through eTECH are fully accredited and, in some cases, an entire degree may be completed electronically without the need for actually visiting the campus.

Undergraduate students who require remediation, based on their ACT scores, must check with the Office of the Registrar to determine their eligibility to enroll in eTECH courses.

Students may apply for admission and registration through the Arkansas Tech University Web Site or by visiting the campus. You can learn more about eTECH and the courses offered by visiting <http://etech.atu.edu>.

**Military Science**

Reserve Officers' Training Corps  
Adjunct Faculty  
Bryan Hall, Room 118  
(479) 498-6069 (Tech)  
(501) 450-3145 (UCA)

Arkansas Tech University students may enroll in military science courses offered on the Arkansas Tech Campus by the Department of Military Science at the University of Central Arkansas at Conway under a cross enrollment agreement. The objective of the department is to provide a basic military education and, in conjunction with the goals of Tech, to develop individual attributes essential to an Army officer. Instruction covers military fundamentals common to all branches of the military service.

Courses are open to all students. Requirements for enrollment in military science courses are as follows:

1. Student must be enrolled at Tech and remain at or above the University's probationary level.
2. When contracted by the Department of Military Science, students must have a cumulative grade point average of at least 2.00; ROTC scholarship recipients must maintain a 2.50 GPA or better. Registration for military science courses is accomplished at the same time and in the same manner as registration for other courses through Tech. Students interested in this program may obtain further information by contacting the ROTC Department at (479) 498-6069.

**Arkansas Tech Museum**

Judith C. Stewart-Abernathy, Director  
1502 North El Paso Avenue Techionery - Museum  
(479) 964-0826  
<http://museum.atu.edu>

Theresa Jureka-Johnson, Education Coordinator  
Donna Park, Collections Manager

The mission of this Museum is to provide a center for collections, conservation, interpretation, and research concerned with the people and events of the Arkansas River Valley of western Arkansas, making this knowledge and interpretation available to the community served by Arkansas Tech University. Museum interpretation focuses on the establishment, history, and development of Arkansas Tech University, seeking to tell a compelling story of the places, events, and individuals making up the University's history.

The museum officially opened in April 1992 and accepts visitors between the hours of 9:00 a.m. and 4:00 p.m., Tuesday through Thursday, as well as by special appointment, for evening lectures, and through events. Each Spring semester, the Museum offers a course entitled Interpretation/Education through Museum Methods, listed as MUSM (ANTH, HIST) 4403(5403).

Laurie Boyce, Store  
Manager

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[Academic Affairs Hon](#)

## College of Applied Sciences

### Select a Department

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Dr. William Hoefler, Dean  
Corley Building, Room 112  
(479) 968-0353  
[whoeflerjr@atu.edu](mailto:whoeflerjr@atu.edu)  
Fax:(479) 968-0677

#### **Mission**

The mission of the College is to provide high quality opportunities for learning and provide a foundation for life-long learning.

#### **Core Values**

The College of Applied Sciences values student learning. The College values enhancement of teaching and its positive impact on student learning. The College values and professional communities. The College seeks to demonstrate to students, and professional conduct. The College continually seeks to improve all its programs.

The College of Applied Sciences seeks to equip students with the interdisciplinary knowledge necessary to develop workable solutions to complex problems. The College is composed of six academic departments: Computer and Information Science, Electrical Engineering, Emergency Management, Information Technology, Recreation and Hospitality Administration. These departments offer programs and degrees listed below.

#### **Bachelor of Science**

Agriculture Business with Horticulture Business, Animal Science, and Pre-Veterinary Medicine options

Computer Science

Information Systems

Emergency Management

Information Technology

Hospitality Administration

Recreation and Park Administration with emphases in:

Recreation Administration

Therapeutic Recreation

Natural Resource

Turf Management

Interpretation

#### **Bachelor of Science in Electrical Engineering**

Electrical Engineering

#### **Bachelor of Science in Mechanical Engineering**

Mechanical Engineering

#### **Associate of Applied Science**

Information Technology

Culinary Management

#### **Associate of Science in Nuclear Technology**

Nuclear Technology

## Transfer Students

Applicability of transfer credit to meet specific degree requirements depends on the program selected. A transfer student should review the Transfer Credit policy in the Admission section and consult with an advisor to determine final transfer credit eligibility for the selected program of study.

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## COURSE CATALOGS

[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)

### Department of Agriculture

[Back to College of Applied Sciences](#)

Dr. Malcolm Rainey,  
Head  
Dean Hall, Suite 123  
(479) 968-0251  
mrainey@atu.edu

**Professors:**  
Collins, Hoefer, Rainey  
**Assistant Professors:**  
Brant, Fairbanks, Renfro

The Agriculture Department includes programs of study as follows:

1. A four-year curriculum in agriculture business, with horticulture and animal science, pest management and pre-veterinary medicine options, leading to a bachelor of science degree.
2. Pre-veterinary medicine - Through proper advising and taking courses in proper sequence, students can meet the minimum course requirements for entrance into Louisiana State University, University of Missouri, Oklahoma State University, Tuskegee Institute, and other institutions offering the D.V.M degree in two years.

The objectives of the department are to:

1. provide a balanced educational program with relatively broad interdisciplinary training as opposed to narrow specialization, thus preparing the student for success in his/her chosen field and in his/her citizenship responsibilities.
2. serve and assist the student in educational and personal problems through active faculty counseling.
3. assist the student in development and improvement of leadership abilities through encouragement of active participation in activities of the Agri Club, FFA Day and other extracurricular activities.

The baccalaureate degree program in agri-business integrates the discipline of agriculture, business, accounting, economics, and finance. Emphasis is placed on management directed toward the farm business and agri-business firms.

Trends in occupations related to agriculture are shifting from production to agri-business services such as management, processing, distribution, and marketing. This creates a need for personnel with a broad background in these areas of training. Our systems concept is geared to integration of disciplines to better prepare graduates for present day needs.

Attractive career opportunities exist in agricultural business firms, banks and other financial agencies, marketing, food processing, extension, soil conservation, forestry, farm and agri-business management, and sales and distribution firms.

The curricula that follow represent the program of study for the four-year degree in agri-business, including the horticulture, animal science, pest management and pre-veterinary medicine options. Students enrolled in programs other than agri-business may want to tailor their curriculum to best meet their individual needs.

### Curriculum in Agriculture Business

#### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore			
Fall	Spring	Fall	Spring		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 BLAW 2033 <sup>T</sup>	3 AGBU 2073	3	
BIOL 1014 <sup>T</sup>	4 AGPS 1024	4 AGBU 2063	3 AGSS 2014	4	
AGAS 1014	4 AGBU 1013	3 ACCT 2003 <sup>T</sup>	3 Fine Arts <sup>1,T</sup>	3	
MATH 1113 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1 SPH 2173 <sup>T</sup>	3 MATH 2163 <sup>T</sup>	3	
AGPS 1003	3 COMS 1003 <sup>T</sup>	3 CHEM 1114 <sup>T</sup>	4 Social Sciences <sup>1,T</sup>	3	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>	
<b>Junior</b>					
<b>Fall</b>		<b>Sophomore</b>		<b>Senior</b>	
Elective <sup>3,T</sup>	3 Elective <sup>3,T</sup>	2 AGBU 4003	3 AGBU 4023	3	
AGPS 3244	4 Agriculture Elective <sup>2</sup>	6 Agriculture Elective <sup>2</sup>	6 Agriculture Elective <sup>2</sup>	6	
AGBU 3213	3 Physical Activity <sup>1,T</sup>	1 Social Sciences <sup>1,T</sup>	3 Elective <sup>3,T</sup>	3	
AGEG 3413	3 Social Sciences <sup>1,T</sup>	6 AGBU 4013	3 AGBU 4033	3	
Humanities <sup>1,T</sup>	3				
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>	

#### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore			
Spring	Fall	Spring	Fall		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 AGBU 2073	3 BLAW 2033 <sup>T</sup>	3	
COMS 1003 <sup>T</sup>	3 BIOL 1014 <sup>T</sup>	4 MATH 2163 <sup>T</sup>	3 AGBU 2063	3	
AGBU 1013	3 AGAS 1014	4 AGSS 2014	4 ACCT 2003 <sup>T</sup>	3	
AGPS 1024	4 AGPS 1003	3 Fine Arts <sup>1,T</sup>	3 CHEM 1114 <sup>T</sup>	4	
Physical Activity <sup>1,T</sup>	1 MATH 1113 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>	3 SPH 2173 <sup>T</sup>	3	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>	
<b>Junior</b>					
<b>Spring</b>		<b>Sophomore</b>		<b>Fall</b>	
Social Sciences <sup>1,T</sup>	6 Elective <sup>3,T</sup>	3 AGBU 4023	3 AGBU 4003	3	
Agriculture Elective <sup>2</sup>	6 AGPS 3244	4 AGBU 4033	3 Agriculture Elective <sup>2</sup>	6	

Curriculum in Agriculture Business							
Elective <sup>3,T</sup>	2	AGEG 3413	3	Agriculture Elective <sup>2</sup>	6	Social Sciences <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1	AGBU 3213	3	Elective <sup>3,T</sup>	3	AGBU 4013	3
		Humanities <sup>1,T</sup>	3				
Total Hours	15	Total Hours	16	Total Hours	15	Total Hours	15

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)". (Except ECON 2003).

<sup>2</sup>Must be 3000-4000 level.

<sup>3</sup>Recommended electives are SPAN 1014 and SPAN 1024.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Curriculum in Agriculture Business (Horticulture Option)

#### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3	BLAW 2033 <sup>T</sup>
BIOL 1014 or 2134 <sup>T</sup>	4 AGPS 1024	4	AGBU 2063
AGAS 1014	4 AGBU 1013	3	ACCT 2003 <sup>T</sup>
MATH 1113 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1	SPH 2173 <sup>T</sup>
AGPS 1003	3 COMS 1003 <sup>T</sup>	3	CHEM 1114
Total Hours	17 Total Hours	14	Total Hours
			16 Total Hours
			16
Junior		Senior	
Fall	Spring	Fall	Spring
AGPS 3093	3 Elective <sup>3,T</sup>	1	AGBU 4003
AGPS 3244	4 Physical Activity <sup>1,T</sup>	1	Social Sciences <sup>1,T</sup>
Elective <sup>3,T</sup>	3 AGPS 3064	4	AGPM 3104 or AGPS 3053 and AGBU 4991
AGBU 3213	3 AGPS 3044	4	AGPS 3074
Humanities <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	6	AGBU 4013
Total Hours	16 Total Hours	16	Total Hours
			17 Total Hours
			12

#### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore	
Spring	Fall	Spring	Fall
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3	AGBU 2073
COMS 1003 <sup>T</sup>	3 AGAS 1014	4	AGSS 2014
AGPS 1024	4 BIOL 1014 or 2134 <sup>T</sup>	4	MATH 2163 <sup>T</sup>
Physical Activity <sup>1,T</sup>	1 MATH 1113 <sup>T</sup>	3	Fine Arts <sup>1,T</sup>
AGBU 1013	3 AGPS 1003	3	Social Sciences <sup>1,T</sup>
Total Hours	14 Total Hours	17	Total Hours
			16 Total Hours
			16
Junior		Senior	
Spring	Fall	Spring	Fall
Elective <sup>3,T</sup>	1 AGPS 3093	3	AGPS 3083
AGPS 3044	4 AGPS 3244	4	AGBU 4023
Physical Activity <sup>1,T</sup>	1 Elective <sup>3,T</sup>	3	AGBU 4033
AGPS 3064	4 AGBU 3213	3	AGPM 3104 or AGPS 3053 and AGBU 4991
Social Sciences <sup>1,T</sup>	6 Humanities <sup>1,T</sup>	3	AGPS 3074
Total Hours	16 Total Hours	16	Total Hours
			12 Total Hours
			17

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)" (Except ECON 2003).

<sup>2</sup>Must be 3000 - 4000 level.

<sup>3</sup>Recommended electives are SPAN 1014 and SPAN 1024.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Curriculum in Agriculture Business (Animal Science Option)

#### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 CHEM 1114 <sup>T</sup>	4 AGAS 2083
BIOL 1014 or 2124 <sup>T</sup>	4 AGPS 1024	4 SPH 2173 <sup>T</sup>	3 AGBU 2073
AGAS 1014	4 AGBU 1013	3 AGBU 2063	3 MATH 2163 <sup>T</sup>
AGPS 1003	3 COMS 1003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 AGSS 2014
MATH 1113 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1 ACCT 2003 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>

Curriculum in Agriculture Business (Animal Science Option)					
Total Hours	17 Total Hours	14 Total Hours	16 Total Hours	16 Total Hours	16 Total Hours
<b>Junior</b>		<b>Senior</b>		<b>Spring</b>	
<b>Fall</b>		<b>Fall</b>		<b>Fall</b>	
Humanities <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	6 AGBU 4003	3 AGAS 4203	3	
Elective <sup>2,T</sup>	3 Poultry Science <sup>3</sup>	3 AGBU 4013	3 Social Sciences <sup>1,T</sup>	3	
AGBU 3213	3 Physical Activity <sup>1,T</sup>	1 Elective <sup>2,T</sup>	2 AGBU 4023	3	
AGAS 3004	4 Fine Arts <sup>1,T</sup>	3 AGAS 3014	4 AGBU 4033	3	
AGEG 3413	3 AGAS 3104	4 AGPS 3244	4		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>12</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>					
<b>Freshman</b>		<b>Sophomore</b>		<b>Fall</b>	
<b>Spring</b>		<b>Spring</b>		<b>Fall</b>	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 AGAS 2083	3 ACCT 2003 <sup>T</sup>	3	
AGPS 1024	4 MATH 1113 <sup>T</sup>	3 AGBU 2073	3 SPH 2173 <sup>T</sup>	3	
AGBU 1013	3 AGPS 1003	3 MATH 2163 <sup>T</sup>	3 AGBU 2063	3	
COMS 1003 <sup>T</sup>	3 AGAS 1014	4 AGSS 2014	4 CHEM 1114 <sup>T</sup>	4	
Physical Activity <sup>1,T</sup>	1 BIOL 1014 or 2124 <sup>T</sup>	4 Social Sciences <sup>1,T</sup>	3 BLAW 2033 <sup>T</sup>	3	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		<b>Spring</b>	
<b>Spring</b>		<b>Spring</b>		<b>Fall</b>	
Social Sciences <sup>1,T</sup>	6 Humanities <sup>1,T</sup>	3 AGAS 4203	3 AGBU 4003	3	
Poultry Science <sup>3</sup>	3 AGBU 3213	3 Social Sciences <sup>1,T</sup>	3 AGBU 4013	3	
AGAS 3104	4 Elective <sup>2,T</sup>	3 AGBU 4023	3 Elective <sup>2,T</sup>	2	
Fine Arts <sup>1,T</sup>	3 AGAS 3004	4 AGBU 4033	3 AGAS 3014	4	
Physical Activity <sup>1,T</sup>	1 AGEG 3413	3	AGPS 3244	4	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>12 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)". (Except ECON 2003).

<sup>2</sup>Must be 3000 - 4000 level.

<sup>3</sup>One of the following AGAS 3303, 3323, 3333, or 4303.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Agriculture Business (Pest Management Option)					
Degree Completion Plan Beginning in Fall Semester					
Freshman	Spring	Sophomore	Fall	Spring	Fall
<b>Fall</b>		<b>Fall</b>		<b>Spring</b>	
AGAS 1014	4 AGPS 1024	4 ACCT 2003 <sup>T</sup>	3 AGBU 2073	3	
AGPS 1003	3 AGBU 1013	3 AGBU 2063	3 AGSS 2014	4	
BIOL 1014 <sup>T</sup>	4 COMS 1003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 Fine Arts <sup>1,T</sup>	3	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 SPH 2173 <sup>T</sup>	3 MATH 2163 <sup>T</sup>	3	
MATH 1113 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1 CHEM 1114 <sup>T</sup>	4 Social Science <sup>1,T</sup>	3	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		<b>Spring</b>	
<b>Fall</b>		<b>Fall</b>		<b>Fall</b>	
AGBU 3213	3 Agriculture Elective <sup>3</sup>	1 AGBU 4003	3 AGBU 4023	3	
AGEG 3413	3 Elective <sup>2,T</sup>	2 AGBU 4013	3 AGBU 4033	3	
AGPS 3244	4 AGPM 3124	4 AGPS 3053	3 AGPM 4103	3	
AGPM 3104	4 Social Sciences <sup>1,T</sup>	6 Elective <sup>2,T</sup>	3 AGPS 4103	3	
Humanities <sup>1,T</sup>	3 Physical Activity <sup>1,T</sup>	1 Social Sciences <sup>1,T</sup>	3 Elective <sup>2,T</sup>	3	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>14 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>					
<b>Freshman</b>		<b>Sophomore</b>		<b>Fall</b>	
<b>Spring</b>		<b>Spring</b>		<b>Fall</b>	
AGPS 1024	4 AGAS 1014	4 AGBU 2073	3 ACCT 2003 <sup>T</sup>	3	
AGBU 1013	3 AGPS 1003	3 AGSS 2014	4 AGBU 2063	3	
COMS 1003 <sup>T</sup>	3 BIOL 1014 <sup>T</sup>	4 Fine Arts <sup>1,T</sup>	3 BLAW 2033 <sup>T</sup>	3	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 MATH 2163 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3	
Physical Activity <sup>1,T</sup>	1 MATH 1113 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>	3 CHEM 1114 <sup>T</sup>	4	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		<b>Spring</b>	
<b>Spring</b>		<b>Spring</b>		<b>Fall</b>	
Agriculture Elective <sup>3</sup>	1 AGBU 3213	3 AGBU 4023	3 AGBU 4003	3	
Elective <sup>2,T</sup>	2 AGEG 3413	3 AGBU 4033	3 AGBU 4013	3	
Social Sciences <sup>1,T</sup>	6 AGPS 3244	4 AGPM 4103	3 AGPS 3053	3	
Physical Activity <sup>1,T</sup>	1 Humanities <sup>1,T</sup>	3 AGPS 4103	3 Social Sciences <sup>1,T</sup>	3	

## **Curriculum in Agriculture Business (Pest Management Option)**

<b>AGPM 3124</b>	<b>4</b>	<b>AGPM 3104</b>	<b>4</b>	<b>Elective<sup>2,T</sup></b>	<b>3</b>	<b>Elective<sup>2,T</sup></b>	<b>3</b>
<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)" (Except ECON 2003).

<sup>2</sup>Recommended electives are SPAN 1014 and SPAN 1024.

<sup>3</sup>Must be 3000-4000 level.

<sup>†</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

## Pre-Professional Programs

Dr. Molly Brant  
Coordinator  
Dean Hall, Suite

Arkansas Tech University offers a complete pre-professional training program in pre-veterinary medicine. Statements and curricula for this program are listed below.

## **Curriculum in Agriculture Business (Pre-Veterinary Medicine Option)**

## Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore	
Fall	Spring	Fall	Spring
AGAS 1014	4 AGBU 1013	3 AGBU 2063	3 ACCT 2003 <sup>T</sup>
BIOL 1014 <sup>T</sup>	4 BIOL 2124 <sup>T</sup>	4 Humanities <sup>1,T</sup>	3 AGAS 2083
ENGL 1013 <sup>1,T</sup>	3 CHEM 2124 <sup>T</sup>	4 CHEM 2134 <sup>T</sup>	4 AGBU 2073
COMS 1003 <sup>T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 SPH 2173 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>
MATH 1113 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1 PHYS 2014 <sup>T</sup>	4 PHYS 2024 <sup>T</sup>
Total Hours	17 Total Hours	15 Total Hours	17 Total Hours
Junior		Senior	
Fall	Spring	Fall	Spring
AGBU 3213	3 BIOL 3054	4 AGBU 4003	3 AGAS 4203
AGEG 3413	3 CHEM 3344	3 AGBU 4013	3 AGBU 4023
AGPS 3244	4 MATH 2163 <sup>T</sup>	3 BIOL 3034	4 AGBU 4033
CHEM 3254	4 Social Sciences <sup>1,T</sup>	6 Physical Activity <sup>1,T</sup>	1 Social Sciences <sup>1,T</sup>
Fine Arts <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3
Total Hours	17 Total Hours	17 Total Hours	14 Total Hours
			12

## Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore	
Spring	Fall	Spring	Fall
AGBU 1013	3	AGAS 1014	4
BIOL 1014 <sup>T</sup>	4	BIOL 2124 <sup>T</sup>	4
CHEM 2124 <sup>T</sup>	4	ENGL 1023 <sup>1,T</sup>	3
ENGL 1013 <sup>1,T</sup>	3	Humanities <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1	MATH 1113 <sup>T</sup>	3
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>17</b>
Junior			
Spring	Fall	Spring	Fall
BIOL 3054	4	AGBU 3213	3
CHEM 3344	3	AGEG 3413	3
MATH 2163 <sup>T</sup>	3	AGPS 3244	4
Social Sciences <sup>1,T</sup>	6	CHEM 3254	4
		Fine Arts <sup>1,T</sup>	3
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>17</b>
Senior			
Spring	Fall	Spring	Fall
BIOL 3054	4	AGBU 4003	3
CHEM 3344	3	AGBU 4013	3
MATH 2163 <sup>T</sup>	3	BIOLOGICAL SCIENCES 3034	4
Social Sciences <sup>1,T</sup>	3	Physical Activity <sup>1,T</sup>	1
		Social Sciences <sup>1,T</sup>	3
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>14</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)" (Except ECON 2003).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.



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### Department of Computer and Information Science

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**Professor:**  
Morell  
**Associate Professors:**  
Fang, Hoelzeman,  
Middleton, Nezu,  
R. Robison, S. Robison  
**Assistant Professors:**  
M. Brown, J. Moody  
**Instructors:**  
Cunningham, Park

The Computer and Information Science Department offers four undergraduate programs: a Bachelor of Science in Computer Science, a Bachelor of Science in Information Systems, a Bachelor of Science in Information Technology, and an Associate of Applied Science in Information Technology.

The program in information systems prepares students for careers as application programmers/analysts in a business environment and for further graduate work in information systems. Business courses supplement a strong core of technical courses to enable students to design and implement business processing systems that require programming, databases, web development, networking, and client-server processing.

The program in computer science prepares students for careers as systems programmers in a scientific and/or engineering environment and for graduate work in computer science. Mathematics and engineering courses supplement a strong core of computer science courses, enabling students to design and implement software that requires complicated computations, data structures and interfaces.

The program in information technology prepares students for careers in administering and supporting the computing infrastructures of an organization. The curriculum consists of an integrated set of courses in networking, web development and administration, database development and administration, systems administration, and computer forensics.

#### Curriculum in Computer Science

##### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore			
Fall	Spring	Fall	Spring		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 COMS 2203 <sup>T</sup>	3 SPH 2173 <sup>T</sup>		3
COMS 1403 <sup>T</sup>	3 COMS 2104 <sup>T</sup>	4 COMS 2703 <sup>T</sup>	3 COMS 2213 <sup>T</sup>		3
COMS 1411 <sup>T</sup>	1 COMS 2003 <sup>T</sup>	3 COMS 2700 <sup>T</sup>	0 COMS 2223 <sup>T</sup>		3
Fine Arts <sup>T</sup>	3 Biological Science <sup>1,T</sup>	4 COMS 2903 <sup>T</sup>	3 ENGL 2053 <sup>T</sup>		3
Social Sciences <sup>1,T</sup>	6 Physical Activity <sup>1,T</sup>	1 ELEG 2134 <sup>T</sup>	4 MATH 2924 <sup>T</sup>		4
		ELEG 2130 <sup>T</sup>	0		
		MATH 2914 <sup>T</sup>	4		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>		<b>16</b>
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
COMS 3213	3 COMS 3703	3 Social Sciences <sup>1,T</sup>	3 Management Elective <sup>4</sup>		3
COMS 4203	3 COMS 4163	3 COMS 4033	3 COMS 4043		3
MATH 3153	3 COMS 4703	3 COMS 4103	3 COMS 4403		3
Social Sciences <sup>1,T</sup>	3 COMS 4700	0 COMS 3053	3 Technical Elective <sup>2</sup>		3
Science Sequence I <sup>3,T</sup>	4 Humanities <sup>1,T</sup>	3 MATH 4003	3 Elective 3000-4000 level		3
	Science Sequence II <sup>3,T</sup>	4 Physical Activity <sup>1,T</sup>	1		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>		<b>15</b>

##### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore			
Spring	Fall	Spring	Fall		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ENGL 2053 <sup>T</sup>	3 SPH 2173 <sup>T</sup>		3
COMS 2104 <sup>T</sup>	4 COMS 2203 <sup>T</sup>	3 COMS 2213 <sup>T</sup>	3 COMS 4203		3
COMS 1403 <sup>T</sup>	3 COMS 2703 <sup>T</sup>	3 COMS 2223 <sup>T</sup>	3 Fine Arts <sup>1,T</sup>		3
COMS 1411 <sup>T</sup>	1 COMS 2700 <sup>T</sup>	0 COMS 2003 <sup>T</sup>	3 COMS 3213		3
Biological Science <sup>1,T</sup>	4 ELEG 2134 <sup>T</sup>	4 MATH 2914	4 MATH 2924 <sup>T</sup>		4
	ELEG 2130 <sup>T</sup>	0			
	COMS 2903 <sup>T</sup>	3			
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>		<b>16</b>
<b>Junior</b>		<b>Senior</b>			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
COMS 3703	3 Social Sciences <sup>T</sup>	3 Management Elective <sup>4</sup>	3 COMS 3053		3
COMS 4163	3 COMS 4033	3 COMS 4043	3 Elective 3000-4000 level		3
COMS 4703	3 COMS 4103	3 COMS 4403	3 Social Sciences <sup>1,T</sup>		3
COMS 4700	0 MATH 4003	3 Technical Elective <sup>2</sup>	3 MATH 3153		3
Social Sciences <sup>1,T</sup>	6 Science Sequence I <sup>3,T</sup>	4 Science Sequence II <sup>3,T</sup>	4 Humanities <sup>1,T</sup>		3

**Curriculum in Computer Science**

Physical Activity <sup>1,T</sup>	1		Physical Activity <sup>1,T</sup>	1
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Total Hours	<b>16 Total Hours</b>		Total Hours
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16 Total Hours	<b>16 Total Hours</b>	
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16 Total Hours	<b>16</b>	16
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<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Technical electives must be taken from upper-level courses in Engineering, Physics, Chemistry, Math, or Astronomy.

<sup>3</sup>May be satisfied by any 1-year science sequence that requires a lab in each course, excluding biological science courses.

<sup>4</sup>This management elective is to be selected from **COMS 4053**, **COMS 4063**, or MGMT course approved jointly by the Department of Management and Marketing and the Department of Computer and Information Science.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Curriculum in Information Systems**

Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore		
Fall	Spring	Fall	Spring	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ENGL 2053 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>	3
COMS 1403 <sup>T</sup>	3 COMS 2104 <sup>T</sup>	4 COMS 2203 <sup>T</sup>	3 COMS 2213 <sup>T</sup>	3
COMS 1411 <sup>T</sup>	1 COMS 2003 <sup>T</sup>	3 COMS 2703 <sup>T</sup>	3 COMS 2853 <sup>T</sup>	3
MATH 2243 <sup>T</sup>	3 Science with Lab <sup>1,T</sup>	4 COMS 2700 <sup>T</sup>	0 ACCT 2013 <sup>T</sup>	3
Social Sciences <sup>1,T</sup>	6 ECON 2003 <sup>T</sup>	3 ACCT 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>	3
		Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1
		COMS 2903 <sup>T</sup>	3	
Total Hours	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
Junior		Senior		
Fall	Spring	Fall	Spring	
SPH 2173 <sup>T</sup>	3 MGMT 3003	3 Humanities <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3
COMS 4203	3 Science with Lab <sup>1,T</sup>	4 COMS 4033	3 COMS 4043	3
COMS 3903	3 COMS 4703	3 COMS 4133	3 COMS 4053	3
COMS 3513	3 COMS 4700	0 COMS 4303	3 COMS Elective <sup>2</sup>	3
Social Sciences <sup>1,T</sup>	3 COMS 3503	3 COMS 3053	3 Elective 3000-4000 level	3
	MKT 3043	3		
Total Hours	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>

Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore		
Spring	Fall	Spring	Fall	
ENGL 1013 <sup>1</sup>	3 ENGL 1023 <sup>1,T</sup>	3 COMS 2003 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>	3
COMS 2104 <sup>T</sup>	4 COMS 2203 <sup>T</sup>	3 COMS 2213 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>	3
COMS 1403 <sup>T</sup>	3 COMS 2703 <sup>T</sup>	3 COMS 2853 <sup>T</sup>	3 COMS 3903 <sup>T</sup>	3
COMS 1411 <sup>T</sup>	1 COMS 2700 <sup>T</sup>	0 ACCT 2003 <sup>T</sup>	3 ENGL 2053 <sup>T</sup>	3
MATH 2243 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>	3
Social Sciences <sup>1,T</sup>	3 COMS 2903 <sup>T</sup>	3	Physical Activity <sup>1,T</sup>	1
		1		
Total Hours	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>16</b>
Junior		Senior		
Spring	Fall	Spring	Fall	
Social Sciences <sup>1,T</sup>	3 MGMT 3003	3 COMS 4043	3 COMS 4303	3
SPH 2173 <sup>T</sup>	3 COMS 4033	3 Science with Lab <sup>1,T</sup>	4 COMS 3053	3
COMS 3503	3 Science with Lab <sup>1,T</sup>	4 MKT 3043	3 COMS Elective <sup>2</sup>	3
COMS 4203	3 COMS 4133	3 Elective 3000-4000 level	3 COMS 4053	3
COMS 4703	3 COMS 3513	3 Humanities <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3
COMS 4700	0			
Total Hours	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>1000-level courses may not be used to satisfy this requirement.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Curriculum in Information Technology**

Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore		
Fall	Spring	Fall	Spring	
COMS 1403 <sup>T</sup>	3 COMS 1333 <sup>T</sup>	3 COMS 2203 <sup>T</sup>	3 COMS 2003 <sup>T</sup>	3
COMS 1411 <sup>T</sup>	1 COMS 2104 <sup>T</sup>	4 COMS 2333 <sup>T</sup>	3 COMS 2713 <sup>T</sup>	3
MATH 2243 <sup>T</sup>	3 Science with Lab <sup>2,T</sup>	4 COMS 2703 <sup>T</sup>	3 COMS 2733 <sup>T</sup>	3
Social Sciences <sup>2,T</sup>	6 ECON 2003 <sup>T</sup>	3 COMS 2700 <sup>T</sup>	0 BUAD 2053 <sup>T</sup>	3
ENGL 1013 <sup>2,T</sup>	3 ENGL 1023 <sup>2,T</sup>	3 ENGL 2053 <sup>T</sup>	3 Elective <sup>T</sup>	3
		COMS 2903 <sup>T</sup>	3 Physical Activity <sup>2,T</sup>	1

Curriculum in Information Technology						
Total Hours	16 Total Hours		17 Total Hours		15 Total Hours	
Junior	Spring		Senior		Spring	
Fall	3	COMS (3000-4000) <sup>1</sup> Elective	3	COMS (3000-4000) <sup>1</sup> Elective	3	COMS 3053
COMS 3903	3	COMS 3523	3	COMS 4033	3	COMS 4043
COMS 4203	3	COMS 4703	3	COMS 4213	3	COMS 4063
COMS 4313	3	SPH 2173 <sup>T</sup>	0	COMS 4713	3	Elective (3000-4000) <sup>1,2</sup>
SPH 2173 <sup>T</sup>	3	Humanities <sup>3,T</sup>	4	COMS 4710	0	Physical Activity <sup>2,T</sup>
		Science with Lab <sup>2,T</sup>			3	Fine Arts <sup>2,T</sup>
		Elective (3000-4000 level) <sup>1</sup>	3	Social Sciences <sup>2,T</sup>	3	
Total Hours	15 Total Hours		16 Total Hours		15 Total Hours	
Degree Completion Plan Beginning in Spring Semester						
Freshman	Spring		Sophomore		Fall	
Spring	Fall		Spring		Fall	
COMS 1403 <sup>T</sup>	3	COMS 2003 <sup>T</sup>	3	COMS 1333 <sup>T</sup>	3	COMS 2333 <sup>T</sup>
COMS 1411 <sup>T</sup>	1	COMS 2104 <sup>T</sup>	4	COMS 2203 <sup>T</sup>	3	COMS 2903 <sup>T</sup>
MATH 2243 <sup>T</sup>	3	COMS 2703 <sup>T</sup>	3	COMS 2713 <sup>T</sup>	3	ENGL 2053 <sup>T</sup>
Social Sciences <sup>2,T</sup>	3	COMS 2700 <sup>T</sup>	0	COMS 2733 <sup>T</sup>	3	BUAD 2053 <sup>T</sup>
Science with Lab <sup>2,T</sup>	4	Social Sciences <sup>2,T</sup>	3	SPH 2173 <sup>T</sup>	3	Science with Lab <sup>2,T</sup>
ENGL 1013 <sup>2,T</sup>	3	ENGL 1023 <sup>2,T</sup>	3			
Total Hours	17 Total Hours		16 Total Hours		15 Total Hours	
Junior	Spring		Senior		Fall	
Spring	Fall		Spring		Fall	
COMS 3523	3	COMS 3903	3	COMS (3000-4000) <sup>1</sup> Elective	3	COMS (3000-4000) <sup>1</sup> Elective
COMS 4063	3	COMS 4033	3	COMS 3053	3	COMS 4213
COMS 4703	3	COMS 4203	3	COMS 4043	3	COMS 4313
COMS 4700	0	COMS 4713	3	Elective (3000-4000) <sup>1</sup>	3	Humanities <sup>2,T</sup>
ECON 2003 <sup>T</sup>	3	COMS 4710	0	Fine Arts <sup>2,T</sup>	3	Elective (3000-4000) <sup>1</sup>
Elective <sup>T</sup>	3	Social Sciences <sup>2,T</sup>	3		Physical Activity <sup>T</sup>	1
		Physical Activity <sup>2,T</sup>	1			
Total Hours	15 Total Hours		16 Total Hours		15 Total Hours	

<sup>1</sup>One elective must be in the area of networking.<sup>2</sup>See appropriate alternatives or substitutions in "General Education Requirements".<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Associate of Applied Science in Information Technology

The Associate of Applied Science in Information Technology program enables students to develop skills in the areas of web processing, databases, networking, programming, and various operating systems. These skills enable students to seek positions within the information technology industry.

### Curriculum in Information Technology Associate of Applied Science Degree Suggested Sequence of Courses

Freshman	Spring		Sophomore		Spring	
Fall	Fall		Fall		Spring	
COMS 1403 <sup>T</sup>	3	COMS 1333 <sup>T</sup>	3	COMS 2203 <sup>T</sup>	3	SPH 2173 <sup>T</sup>
COMS 1411 <sup>T</sup>	1	COMS 2104 <sup>T</sup>	4	COMS 2703 <sup>T</sup>	3	COMS Elective <sup>3,T</sup>
COMS 2003 <sup>T</sup>	3	COMS 2233 <sup>T</sup>	3	COMS 2700 <sup>T</sup>	0	General Elective <sup>T</sup>
MATH 1113 <sup>2,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	COMS Elective <sup>3,T</sup>	3	
ENGL 1013 <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	PHSC 1013 <sup>T</sup>	3	
Social Sciences <sup>1,T</sup>	3			PHSC 1021 <sup>T</sup>	1	
				ENGL 2053 <sup>T</sup>	3	
Total Hours	16 Total Hours		16 Total Hours		16 Total Hours	

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".<sup>2</sup>The mathematics requirement may be fulfilled by taking MATH 1113 or any higher level mathematics course.<sup>3</sup>1000-level courses may not be used to satisfy this requirement.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.



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### Department of Electrical Engineering

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**Professor:**

Greco

**Associate Professors:**  
Buford, Bullock, Misoc,

Richards

**Assistant Professor:**

Castillo

**Instructor:**

Reasoner

The Department of Electrical Engineering offers a four-year degree program leading to the degree Bachelor of Science in Electrical Engineering (BSEE). This program is accredited by the Engineering Accreditation Commission (EAC) of ABET, Inc., the national accrediting board for engineering and technology. The degree program includes both traditional electrical engineering as well as a computer engineering option.

The mission of the Department of Electrical Engineering at Arkansas Tech University is to maintain an accredited program leading to the Bachelor of Science degree. The Department is committed to providing its students with a positive atmosphere in which to learn the fundamentals of engineering practice including engineering science and design. In order to fulfill its mission, the Department has established the following educational objectives.

Engineers who graduate from Arkansas Tech University with a BSEE degree will be:

1. Intellectuals - with a commitment to ethics, social and environmental responsibility, and lifelong learning.
2. Team Players - communicating, planning, coordinating, and managing projects and personnel with efficiency and effectiveness.
3. Problem solvers - learning new concepts, techniques, skills, and tools to aid in analyzing and designing electrical engineering systems.
4. Professionals - trained and competent in the fundamentals of engineering science, applied mathematics, laboratory practice, and principles of electrical and computer engineering.

The first two years of curriculum contain the needed science, mathematics, engineering, and computer science basics to prepare the student for the upper level courses. The junior and senior years of the traditional electrical engineering path include 12 hours of electives which allow students to concentrate their studies in an area of specialization such as electric power, controls and robotics, or communications.

The following curriculum represents the program of study and a suggested sequence for the Bachelor of Science in Electrical Engineering degree. The student should be aware that not all courses are offered each semester and that the ordering of courses is subject to change. In order to minimize scheduling difficulties, each student should schedule a special session with their advisor at the beginning of their junior year to plan the remaining coursework.

#### Bachelor of Science in Electrical Engineering (BSEE)

##### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore			
Fall	Spring	Fall	Spring	Total Hours	
ELEG 1012 <sup>T</sup>	2 ELEG 2134	4 ELEG 2103	3 ELEG 2113		3
COMS 2803 <sup>T</sup>	3 ELEG 2130	0 Fine Arts <sup>1,T</sup>	3 ELEG 2111		1
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 MCEG 2023	3 ELEG 3133		3
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MATH 3243	3 MATH 2934 <sup>T</sup>		4
Biological Science <sup>1,T</sup>	4 CHEM 2124 <sup>T</sup>	4 PHYS 2114 <sup>T</sup>	4 PHYS 2124 <sup>T</sup>		4
			Physical Activity <sup>1,T</sup>		1
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>		<b>16</b>
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
ELEG 3103	3 ELEG 4103	3 ELEG 4202	2 Technical Elective <sup>3</sup>		3
Engineering Elective <sup>2</sup>	3 ELEG 3143	3 ELEG 4143	3 ELEG 4193		3
ELEG 3003	3 ELEG 3123	3 ELEG 4113	3 Engineering Elective <sup>2</sup>		6
MCEG 2013	3 MCEG 2033	3 ECON 2003 <sup>T</sup>	3 Humanities <sup>1,T</sup>		3
MATH 3153	3 ELEG 3131	1 ELEG 4303			
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>			
	Physical Activity <sup>1,T</sup>	1			
<b>Total Hours</b>	<b>18 Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>		<b>15</b>

##### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore			
Spring	Fall	Spring	Fall	Total Hours	
ELEG 1012 <sup>T</sup>	2 ELEG 2134	4 ELEG 2103	3 ELEG 2113		3
COMS 2803 <sup>T</sup>	3 ELEG 2130	0 Fine Arts <sup>1,T</sup>	3 ELEG 2111		1
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 MCEG 2023	3 ELEG 3133		3
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MATH 3243	3 MATH 2934 <sup>T</sup>		4
Biological Science <sup>1,T</sup>	4 CHEM 2124 <sup>T</sup>	4 PHYS 2124 <sup>T</sup>	4 PHYS 2114 <sup>T</sup>		4
		Physical Activity <sup>1,T</sup>	1		1
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>		<b>16</b>

**Bachelor of Science in Electrical Engineering (BSEE)**

Junior	Fall	Senior	Fall
Spring		Spring	
ELEG 3003	3 ELEG 3103	3 ELEG 4103	3 Technical Elective <sup>3</sup>
ELEG 3123	3 ELEG 4143	3 ELEG 4202	2 ELEG 4193
MCEG 2013	3 ELEG 4113	3 ELEG 3143	3 ELEG 3131
MATH 3153	3 Engineering Elective <sup>2</sup>	3 ECON 2003 <sup>T</sup>	3 Engineering Elective <sup>2</sup>
Physical Activity <sup>1,T</sup>	1 MCEG 2033	3 ELEG 4303	3 Humanities <sup>1,T</sup>
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>18 Total Hours</b>	<b>17 Total Hours</b>
			<b>16</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Engineering Elective must be a 3000 or 4000 level Electrical Engineering course.<sup>3</sup>Technical Elective must be a course from Engineering, Math or the Sciences excluding courses intended for Education Majors. All electives must have approval of the Department.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

A computer engineering option of the electrical engineering program will be available for enrollment by students in the fall of 2010.

**Bachelor of Science in Electrical Engineering  
Computer Engineering Option****Degree Completion Plan Beginning in Fall Semester**

Freshman	Sophomore		
Fall	Spring	Fall	Spring
ELEG 1012	2 ELEG 2134	4 ELEG 2103	3 ELEG 2113
COMS 2104 <sup>T</sup>	4 ELEG 2130	0 Fine Arts <sup>1</sup>	3 ELEG 2111
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1</sup>	3 CHEM 2124 <sup>T</sup>
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MATH 3243	3 MATH 2934 <sup>T</sup>
Biological Science <sup>1,T</sup>	4 COMS 2203 <sup>T</sup>	3 PHYS 2114 <sup>T</sup>	4 PHYS 2124 <sup>T</sup>
	Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>
			<b>17</b>

  

Junior	Senior		
Fall	Spring	Fall	Spring
ELEG 3103	3 ELEG 4103	3 ELEG 4202	2 ECON 2003 <sup>T</sup>
ELEG 3133	3 ELEG 3131	1 Social Sciences <sup>1,T</sup>	3 COMS 3703
ELEG 3003	3 COMS 2223 <sup>T</sup>	3 ELEG 4143	3 Social Sciences <sup>1,T</sup>
COMS 2903 <sup>T</sup>	3 ELEG 3123	3 ELEG 4113	3 ELEG 4193
MATH 3153	3 COMS 2213 <sup>T</sup>	3 ELEG 4303	3 Engineering Elective <sup>2</sup>
Humanities <sup>1</sup>	3 ELEG 3143	3 ELEG 4133	3
<b>Total Hours</b>	<b>18 Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>
			<b>15</b>

  

Freshman	Sophomore		
Spring	Fall	Spring	Fall
ELEG 1012	2 ELEG 2134	4 ELEG 2103	3 CHEM 2124 <sup>T</sup>
Fine Arts <sup>1,T</sup>	3 ELEG 2130	0 COMS 2203 <sup>T</sup>	3 ELEG 2111
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 ELEG 2113
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MATH 3243	3 MATH 2934 <sup>T</sup>
Biological Science <sup>1,T</sup>	4 COMS 2104 <sup>T</sup>	4 PHYS 2114 <sup>T</sup>	4 PHYS 2124 <sup>T</sup>
	Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
			<b>17</b>

**Degree Completion Plan Beginning in Spring Semester**

Freshman	Sophomore		
Spring	Fall	Spring	Fall
ELEG 1012	2 ELEG 2134	4 ELEG 2103	3 CHEM 2124 <sup>T</sup>
Fine Arts <sup>1,T</sup>	3 ELEG 2130	0 COMS 2203 <sup>T</sup>	3 ELEG 2111
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 ELEG 2113
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MATH 3243	3 MATH 2934 <sup>T</sup>
Biological Science <sup>1,T</sup>	4 COMS 2104 <sup>T</sup>	4 PHYS 2114 <sup>T</sup>	4 PHYS 2124 <sup>T</sup>
	Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
			<b>17</b>

  

Junior	Senior		
Spring	Fall	Spring	Fall
COMS 2223 <sup>T</sup>	3 ELEG 3103	3 ELEG 4202	2 ELEG 4113
ELEG 3133	3 Humanities <sup>1</sup>	3 COMS 3703	3 ELEG 4303
ELEG 3123	3 ELEG 3003	3 ECON 2003 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>
COMS 2903 <sup>T</sup>	3 COMS 2213 <sup>T</sup>	3 ELEG 4103	3 ELEG 4193
MATH 3153	3 Social Sciences <sup>1,T</sup>	3 Engineering Elective <sup>2</sup>	3 ELEG 4133
ELEG 3143	3 ELEG 4143	3 ELEG 3131	1
<b>Total Hours</b>	<b>18 Total Hours</b>	<b>18 Total Hours</b>	<b>15 Total Hours</b>
			<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Engineering Elective must be a 3000 or 4000 level Electrical Engineering course.<sup>3</sup>Technical Elective must be a course from Engineering, Math or the Sciences excluding courses intended for Education Majors. All electives must have approval of the Department.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.



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### Department of Emergency Management

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**Ed Leachman, Interim Head**  
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**Fax: (479) 356-2091**

**Associate Professor:**

Ihde

**Assistant Professors:**  
 Earls, Garner, Gray,  
 Leachman

The bachelor of science degree in Emergency Management (EAM) was established in 1997. Arkansas Tech University was one of the first institutions to offer a baccalaureate degree in this specialized and rapidly growing academic discipline. In 2006, the program became the first degree program to receive accreditation on a national as well as international level from the Foundation of Higher Education Accreditation in Emergency Management. In view of the interest in this degree from a wide geographic area including foreign countries, the degree is also available online as an electronic degree that was approved by the Higher Learning Commission in 2005. The program offers a master of science degree in Emergency Management and Homeland security for students seeking an advanced degree in the discipline.

The Department of Emergency Management at Arkansas Tech University is dedicated to:

1. Increasing learning and knowledge by providing outstanding teaching, scholarship, and service for the university and community.
2. Sustaining a department that supports faculty and students in their professional and intellectual growth.
3. Educating students to become leaders in the emergency management discipline and to make a positive contribution to the field.

Interest in emergency management and its importance from the global perspective have increased following recent events related to natural and technological hazards, terrorism, and other Homeland Security issues. The degree supports advancement opportunities for career professionals in a broad range of discipline areas as well as appealing to students seeking careers in emergency management in both the private and public sectors.

The curriculum in the EAM degree is based on the following core competencies for emergency managers:

Management skills  
 Communication skills  
 Leadership and decision making skills  
 Technical skills  
 Political, bureaucratic and social contexts  
 Comprehensive emergency management contexts  
 Legal and ethical contexts  
 Practical applications

The curriculum requires all students to complete 30 hours of EAM core courses which include 12 hours of credit for externship/internship experiences. This focus of the program is designed to build a solid foundation in emergency management concepts, competencies, and demonstrated applications. Additionally, students are required to complete 15 hours in an administrative core and 21 hours in an interdisciplinary core, which can include courses in both the natural and social sciences. Students have the option of addressing the interdisciplinary core by completing a minor in an area approved by the advisor as long as the total coursework equals 21 hours.

#### Curriculum in Emergency Management

##### Degree Completion Plan Beginning in Fall Semester

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Fine Arts/Humanities <sup>1,T</sup>	3 Fine Arts/Humanities <sup>1,T</sup>
Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>
MATH 1113 <sup>T</sup>	3 EAM 1013	3 EAM Core <sup>4</sup>	3 EAM 4033
EAM 1003	3 Interdisciplinary Core <sup>2,T</sup>	3 Interdisciplinary Core <sup>2,T</sup>	3 Interdisciplinary Core <sup>2,T</sup>
		Administrative <sup>3</sup>	Administrative <sup>3</sup>
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
EAM Core <sup>4</sup>	6 EAM 3206	6 EAM Core <sup>4</sup>	6 EAM 4106
Administrative <sup>3,T</sup>	3 EAM Core <sup>4</sup>	3 Elective <sup>T</sup>	3 Elective <sup>T</sup>
Interdisciplinary Core <sup>2,T</sup>	3 Interdisciplinary Core <sup>2,T</sup>	3 Interdisciplinary Core <sup>2,T</sup>	6
Elective <sup>T</sup>	3 Administrative <sup>3,T</sup>	3 Administrative <sup>3,T</sup>	3
	EAM 4023		
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>18 Total Hours</b>	<b>18 Total Hours</b>

##### Degree Completion Plan Beginning in Spring Semester

<b>Freshman</b>		<b>Sophomore</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Fine Art/Humanities <sup>1,T</sup>	3 Fine Art/Humanities <sup>1,T</sup>

Curriculum in Emergency Management							
	4	Science with Lab <sup>1,T</sup>	4	Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>	1
<b>MATH 1113<sup>T</sup></b>	3	<b>EAM 1013</b>	3	EAM Core <sup>4</sup>	3	<b>EAM 4033</b>	3
<b>EAM 1003</b>	3	Interdisciplinary Core <sup>2,T</sup>	3	Interdisciplinary Core <sup>2,T</sup>	3	Interdisciplinary Core <sup>2,T</sup>	3
				Administrative <sup>3,T</sup>	3	Administrative <sup>3,T</sup>	3
<b>Total Hours</b>	<b>16</b>						
<b>Junior</b>				<b>Senior</b>			
<b>Spring</b>		<b>Fall</b>		<b>Spring</b>		<b>Fall</b>	
EAM Core <sup>4</sup>	3	EAM Core <sup>4</sup>	3	EAM Core <sup>4</sup>	9		
<b>EAM 4023</b>	3	<b>EAM 3206</b>	6	Elective <sup>T</sup>	3		
Interdisciplinary Core <sup>2,T</sup>	3	Interdisciplinary Core <sup>2,T</sup>	6	Interdisciplinary Core <sup>2,T</sup>	3	<b>EAM 4106</b>	6
Administrative <sup>3,T</sup>	3	Administrative <sup>3,T</sup>	3	Administrative <sup>3,T</sup>	3	Elective <sup>T</sup>	3
Elective <sup>T</sup>	3						
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>	<b>9</b>

<sup>1</sup>See appropriate alternatives or substitutions "[General Education Requirements](#)".

<sup>2</sup>See Appropriate alternatives in "[Interdisciplinary Core](#)"

<sup>3</sup>See appropriate alternatives in "[Required Administrative Core](#)".

<sup>4</sup>See appropriate substitutions in "[EAM Core](#)"

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### **EAM Core (30 hours)**

The student will select with the advisor's recommendation 30 hours of credit from the EAM Core courses. **EAM 1003**, **EAM 1013**, and **EAM 4033** are required classes for all students. In addition, all students must take 12 hours (**EAM 3206** and **EAM 4106**) from the Practical Applications in addition to the 30 hours. Courses used in other categories, i.e. EAM Core, Administrative, or Interdisciplinary may not be counted in another category.

- EAM 1003** Living in a Hazardous Environment
- EAM 1013** Aim and Scope of Emergency Management
- EAM 2033** Citizen/Family/Community Disaster Preparedness Education
- EAM 3003** Developing Emergency Management Skills
- EAM 3013** Public Policy Issues in Emergency Management
- EAM 3023** Principles and Practice of Disaster Planning and Response Operations
- EAM 3033** The Social Dimensions of Disaster
- EAM 3123** Public Information Skills for Emergency Managers
- EAM 3143** The Economics of Hazards and Disaster
- EAM 3243** Introduction to Terrorism
- EAM 4003** Principles and Practice of Disaster Relief and Recovery
- EAM 4013** Business and Industry Crisis Management
- EAM 4023** Information Technology and Emergency Management
- EAM 4033** Emergency Management Research Methods/Analysis
- EAM 4043** Disaster and Emergency Management Ethics
- EAM 4053** Community Management of Hazardous Materials
- EAM 4991-3** Special Problems and Topics

### **Practical Applications (12 hours)**

- EAM 3206** Externship
- EAM 4106** Practicum/Internship

### **Administrative Core<sup>1</sup> (15 hours)**

The student will select with the advisor's recommendation 15 hours of credit from the following courses which are currently offered within each departmental area.

- BUAD 2003** Business Information Systems or
- COMS 1003** Introduction to Computer Based Systems<sup>T</sup>
- BLAW 2033** Legal Environment of Business<sup>T</sup>
- BUAD 2053** Business Statistics or
- SOC 2053** Statistics for the Behavioral Sciences or
- MATH 2163** Introduction to Statistical Methods<sup>T</sup>
- COMS 1333** Web Publishing I
- COMS 1403** Orientation to Computing, Information, and Technology
- COMS 2003** Microcomputer Applications
- ENGL 2053** Technical Writing<sup>T</sup>
- HAR/P 4113** Personnel Management in Parks, Recreation, and Hospitality Administration
- JOUR 2133** Introduction to Mass Communication
- JOUR 4033** Community Journalism
- JOUR 4083** New Communication Technology
- JOUR 4123** Laws of Communication
- PS 3023** Professional Communications
- PS 3133** Applied Principles of Personnel Management
- SPH 1003** Introduction to Speech-Communication<sup>T</sup>
- SPH 2003** Public Speaking
- SPH 2173** Business and Professional Speaking
- SPH 3003** Interpersonal Communication
- SPH 3013** Intercultural Communication
- SPH 3033** Interviewing Principles and Practices

SPH 3073 Group Communication

SPH 4063 Organizational Communication

SPH 4153 Persuasive Theory and Audience Analysis

<sup>1</sup>Students must address any prerequisites for these courses

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

**Interdisciplinary Core<sup>1,2</sup>  
(21 hours)**

The student will select with the advisor's recommendation 21 hours of credit from the following courses which are currently offered within each departmental area.

ANTH 2003 Cultural Anthropology<sup>T</sup>

Biol 1004 Principles of Environmental Science

Biol 3043 Conservation

Biol 3054 Microbiology

Biol 3114 Principles of Ecology

Biol 4023 Immunology

Biol 4094 Coastal Ecology

CHEM 2143 Environmental Chemistry

CHEM 2204 Organic Physiological Chemistry

CHEM 3245 Quantitative Analysis

CHEM 3254 Fundamentals of Organic Chemistry

CHEM 3264 Mechanistic Organic Chemistry

CHEM 3324 Physical Chemistry I

CHEM 3334 Physical Chemistry II

CHEM 3344 Principles of Biochemistry

CHEM 3353 Fundamentals of Toxicology

CHEM 4422 Advanced Organic Chemistry

COMS 2703 Computer Networks and Architecture

COMS 2733 Introduction to Computer Forensics and Security

COMS 4703 Data Communications and Networks

COMS 4713 Heterogeneous Networks

CJ 2003 Introduction to Criminal Justice<sup>T</sup>

CJ/SOC 3023 Judicial Process

CJ 4023 Law and the Legal System

GEOG 2013 Regional Geography of the World

GEOG 2023 Human Geography

GEOG 3033 Physical Geography

GEOG 4023 Economic Geography

GEOG 4833 Geographic Information Systems

GEOL 1014 Physical Geology

GEOL 3044 Geomorphology

GEOL 3083 Hydrogeology

GEOL 3153 Environmental Geology

HA 1013 Sanitation and Safety

HLED 3203 Consumer Health Programs

JOUR 2143 News Writing

JOUR 3173 Public Relations Principles

JOUR 3273 Public Relations Writing

MATH 2183 Statistical Process Control

MATH 2243 Calculus for Business and Economics

MATH 3153 Applied Statistics I

MATH 4123 Mathematical Modeling

MATH 4173 Advanced Biostatistics

PE 2513 First Aid<sup>T</sup>

PHSC 3033 Meteorology

PHYS 3213 Modern Physics

POLS 2013 Introduction to Political Science<sup>T</sup>

POLS 3033 American State and Local Government

POLS 3053 Introduction to Public Administration

POLS 3093 American Municipal Government

POLS 3403 Comparative Government

POLS 3413 International Relations

POLS 3473 National Security Policy

POLS 4103 Environmental Politics

PSY 2003 General Psychology<sup>T</sup>

PSY 2033 Psychology of Adjustment

PSY/SOC 3013 Psychosocial Aspects of Death and Dying

PSY 3043 Environmental Psychology

PSY 3063 Developmental Psychology I

PSY 3093 Industrial Psychology

PSY 3163 Developmental Psychology II

RP 1993 Basic Forest Fighting

RP 3053 Natural Resource Management and Planning

RP 3993 Wildland Fire Practices in Natural Resource Management

RP 4053 Water Resources Development

SOC 1003 Introductory Sociology<sup>T</sup>

SOC/CJ 2033 Social Problems<sup>T</sup>

SOC 3063 Communities

SOC/CJ 3083 Social Deviance

SOC 4003 Minority Relations

<sup>1</sup>Students must address any prerequisites for these courses

<sup>2</sup>Students can complete the Interdisciplinary Core by minoring in one of the following subjects. If the minor doesn't total 21 hours, they can take an additional course from the above list.

Anthropology, Biology, Chemistry, Criminal Justice, Engineering Physics, Geography, Geology, History, Hospitality Administration, Journalism, Physical Science, Political Science, Psychology, Recreation and Park Administration, Sociology, Speech.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

**Minor  
Emergency  
Management**

The minor in Emergency Management is designed to provide additional breadth for students majoring in related programs in the field of crisis and disaster management. The minor will require 18 hours of coursework emphasizing content in areas of human and physical consequences of natural and technological disasters along with mitigation procedures. Students may wish to minor in Emergency Management from disciplines listed in the Interdisciplinary Core such as Biology, Chemistry, Computer and Information Science, Criminal Justice, and Journalism.

- \*[EAM 1003](#) Living in a Hazardous Environment
- \*[EAM 1013](#) Aim and Scope of Emergency Management
- Twelve hours of upper division EAM Core Classes
- \*Required for the Bachelor's degree in EAM

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### Department of Mechanical Engineering

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**Professors:**  
Culp, Helmer, Krohn  
**Associate Professors:**  
Fithen, Frasier  
**Assistant Professor:**  
Steuber  
**Instructor:**  
Apple

The Department of Mechanical Engineering offers a four-year degree program leading to the Bachelor of Science in Mechanical Engineering (BSME) and a two-year degree program in Nuclear Technology. The program leading to the Bachelor of Science in Mechanical Engineering (BSME) degree is accredited by the Engineering Accreditation Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET).

The mission of the Department of Mechanical Engineering at Arkansas Tech University is to develop and maintain accredited programs leading to the Bachelor of Science degree. The department is committed to providing its students with a positive atmosphere in which to learn the fundamentals of engineering practice including engineering science and design. In order to meet its mission, the department has established educational objectives for its program.

The educational objectives of the engineering program of the Department of Mechanical Engineering at Arkansas Tech University are:

1. To produce graduates who use the engineering skills and technical ability gained through the program to embark upon successful careers in mechanical engineering.
2. To produce graduates who engage in life-long learning.
3. To produce graduates who employ engineering analysis, experimental methods, and design techniques to solve engineering problems.
4. To produce graduates who demonstrate skills pertinent to the design process including the ability to formulate problems, to think creatively, to communicate effectively, to synthesize information and to work collaboratively.
5. To produce graduates who understand their professional and ethical responsibilities.

#### Mechanical Engineering

Mechanical engineering is the profession which designs, develops, and manufactures machines that produce, transmit, or use power. Mechanical engineers are involved in the design, development, and production of virtually every product one can imagine. The range of job possibilities for mechanical engineers, both in location and function, is limitless. The mechanical engineering program at Arkansas Tech is designed to give its students a solid grounding in the machine design and thermal systems areas and to help satisfy the engineering manpower needs of industry in Arkansas and the mid-south region. The required courses provide a basic foundation in mechanical engineering with a strong cross-disciplinary component and an emphasis on engineering design.

Most graduates of the engineering program go directly into the work force as practicing engineers. Many are employed by manufacturing companies in the Arkansas River Valley area, while others have obtained positions with large national and multinational corporations. A number of graduates have elected to attend one of many different graduate schools specializing in disciplines such as engineering (electrical, mechanical, industrial, or nuclear), mathematics, physics, or business.

The first two years of the curriculum contain the needed mathematics, science, and engineering science basics to prepare the student for the upper-level mechanical engineering courses. The junior and senior years include 12 hours of engineering electives which allows the student to concentrate in one of the available areas of specialization which include machine design, nuclear systems, or thermal systems.

#### Transfer of Credit

Students wishing to transfer into one of the programs offered by the Department of Mechanical Engineering are urged to contact the Department Head as soon as possible to reduce the possibility of taking non-transferable courses. Course work taken at another institution must meet the requirements of the Arkansas Tech University transfer policies and, in addition, are subject to the department's current transfer policy. Contact the Department of Mechanical Engineering for the latest course transfer information and policy.

Students planning to transfer to another university can, in most cases, complete the first two years of work at Arkansas Tech University. Students who plan to transfer should consult with the school to which they plan to transfer to coordinate details.

The following curriculum represents the program of study and a suggested sequence for the Bachelor of Science in Mechanical Engineering degree. The student should be aware that not all courses are offered each semester and that the ordering of courses is subject to change. In order to minimize scheduling difficulties, each student should schedule a special session with their advisor at the beginning of their junior year to plan the remaining coursework.

#### Bachelor of Science in Mechanical Engineering (BSME)

##### Degree Completion Plan Beginning in Fall Semester

Freshman	Sophomore			
Fall	Spring		Fall	Spring
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	MATH 2934 <sup>T</sup>
MCEG/ELEG 1012 <sup>1,T</sup>	2	MCEG 1002 <sup>T</sup>	2	PHYS 2124 <sup>T</sup>
Social Sciences <sup>1,T</sup>	3	PHYS 2114 <sup>T</sup>	4	MCEG 2013
Biological Science <sup>1,T</sup>	4	CHEM 2124 <sup>T</sup>	4	MCEG 2023
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	MCEG 2203
				3
				ELEG 2103
				3

<b>Bachelor of Science in Mechanical Engineering (BSME)</b>					
Total Hours	16 Total Hours	17 Total Hours	Physical Activity <sup>1,T</sup>	1	
<b>Junior</b>	<b>Spring</b>		<b>Senior</b>	<b>Spring</b>	
<b>Fall</b>	3 Technical Elective <sup>4</sup>	3 MCEG/ELEG 4202	2 ELEG 4303	3	
MATH 3153	3 MCEG 4403	3 MCEG 4433	3 MCEG 4443	3	
MCEG 3313	3 MCEG 4423	3 ENGR Lab Elective <sup>2</sup>	1 MCEG 4442	2	
MCEG 3413	2 ELEG 2113	3 ENGR Electives <sup>3</sup>	3 ENGR Electives <sup>3</sup>	3	
MCEG 3442	3 ELEG 2111	1 Humanities <sup>1,T</sup>	3 MCEG 4493	3	
ECON 2003 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>	3 MCEG/ELEG 3003	3 Social Sciences <sup>1,T</sup>	3	
ENGR Electives <sup>3</sup>		Physical Activity <sup>1,T</sup>	1		
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>17</b>	
<b>Degree Completion Plan Beginning in Spring Semester</b>					
<b>Freshman</b>	<b>Sophomore</b>		<b>Fall</b>	<b>Spring</b>	
<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	<b>Fall</b>	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 MATH 2934 <sup>T</sup>	4 MATH 3243	3	
MCEG/ELEG 1012 <sup>1,T</sup>	2 MCEG 1002 <sup>T</sup>	2 PHYS 2114 <sup>T</sup>	4 Fine Arts <sup>1,T</sup>	3	
Social Sciences <sup>1,T</sup>	3 PHYS 2124 <sup>T</sup>	4 MCEG 2023	3 MCEG 2013	3	
Biological Science <sup>1,T</sup>	4 CHEM 2124 <sup>T</sup>	4 ELEG 2103	3 ECON 2003 <sup>T</sup>	3	
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MCEG 2203	3 ELEG 2113	3	
			ELEG 2111	1	
			Physical Activity <sup>1,T</sup>	1	
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>	<b>17</b>	
<b>Junior</b>	<b>Senior</b>		<b>Fall</b>	<b>Spring</b>	
<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	<b>Fall</b>	
MATH 3153	3 MCEG/ELEG 3003	3 MCEG/ELEG 4202	2 ELEG 4303	3	
MCEG 3013	3 MCEG 3413	3 MCEG 4423	3 MCEG 4433	3	
MCEG 2033	3 MCEG 4403	3 MCEG 4443	3 ENGR Lab Elective <sup>2</sup>	1	
MCEG 3313	3 MCEG 3442	2 MCEG 4442	2 ENGR Electives <sup>3</sup>	3	
ENGR Electives <sup>3</sup>	3 Technical Elective <sup>4</sup>	3 ENGR Electives <sup>3</sup>	3 MCEG 4493	3	
Physical Activity <sup>1,T</sup>	1 Social Sciences <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3	
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>3000-level or above ELEG or MCEG laboratory class.

<sup>3</sup>3000-level or above ELEG or MCEG course with minimum of three (3) hours at the 4000-level and approval of advisor.

<sup>4</sup>Technical elective course to be chosen with approval of advisor from list of eligible courses maintained in the departmental office.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

## Nuclear Technology

The department also offers a two-year program leading to the Associate of Science in Nuclear Technology (ASNT) degree. This degree is designed to allow the student to obtain the knowledge base and training necessary to work in one of the many areas in the nuclear field. While many technology degrees, especially at the associate's level, are seen as less rigorous paths, the ASNT program at Arkansas Tech University includes most of the same courses as the first two years of the engineering programs.

Graduates of the program leading to the Associate of Science Degree in Nuclear Technology may find employment in many areas of the nuclear industry. Many past ASNT graduates have continued their studies to obtain bachelors degrees in engineering or the physical sciences either at Arkansas Tech University or at other institutions.

<b>Associate of Science in Nuclear Technology (ASNT)</b>					
<b>Suggested Sequence of Courses</b>					
<b>Freshman</b>	<b>Spring</b>		<b>Sophomore</b>	<b>Spring</b>	
<b>Fall</b>	<b>Fall</b>		<b>Fall</b>	<b>Spring</b>	
ENGL 1013	3 ENGL 1023	3 MATH 2934	4 Fine Arts <sup>1</sup>	3	
MCEG 1012	2 PHYS 2114	4 Humanities <sup>1</sup>	3 Social Sciences <sup>1</sup>	3	
Social Science <sup>1</sup>	3 Biological Sciences <sup>1</sup>	3 MCEG 2013	3 MCEG 3313	3	
CHEM 2124	4 MCEG 2023	3 MCEG 3503	3 MCEG 3523	3	
MATH 2914	4 MATH 2924	4 Social Sciences <sup>1</sup>	3 ECON 2003	3	
Physical Activity <sup>1</sup>	1	Physical Activity <sup>1</sup>	1 MCEG 3512	2	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>18 Total Hours</b>	<b>17 Total Hours</b>	<b>17</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Mathematics, science, or engineering elective must be approved by an engineering advisor and the Mechanical Engineering Department Head.



## COURSE CATALOGS

[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)

### Department of Parks, Recreation and Hospitality Administration

[Back to College of Applied Sciences](#)

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T. Herrick  
**Associate Professor:**  
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**Assistant Professors:**  
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The Department of Parks, Recreation and Hospitality Administration offers a Bachelor of Science in *Recreation and Park Administration and Hospitality Administration*, an Associate of Applied Science in *Culinary Management* and minors in *Recreation and Park Administration and Hospitality Administration*.

The *Recreation and Park Administration* major provides specialized education that prepares students for supervisory and administrative positions in federal, state, and local recreation and park agencies as well as commercial recreation and tourism organizations. This program is accredited by the Council on Accreditation, sponsored by the National Recreation and Park Association.

#### Vision

The program will produce leaders in Recreation and Park Administration.

#### Core Values

The Recreation and Park Administration Program is committed to:

- Lifelong learning
- Service to community
- Personal and professional development
- Diversity of experience
- Environmental stewardship
- Interpersonal communication
- Healthy lifestyles

#### Mission

The mission of the Recreation and Park Administration Program is to educate Recreation and Park professionals for self, community and society.

#### Recreation and Park Administration

This program is designed to prepare students for management careers in private and public recreation agencies or park systems. A broad background in the behavioral and natural sciences is required with major emphasis on resource management and the delivery of leisure services to diverse populations. Specialized course work in biological sciences and business management aid in natural resource decision making. This provides a base for professional courses in planning, design, and operation of park and recreation facilities. A career in recreation administration, park administration, therapeutic recreation, turf management or interpretation requires a basic understanding of human behavior and the challenges of contemporary society. Due to the multidisciplinary nature of the career field, a student is required to choose courses from several related fields, based on professional interest. A comprehensive general education is complemented with a core of professional courses. The Bachelor of Science in Recreation and Park Administration offers five emphases of professional preparation:

*Recreation Administration Emphasis* prepares students to work in community and agency settings and commercial recreation businesses. Programming and people management are major areas of expertise.

#### Recreation Administration Emphasis Suggested Sequence of Courses

Freshman		Sophomore		Junior		Senior	
Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 ECON 2003 <sup>T</sup>	3	3		
Science with Lab <sup>1,T</sup>	4 MATH 1003 <sup>1,T</sup>	3 PSY 2003 <sup>T</sup>	3 SPH 2003 <sup>T</sup>				
RP 1013	3 Science with Lab <sup>1,T</sup>	4 LBMD 2001	1 RP 2033				
Physical Activity <sup>1,T</sup>	2 Social Sciences <sup>1,T</sup>	3 RP 2003	3 RP 2013				
	COMS 1003 <sup>T</sup>	3 ACCT 2003 <sup>T</sup>	3 RP 3023				
		Approved Elective <sup>2</sup>	3				
Total Hours	12 Total Hours	16 Total Hours	16 Total Hours	16 Total Hours	15 Total Hours	15 Total Hours	15 Total Hours
<b>Junior</b>		<b>Sophomore</b>		<b>Senior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 RP 4001	1 RP 4023	3	3		
RP 3013	3 RP 3043	3 RP 4013	3 RP 4113				
RP 3034	4 RP 3063	3 RP 4103	3 RP 4093				
RP 3033	3 POLS 3093	3 HA 4013	3 Approved Elective <sup>2</sup>				
POLS 3053	3 RP 3503	3 RP 4063	3				
		PE 4103	3				
Total Hours	16 Total Hours	15 Total Hours	16 Total Hours	16 Total Hours	15 Total Hours	15 Total Hours	12 Total Hours
<b>Senior 9th Semester</b>							

**Recreation Administration Emphasis****Fall**

<b>RP 4116<sup>3</sup></b>	<b>6</b>
<b>Total Hours</b>	<b>6</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>See Departmental Advisor.<sup>3</sup>Internship must be completed in last semester after all coursework has been completed.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

*Therapeutic Recreation Emphasis* prepares students for a career as a Certified Therapeutic Recreation Specialist (CTRS) working with special populations in clinical and community recreation environments. The specialized TR emphasis prepares students for national certification under guidelines established by the National Council for Therapeutic Recreation Certification.

**Therapeutic Recreation Emphasis****Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>ENGL 1013<sup>1,T</sup></b>	<b>3 ENGL 1023<sup>1,T</sup></b>	<b>3 PSY 2003<sup>T</sup></b>	<b>3 ECON 2003<sup>T</sup></b>
Physical Activity <sup>1,T</sup>	<b>2 COMS 1003<sup>T</sup></b>	<b>3 SPH 2003<sup>T</sup></b>	<b>3 Fine Arts<sup>1,T</sup></b>
Science with Lab <sup>1,T</sup>	<b>4 Science with Lab<sup>1,T</sup></b>	<b>4 RP 2003</b>	<b>3 LBMD 2001</b>
<b>RP 1013</b>	<b>3 Social Sciences<sup>1,T</sup></b>	<b>3 RS 2003</b>	<b>3 RP 2033</b>
	<b>MATH 1003<sup>1,T</sup></b>	<b>3 BIOL 2004<sup>T</sup></b>	<b>4 Social Sciences<sup>1,T</sup></b>
<b>Total Hours</b>	<b>12 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>RP 4173</b>	<b>3 PSY 3163</b>	<b>3 RP 4373</b>	<b>3 RP 4023</b>
<b>PSY 3063</b>	<b>3 RP 3063</b>	<b>3 PE 4103</b>	<b>3 RP 4113</b>
<b>RP 3013</b>	<b>3 RP 3043</b>	<b>3 RP 4013</b>	<b>3 RP 4273</b>
<b>RP 3033</b>	<b>3 PSY 3003</b>	<b>3 RP 4103</b>	<b>3 RP 4073</b>
<b>RP 3034</b>	<b>4 Approved Elective<sup>2</sup></b>	<b>2 AHS 2013<sup>T</sup></b>	<b>3</b>
<b>RP 4001</b>	<b>1</b>		
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>14 Total Hours</b>	<b>15 Total Hours</b>
<b>Senior 9th Semester</b>		<b>12</b>	
<b>Fall</b>			
<b>RP 4116<sup>3</sup></b>	<b>6</b>		
<b>Total Hours</b>	<b>6</b>		

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>See departmental advisor<sup>3</sup>Internship must be completed in last semester after all coursework has been completed.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

*Natural Resource Emphasis* prepares students to manage large parks, resource areas and visitor facilities. Planning and management of land and water resources within private and public park and natural resource management organizations to provide outdoor recreation opportunities for constituents are emphasized.

**Natural Resource Emphasis****Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>ENGL 1013<sup>1,T</sup></b>	<b>3 ENGL 1023<sup>1,T</sup></b>	<b>3 PSY 2003<sup>T</sup></b>	<b>3 ECON 2003<sup>T</sup></b>
<b>RP 1013</b>	<b>3 COMS 1003<sup>T</sup></b>	<b>3 RP 2003</b>	<b>3 RP 2013</b>
<b>CHEM 1114 or GEOL 1014<sup>T</sup></b>	<b>4 BIOL 2124 or 2134<sup>T</sup></b>	<b>4 Physical Activity<sup>1,T</sup></b>	<b>2 RP 2033</b>
<b>Social Sciences<sup>1,T</sup></b>	<b>3 Social Sciences<sup>1,T</sup></b>	<b>3 LBMD 2001</b>	<b>1 SPH 2003<sup>T</sup></b>
	<b>MATH 1003<sup>1,T</sup></b>	<b>3 Fine Arts<sup>1,T</sup></b>	<b>3 Approved Elective<sup>2</sup></b>
		<b>RP Major Elective<sup>3</sup></b>	<b>4</b>
<b>Total Hours</b>	<b>13 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>Humanities<sup>1,T</sup></b>	<b>3 RP 3043</b>	<b>3 RP 4001</b>	<b>1 RP 4023</b>
<b>RP 3033</b>	<b>3 RP 3063</b>	<b>3 RP 4013</b>	<b>3 RP 4113</b>
<b>RP 3013</b>	<b>3 RP 3053</b>	<b>3 RP 4063</b>	<b>3 RP Major Elective<sup>3</sup></b>
<b>RP 3034</b>	<b>4 Approved Elective<sup>2</sup></b>	<b>6 RP 4103</b>	<b>3 Approved Elective<sup>2</sup></b>
<b>RP 3093</b>	<b>3</b>	<b>HA 4013</b>	<b>3</b>
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>13 Total Hours</b>
<b>Senior 9th Semester</b>		<b>13</b>	
<b>Fall</b>			

**Natural Resource Emphasis**

<b>RP 4116<sup>4</sup></b>	<b>6</b>
<b>Total Hours</b>	<b>6</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>See Departmental Advisor or select from the following list:

BIOL 1014, 1114, 2124, 2134, or any 3000 or 4000 level BIOL course

FW 2003, or any 3000 or 4000 level FW course

GEOL 1014 or 3153 AGEG 3203 or 3213

AGPS 1024, 1033 or 3244 AGSS 2014

GEOG 4833

<sup>3</sup>Choose from the following RP courses: **RP 1993, 3993, 4053, or 4773**

<sup>4</sup>Internship must be completed in last semester after all coursework has been completed.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

*Turf Management Emphasis* prepares students to meet the expanding market for turfgrass specialists in parks, recreation playfields and golf courses.

**Turf Management Emphasis****Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>		<b>Spring</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	6 RP 2033		3
RP 1013	3 BIOL 2134 <sup>T</sup>	4 PSY 2003 <sup>T</sup>	3 ECON 2003 <sup>T</sup>		3
CHEM 1114 <sup>T</sup>	4 MATH 1003 <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>		3
Physical Activity <sup>1,T</sup>	2 COMS 1003 <sup>T</sup>	3 RP 2003	3 RP 2013		3
	AGPS 1024	4	AGSS 2014		4
<b>Total Hours</b>	<b>12 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
RP 3013	3 RP 3043	3 RP 4001	1 RP 4023		3
RP 3033	3 AGPS 3053	3 RP 4063	3 Electives		6
RP 3034	4 RP 3063	3 RP 4103	3 RP 4763		3
RP 3763	3 RP 3793	3 RP 4753	3 RP 3791		1
RP 4013	3 AGPS 3244	4 RP 4113	3		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>13 Total Hours</b>	<b>13 Total Hours</b>	<b>13</b>
<b>Senior 9th Semester</b>					
<b>Fall</b>					
RP 4116 <sup>3</sup>	6				
<b>Total Hours</b>	<b>6</b>				

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>See Departmental Advisor.

<sup>3</sup>Internship must be completed in last semester after all coursework has been completed.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

*Interpretation Emphasis* offers a curriculum that utilizes communication skills and interpretive methods courses to provide training for those wanting to find employment with various interpretive programs of private, state and federal agencies operating cultural and natural history oriented sites. Students are required to minor in Anthropology, Biology, or History.

**Interpretation Emphasis****Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>		<b>Spring</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 PSY 2003 <sup>T</sup>	3 ECON 2003 <sup>T</sup>		3
RP 1013	3 BIOL 1014 <sup>T</sup>	4 RP 2003	3 RP 2033		3
GEOL 1014 <sup>T</sup>	4 COMS 1003 <sup>T</sup>	3 SPH 2003 <sup>T</sup>	3 RP 2013		3
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Physical Activity <sup>1,T</sup>	2 LBMD 2001		1
	MATH 1003 <sup>1,T</sup>	3 Approved Elective <sup>2</sup>	4 Elective in Minor <sup>3</sup>		3
<b>Total Hours</b>	<b>13 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>13 Total Hours</b>	<b>13</b>
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 RP 4001	1 RP 4023		3
RP 3033	3 RP 3043	3 RP 4013	3 ANTH/MUSM 4403		3
RP 3013	3 RP 3063	3 RP 4103	3 RP Major Elective <sup>4</sup>		6
RP 3034	4 Elective in Minor <sup>3</sup>	7 RP 4113	3 Elective in Minor <sup>3</sup>		5
RP 3093	3	Elective in Minor <sup>3</sup>	3		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>13 Total Hours</b>	<b>13 Total Hours</b>	<b>17</b>
<b>Senior 9th Semester</b>					
<b>Fall</b>					

**Interpretation Emphasis**

<b>RP 4116<sup>5</sup></b>	<b>6</b>
<b>Total Hours</b>	<b>6</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>See Departmental Advisor.<sup>3</sup>Students must minor in Anthropology, History or Biology. See Departmental Advisor.<sup>4</sup>Students must select from the following list of RP courses: RP 1993, 3023, 3133, 3993, 4042, 4053, 4093, 4753, 4951-4, 4991-3.<sup>5</sup>Internship must be completed in last semester after all coursework has been completed.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Minor Recreation and Park Administration**

The minor in Recreation and Park Administration is designed for those students majoring in other disciplines who wish to develop specialized knowledge in the area of Recreation and Park Administration. This minor may be of particular interest to those students who wish to work for a recreation and park oriented agency after graduation. This minor may be well-suited for Emergency Management, Fisheries and Wildlife Science, and Hospitality Administration majors. Flexibility in the minor allows students to choose courses to match their particular needs and interests. The minor in Recreation and Park Administration requires 18 hours of courses:

**RP 1013** Principles of Recreation and Park Administration**RP 2003** Recreation ProgrammingRP Electives (12 hours of RP academic courses including 9 hours at the 3000 or 4000 level, excluding **RP 3043**, **RP 4001**, and **RP 4116**)**Hospitality Administration****Mission**

The mission of the Hospitality Administration Program is to provide quality education in hospitality administration and provide a foundation for professional growth and development. This is achieved by:

- Providing knowledge, skills and abilities through a comprehensive academic curriculum.
- Demonstrating professionalism, leadership and high ethical standards by a competent faculty and administration.
- Promoting community service and outreach.
- Emphasizing the importance of research and continuing education.
- Encouraging life-long learning.

The Hospitality Administration degree program is designed to prepare students for management positions within the hospitality industry such as lodging, resorts, conference, convention and visitor centers, restaurants, contract services, theme parks and travel and tourism related operations.

The course work concentrates on general business, management, finance, marketing, accounting, law, computer science, and specific courses related to hospitality management. The entire curriculum features numerous opportunities for the practical application of problem-solving skills and creativity. The Hospitality Administration Program is accredited by the Accreditation Commission for Programs in Hospitality Administration.

The *Lodging and Club Management Emphasis* prepares students for management careers in hotels, lodging, resorts, and public and private clubs. This emphasis will analyze competitive strategies, leadership styles, teamwork, and technology in this dynamic and ever-changing hospitality industry.

**Curriculum in Lodging and Club Management Emphasis****Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HA 2003	3 HA 2023	3
BIOL 1014 <sup>T</sup>	4 CHEM 1114 <sup>T</sup>	4 HA 3143	3 ACCT 2013 <sup>T</sup>	3
COMS 1003 <sup>T</sup>	3 MATH 1113 <sup>T</sup>	3 ACCT 2003 <sup>T</sup>	3 HA 2043	3
HA 1043	3 HA 1063	3 HA 2063	3 SPH 2173 <sup>T</sup>	3
Physical Activity <sup>1,T</sup>	2 Approved Electives <sup>2</sup>	2 ECON 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>
<b>Junior</b>		<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
BUAD 3023	3 HA 4093	3 HA 4113	3 HA 4243	3
Humanities <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3 HA 4073	3 HA 4023	3
Social Sciences <sup>1,T</sup>	3 GEOG 2013 <sup>T</sup>	3 HA 4063	3 HA 4203	3
Approved Electives <sup>2</sup>	3 HA 4033	3 HA 4013	3 HA 4001	1
HA 2053	3 MGMT 3003	3 HA 4243	3 Approved Electives <sup>2</sup>	3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>13</b>
<b>Senior 9th Semester</b>				
<b>Fall</b>		<b>Fall</b>		
HA 4116 <sup>3</sup>	6			
<b>Total Hours</b>	<b>6</b>			

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>See Departmental Advisor.<sup>3</sup>Internship must be completed in last semester after all coursework has been completed.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

The *Tourism and Event Management Emphasis* prepares students for careers in tourism, convention and visitors bureaus and sport and event management. This emphasis will provide a background in commercial recreation, recreational sport and event management in Arkansas' second leading industry and the world's largest industry. Tourism and Event Management is a collection of industries under the larger umbrella of hospitality management.

### **Curriculum in Tourism and Event Management Emphasis**

#### Suggested Sequence of Courses

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HA 2003	3 HA 2023 3
BIOL 1014 <sup>T</sup>	4 CHEM 1114 <sup>T</sup>	4 HA 2133	3 HA 3133 3
COMS 1003 <sup>T</sup>	3 MATH 1113 <sup>T</sup>	3 ACT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup> 3
HA 1043	3 HA 1063	3 HA 2063	3 SPH 2173 <sup>T</sup> 3
Physical Activity <sup>1,T</sup>	2 Approved Electives <sup>2</sup>	3 ECON 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup> 3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b> <b>15</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
BUAD 3023	3 RP 3503	3 Approved Electives <sup>2</sup>	3 HA 4023 3
Humanities <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3 HA 4073	3 HA 4053 3
Social Sciences <sup>1,T</sup>	3 GEOG 2013 <sup>T</sup>	3 HA 4113	3 HA 4203 3
RP 3033	3 HA 4033	3 HA 4013	3 HA 4001 1
HA 2053	3 MGMT 3003	3 Approved Elective <sup>2</sup>	2 HA 4093 3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>14 Total Hours</b> <b>13</b>
<b>Senior 9th Semester</b>			
<b>Fall</b>			
HA 4116 <sup>3</sup>	6		
<b>Total Hours</b>	<b>6</b>		

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>See Departmental Advisor.

<sup>3</sup>Internship must be completed in last semester after all coursework has been completed.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

The *Food and Beverage Management Emphasis* prepares students for management careers in the food and beverage industries as well as managed foodservice. This emphasis will provide the knowledge and skills necessary for a comprehensive management background in this dynamic and ever-changing hospitality industry. Restaurants are the nation's largest private-sector employer.

### **Curriculum in Food and Beverage Management Emphasis**

#### Suggested Sequence of Courses

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HA 2003	3 HA 2053 3
BIOL 1014 <sup>T</sup>	4 CHEM 1114 <sup>T</sup>	4 HA 1923	3 HA 2023 3
COMS 1003 <sup>T</sup>	3 MATH 1113 <sup>T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup> 3
HA 1043	3 HA 1063	3 HA 2063	3 SPH 2173 <sup>T</sup> 3
Physical Activity <sup>1,T</sup>	2 HA 1013	3 ECON 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup> 3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b> <b>15</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
BUAD 3023	3 Approved Electives <sup>2,T</sup>	3 Approved Electives <sup>2</sup>	3 HA 4033 3
Humanities <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3 HA 4073	3 HA 4113 3
Social Sciences <sup>1,T</sup>	3 GEOG 2013 <sup>T</sup>	3 HA 4063	3 HA 4203 3
HA 2813	3 Approved Electives <sup>2</sup>	2 HA 4013	3 HA 4001 1
HA 2913	3 MGMT 3003	3 HA 4983	3 HA 4023 3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>14 Total Hours</b>	<b>15 Total Hours</b> <b>13</b>
<b>Senior 9th Semester</b>			
<b>Fall</b>			
HA 4116 <sup>3</sup>	6		
<b>Total Hours</b>	<b>6</b>		

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>See Departmental Advisor.

<sup>3</sup>Internship must be completed in last semester after all coursework has been completed.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

The Hospitality Administration minor is designed for students of any major who want to learn about the hospitality profession. The minor in Hospitality Administration consists of 18 hours of coursework:

**Minor Hospitality Administration**

HA 1043 Introduction to Hospitality Management  
 HA 2053 Work Experience  
 HA 4093 Resort Management  
 HA Elective (3 hours)  
 HA Elective (6 hours of 3000 or 4000 level)

**Associate of Applied Science in Culinary Management****Curriculum in Culinary Management****Suggested Sequence of Courses**

<b>Freshman</b>			<b>Sophomore</b>		
<b>Fall</b>		<b>Spring</b>	<b>Fall</b>		<b>Spring</b>
ENGL 1013 <sup>1</sup>	3	ENGL 1023 <sup>1</sup>	3	CUL 2903	3
CHEM 1114	4	COMS 1003	3	SPH 2173	3
MATH 1003	3	PSY 2003	3	CUL 2003	3
CUL 1013	3	CUL 2813	3	CUL 2053	3
CUL 1923	3	CUL 2913	3		
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>12</b>
<b>Summer Between 1<sup>st</sup> and 2<sup>nd</sup> year</b>			<b>Summer After 2<sup>nd</sup> Spring</b>		
CUL 2923	3		CUL 2996	6	
CUL 2943	3				
<b>Total Hours</b>	<b>6</b>		<b>Total Hours</b>	<b>6</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

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**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**College of Arts and Humanities**Select Department 

Dr. Micheal Tarver, Dean  
Witherspoon Hall, Room  
240  
(479) 968-0274  
[mtarver@atu.edu](mailto:mtarver@atu.edu)  
Fax: (479) 964-0812

The College of Arts and Humanities comprises seven departments which offer programs of study leading to baccalaureate and associate degrees as listed below:

**Bachelor of Arts**

Art  
Art Education  
English  
English Education  
Foreign Language  
Foreign Language Education  
History  
International Studies  
Journalism  
Music  
Political Science  
Psychology  
Rehabilitation Science  
Social Studies Education  
Sociology  
Speech  
Speech Education

**Bachelor of Fine Arts**

Creative Writing  
Creative Writing Education

**Bachelor of Music Education****Associate of Arts**

Criminal Justice  
General Studies

In addition to the degree programs offered, the College of Arts and Humanities also offers minors in anthropology, art, creative writing, criminal justice, English, French, geography, German, history, Italian/Latin, Japanese, journalism, Latin American studies, military science, philosophy, political science, psychology, rehabilitation science, religious studies, sociology, Spanish, speech communication, strategic studies, teaching English as a second language, and theatre. The college also supervises pre-professional curriculum in law and is extensively involved in the general education program.

Through these degree and pre-professional curricula, the departments in the College of Arts and Humanities prepare graduates for a variety of challenging and rewarding careers, either directly or via continued graduate or professional studies. These curricula are designed not only to develop theoretical and technical expertise in the fine arts, humanities, and social sciences, but also to nurture the ability to think clearly and express ideas persuasively. Through its general education commitment and elective offerings, the college's faculty contributes to the broadening of the knowledge and experience of all graduates of Arkansas Tech University by promoting basic competence in communication skills, by fostering an appreciation and understanding of our cultural heritage and current world affairs, and by developing problem-solving techniques.

**Transfer Students**

Applicability of transfer credit to meet specific degree requirements depends on the major selected by the transfer student. The transfer student should review the Transfer Credit policy in the Admission section of this catalog and meet with their academic advisor to determine final transfer credit eligibility for the selected program of study.

**Associate of Arts  
General Studies**

The associate of arts degree program in general studies is designed primarily for continuing education students who enroll on a part-time basis in the University's evening school. This degree offers students the background, knowledge, and academic preparation necessary to pursue career opportunities not requiring the traditional four-year degree while at the same time providing the foundation for continued study toward a bachelor's degree. To qualify for the associate of arts in general studies, the student must satisfy the associate degree requirements, see "Associate Degrees" and complete the following curriculum:

Curriculum	Hours
General Education courses <sup>1</sup>	37
Electives	25
Total	62

<sup>1</sup>See "[General Education Requirements](#)".

**International  
Studies**

The International Studies program is interdisciplinary. The Degree Program in International Studies requires 37 hours of General Education coursework, 30 hours of courses selected from an International Studies Core, 9 hours in a foreign language at the 3000 or 4000 level, 27 hours in an area of concentration, and sufficient electives to complete 124 hours with a minimum of 40 hours of upper division courses. Students may select areas of concentration from the available programs outlined below. Students must follow the established course sequence and prerequisite requirements already defined in the catalog.

International Studies majors are advised by the College Dean (479-968-0274, Witherspoon 240).

International Studies majors who choose a foreign language as an area of concentration must complete the foreign language requirement of 9 hours at the 3000 or 4000 level in a second foreign language. International studies majors who elect a foreign language as their area of concentration, and whose native language is not English, may elect 9 hours of English to fulfill their foreign language requirement. English courses must be at the 3000-4000 level. Students with previous foreign language experience may petition the Department of Foreign Languages and International Studies for advanced placement and credit. Petitioners will be given written and/or oral examinations by a foreign language faculty member who will then recommend an appropriate foreign language placement level. This placement level will not exceed **FR 3013, GER 3013, JPN 2024, LAT 2013, or SPAN 3013**, and will be approved by the department head. Students who have omitted one or more courses in the basic language sequence will receive credit for omitted courses when they have validated their advanced placement by passing the course into which they are placed with a grade of "C" or better.

### International Studies Degree Requirements

#### Suggested Sequence of Courses

Freshman		Sophomore			
Fall	Spring	Fall	Spring		
ENGL 1013 <sup>1,5,T</sup>	3 ENGL 1023 <sup>1,5,T</sup>	3 FR, GER, or SPAN 2014 <sup>2,3,T</sup>	4 FR, GER or SPAN 2024 <sup>2,3,T</sup>	4	
MATH 1113 <sup>5,T</sup>	3 ENGL 2003 or 2013 <sup>T</sup>	3 AMST 2003 <sup>T</sup>	3 POLS 2003 <sup>T</sup>	3	
BIOL 1014 <sup>1,T</sup>	4 PHSC 1013 & 1021 <sup>1,T</sup>	4 PHIL 3023 <sup>T</sup>	3 SPH 2003 or 2173 <sup>T</sup>	3	
ART 2123 <sup>1,T</sup>	3 COMS 1003 <sup>T</sup>	3 ANTH 2003 <sup>T</sup>	3 ECON 2003, PSY 2003 or SOC 1003 <sup>T</sup>	3	
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1 POLS 3403 or 3413 <sup>T</sup>	3 POLS 3403 or 3413 <sup>T</sup>	3	
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3			
Total Hours	17 Total Hours	17 Total Hours	16 Total Hours	16	
Junior		Senior			
Fall	Spring	Fall	Spring		
FR, GER or SPAN 3003 <sup>3</sup>	3 FR, GER or SPAN 3013	3 FR, GER 3113 or SPAN 3123 or 3133	3 HIST 3533, 3603, 3703 or 3803	3	
Area of Concentration	6 Area of Concentration	9 Area of Concentration	6 Area of Concentration	6	
GEOG 2013, 3303 or 3703	3 PHIL 2013, 3013 or 3113	3 Elective <sup>4</sup>	4 Elective <sup>4</sup>	3	
HIST 3313	3	HIST 3323	3		
Total Hours	15 Total Hours	15 Total Hours	16 Total Hours	12	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.

<sup>3</sup>Lab attendance is required for the beginning and intermediate foreign language courses.

<sup>4</sup>At least 40 of the total hours required for graduation must be 3000-4000 level.

<sup>5</sup>Students must complete course with a grade of C or better.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Concentration Areas:

#### Art Education: 27 hours

ART 1303; ART 1403; ART 2103 or ART 2113; ART 2403; ART 2413; ART 3003; ART 3013; 3 hours from ART 3113, ART 3123, ART 4103, ART 4823; 3 hours from ART 2503, ART 2703, ART 3533, ART 3603, ART 3803.

#### Journalism: 27 Hours

JOUR 2133; JOUR 2143; JOUR 3114; JOUR 3143; JOUR 3183 or JOUR 3273; JOUR 4883; 2 hours from JOUR practicum (Broadcast, Print, or Multimedia); 6 hours from 1000/2000/3000/4000-level JOUR classes.

#### Biology: 28 Hours

8 hours from BIOL 1114, BIOL 2124, BIOL 2134; 4 hours from BIOL 3114, BIOL 3034, BIOL 3074, BIOL 3124; 4 hours from any 1000/2000/3000/4000-level BIOL classes; 4 hours from any 3000/4000-level BIOL classes; 8 hours from any 2000/3000/4000-level CHEM classes.

#### Philosophy: 27 Hours

PHIL 2003; PHIL 3013; PHIL 2013 or PHIL 3053; 3 hours from PHIL 3253, POLS 3253, PHIL 3063, POLS 3063; 6 hours from PHIL 3003, PHIL 3013, PHIL 3113, PHIL 3203; 3 hours from PHIL 3033, PHIL 4093, PHIL 4103; 6 hours from 3000/4000-level Philosophy classes.

#### Fine Arts: 18 hours: ART 1303, 1403, ART 2103 or ART 2113; ART 2403; ART 2413; 3 hours from ART 3113, ART 3123, ART 4103, ART 4823; 9 hours from ART 2503, ART 2703, ART 3533, ART 3603, ART 3803.

#### Political Science: 27 Hours

POLS 2013; POLS 2253; POLS 4963; 3 hours from PHIL 3253, POLS 3253, PHIL 3063, POLS 3063; 6 hours from POLS 3013, POLS 3473, POLS 3433, POLS 4103; 9 hours from 3000/4000-level POLS classes.

#### English: 27 Hours

Any 27 hours of ENGL classes beyond ENGL 1023/1053.

#### Religious Studies: 27 Hours

HIST 3803; HIST 4503; PHIL 2003; PHIL 2013; PHIL 3053; PHIL 3023; SOC 4073; ANTH 3233 or ENGL 2263; 3 hours from 1000/4000-level PSY classes.

#### German: 27 Hours

Any 27 hours of GER classes. Reminder: Student must complete the foreign language requirement of 9 hours at the 3000 or 4000 level in a second foreign language.

#### Social Sciences: 27 Hours

HIST 4963 or POLS 4963; 3 hours from HIST 3313, HIST 3323, HIST 4133; 3 hours from PHIL 3253, POLS 3253, PHIL 3063, POLS 3063; 3 hours from POLS 3013, POLS 3473, POLS 3433, POLS 4103; 6 hours from HIST 3603, HIST 3703, HIST 3803; 9 hours from GEOG 3303, GEOG 3413, GEOG 3703, GEOG 4023, GEOG 4803.

#### History: 27 Hours

HIST 2013; HIST 2513 or POLS 2513; HIST 4963; 3 hours from HIST 3313, HIST 3323, HIST 4133; 3 hours from HIST 4083, HIST 4483, HIST 4513; 3 hours from any 3000/4000-

#### Spanish: 27 Hours

Any 27 hours of SPAN classes. Reminder: Student must complete

level History class; 3 hours from HIST 3493, HIST 3513, HIST 3533; 6 hours from HIST 3603, HIST 3703. the foreign language requirement of 9 hours at the 3000 or 4000 level in a second foreign language.

**Hospitality: 27 Hours**

HA 1013; HA 1043; HA 2063; HA 3043; HA 4003; HA 4093; 9 hours from any 1000/2000/3000/4000-level HA class (excluding HA 4116).

**Strategic Studies: 27 Hours**

EAM 1003; EAM 1013; POLS 2153; POLS 3013; POLS 3473; 6 hours from HIST 4013, HIST 4023, HIST 4083, HIST 4813; 6 hours from ECON 4093, GEOG 4803, HIST 4013, HIST 4023, HIST 4083, HIST 4813, 3000/4000-level EAM classes.

**Japanese: 27 Hours**

Any 27 hours of JPN classes. Reminder: Student must complete the foreign language requirement of 9 hours at the 3000 or 4000 level in a second foreign language.

**Theatre: 27 Hours**

TH 2203; TH 2513; TH 2703; TH 3513; 3 hours from TH 4263, TH 4273, TH 4313, TH 4323; 12 hours from 3000/4000-level TH classes.

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### Department of Art

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**Dr. Cathy R. Caldwell,**  
Head  
Norman Hall, Room 104  
(479) 968-0244  
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**Professor:**  
Caldwell  
**Associate Professors:**  
Brands, Brunson,  
Mudrinich  
**Assistant Professor:**  
Cuenco, Harrington

The Art Department is committed to quality visual arts education consistent with high professional standards. To achieve its mission, the Art Department seeks to provide:

1. A strong core foundation in visual art concepts, skills, processes, technology and other art media.
2. Substantive curriculum content that challenges students to think critically in both creating and responding to art.
3. Historical perspectives necessary for student understanding of the role of art across time, as a form of communication, and in cultural contexts.
4. Opportunities for developing and assessing a portfolio consistent with areas of professional specialization.
5. Leadership in developing and providing access to visual arts programming for the university and community.

The department has three major components leading to the baccalaureate degree. The first, Art Education (curriculum also located in Secondary Education), provides a foundation of art skills, methodology, and advanced work through teaching internships necessary for teacher licensure. The second, the Fine Arts area, concentrates on drawing, painting, printmaking, ceramics, and sculpture and other special art interests. Third, the Graphic Design program enables a student to develop the skills and techniques required to engage in the various fields of advertising art. All three curricula lead to the bachelor of arts degree. The department also offers a service course required in the area of general education. In addition, the department offers an art minor which provides an opportunity to investigate a range of content and studio experiences.

All majors will enroll in a foundations core made up of **ART 1303**, Introduction to Drawing; **ART 1403**, Two-Dimensional Design; **ART 2403**, Color Design; **ART 2413**, Three-Dimensional Design; **ART 2103**, Art History I; and **ART 2303**, Figure Drawing. Graphic Design and Art Education students are expected to include **ART 1503**, Introduction to Graphic design in their foundations core. These courses may be taken independently of one another, and more than one may be taken in a semester. All art majors are required to enroll in twelve hours of art history. All majors participate in an assessment process beginning with the Sophomore Review after students complete 12 hours of core courses to include **ART 1303**, **ART 1403**, **ART 2403**, **ART 2413**. It is prerequisite to advanced course work in all program areas. The Junior Review is to be completed one year before enrolling in the Senior Project Course (Spring Semester) for Fine Arts.

#### Curriculum in Fine Arts

##### Suggested Sequence of Courses

Freshman		Sophomore	
Fall	Spring	Fall	Spring
<b>ART 1303<sup>T</sup></b>	3 <b>ART 2403<sup>T</sup></b>	3 <b>ART 2113<sup>T</sup></b>	3 <b>ART 2303<sup>T</sup></b>
<b>ART 1403<sup>T</sup></b>	3 <b>ART 2413<sup>T</sup></b>	3 <b>ART 2703</b>	3 ART History (3000-4000) <sup>3</sup>
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ART 2103<sup>T</sup></b>	3 Science with Labs <sup>1,T</sup>	4 Elective <sup>2,T</sup>
Social Sciences <sup>1,T</sup>	3 Science with Labs <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
Mathematics <sup>1,T</sup>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 Humanities <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>
		Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
<b>ART 3603</b>	3 Art History (3000-4000) <sup>3</sup>	3 Art Elective <sup>2</sup>	6 <b>ART 4703</b>
<b>ART 3803</b>	3 Art Elective <sup>2</sup>	3 Elective <sup>2</sup>	9 Art Elective <sup>2</sup>
<b>ART 3303</b>	3 Elective <sup>2</sup>	9	Elective <sup>2</sup>
<b>ART 3403 or 3533</b>	3		
Social Sciences <sup>1,T</sup>	3		
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>At least 40 upper level hours are required, electives can include art courses. Art Electives are all upper level hours.

<sup>3</sup>See art history electives. **ART 4823** can be used toward this requirement.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

#### Curriculum in Graphic Design

##### Suggested Sequence of Courses

Freshman		Sophomore	
Fall	Spring	Fall	Spring
<b>ART 1303<sup>T</sup></b>	3 <b>ART 2403<sup>T</sup></b>	3 <b>ART 1503</b>	3 <b>ART 2303<sup>T</sup></b>
<b>ART 1403<sup>T</sup></b>	3 <b>ART 2413<sup>T</sup></b>	3 <b>ART 2113<sup>T</sup></b>	3 <b>ART 2213</b>
Mathematics <sup>1,T</sup>	3 <b>ART 2103<sup>T</sup></b>	3 Science with Lab <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>

Curriculum in Graphic Design Suggested Sequence of Courses							
Social Sciences <sup>1,T</sup>	3	Science with Lab <sup>1,T</sup>	4	Social Sciences <sup>1,T</sup> Physical Activity <sup>1,T</sup>	3	Elective <sup>2,T</sup>	3
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Spring</b>		<b>Senior</b>		<b>Spring</b>	
<b>Fall</b>		<b>ART 3203</b>	3	<b>Fall</b>	<b>ART 3803</b>	<b>ART 4243</b>	3
<b>ART History<sup>3</sup> (3000-4000)</b>	3	<b>ART 3233</b>	3	<b>ART 3223</b>	3	<b>ART 4623</b>	3
<b>Social Sciences<sup>1</sup></b>	3	<b>Art Elective<sup>5</sup></b>	3	<b>ART 3243</b>	3	<b>Elective<sup>2</sup></b>	9
<b>Elective<sup>2</sup></b>	3	<b>Elective<sup>2</sup></b>	6	<b>Elective<sup>2</sup></b>	6		
<b>ART 3253</b>	3						
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>At least 40 upper level hours are required, general electives can include art courses. Art electives can include art courses. Art electives are all upper level hours.<sup>3</sup>See art history electives, **ART 4823** can be used toward this requirement.<sup>4</sup>Excludes **ART 2123**.<sup>5</sup>Choose **ART 3303**, or **4233**<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Art for Teacher Licensure Suggested Sequence of Courses					
Freshman		Spring	Sophomore		Spring
<b>Fall</b>			<b>Fall</b>		
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	<b>ART 2113<sup>T</sup></b>	3
<b>Social Sciences<sup>1,T</sup></b>	3	<b>ART 2103<sup>T</sup></b>	3	<b>ART 2413<sup>T</sup></b>	3
<b>Mathematics<sup>1,T</sup></b>	3	<b>Science with Lab<sup>1,T</sup></b>	4	<b>Social Sciences<sup>1,T</sup></b>	3
<b>ART 1303<sup>T</sup></b>	3	<b>ART 1503</b>	3	<b>Science with Lab<sup>1,T</sup></b>	4
<b>ART 1403<sup>T</sup></b>	3	<b>ART 2403<sup>T</sup></b>	3	<b>SEED 2002</b>	2
				<b>Humanities<sup>1,T</sup></b>	3
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>18</b>
<b>Junior</b>		<b>Spring</b>	<b>Fall</b>		<b>Spring</b>
<b>Fall</b>				<b>Fall</b>	
<b>ART 3603</b>	3	<b>ART 4823</b>	3	<b>ART 3013</b>	3
<b>ART 3003</b>	3	<b>Art Elective (3000-4000)</b>	3	<b>ART 3803</b>	3
<b>ART 2703</b>	3	<b>Social Sciences<sup>1,T</sup></b>	3	<b>Art Elective (3000-4000)</b>	3
<b>ART 3403 or 3533</b>	3	<b>SEED 3552</b>	2	<b>SEED 4556</b>	6
Art History (3000-4000)	3	<b>SEED 4052</b>	2		
		<b>SEED 3702</b>	2		
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>13</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Minor  
Art**

The minor program provides an opportunity to investigate a range of content and studio experiences. Students who wish to take advanced level coursework in any studio area must meet prerequisites. The minor in art requires 18 hours of courses:

**ART 1303** Introduction to Drawing  
**ART 1403** Two Dimensional Design  
 ART Electives (9 hours)

**AND**

3 hours selected from the following:  
**ART 2123** Experiencing Art  
**ART 2103** Art History I  
**ART 2113** Art History II



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### Department of Behavioral Sciences

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Dr. W. Daniel Martin,  
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(479) 968-0305  
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**Professor:**

Harris

**Associate Professors:**

Martin, Osburn, Ward,  
Wilkerson, Willmering

**Assistant Professors:**

Bowne, Huss, Peacock,  
Schluterman, Ulisperger,  
Warnick, Williams, Zeng

The Behavioral Sciences Department includes the allied disciplines of psychology, sociology, anthropology, criminal justice, and rehabilitation science, including minors in each area and an Associate of Arts in criminal justice. The student is offered the opportunity to develop an understanding of human behavior via the distinctive approach of each discipline as well as an integrated view of interpersonal, social, and cultural activities.

The department has several distinctive goals. It gives basic preparation which may lead to advanced study; it provides a career line for work in state and local agencies and programs; it provides practical experience and skills in human services; and it offers electives to support other programs of study in the University.

The student may select a major in psychology, sociology, rehabilitation science, or criminal justice. In addition, the student may select an Associate of Arts in criminal justice or a minor in anthropology, psychology, sociology, rehabilitation science, or criminal justice.

While each area outlines a complete program below, one of the objectives of the department is to maintain maximum flexibility of planning with each student within the context of the broad range of offerings. Each student is encouraged to consult with a departmental advisor at the earliest opportunity to develop a program appropriate to his/her interests and goals.

### Psychology

The Psychology curriculum is designed to (1) prepare students for advanced study in psychology; (2) support, through electives, programs of study in other disciplines; (3) give a basis for entry into the job market; (4) arouse the curiosity of all students regarding human behavior; (5) provide opportunities for experiences outside the classroom by way of field programs and practical experiences.

The student majoring in psychology must, in addition to meeting the general education requirements:

- Complete a minimum of 31 credits in psychology to include: (18 credits must be upper division).
  - PSY 2003 General Psychology
  - PSY 2053 Statistics for the Behavioral Sciences
  - PSY 2074 Experimental Psychology
 The remainder of the major may be developed to reflect various career goals.  
 If the student plans to go to graduate school, the following should be included: PSY 3053, PSY 3073, PSY 3153, PSY 4013, PSY 4033, PSY/SOC 4043, PSY 4073, PSY 4991.  
 If the student plans to seek employment in applied human service settings, the following should be included: PSY 2033, PSY 3003, PSY/SOC 3013, PSY 3063, PSY 3153.  
 If the student plans to seek employment in business, industry or organizational settings, the following should be included: PSY 2023, PSY 3093, PSY 4033, PSY/SOC 4043, PSY 4234.
- Complete 15 credits in a second field of study designed to complement career objectives.
- Complete Introductory Sociology (SOC 1003) and Introduction to Anthropology (ANTH 1213) or Cultural Anthropology (ANTH 2003).

### Curriculum in Psychology

#### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore		
Fall	Spring	Fall	Spring	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 Elective <sup>3,T</sup>	3
MATH 1113 <sup>T</sup>	3 PHSC 1013 <sup>1</sup>	3 Fine Arts <sup>1,T</sup>	3 Elective <sup>3,T</sup>	4
Social Sciences <sup>1,T</sup>	3 PHSC 1021 <sup>1,T</sup>	1 PSY 2053 <sup>T</sup>	3 PSY 2063 <sup>T</sup>	4
Elective <sup>3,T</sup>	3 PSY 2003 <sup>T</sup>	3 BIOL 2014 or 2124 <sup>T</sup>	4 PSY Topical Core	3
Elective <sup>3,T</sup>	3 Elective <sup>3,T</sup>	3 Physical Activity <sup>1,T</sup>	1 Second Field of Study <sup>2,T</sup>	3
		3		
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>	<b>16</b>
Junior		Senior		
Fall	Spring	Fall	Spring	
PSY Topical Core	6 PSY Topical Core	3 PSY (3000-4000 level)	3 PSY 4003	3
Physical Activity <sup>1,T</sup>	1 Second Field of Study <sup>2</sup>	3 PSY (3000-4000 level)	3 Elective <sup>3</sup>	3
Second Field of Study <sup>2</sup>	3 Second Field of Study <sup>2</sup>	3 Second Field of Study <sup>2</sup>	3 Elective <sup>3</sup>	3
SOC 1003 <sup>T</sup>	3 ANTH 1213 or 2003 <sup>T</sup>	3 Elective <sup>3</sup>	3 Elective <sup>3</sup>	3
Elective <sup>3</sup>	3 Elective <sup>3</sup>	3 Elective <sup>3</sup>	3 Elective <sup>3</sup>	3
		2		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>

#### Degree Completion Plan Beginning in Spring Semester

#### Freshman

#### Sophomore

Curriculum in Psychology					
Spring	Fall	Spring	Fall		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 Elective <sup>3,T</sup>	3	3
MATH 1113 <sup>T</sup>	3 PHSC 1013 <sup>1,T</sup>	3 Fine Art <sup>1,T</sup>	3 Elective <sup>3,T</sup>	3	3
Social Sciences <sup>1,T</sup>	3 PHSC 1021 <sup>1,T</sup>	1 Elective <sup>3,T</sup>	3 PSY 2053 <sup>T</sup>	3	3
Elective <sup>3,T</sup>	3 PSY 2003 <sup>T</sup>	3 BIOL 2014 or 2124 <sup>T</sup>	4 PSY Elective <sup>T</sup>	3	3
Elective <sup>3,T</sup>	3 Elective <sup>3,T</sup>	3 Physical Activity <sup>1,T</sup>	2 Second Field of Study <sup>2,T</sup>	3	3
	Elective <sup>3,T</sup>	3			
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>	
<b>Junior</b>		<b>Senior</b>			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
PSY Topical Core	6 PSY Topical Core	3 PSY (3000-4000 level)	3 PSY 4003	3	3
PSY 2063 <sup>T</sup>	3 Second Field of Study <sup>2</sup>	3 PSY (3000-4000 level)	3 Elective <sup>3</sup>	3	3
Elective <sup>3</sup>	4 Second Field of Study <sup>2</sup>	3 Second Field of Study <sup>2</sup>	3 Second Field of Study <sup>2</sup>	3	3
SOC 1003 <sup>T</sup>	3 ANTH 1213 or 2003 <sup>T</sup>	3 Elective <sup>3</sup>	3 Elective <sup>3</sup>	3	3
	Elective <sup>3</sup>	3 Elective <sup>3</sup>	3 Elective <sup>3</sup>	3	3
	Elective <sup>3</sup>	2			
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>A minor may be used to fulfill the 2nd field of study.

<sup>3</sup>At least 40 of the total hours required for graduation must be 3000 - 4000 level courses.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

## Minor Psychology

The psychology minor is designed for students of any major who want to pursue an understanding of human behavior through psychology. Many majors could benefit from the psychology minor, but majors that are especially compatible include biology, business education, nursing, pre-med, pre-law, rehabilitation science, and sociology. The minor in psychology requires 18 hours of courses:

**PSY 2003** General Psychology  
**PSY Electives** (3 hours)  
**PSY Electives** (12 hours of 3000 or 4000 level)

## Rehabilitation Science

Dr. Lyman Harris, Director  
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The Rehabilitation Science curriculum is designed to produce undergraduate rehabilitation generalists who have training and experience conducive to successful careers in various rehabilitation service programs. Within the Rehabilitation Science major five areas of emphasis are offered: 1) Vocational Rehabilitation, 2) Aging, 3) Corrections, 4) Social Services, and 5) Child Welfare.

The primary objective of the program is to develop personnel for careers with state and private agencies providing rehabilitation services to individuals with a disability. Until such time as the student enters graduate school, he/she may work in a variety of roles such as caseworker, evaluator, parole officer, probation officer, juvenile intake officer, children and family service worker, or a number of rehabilitation service-provider roles in direct service agencies or institutions. Examples of these agencies and institutions are state rehabilitation services, departments of social services, mental retardation centers, mental hospitals, correctional facilities, nursing homes, halfway houses, sheltered workshops, employment security divisions, disability determination, and occupational skills training schools.

The student majoring in rehabilitation science must, in addition to completing the general education requirements:

- complete the rehabilitation and related required core, including 12 hours of field placement or a 12-hour internship in rehabilitation science. If the field placements are taken instead of an internship, the student must take one placement course in the core rehabilitation area, one in the chosen primary emphasis area, and one in the chosen secondary emphasis area.
- complete a minimum of 12 non-field placement hours in a primary emphasis area and 6 hours of the indicated courses in a secondary emphasis area. Emphasis areas available are vocational rehabilitation, social services, aging, corrections, and child welfare.

## Curriculum in Rehabilitation Science

### Suggested Sequence of Courses

Freshman	Spring	Sophomore	Spring
Fall		Fall	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Biology <sup>2,T</sup>	4 ANTH 1213/2003 <sup>T</sup>
RS 2003	3 PSY 2003 <sup>T</sup>	3 PSY 2053 <sup>T</sup>	3 PSY 2074 or SOC 3163
SOC 1003 <sup>T</sup>	3 PHSC 1013 <sup>1,T</sup>	3 RS 3013	3 Elective or Emphasis Area <sup>3,T</sup>
MATH 1113 <sup>T</sup>	3 PHSC 1021 <sup>1,T</sup>	1 Elective <sup>T</sup>	3 RS 3004
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1 PSY 3063 <sup>T</sup>	3
Elective <sup>T</sup>	3 Elective <sup>T</sup>	3	
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
RS 3023	3 RS 3123	3 RS 3133	3 RS 40_4 <sup>4</sup>
RS 3073	3 PSY 3003 <sup>T</sup>	3 RS 40_4 <sup>4</sup>	4 Social Sciences <sup>1,T</sup>
Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 Elective or Emphasis Area <sup>3</sup>	9 Elective or Emphasis Area <sup>3</sup>
			8

**Curriculum in Rehabilitation Science**

Elective or Emphasis Area <sup>3</sup>	6	RS 40_4 <sup>4</sup>	4	
		Elective or Emphasis Area <sup>3</sup>	3	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Any General Education biology course is acceptable except BIOL 2134.<sup>3</sup>18 hours of emphasis area courses are required. 12 hours in a primary emphasis and 6 hours in a secondary emphasis.<sup>4</sup>Students who choose to complete a 12 hour internship (RS 4012) will do so either their last or next to last semester and will not take the three field placements RS 40\_4.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Minor  
Rehabilitation  
Science**

The rehabilitation science minor is designed primarily for psychology and sociology majors who want to add an applied dimension to their degree and are interested in working in a human services setting after completing degree requirements. It may also be of interest to business majors interested in working in human resources, nursing majors, education majors, and other degree programs. The minor in rehabilitation science requires 18 hours of courses:

**RS 2003** Introduction to Rehabilitation Services  
**RS 3023** Principles and Techniques of Rehabilitation Science  
 \*RS Electives (12 hours)

\*Students who choose to complete a minor in rehabilitation science should consult with a rehabilitation science faculty member to discuss course selection and how they want their RS minor to supplement their major.

**Sociology**

The Sociology curriculum is designed to prepare students for employment in a range of careers or for advanced study in sociology, law, criminology, criminal justice, counseling, education, research, population, social work or other related fields. Sociology prepares majors to deal with the constant social change that is today's world. In addition to understanding the organization of social groups and the human behaviors that comprise everyday social life, sociologists remain important contributors to the collection of data pertaining to these levels of human behavior. The undergraduate sociology major learns to identify problems, formulate appropriate questions, search for answers, analyze data, organize information, and express themselves in written and spoken communication. The undergraduate major provides a strong liberal arts degree for entry-level positions throughout the business, social service, and government worlds. In addition to the general education requirements, a student majoring in sociology must complete: (1) 30 hours of sociology including **SOC 1003**, 2073, 2083, 3163, 2053 (At least 18 credits must be upper division); (2) Complete a minor or major in a second field of study; (3) **PSY 2003**; (4) **RS 2003**; **ANTH 1213** or **ANTH 2003**; and (5) **COMS 1003**.

**Curriculum in Sociology****Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>SOC 2053<sup>T</sup></b>	3 Social Sciences <sup>1,T</sup>	3
Science with Lab <sup>1,T</sup>	4 <b>ANTH 1213 or 2003<sup>T</sup></b>	3 Science with Lab <sup>1,T</sup>	4 Fine Arts/Humanities <sup>1</sup>	3
Physical Activity <sup>1,T</sup>	1 Social Sciences <sup>1,T</sup>	3 <b>PSY 2003<sup>T</sup></b>	3 <b>SOC 2083<sup>T</sup></b>	3
<b>SOC 1003<sup>T</sup></b>	3 Fine Art/Humanities <sup>1,T</sup>	3 <b>SOC 2073<sup>T</sup></b>	3 SOC Elective(3000-4000 level)	3
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup> <b>MATH 1113<sup>T</sup></b>	3 <b>SOC 2063<sup>T</sup></b>	3 Physical Activity <sup>1</sup> Gen. Elec <sup>2</sup>	1 3
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>18 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
Elec - Minor	3 SOC Elective (3000-4000 level)	3 SOC Elective (3000-4000 level)	3 <b>SOC 4283</b>	3
<b>RS 2003<sup>T</sup></b>	3 <b>SOC 3163</b>	3 Elec - Minor	3 Elec - Minor	3
Elec - Minor	3 Elec - Minor	3 Elec - Minor	3 Gen Elec <sup>2</sup>	3
Gen Elec <sup>2</sup>	3 Gen Elec <sup>2</sup>	3 Gen Elec <sup>2</sup>	3 Gen Elec <sup>2</sup>	3
SOC Elective (3000-4000 level)	3 Gen Elec <sup>2</sup>	3 Gen Elec <sup>2</sup>	3 Gen Elec <sup>2</sup>	3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>

**Degree Completion Plan Beginning in Spring Semester**

<b>Freshman</b>		<b>Sophomore</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3
Science with Lab <sup>1,T</sup>	4 <b>ANTH 1213 or 2003<sup>T</sup></b>	3 <b>SOC 2053<sup>T</sup></b>	3 Science with Lab <sup>1,T</sup>	4
Physical Activity <sup>1,T</sup>	1 Gen. Elec <sup>2</sup>	3 <b>SOC 2083<sup>T</sup></b>	3 <b>SOC 2073<sup>T</sup></b>	3
<b>SOC 1003<sup>T</sup></b>	3 Fine Art/Humanities <sup>1,T</sup>	3 <b>SOC 2063<sup>T</sup></b>	3 Fine Art/Humanities <sup>1,T</sup>	3
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup> <b>MATH 1113<sup>T</sup></b>	3 Physical Activity <sup>1</sup> Gen. Elec <sup>2</sup>	1 <b>PSY 2003<sup>T</sup></b>	3
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>18 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
<b>SOC 3163</b>	3 <b>RS 2003<sup>T</sup></b>	3 Elec - Minor	3 Elec - Minor	3

**Curriculum in Sociology**

SOC Elective (3000-4000 level)	3	SOC Elective (3000-4000 level)	6	SOC Elective (3000-4000 level)	3	Elec - Minor	3
Elec - Minor	3	Elec - Minor	3	Elec - Minor	3	Gen. Elec <sup>2</sup>	3
Gen. Elec <sup>2</sup>	3	Gen Elec <sup>2</sup>	3	SOC 4283	3	Gen. Elec <sup>2</sup>	3
Gen Elec <sup>2</sup>	3			Gen. Elec <sup>2</sup>	3	Gen. Elec <sup>2</sup>	3
<b>Total Hours</b>	<b>15 Total Hours</b>			<b>15 Total Hours</b>	<b>15 Total Hours</b>		<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>To be chosen in consultation with advisor. Students are strongly encouraged to pursue a foreign language. At least 40 of the total hours required for graduation must be 3000 - 4000 level courses.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor Sociology**

The sociology minor is designed to prepare students for employment in a range of careers that require an understanding of social processes and institutions. In addition, the sociology minor is provided for students whose major department requires a minor. The minor in sociology requires 18 hours of courses:

**SOC 1003** Introductory Sociology  
**SOC 3133** Self and Society or **CJ/SOC 2033** Social Problems  
SOC Electives (12 hours)

**Associate of Arts Criminal Justice**

The Associate of Arts degree program in criminal justice is designed primarily for students interested in police work at levels other than Federal. This degree will provide the basic, foundational, knowledge to supplement the police academy experience.

Completion of the requirement for the associate's degree will provide the necessary background for those continuing study towards a bachelor's degree. To qualify for the Associate of Arts in criminal justice, the student must satisfy the associate degree requirements, see "[General Education Requirements](#)" of this catalog and complete the following curriculum:

<b>Curriculum</b>	<b>Hours</b>
General Education courses <sup>1</sup>	37
CJ/SOC 2003 Introduction to Criminal Justice	3
CJ/SOC 2043 Crime and Delinquency	3
SOC/CJ 2033 Social Problems	3
Criminal Justice Electives	9
Electives	7
Total	62

<sup>1</sup>See "[General Education Requirements](#)".

**Minor Criminal Justice**

The criminal justice minor is designed to prepare students for a career in the field of criminal justice, e.g. police work, probation/parole or corrections. In addition, the criminal justice minor is provided for students whose major department requires a minor. The minor in criminal justice requires 18 hours of courses:

**CJ 2003** Introduction to Criminal Justice  
**CJ 2043** Crime and Delinquency  
CJ Electives (12 hours)

**Minor Anthropology**

The minor in anthropology concentrates on the areas of cultural anthropology. Within this subdivision, the emphasis concerns historic and contemporary cultures (ethnography) and prehistoric cultures (archeology). The Russellville Station of the Arkansas Archeological Survey is located on the Arkansas Tech University campus and offers traditional opportunities in the state for students interested in anthropology. The minor in anthropology requires 18 hours of courses:

**ANTH 1213** Introduction to Anthropology  
**ANTH 2003** Cultural Anthropology  
ANTH Electives (12 hours)



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### Department of English

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**Dr. Carl W. Brucker, Head**  
Witherspoon Hall, Room  
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(479) 968-0256  
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**Professors:**  
Brucker, Lake, Lombardo,  
Poznar, Ritchie, Wilson  
**Associate Professors:**  
Gemme, White, Worley  
**Assistant Professors:**  
Anderson, Enchelmayer,  
St. John, Shuman,  
Wendelberger  
**Instructor:**  
N. Cox

The Department of English offers majors and teacher licensure in creative writing and English. In addition, the department offers minors in creative writing, English, and teaching English as a second language.

The department's programs seek to help students express themselves effectively, especially in writing; develop a respect for and an understanding of language; appreciate and profit from a study of our common literary heritage; increase their awareness of and empathy for diverse peoples and cultures; discover the relevance of ideas and values found in their reading; and learn to think critically and evaluate wisely.

Departmental majors are prepared for a variety of careers in advertising, communications, education, government, management, personnel work, public relations, and sales. A degree in creative writing or English also provides an excellent undergraduate preparation for the student planning to pursue graduate study of business, law, or the humanities.

The degree program in English requires 36 semester hours in English: **ENGL 2063; 3013 or 3023; 3313; 3323; 3413; 3423** and six English electives. The English major must also complete two semesters of study in one foreign language.

The degree program in creative writing requires 45 hours in English: **ENGL 2043; 2063**; a minimum of 3 hours in **2881; 3043; 3083; 3093; 3313; 3323; 3413; 3423; 4093; 4813** and four English electives.

Students who plan to use an English or creative writing degree as a preparation for law school are encouraged to complete some of the following electives in addition to their required courses: **BLAW 2033**, Legal Environment of Business; **PHIL 3103**, Logic; **CJ 4023**, Law and the Legal System; **POLS 4043**, American Constitutional Law; **CJ 4053**, Criminal Law and the Constitution; **SOC/CJ 2043**, Crime and Delinquency; **SPH 2003**, Public Speaking; **SPH 2111-2121**, Debate Practicum; **SPH 4153**, Persuasive Theory and Audience Analysis; **JOUR 4123**, Laws of Communication.

The curricula for teacher licensure in creative writing and English are printed in the catalog section for the [College of Education](#).

### Curriculum in English (BA Degree)

#### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore	
Fall	Spring	Fall	Spring
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>ENGL 2063</b>	3 <b>ENGL 3013 or 3023</b>
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 English Elective <sup>3</sup>
Beg. Foreign Lang I <sup>2,T</sup>	4 Beg. Foreign Lang II <sup>2,T</sup>	4 English Elective <sup>3</sup>	3 Elective <sup>4</sup>
Physical Activity <sup>1,T</sup>	2 Elective <sup>4,T</sup>	3 Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>ENGL 3313</b>	3 <b>ENGL 3323</b>	3 English Elective (3000-4000 level)	3 English Elective (3000-4000 level)
<b>ENGL 3413</b>	3 <b>ENGL 3423</b>	3 Elective <sup>4</sup>	12 Elective <sup>4</sup>
English Elective <sup>3</sup>	3 English Elective <sup>3</sup>	3	
Elective <sup>4,T</sup>	6 Elective <sup>4,T</sup>	6	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>

#### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore	
Spring	Fall	Spring	Fall
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>ENGL 2063</b>	3 <b>ENGL 3313</b>
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 ENGL 3013 or 3023	3 Social Sciences <sup>1,T</sup>
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 English Elective <sup>3</sup>
Elective <sup>4,T</sup>	3 Beg. Foreign Lang I <sup>2,T</sup>	4 Beg. Foreign Lang II <sup>2,T</sup>	4 Elective <sup>4,T</sup>
Physical Activity <sup>1,T</sup>	2 Elective <sup>4,T</sup>	3 Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
<b>ENGL 3323</b>	3 <b>ENGL 3413</b>	3 <b>ENGL 3423</b>	3 English Elective (3000-4000 level)
Social Sciences <sup>1,T</sup>	3 English Elective <sup>3</sup>	6 English Elective (3000-4000 level)	3 Elective <sup>4</sup>
English Elective <sup>3</sup>	3 Elective <sup>4</sup>	6 Elective <sup>4</sup>	9
Elective <sup>4,T</sup>	6		

**Curriculum in English (BA Degree)**

Total Hours	15 Total Hours	15 Total Hours	15 Total Hours	16
1See appropriate alternatives or substitutions in " <a href="#">General Education Requirements</a> ".				
2All minimum college hours (at least two semesters) should be in one language. Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.				
3Any 2-4000 level English courses excluding English 2003, 2013, 2173, 2881, and 4881-4.				
4At least 40 of the 124 hours required for graduation must be earned in 3000-4000 level courses.				
TDesignates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.				

**Minor English**

The English minor is an excellent complement to any major, allowing students to choose from a wide selection of courses in literature, advanced writing, and linguistics.

The minor in English requires 18 hours of English courses:

ENGL Electives (9 hours, excluding ENGL 1013, 1023, 1043, and 1053)  
ENGL Electives (9 hours of 3000 or 4000 level)

**Curriculum in Creative Writing (BFA Degree)****Degree Completion Plan Beginning in Fall Semester**

Freshman	Spring	Sophomore	Spring	
Fall	Fall	Fall	Fall	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ENGL 2043	3 English Elective <sup>2</sup>	6
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 Humanities <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1</sup>	1 ENGL 2063	3 ENGL 3043	3
Elective <sup>3,T</sup>	3 Elective <sup>3,T</sup>	3 Fine Arts <sup>1,T</sup>	3 Elective <sup>3,T</sup>	3
<b>Total Hours</b>	<b>13 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>18</b>
Junior	Spring	Senior	Spring	
Fall	Fall	Fall	Fall	
ENGL 3313	3 ENGL 3323	3 ENGL 4093	3 ENGL 4813	3
ENGL 3413	3 ENGL 3423	3 English Elective <sup>2</sup>	3 English Elective (3000-4000 level)	3
ENGL 3093	3 ENGL 3083	3 Elective <sup>3,T</sup>	9 Elective <sup>3</sup>	12
Elective <sup>3,T</sup>	6 Elective <sup>3</sup>	6		
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>18</b>

**Degree Completion Plan Beginning in Spring Semester**

Freshman	Spring	Sophomore	Spring	
Fall	Fall	Fall	Fall	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ENGL 2043	3 ENGL 3313	3
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 English Elective <sup>2</sup>	3
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1</sup>	1 ENGL 2063	3 Humanities <sup>1,T</sup>	3
Elective <sup>3,T</sup>	3 Elective <sup>3,T</sup>	6 Fine Arts <sup>1,T</sup>	3 ENGL 3043	3
			Elective <sup>3,T</sup>	3
<b>Total Hours</b>	<b>13 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>12</b>
Junior	Spring	Senior	Spring	
Fall	Fall	Fall	Fall	
ENGL 3323	3 ENGL 3413	3 ENGL 3423	3 English Elective (3000-4000 level)	3
ENGL 3083	3 ENGL 3093	3 ENGL 4093	3 Elective <sup>3</sup>	12
English Elective <sup>2</sup>	3 English Elective <sup>2</sup>	3 ENGL 4813	3	
Elective <sup>3,T</sup>	6 Elective <sup>3,T</sup>	6 Elective <sup>3</sup>	6	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Any 2-4000 level English courses excluding English 2003, 2013, 2173, 2881, and 4881-4.

<sup>3</sup>At least 40 of the 124 hours required for graduation must be earned in 3000-4000 level courses.

TDesignates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor Creative Writing**

The minor in creative writing provides students who cannot complete a full major with an opportunity to explore their interests in writing.

The minor in creative writing requires 18 hours of courses:

ENGL 2043 Introduction to Creative Workshop  
ENGL 3083 Fiction Workshop  
ENGL 3093 Poetry Workshop  
and 9 hours selected from the following:  
ENGL 2881, 4881-4 Nebo Practicum  
ENGL 2063 Advanced Composition  
ENGL 3043 Literary Editing and Publishing

**ENGL 4093** Seminar in Creative Writing  
ENGL Electives (any 3000 or 4000 level literature course)

**Minor  
Teaching English as  
a Second Language**

The minor in teaching English as a second language offers students an opportunity to add this useful specialization to their transcripts.

The minor in teaching English as a second language requires 18 hours of English and foreign language courses:

**ENGL 4023** Second Language Acquisition  
**ENGL 4703** Teaching English as a Second Language  
**ENGL 4713** ESL Assessment  
**ENGL 4723** Teaching People of Other Cultures  
and 6 hours selected from the following:  
**ENGL 3013** Systems of Grammar  
**ENGL, FR, GER, SPAN, SPH 3023** Linguistics  
**ENGL 4733** Teaching English in the Secondary School  
**FR, GER, SPAN 4703** Foreign Language Teaching Methods

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### Department of Foreign Languages and International Studies

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**Dr. Carl Brucker, Interim Head**  
Witherspoon, Room 142  
(479) 968-0256  
cbrucker@atu.edu

**Professors:**

Chandler, Ward,  
Zakharian

**Assistant Professors:**

Carballo, Ramírez

**Instructor:**

Joselin-Yucra

The mission of the Department of Foreign Languages and International Studies is to help students attain a state of intellectual freedom that enables them to grow personally, socially, and professionally. The department works to develop students' learning skills in foreign languages; to teach students to communicate effectively; to foster cultural understanding, tolerance and world perspective; and to prepare students to live in a global society.

The Department of Foreign Languages and International Studies offers programs of study leading to a baccalaureate degree in French, German, Spanish, International Studies, and Spanish Medical Interpretation. The programs are designed to prepare students to communicate effectively in another language, as well as live, study, or work in international settings. Study or work abroad opportunities, either as part of or after the four-year program, will be available to students. The programs are supported by the most up-to-date technology, available to students in the Foreign Languages Lab located in Dean Hall and Pendergraft Library. Departmental majors will be prepared to pursue graduate degrees and a variety of careers in business and industry, communication, education, foreign service, government, and public relations.

Tech offers a comprehensive foreign languages program. Students may choose a degree program in French, German, and Spanish; pursue studies in Chinese, Italian, Japanese, Latin, and Russian; or complete a minor in French, German, Japanese, Italian/Latin, Latin American/Latino studies with language proficiency, Latin American/Latino studies without language proficiency, and Spanish.

#### Foreign Languages

All foreign languages majors will be required to take the ACTFL Oral Proficiency Interview (OPI) prior to graduation and score at the Advanced Low level. The OPI fee is currently \$134. Each student is responsible for the cost of the exam.

All foreign languages education majors must have at least an Advanced Low oral proficiency rating on the ACTFL Oral Proficiency Interview (OPI) for admission to the internship. The OPI fee (\$134) is assessed with enrollment in **FR/GER/SPAN 4003**. Each student is responsible for the cost of the exam.

The degree program in Foreign Languages requires 38 hours in foreign languages. A student's credit by examination and course work must total 38 semester hours.

Foreign Languages majors may pursue teacher licensure in French, German, and Spanish. The curricula for teacher licensure in French, German, and Spanish are printed in the catalog section of the College of Education.

Students with previous foreign languages experience may petition the Department of Foreign Languages and International Studies for advanced placement and credit. Petitioners will be given written and/or oral examinations by a foreign language faculty member who will then recommend an appropriate foreign language placement level. This placement level will not exceed **FR 3013, GER 3013, JPN 2024, LAT 2013, or SPAN 3013**, and will be approved by the department head. Students who have omitted one or more courses in the basic language sequence will receive credit for omitted courses when they have validated their advanced placement by passing the course into which they are placed with a grade of "C" or better.

Students have the opportunity to attend universities abroad for a semester or an academic year (see the catalog entry under Student Exchange Opportunities).

Student advising is an important part of the programs. Departmental majors will work closely with their faculty advisors to assure successful academic progress.

#### Curriculum in Foreign Languages (BA Degree with Concentration in French, German, or Spanish)

Suggested Sequence of Courses

Freshman		Sophomore		
Fall	Spring	Fall	Spring	
<b>BIOL 1014<sup>1,T</sup></b>	4 ENGL 1023 <sup>1,T</sup>	3 ANTH 2003 <sup>T</sup>	3 PHSC 1013 & 1021 <sup>1,T</sup>	4
<b>ENGL 1013<sup>1,T</sup></b>	3 ART 2123 <sup>1,T</sup>	3 FR, GER, or SPAN 3003	3 ENGL 2003 or 2013 <sup>T</sup>	3
<b>FR, GER or SPAN 2014<sup>2,3,T</sup></b>	4 FR, GER, or SPAN 2024 <sup>2,3,T</sup>	4 FR, GER, or SPAN 3023	3 FR, GER, or SPAN 3013	3
<b>HIST 1503<sup>1,T</sup></b>	3 HIST 1513 <sup>1,T</sup>	3 Elective <sup>4</sup>	6 Elective <sup>4,T</sup>	6
<b>MATH 1113<sup>1,6,T</sup></b>	3 Physical Activity <sup>1,T</sup>	2		
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
FR, GER, or SPAN 3213	3 FR, GER 3113, SPAN 3123 or 3133	3 FR, GER, or SPAN 4213	3 FR, GER, SPAN 4223	3
Social Sciences <sup>T</sup>	3 FR, GER, or SPAN 3223	3 FR/GER/SPAN 3143 or 3163	3 Elective <sup>4</sup>	13
Elective <sup>4,T</sup>	9 Elective <sup>4</sup>	FR, GER, SPAN 4003 <sup>5</sup>	3	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16</b>

**Curriculum in Foreign Languages  
(BA Degree with Concentration in French, German, or Spanish)**

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.

<sup>3</sup>Lab attendance is required for the beginning and intermediate foreign language courses.

<sup>4</sup>At least 40 of the total hours required for graduation must be 3000-4000 level.

<sup>5</sup>All foreign language majors will be required to take the OPI.

<sup>6</sup>Must complete course with grade of C or better.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Spanish Medical Interpretation**

The BA Degree in Foreign Languages with a Concentration in Spanish Medical Interpretation is an interdisciplinary degree, drawing heavily from the Sciences, from Nursing and Spanish. Students who choose this degree will take a minimum of 12 hours of Science, 37 hours of Nursing, and 37 hours of Spanish and fulfill their general education requirements.

A degree in Spanish Medical Interpretation is designed to prepare students to work with clients in the medical field who speak Spanish and little or no English, and who need assistance in communicating with doctors and other healthcare providers. The nature of the translation requires that students are trained in health care and possess a native or near native fluency in Spanish.

Students admitted to this degree program must demonstrate at least a beginning proficiency in Spanish and are expected to demonstrate advanced proficiency in Spanish upon completion of the program. Students who are native speakers of Spanish must demonstrate proficiency in English for admission. Students may receive up to eleven (11) hours of Advanced Placement credit in Spanish.

It is recommended that students without computer skills enroll in **COMS 1003**. Prerequisites for **NUR 3204, 3606, 3703, 4206**, and **4606** will be waived for students majoring in Foreign Languages with Concentration in Spanish Medical Interpretation.

Students must comply with the following requirements:

1. Maintain at least a grade of B in all the Spanish language courses.
2. Maintain at least a 2.75 grade point average on a 4.00 scale in order to be admitted to upper division nursing courses.
3. Acquire professional student liability insurance and current certification of Basic CPR for adults, children, and infants as taught by the American Heart Association, the American Red Cross, or persons currently certified in CPR instruction. These must be renewed each year.
4. Produce evidence of immunity to chicken pox or vaccination.
5. Obtain Hepatitis B Vaccine series.

**Curriculum in Foreign Languages  
(BA Degree with Concentration in Spanish Medical Interpretation)**

Suggested Sequence of Courses

Freshman		Sophomore			
Fall	Spring	Fall	Spring		
ENGL 1013 <sup>1,4,T</sup>	3 ENGL 1023 <sup>1,4,T</sup>	3 NUR 2023 <sup>4,T</sup>	3 NUR 3803	3	
MATH 1113 <sup>4,T</sup>	3 BIOL 2014 <sup>4,T</sup>	4 BIOL 3074 <sup>4</sup>	4 NUR 3501 <sup>4</sup>	1	
CHEM 1114 <sup>4,T</sup>	4 SOC 1003 <sup>4,T</sup>	3 HIST 3323	3 PSY 2003 <sup>4,T</sup>	3	
SPAN 1063 <sup>2,T</sup>	3 ART 2123 <sup>1,T</sup>	3 SPAN 3003	3 Social Sciences <sup>1, T</sup>	3	
SPAN 2014 <sup>2,3,T</sup>	4 SPAN 2024 <sup>2,3,T</sup>	4 NUR 3102 <sup>4</sup>	2 SPAN 3013	3	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>13</b>	
<b>Junior</b>					
<b>Fall</b>		<b>Sophomore</b>			
Fall		Fall	Spring		
NUR 3204 <sup>4</sup>	4 NUR 3606 <sup>4</sup>	6 NUR 4206 <sup>4</sup>	6 NUR 4606 <sup>4</sup>	6	
SPAN 3133	3 NUR 3703 <sup>4</sup>	3 SPAN 4384 <sup>6</sup>	4 SPAN 4809	9	
HIST 4133	3 SPAN 3213	3 SPAN 4801	1		
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1 HIM 4073	3		
ENGL 2003 or 2013 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>	3 NUR 3302 <sup>4</sup>	2		
		SPAN Elective	1		
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>15</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.

<sup>3</sup>Lab attendance is required for the beginning and intermediate foreign language courses.

<sup>4</sup>Students must complete course with a grade of C or better.

<sup>5</sup>At least 40 of the total hours required for graduation must be 3000-4000 level.

<sup>6</sup>An oral proficiency level of Advanced Low, as demonstrated by a score on the ACTFL Oral Proficiency Interview, will be required of all Spanish Medical Interpretation majors. The OPI fee (\$134) is assessed with enrollment in **SPAN 4384**.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor  
French**

The minor in French is designed for foreign language majors who would like to study an additional language and for students who cannot complete a major in a foreign language, but for employment or other considerations, would like to obtain some basic foreign language competencies and be familiar with the culture of the target language. The minor in French requires 17 hours of courses (all course prerequisites must be met first):

FR 2014 Intermediate French I  
FR 2024 Intermediate French II  
FR 3003 Conversation and Composition I  
FR 3013 Conversation and Composition II  
FR 3113 Culture and Civilization

**Minor  
German**

The minor in German is designed for foreign language majors who would like to study an additional language and for students who cannot complete a major in a foreign language, but for employment or other considerations, would like to obtain some basic foreign language competencies and be familiar with the culture of the target language. The minor in German requires 17 hours of courses (all course prerequisites must be met first):

GER 2014 Intermediate German I  
GER 2024 Intermediate German II  
GER 3003 Conversation and Composition I  
GER 3013 Conversation and Composition II  
GER 3113 Culture and Civilization

**Minor  
Japanese**

The minor in Japanese is designed for foreign language majors who would like to study an additional language and for students who cannot complete a major in a foreign language, but for employment or other considerations, would like to obtain some basic foreign language competencies and be familiar with the culture of the target language. The minor in Japanese requires 17 hours of courses (all course prerequisites must be met first):

JPN 2014 Intermediate Japanese I  
JPN 2024 Intermediate Japanese II  
JPN 3003 Conversation and Composition I  
JPN 3013 Conversation and Composition II  
JPN 3113 Culture and Civilization

**Minor  
Italian/Latin**

The minor in Latin/Italian is designed for foreign language majors who would like to study an additional language and for students who cannot complete a major in a foreign language, but for employment or other considerations, would like to obtain some basic foreign language competencies and be familiar with the culture of the target language. The minor in Latin/Italian requires 17 hours of courses (all course prerequisites must be met first):

LAT 1013 Beginning Latin I  
LAT 1023 Beginning Latin II  
ITAL 2014 Intermediate Italian I  
ITAL 2024 Intermediate Italian II  
ITAL 3113 Culture and Civilization

**Minor  
Latin  
American/Latino  
Studies with  
language  
proficiency**

The minor in Latin American and Latino Studies with language proficiency is designed for students who wish to obtain a sufficient background about the Spanish speaking populations in Arkansas and the United States. This minor will be particularly valuable to students who are already bilingual and who plan to work with native Spanish speakers in the health fields, law enforcement, education, and the service sectors. The minor in Latin American and Latino Studies with language proficiency requires 18 hours of courses (all course prerequisites must be met first):

HIST 3313 Colonial Latin America  
HIST 3323 Modern Latin America  
HIST 4133 Latinos in the United States  
AND  
9 hours selected from the following:  
SPAN 3123 Spanish Civilization and Culture  
SPAN 3133 Spanish-American Civilization and Culture  
SPAN 3143 Contemporary Hispanic Culture Immersion Experiences  
SPAN 4213 Spanish Literature  
SPAN 4223 Spanish-American Literature  
SPAN 4803 Foreign Language Internship  
SPAN 4991-3 Special Problems in Spanish

**Minor  
Latin  
American/Latino  
Studies without  
language  
proficiency**

The minor in Latin American and Latino Studies without language proficiency is designed for students who wish to obtain a sufficient background about the Spanish speaking populations in Arkansas and the United States, but who do not wish to major in either history or Spanish. This minor will be particularly valuable to students who plan to work with native Spanish speakers in the health fields, law enforcement, education, and the service sectors. The minor in Latin American and Latino Studies without language proficiency requires 19 hours of courses (all course prerequisites must be met first):

ANTH 3233 MesoAmerican Archeology  
GEOG 3303 Geography of Latin America  
HIST 3313 Colonial Latin America  
HIST 3323 Modern Latin America  
HIST 4133 Latinos in the United States  
SPAN 1024 Beginning Spanish II

**Minor  
Spanish**

The minor in Spanish is designed for foreign language majors who would like to study an additional language and for students who cannot complete a major in a foreign language, but for employment or other considerations, would like to obtain some basic foreign language competencies and be familiar with the culture of the target language. The minor in Spanish requires 17 hours of courses (all course prerequisites must be met first):

**SPAN 2014** Intermediate Spanish I  
**SPAN 2024** Intermediate Spanish II  
**SPAN 3003** Conversation and Composition I  
**SPAN 3013** Conversation and Composition II or **SPAN 3113** Business Spanish  
**SPAN 3133** Spanish-American Civilization and Culture

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### Department of History and Political Science

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Dr. Jeff Woods, Interim Head  
Witherspoon Hall, Room 255  
(479) 968-0265  
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**Professors:**  
Busch, DeBlack, Duncan,  
Jenkins, Mitchell, Tarver  
**Associate Professors:**  
Dykema, Link, Moses,  
Roberts, Woods  
**Assistant Professors:**  
Gleason, Gooch,  
Housenick, Mirkovic,  
Rogers, Swain

The baccalaureate degree in history or political science is excellent preparation for careers in government and education, for further study in graduate school or law school, and for careers in the private sector of the economy. For personal and career flexibility, students majoring in history can design their degree requirements by selecting courses in World history, American history, or European history. Political science majors can select among courses in American politics and international relations. Students may also elect to work toward social studies secondary teaching licensure. In addition, the department offers minors in geography, history, philosophy, political science, and strategic studies.

The history degree requires thirty nine semester hours in courses in addition to the required General Education courses. In the General Education requirements, history majors are required to take the two-course sequence in World Civilization (**HIST 1503, 1513**), and introductory courses in political science and economics (**POLS 2003, ECON 2003**). The thirty nine semester hours required for the history degree include the two-course sequence in American history (**HIST 2003, HIST 2013**), Regional Geography of the World (**GEOG 2013**), three hours of a foreign language or speech, the introduction to anthropology or sociology (**ANTH 2003** or **SOC 1003**), Historical Methods (**HIST 2513**), Arkansas History (**HIST 4153**), and Senior Seminar (**HIST 4963**). Fifteen additional semester hours must be 3000-4000 level history courses with at least six hours in U.S. History and six hours in World/European History.

The political science degree requires thirty nine additional semester hours beyond the General Education requirements. In the General Education requirements, political science majors are required to take the two-course sequence in American history (**HIST 2003, HIST 2013**), one of the two World Civilization courses (**HIST 1503, HIST 1513**), and an introductory course in sociology, psychology or economics (**SOC 1003, PSY 2003, ECON 2003**). The thirty nine semester hours required for the political science degree include the introductory course (**POLS 2003**), Western Political Thought (**POLS 2253**), Research Methods I (**POLS 2513**), either American Political Behavior (**POLS 3123**) or Congress (**POLS 3113**), and either Comparative Government (**POLS 3403**) or International Relations (**POLS 3413**). Majors also choose one course from each from the four political science blocks: Research Methods, Political Theory, International Relations, and American Politics. Nine semester hours of electives, six of which must be 3000-4000 level and Senior Seminar (**POLS 4963**) complete the major requirements.

Students must complete 124 hours for graduation with a degree in history or political science.

For the curriculum in Social Studies for teacher licensure, see "Curriculum in Secondary Education".

#### History

#### Curriculum in History

##### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore		16
Fall	Spring	Fall	Spring	
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>HIST 2003<sup>T</sup></b>	3 <b>HIST 2013<sup>T</sup></b>	3
<b>HIST 1503<sup>T</sup></b>	3 <b>HIST 1513<sup>T</sup></b>	3 <b>ANTH 2003 or SOC 1003</b>	3 <b>HIST 2513</b>	3
Science ( <b>BIOL 1014</b> ) <sup>1,T</sup>	4 Science ( <b>PHSC 1013</b> ) <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 Physical Activity <sup>1,T</sup>	1
Mathematics <sup>1,T</sup>	3 Science ( <b>PHSC 1021</b> ) <sup>1,T</sup>	1 <b>ECON 2003</b>	3 Elective <sup>T</sup>	9
Fine Arts <sup>1,T</sup>	3 Elective <sup>T</sup>	3 <b>GEOG 2013</b>		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
HIST Elective (3000-4000 level) <sup>3</sup>	3 HIST Elective (3000-4000 level)	3 HIST Elective (3000-4000 level) <sup>3</sup>	3 <b>HIST 4963</b>	3
HIST Elective (3000-4000 level) <sup>4</sup>	3 Foreign Lang or SPH Elective	3-4 HIST Elective (3000-4000 level) <sup>4</sup>	3 <b>HIST 4153</b>	3
Elective <sup>2</sup>	8 Elective <sup>2</sup>	9-10 Elective <sup>2</sup>	9 Elective <sup>2</sup>	9
Physical Activity <sup>1,T</sup>	1			
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15 Total Hours</b>

##### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore		16
Spring	Fall	Spring	Fall	
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>HIST 2003<sup>T</sup></b>	3 <b>HIST 2013<sup>T</sup></b>	3
<b>HIST 1503<sup>T</sup></b>	3 <b>HIST 1513<sup>T</sup></b>	3 <b>ANTH 2003 or SOC 1003</b>	3 <b>HIST 2513</b>	3
Science ( <b>BIOL 1014</b> ) <sup>1,T</sup>	4 Science ( <b>PHSC 1013</b> ) <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 Physical Activity <sup>1,T</sup>	1
Mathematics <sup>1,T</sup>	3 Science ( <b>PHSC 1021</b> ) <sup>1,T</sup>	1 <b>ECON 2003</b>	3 Elective <sup>T</sup>	9
Fine Arts <sup>1,T</sup>	3 Elective <sup>T</sup>	3 <b>GEOG 2013</b>		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	

<b>Curriculum in History</b>					
HIST Elective (3000-4000 level) <sup>3</sup>	3	HIST Elective (3000-4000 level)	3	HIST Elective (3000-4000 level) <sup>3</sup>	3
HIST Elective (3000-4000 level) <sup>4</sup>	3	Foreign Lang or SPH Elective	3 -4	HIST Elective (3000-4000 level) <sup>4</sup>	3
Elective <sup>2</sup>	8	Elective <sup>2</sup>	9-10	Elective <sup>2</sup>	9
Physical Activity <sup>1,T</sup>	1			Elective <sup>2</sup>	9
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)"

<sup>2</sup>At least 40 of the total hours required for graduation must be 3000 - 4000 level courses.

<sup>3</sup>HIST class must be in the sub-field of United States History.

<sup>4</sup>HIST class must be in the sub-field of European or World History.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

<b>Curriculum in Political Science</b>					
<b>Degree Completion Plan Beginning in Fall Semester</b>					
Freshman		Sophomore		Spring	
Fall		Spring		Fall	
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	HIST 2013 <sup>T</sup>	3
HIST 1503 or 1513 <sup>T</sup>	3	HIST 2003	3	POLS 2253	3
SOC 1003, PSY 2003, or ECON 2003	3	POLS 2003	3	POLS 2513	3
Mathematics <sup>1,T</sup>	3	BIOL 1014 <sup>1</sup>	4	Elective <sup>2,T</sup>	3
Fine Arts <sup>1,T</sup>	3	Physical Activity <sup>1</sup>	2	PHSC 1013 <sup>1,T</sup>	3
				PHSC 1021 <sup>1,T</sup>	1
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>
Junior		Senior		Spring	
Fall		Fall		Spring	
Political Theory Block <sup>4</sup>	3	International Relations Block <sup>5</sup>	3	American Politics Block <sup>6</sup>	3
POLS 3403 or POLS 3413	3	POLS 3123 or POLS 3113	3	POLS Elective (3000-4000 level)	6
Elective <sup>2</sup>	10	Elective <sup>2</sup>	10	Elective <sup>2</sup>	7
<b>Total Hours</b>	<b>16 Total Hours</b>		<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>					
Freshman		Sophomore		Fall	
Spring		Spring		Spring	
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	HIST 2013 <sup>T</sup>	3
HIST 1503 or 1513 <sup>T</sup>	3	HIST 2003	3	POLS 2253 <sup>T</sup>	3
SOC 1003, PSY 2003, or ECON 2003	3	POLS 2003	3	POLS 2513	3
Mathematics <sup>1,T</sup>	3	BIOL 1014 <sup>1</sup>	4	Elective <sup>2,T</sup>	3
Fine Arts <sup>1,T</sup>	3	Physical Activity <sup>1</sup>	2	PHSC 1013 <sup>1,T</sup>	3
				PHSC 1021 <sup>1,T</sup>	1
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>
Junior		Senior		Fall	
Spring		Spring		Fall	
Political Theory Block <sup>4</sup>	3	International Relations Block <sup>5</sup>	3	American Politics Block <sup>6</sup>	3
POLS 3403 or POLS 3413	3	POLS 3123 or POLS 3113	3	POLS Elective (3000-4000 level)	6
Elective <sup>2</sup>	10	Elective <sup>2</sup>	10	Elective <sup>2</sup>	7
<b>Total Hours</b>	<b>16 Total Hours</b>		<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)"

<sup>2</sup>At least 40 of the total hours required for graduation must be 3000 - 4000 level courses.

<sup>3</sup>The Research Methods choices include: **POLS 3513**; or grade of C or better in any FL 2024 course; or appropriate methodology course approved by Department Head.

<sup>4</sup>The Political Theory choices include **POLS 3063**; or **POLS 3253**; or appropriate political theory or philosophy course approved by Department Head.

<sup>5</sup>The International Relations choices include **POLS 3013**; or **POLS 3433**; or **POLS 3473**; or appropriate international relations or comparative governments course approved by Department Head.

<sup>6</sup>The American Politics choices include **POLS 3023**; or **POLS 3033**; or **POLS 3053**; or **POLS 3083**; or **POLS 3093**; or **POLS 3113**; or **POLS 3123**; or **POLS 4043**; or appropriate American politics course approved by Department Head.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor  
Geography**

The minor in geography is designed to allow students who have successfully completed eighteen or more hours in Geography the opportunity to have his/her transcript noted with a statement certifying such accomplishment.

Students must have a minimum 2.00 grade point in their Geography courses to be eligible for a Geography minor.

Students wishing to obtain a minor in geography must complete:

**GEOG 2013** Regional Geography of the World  
**GEOG 2023** Human Geography  
GEOG Electives (12 hours with no more than 3 hours in **GEOG 4991-4**, Special Problems in Geography)

**Minor  
History**

The minor in history is designed for those students majoring in other disciplines who wish to increase the breadth and depth of their knowledge of the human past. This minor is particularly well suited for students who are interested in criminal justice, international studies, and foreign languages. The discipline of history satisfies our shared desire to know more about ourselves, and students can tailor the curriculum of the minor to meet their specific interests. Students must have a minimum of 2.00 grade point in History courses to be eligible for a History minor. The minor in history requires 18 hours of courses:

**HIST 1503** World Civilization I or **HIST 1513** World Civilization II  
**HIST 2003** U. S. History I or **HIST 2013** U. S. History II  
HIST Electives (12 hours of 3000 - 4000 level)

**Minor  
Military Science**

The minor in military science is awarded to students who complete the Reserve Officer's Training Corps (ROTC) Program at Arkansas Tech University. The objective of the program is to provide a basic military education and, in conjunction with the goals of the University, to develop individual attributes essential to an Army officer. Instruction covers military fundamentals common to all branches of the military service. Students must have a minimum of a 2.00 grade point average in the required 21 hours to be eligible for a Military Science minor. Students wishing to obtain a minor in Military Science must complete:

**MS 1101** Leadership I  
**MS 1111** Leadership II  
**MS 2312** Military Organization/Tactics I  
**MS 2402** Military Organization/Tactics II  
**MS 3503** Advanced Leadership and Tactics I  
**MS 3603** Advanced Leadership and Tactics II  
**MS 4703** Applied Leadership and Management I  
**MS 4803** Applied Leadership and Management II

and

**MS 4013** United States Military History or **HIST 4013** United States Military History

**Minor  
Philosophy**

The minor in philosophy is designed for those students who wish to broaden their study of the nature of knowledge. This minor is particularly well suited for students who wish to prepare for graduate work or law school. In addition to the academic benefits, the study of philosophy can make an important contribution to the well-lived life. Students can tailor the curriculum of the minor to meet their specific interests. Students must have a minimum 2.00 grade point in their Philosophy courses to be eligible for a Philosophy minor. The minor in philosophy requires 18 hours of courses:

**PHIL 3103** Logic

and 6 hours selected from the following:

**PHIL 2013** Religions of the World  
**PHIL 3023** Ethics  
**PHIL 3033** Esthetics  
**PHIL 3053** Philosophy of Religion  
**PHIL 3253** Classical Political Thought  
**PHIL 3063** Modern Political Thought  
**PHIL 4103** Advanced Logic

and 6 hours selected from the following:

**PHIL 3003** Ancient Philosophy  
**PHIL 3013** Modern Philosophy  
**PHIL 3113** Contemporary Philosophy  
**PHIL 3203** Medieval Philosophy  
**PHIL 4093** American Philosophy

and 3 hours in any additional Philosophy courses

**Minor  
Political Science**

The minor in political science is designed for anyone interested in politics, law, and government and is particularly well suited for students who are interested in criminal justice, international studies, journalism, business, and emergency management. Students can tailor the curriculum of the minor along either a national or international focus. Students must have a minimum 2.00 grade point in their Political Science courses to be eligible for a Political Science minor. The minor in political science requires 18 hours of courses:

**POLS 2253** Survey of Western Political Thought  
**POLS 3123** American Political Behavior or **POLS 3133** United States Congress or **POLS 3143** The United States Presidency  
**POLS 3413** International Relations or **POLS 3403** Comparative Government

**POLS 2513** Research Methods I  
6 hours in any 3000 or 4000 level Political Science courses

**Minor  
Religious Studies**

The minor in religious studies is designed to provide students with the opportunity to learn about religion in cross-cultural and historical perspectives. The required courses are designed to provide a comparative perspective on world religions and to develop an appreciation of both the origins and contemporary expressions of different religions. This minor is particularly well suited for students in the humanities and social sciences as well as students in other disciplines who want to deepen their understanding of the role of religion in contemporary life. Students must have a minimum of 2.00 grade point in the required 18 hours to be eligible for a Religious Studies minor:

**HIST 1503** World Civilization I  
**ANTH 2003** Cultural Anthropology  
**PHIL 2013** Religions of the World  
**PHIL 3053** Philosophy of Religion  
**SOC 4073** Sociology of Religion  
**HIST 4503** History of Christianity

**Minor  
Strategic Studies**

The minor in strategic studies is designed for those students who wish to increase the breadth and depth of their knowledge of the principles that have played a major role in shaping our understanding of foreign and security policy. This minor is particularly well suited for students who are interested in international studies, emergency management, political science, diplomatic history, military science, and international law. Students wishing to obtain a minor in Strategic Studies must complete:

**POLS 2153:** Introduction to Strategic Studies  
**POLS 3013:** Recent American Foreign and Military Policy  
**POLS 3413:** International Relations  
**POLS 3473:** National Security Policy

and any two of the following courses:  
**EAM 3243:** Introduction to Terrorism  
**EAM 3013:** Public Policy Issues in Emergency Management  
**ECON 4093:** International Economics and Finance  
**GEOG 4803:** Seminar in Global Studies  
**HIST 4083:** American Diplomatic History, 1912 to the Present  
**HIST 4013:** American Military History  
**HIST 4023:** Vietnam War  
**HIST 4813:** World War II

Students must have a minimum 2.00 grade point in the required 18 hours to be eligible for a Strategic Studies minor.

**Pre-Law  
Pre-Professional  
Program**

Pre-Law Advisors  
Witherspoon Room 255

Accredited law schools have not, in general, adopted specific requirements for pre-law courses. However, in most cases, courses of value to those planning the study of law include: history, economics, political science, philosophy, psychology, sociology, English composition, and literature, as well as courses in the natural sciences, mathematics, and accounting. A broad cultural background is of prime importance. Rather than attempt to prescribe the specific contents of courses to be taken by pre-law students, Arkansas Tech University considers the individual intellectual interests of students of prime importance, encouraging development of the ability to read and comprehend accurately, rapidly, and thoroughly; to think logically; to analyze and weigh situations and materials; to speak and write clearly; and to develop a critical approach and mature study habits.

The pre-professional curriculum is not a major in itself. Pre-law students must declare a major for graduation selected from any degree currently offered at Arkansas Tech University. Among general electives in the chosen major, or in excess of the 124 hours required for graduation, pre-law majors are urged to take the courses listed below to prepare them for the LSAT and law school. Many pre-law students choose to major in History and Political Science, and pre-law advisors are located in that department. Students should consult these listed pre-law advisors regardless of their chosen major, as these advisors specifically help students design a good pre-law curriculum. A pre-law library has been set up in Witherspoon 242 for student use.

**Suggested Curriculum in Pre-Law**

<b>POLS 2003</b> American Government	<b>POLS 4043</b> American Constitutional Law
<b>POLS/CJ 3023</b> Judicial Process	<b>CJ/SOC 2043</b> Crime and Delinquency
<b>CJ 4053</b> Criminal Law and the Constitution	<b>CJ 4023</b> Law and the Legal System
<b>BLAW 2033</b> Legal Environment of Business	<b>PHIL (POLS) 3063</b> Modern Political Thought
<b>PSY 2003</b> General Psychology	<b>JOUR 4123</b> Laws of Communication
<b>ENGL 3043</b> Advanced Composition	<b>PHIL 3103</b> Logic
<b>SPH 2003</b> Public Speaking	<b>PHIL 3023</b> Ethics
<b>SPH 2111-2121</b> Debate Practicum	<b>SPH 4153</b> Persuasive Theory and Audience Analysis
<b>HIST 4043</b> American Constitutional Development	

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### Department of Music

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Dr. Cynthia L. Hukill,  
Head  
Witherspoon Hall  
Room 107  
(479) 968-0368  
chukill@atu.edu

The mission of the Arkansas Tech University Music Department is to fully exercise its tradition of educational and cultural regional leadership to enhance the quality of life through the art form of music, providing undergraduate educational, artistic, and career opportunities for individuals and the greater society.

The music department has an established reputation for the superior quality of the music teacher preparation program and for high standards in musical performance. Arkansas Tech University is an accredited institutional member of the National Association of Schools of Music.

**Professor:**  
Barrow

**Associate Professors:**  
Barber, Cooper,  
K.L. Futterer,  
K.T. Futterer,  
Hukill, Kiehl,  
Parker, T. Smith

**Assistant Professors:**  
Clements, Gale, Howe  
**Instructor:**  
G. Morris

The goals of the music department are:

1. To provide excellence in music instruction;
2. To provide music instruction for students desiring to pursue music-related studies as a major, as preparation for graduate music studies, and as preparation for a career in music;
3. To provide music curricula leading to the Baccalaureate of Arts with a major in music;
4. To provide the necessary and desirable professional preparation for the training of accredited music teachers for public schools (Baccalaureate in Music Education);
5. To provide opportunities for meaningful professional growth through direct involvement in musical performance;
6. To provide educational and artistic service to students, the institution, the community, and the region;
7. To encourage creative work and research; and
8. To dedicate policies and resources for effectiveness in departmental programs.

An audition, demonstrating acceptable musical preparation, is required prior to enrollment as a major in music.

To meet the requirements for the baccalaureate degree in music, the student must complete 124 semester hours, including 8 hours of applied music and successful completion of the Sophomore Barrier and Keyboard Proficiency Exams, 4 hours in required ensembles (band or choir), 16 hours in music theory and ear training; and 8 hours of music history.

In order to meet the requirements for the baccalaureate degree in music education, students must complete 134-138 semester hours as indicated in the appropriate music education curriculum. Instrumental and keyboard music education majors must complete one semester of class voice. A senior recital is required.

All music majors must demonstrate acceptable piano proficiency or enroll in class or applied piano each semester until successful completion of the appropriate Piano Proficiency Exit Exam. The fee for class piano is \$10 per semester. All music majors are required to attend a prescribed number of campus concerts and recitals. Successful completion of 6 semesters of recital attendance is required.

Private instruction in the student's major performance area is required of all music majors. Such study involves one one-hour lesson and 12 hours of practice per week and carries two semester hours of credit. Students may elect enrollment as a non-major, subject to faculty availability. Such study involves one thirty-minute lesson, 6 hours of practice per week, and assigned ensemble participation. A fee of \$40 per semester credit hour is assessed for all applied music study.

#### Curriculum in Music Suggested Sequence of Courses

Freshman		Sophomore	
Fall	Spring	Fall	Spring
<b>MUS 1000</b>	0	<b>MUS 1000</b>	0
<b>MUS 1713<sup>T</sup></b>	3	<b>MUS 1723</b>	3
<b>MUS 1731<sup>T</sup></b>	1	<b>MUS 1741<sup>T</sup></b>	1
<b>MUS 1_2<sup>5,7,11,T</sup></b>	2	<b>MUS 1_2<sup>5,7,11,T</sup></b>	2
<b>MUS 1441 or 1201<sup>2,T</sup></b>	1	<b>MUS 1441 or 1201<sup>2,T</sup></b>	1
<b>MUS 1501, 1571 or 1681<sup>3,T</sup></b>	1	<b>MUS 1501, 1571 or 1681<sup>3,T</sup></b>	1
<b>Mathematics<sup>1,T</sup></b>	3	<b>Social Sciences<sup>1,T</sup></b>	3
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3
<b>Physical Activity<sup>1,T</sup></b>	1	<b>Physical Activity<sup>1,T</sup></b>	1
		Keyboard Proficiency Exam <sup>4</sup>	0
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
<b>MUS 3000</b>	0	<b>MUS 3692</b>	2
<b>MUS 3773</b>	3	<b>MUS 3783</b>	14
Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	Elective <sup>9,10</sup>
Social Sciences <sup>1,T</sup>	3	Fine Arts <sup>1,8,T</sup>	3
Elective <sup>9,10</sup>	7	Elective <sup>9,10</sup>	7

**Curriculum in Music**

Total Hours	16 Total Hours	16 Total Hours	16 Total Hours	16
<sup>1</sup> See appropriate alternatives or substitutions in " <a href="#">General Education Requirements</a> ".				
<sup>2</sup> Piano ( <a href="#">MUS 1441</a> or <a href="#">MUS 1021</a> ) to be taken each semester until completion of Piano Exit Exam. Students completing the exam upon entrance may substitute music elective hours for the requirement.				
<sup>3</sup> Enrollment in <a href="#">MUS 1501</a> , <a href="#">1571</a> or <a href="#">1681</a> to be selected by advisor. Only one credit per semester may be used for completion of major ensemble requirement.				
<sup>4</sup> Successful completion required for graduation.				
<sup>5</sup> Vocal majors are encouraged to enroll in Vocal Diction ( <a href="#">MUS 1241</a> , <a href="#">2241</a> , <a href="#">2252</a> ) for elective credit.				
<sup>6</sup> Successful completion required for enrollment in upper-level applied study for two hour credit and for completion of all music degrees.				
<sup>7</sup> Concurrent enrollment is required for applied study in appropriate <a href="#">MUS 1501</a> , <a href="#">1571</a> or <a href="#">1681</a> .				
<sup>8</sup> <a href="#">MUS 2003</a> may not be used for fulfillment of Fine Arts requirement.				
<sup>9</sup> Elective courses to obtain a minimum of sixty-six non-music hours (21-23 in addition to General Education and Foreign Language hours).				
<sup>10</sup> Elective courses to obtain a minimum of forty 3000/4000 level hours (32 in addition to music history hours).				
<sup>11</sup> See course descriptions for the appropriate applied music course number.				
<sup>T</sup> Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.				

**Curriculum in Music Education For Teacher Licensure<sup>8</sup>  
(Instrumental Music Option)****Suggested Sequence of Courses**

Freshman	Spring	Sophomore	Spring	
<b>Fall</b>		<b>Fall</b>		
<a href="#">MUS 1000</a>	0			
MUS 1_2 <sup>9,T</sup>	2 MUS 1_2 <sup>9,T</sup>	2 MUS 1_2 <sup>9</sup>	2 MUS 1_2 <sup>9,T</sup>	2
<a href="#">MUS 1441 or 1201<sup>2,T</sup></a>	1			
<a href="#">MUS 1501<sup>T</sup></a>	1 <a href="#">MUS 1501<sup>T</sup></a>	1 <a href="#">MUS 1501<sup>T</sup></a>	1 Piano Exit Exam	0
<a href="#">MUS 1713<sup>T</sup></a>	3 <a href="#">MUS 1723</a>	3 <a href="#">MUS 2713</a>	3 <a href="#">MUS 1501<sup>T</sup></a>	1
<a href="#">MUS 1731<sup>T</sup></a>	1 <a href="#">MUS 1741</a>	1 <a href="#">MUS 2731</a>	1 <a href="#">MUS 2723</a>	3
<a href="#">MUS 2441<sup>T</sup></a>	1 ENGL 1023 <sup>1,T</sup>	3 <a href="#">MUS 3401</a>	1 <a href="#">MUS 2741</a>	1
<a href="#">ENGL 1013<sup>1,T</sup></a>	3 Science with Lab <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3 <a href="#">MUS 3481</a>	1
Mathematics <sup>1,T</sup>	3	SPH 2003 or 3083 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1
		Physical Activity <sup>1,T</sup>	1 Science with Lab <sup>1,T</sup>	4
			<a href="#">SEED 2002<sup>T</sup></a>	2
			Sophomore Barrier Jury <sup>3</sup>	0
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
<a href="#">MUS 3000</a>	0 <a href="#">MUS 3000</a>	0 MUS 3_2 <sup>9</sup>	2 <a href="#">SEED 4556<sup>5</sup></a>	6
MUS 3_2 <sup>9</sup>	2 MUS 3_2 <sup>9</sup>	2 <a href="#">MUS 3501</a>	1 <a href="#">MUS 4281</a>	1
<a href="#">MUS 3501</a>	1 <a href="#">MUS 3501</a>	1 <a href="#">MUS 3692</a>	2 <a href="#">MUS 4701</a>	1
<a href="#">MUS 3773</a>	3 <a href="#">MUS 3783</a>	3 <a href="#">MUS 3853<sup>4</sup></a>	3 <a href="#">MUS 4001</a>	1
<a href="#">MUS 3802</a>	2 <a href="#">MUS 3762</a>	2 <a href="#">SEED 3552<sup>5</sup></a>	2 Social Sciences <sup>1,T</sup>	3
<a href="#">MUS 3421</a>	1 <a href="#">MUS 3281</a>	1 <a href="#">SEED 4052<sup>5</sup></a>	2 Fine Arts <sup>1,6,T</sup>	3
<a href="#">MUS 4712</a>	2 <a href="#">MUS 3431</a>	1 Humanities <sup>1,T</sup>	3	
<a href="#">MUS 4461</a>	1 <a href="#">MUS 3702</a>	2		
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3		
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>
<b>Senior 9th Semester</b>				
<b>Fall</b>				
<a href="#">SEED 4503</a>	3			
<a href="#">SEED 4809<sup>7,8</sup></a>	9			
<b>Total Hours</b>	<b>12</b>			

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Piano ([MUS 1441](#) or [MUS 1201](#)) to be taken each semester until successful completion of Piano Exit Exam.<sup>3</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion for all music degrees<sup>4</sup>Prerequisite: successful completion of Piano Exit Exam.<sup>5</sup>Prerequisite: admission to Stage II.<sup>6</sup>[MUS 2003](#) may not be used to fulfill Fine Arts requirement.<sup>7</sup>See admission policy and procedure.<sup>8</sup>For licensure, students must pass the Praxis II music specialty and Principles of Learning and Teaching exam.<sup>9</sup>See course descriptions for the appropriate applied music course number.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Curriculum in Music Education for Teacher Licensure<sup>8</sup>  
(Vocal Music Option)****Suggested Sequence of Courses**

**Curriculum in Music Education for Teacher Licensure<sup>8</sup>**  
**(Vocal Music Option)**

<b>Freshman</b>		<b>Sophomore</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
MUS 1000	0 MUS 1000	0 MUS 1000	0 MUS 1000		0
MUS 1232 <sup>T</sup>	2 MUS 1232 <sup>T</sup>	2 MUS 1232 <sup>T</sup>	2 MUS 1232 <sup>T</sup>		2
MUS 1441 or 1201 <sup>2,T</sup>	1 MUS 1441 or 1201 <sup>2,T</sup>	1 MUS 1441 or 1201 <sup>2,T</sup>	1 MUS 1441 or 1201 <sup>2,T</sup>		1
MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1571, 1581 or 1681 <sup>T</sup>	1 Piano Exit Exam		0
MUS 1713 <sup>T</sup>	3 MUS 1723 <sup>T</sup>	3 MUS 2241	1 MUS 1571, 1581 or 1681 <sup>T</sup>		1
MUS 1731 <sup>T</sup>	1 MUS 1741	1 MUS 2713	3 MUS 2251		1
ENGL 1013 <sup>1,T</sup>	3 MUS 1241	1 MUS 2731	1 MUS 2723		3
Mathematics <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 MUS 2741		1
Physical Activity <sup>1,T</sup>	1 Social Sciences <sup>1,T</sup>	3 Physical Activity <sup>1,T</sup>	1 Science with Lab <sup>1,T</sup>		4
			SEED 2002		2
			Sophomore. Barrier Jury <sup>3</sup>		0
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>14 Total Hours</b>		<b>15</b>
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
MUS 3000	0 MUS 3000	0 MUS 3232	2 MUS 4001		1
MUS 3232	2 MUS 3232	2 MUS 3571, 3581 or 3681	1 MUS 4701		1
MUS 3571, 3581 or 3681	1 MUS 3571, 3581 or 3681	1 MUS 3692	2 MUS 4832		2
MUS 3773	3 MUS 3783	3 MUS 3853 <sup>4</sup>	3 SEED 4556 <sup>5</sup>		6
MUS 4712	2 MUS 3762	2 MUS 3441	1 Social Sciences <sup>1,T</sup>		3
MUS 3802	2 MUS 4821	1 SEED 3552 <sup>5</sup>	2 Fine Art <sup>1,6,T</sup>		3
MUS 3821	1 Social Sciences <sup>1,T</sup>	6 SEED 4052 <sup>5</sup>			
MUS 3702	2	Humanities <sup>1</sup>			
SPH 2003 or 3083 <sup>T</sup>	3				
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>		<b>16</b>
<b>Senior 9th Semester</b>					
<b>Fall</b>					
SEED 4503	3				
SEED 4809 <sup>7,8</sup>	9				
<b>Total Hours</b>	<b>12</b>				

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)"

<sup>2</sup>Piano (MUS 1441 or MUS 1201) to be taken each semester until successful completion of Piano Exit Exam.

<sup>3</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion for all music degrees.

<sup>4</sup>Prerequisite: successful completion of Piano Exit Exam.

<sup>5</sup>Prerequisite: admission Stage II.

<sup>6</sup>MUS 2003 may not be used to fulfill Fine Arts requirement.

<sup>7</sup>See admission policy and procedure.

<sup>8</sup>For licensure, students must pass the Praxis II specialty and Principles of Learning and Teaching exam.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Curriculum in Music Education For Teacher Licensure<sup>6</sup>**  
**(Keyboard Vocal Music Option)**

<b>Freshman</b>		<b>Sophomore</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
MUS 1000	0 MUS 1000	0 MUS 1000	0 MUS 1000		0
MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>		2
MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1231 <sup>T</sup>	1 MUS 1231		1
MUS 1713 <sup>T</sup>	3 MUS 1723	3 MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1571, 1581 or 1681 <sup>T</sup>		1
MUS 1731 <sup>T</sup>	1 MUS 1741	1 MUS 2713	3 MUS 2201		1
MUS 2441 <sup>T</sup>	1 MUS 1231	1 MUS 2731	1 MUS 2723		3
ENGL 1013 <sup>1,T</sup>	3 MUS 2201	1 Science with Lab <sup>1,T</sup>	4 MUS 2741		1
Mathematics <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 SPH 2003 or 3083 <sup>T</sup>		3
Physical Activity <sup>1,T</sup>	1 Science with Lab <sup>1,T</sup>	4 Physical Activity <sup>1,T</sup>	1 SEED 2002 <sup>T</sup>		2
			Sophomore Barrier Jury <sup>2</sup>		0
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>		<b>14</b>
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
MUS 3000	0 MUS 3000	0 MUS 3202	2 MUS 4001		1
MUS 3202	2 MUS 3202	2 MUS 3571, 3581 or 3681	1 MUS 3762		2
MUS 3571, 3581 or 3681	1 MUS 3571, 3581 or 3681	1 MUS 3692	2 MUS 3442		2
MUS 1231	1 MUS 3783	3 MUS 3853	3 SEED 4556 <sup>5</sup>		6
MUS 3773	3 MUS 3702	2 MUS 3441	1 Social Sciences <sup>1,T</sup>		3
MUS 4712	2 MUS 4821	1 SEED 3552 <sup>5</sup>	2 MUS 4701		1

**Curriculum in Music Education For Teacher Licensure<sup>6</sup>  
(Keyboard Vocal Music Option)**

**Suggested Sequence of Courses**

<b>MUS 3802</b>	2	Social Sciences <sup>1,T</sup>	3	<b>SEED 4052<sup>5</sup></b>	2
<b>MUS 3821</b>	1	Fine Arts <sup>1,4,T</sup>	3	Humanities <sup>1,T</sup>	3
Social Sciences <sup>1,T</sup>	3				
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>		<b>16 Total Hours</b>
<b>Senior 9th Semester</b>					
<b>Fall</b>					
SEED 4503	3				
SEED 4809 <sup>5,6</sup>	9				
<b>Total Hours</b>	<b>12</b>				

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion for all music degrees.

<sup>3</sup>Prerequisite: admission to Stage II.

<sup>4</sup>**MUS 2003** may not be used to fulfill Fine Arts requirement.

<sup>5</sup>See admission policy and procedure.

<sup>6</sup>For licensure, students must pass the Praxis II specialty and Principles of Learning and Teaching exam.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Curriculum in Music Education for Teacher Licensure<sup>6</sup>  
(Keyboard Instrumental Music Option)**

**Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
<b>MUS 1000</b>	0	<b>MUS 1000</b>	0	<b>MUS 1000</b>	0
<b>MUS 1202<sup>T</sup></b>	2	<b>MUS 1202<sup>T</sup></b>	2	<b>MUS 1202<sup>T</sup></b>	2
<b>MUS 1501<sup>T</sup></b>	1	<b>MUS 1501<sup>T</sup></b>	1	<b>MUS 1501<sup>T</sup></b>	1
<b>MUS 1713<sup>T</sup></b>	3	<b>MUS 1723<sup>T</sup></b>	3	<b>MUS 2713</b>	3
<b>MUS 1731<sup>T</sup></b>	1	<b>MUS 1741<sup>T</sup></b>	1	<b>MUS 2731</b>	1
<b>MUS 2441<sup>T</sup></b>	1	<b>MUS 2201<sup>T</sup></b>	1	<b>MUS 3401</b>	1
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	Science with Lab <sup>1,T</sup>	4
Mathematics <sup>1,T</sup>	3	Science with Lab <sup>1,T</sup>	4	Social Sciences <sup>1,T</sup>	3
Physical Activity <sup>1</sup>	1				
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>		<b>15 Total Hours</b>
<b>Junior</b>			<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
<b>MUS 3000</b>	0	<b>MUS 3000</b>	0	<b>MUS 3202</b>	2
<b>MUS 3202</b>	2	<b>MUS 3202</b>	2	<b>MUS 3501</b>	1
<b>MUS 3501</b>	1	<b>MUS 3501</b>	1	<b>MUS 3692</b>	2
<b>MUS 3773</b>	3	<b>MUS 3783</b>	3	<b>MUS 3853</b>	3
<b>MUS 3421</b>	1	<b>MUS 3431</b>	1	<b>SEED 3552<sup>5</sup></b>	4
<b>MUS 4712</b>	2	<b>MUS 3281</b>	1	<b>SEED 4052</b>	2
<b>MUS 3802</b>	2	<b>MUS 4461</b>	1	<b>Humanities<sup>1,T</sup></b>	3
<b>MUS 3702</b>	2	Fine Arts <sup>1,4,T</sup>	3		
Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3		
<b>Total Hours</b>	<b>16 Total Hours</b>		<b>15 Total Hours</b>		<b>15 Total Hours</b>
<b>Senior 9th Semester</b>					
<b>Fall</b>					
SEED 4503	3				
SEED 4809 <sup>5,6</sup>	9				
<b>Total Hours</b>	<b>12</b>				

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion of all music degrees.

<sup>3</sup>Prerequisite: admission to Stage II.

<sup>4</sup>**MUS 2003** may not be used to fulfill Fine Arts requirement.

<sup>5</sup>See admission policy and procedure.

<sup>6</sup>For licensure, students must pass the Praxis II specialty and Principles of Learning and Teaching exam.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.



## COURSE CATALOGS

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### Department of Speech, Theatre and Journalism

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Dr. Donna R. Vocate,  
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**Professors:**

A. Morris, Vocate

**Associate Professors:**

Norton, Vaughn

**Assistant Professors:**

Adkins, Brugh, Caton,  
Eshelman, Hudkins,

S. Lee, Mumert, Nyandwi

**Instructor:**

Donnell

The Speech, Theatre, and Journalism Department offers majors in speech (speech communication and theatre options) and in journalism. In addition, the department offers minors in journalism, speech, and theatre. Students are involved in both the theoretical and applied dimensions of human communication in these programs. Consequently, students interested in further study and those interested in immediate career opportunities are served. With faculty guidance on the proper selection of courses, students can prepare for: (1) graduate school, (2) public school teaching, (3) recreational or professional theatre, (4) print or broadcast journalism, (5) public relations, or (6) business or government employment requiring communication expertise.

Being able to speak effectively has been recognized as an indicator of the well-educated person throughout recorded history. The ancient Greeks studied the theory and practice of communication under the label of "rhetoric," which also has taken a central role in American education since Harvard was founded in 1636. Even in today's technologically sophisticated world, good human communication skills are vitally important for one's personal and professional life. The study of communication in its original form, speech, or its evolved stages of print and electronic communication can prepare the student for citizenship in a democratic society, for more satisfying relationships, and for occupational success.

#### **Journalism**

The journalism major requires 31-32 semester hours in Journalism: 9 hours of core requirements, 12-13 hours in one of three options (print, broadcast, or public relations), 6 hours of electives, and 4 hours of practicum. 18 hours of the 31-32 hours major must be upper division hours. Students may take a total of eight hours of practicum coursework; however, only four will count toward the major. The 12 hours in any option must include the pertinent writing course. Recommended courses for each option are listed, with substitutions possible with the approval of the student's advisor and department head. Moreover, Journalism requires two semesters (6 to 8 hours) of one foreign language; and all majors must know how to type on a computer keyboard.

**Core Requirements**

JOUR 2133 Introduction to Mass Communication

JOUR 2143 News Writing

JOUR 4883 Mass Communication Theory

**Print Option:**

JOUR 3114 News Editing

JOUR 3143 News Reporting (required for concentration)

JOUR 3153 Feature Writing

JOUR 4143 Advanced Reporting

**Broadcast Option:**

JOUR 2153 Introduction to Telecommunication

JOUR 3183 Broadcast News Writing (required for concentration)

JOUR 3193 TV Production

Either JOUR 4143 Advanced Reporting or

JOUR 4163 Advanced Photography and Video

**Public Relations Option:**

JOUR 3173 Public Relations Principles

JOUR 3273 Public Relations Writing (required for concentration)

JOUR 4073 Graphic Communication

JOUR 4173 Public Relations Project

#### Curriculum in Journalism (Broadcast Option)

##### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore	
Fall	Spring	Fall	Spring
JOUR 2133	3 MATH 1003 <sup>1,T</sup>	3 Physical Science <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Foreign Language <sup>4,T</sup>	4 Foreign Language <sup>4,T</sup>
HIST 1503 <sup>1,T</sup>	3 HIST 1513 <sup>1,T</sup>	3 JOUR 2143	3 Broadcast Option Course <sup>3</sup>
BIOL 1014 <sup>1,T</sup>	4 Physical Activity <sup>1,T</sup>	1 Broadcast Practicum <sup>5</sup>	1 Broadcast Practicum <sup>5</sup>
Physical Activity <sup>1,T</sup>	1 Elective <sup>2,5,T</sup>	6 Social Sciences <sup>1,T</sup>	3 Fine Arts <sup>1</sup>
			Elective <sup>2,T</sup> (3000-4000 level)
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>			
Fall	Spring	Fall	Spring
Humanities <sup>1</sup>	3 Elective <sup>2,5</sup>	3 Broadcast Option Course <sup>3</sup>	3 JOUR 4883
JOUR 3183	3 Broadcast Option Course <sup>3</sup>	3 JOUR Elective <sup>5</sup>	3 JOUR Elective (3000-4000 level)

**Curriculum in Journalism (Broadcast Option)**

Broadcast Practicum <sup>5</sup>	1 Broadcast Practicum <sup>5</sup>	1 Elective <sup>2</sup> (3000-4000 level)	8 Elective <sup>2</sup> (3000-4000 level)	11
Elective <sup>2,5</sup>	9 Elective <sup>2,5</sup>	9		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>	<b>17</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>				
<b>Freshman</b>		<b>Sophomore</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
JOUR 2133	3 MATH 1003 <sup>1,T</sup>	3 Physical Science <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Foreign Language <sup>4,T</sup>	4 Foreign Language <sup>4,T</sup>	4
HIST 1503 <sup>1,T</sup>	3 HIST 1513 <sup>1,T</sup>	3 JOUR 2143	3 Broadcast Option Course <sup>3</sup>	3
BIOL 1014 <sup>1,T</sup>	4 Physical Activity <sup>1,T</sup>	1 Broadcast Practicum <sup>5</sup>	1 Broadcast Practicum <sup>5</sup>	1
Physical Activity <sup>1,T</sup>	1 Elective <sup>2,5,T</sup>	6 Social Sciences <sup>1,T</sup>	3 Fine Arts <sup>1</sup>	3
			Elective <sup>2,T</sup> (3000-4000 level)	3
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>17</b>
<b>Junior</b>		<b>Senior</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
Humanities <sup>1</sup>	3 Elective <sup>2,5</sup>	3 JOUR 4883	3 Broadcast Option Course <sup>3</sup>	3
Broadcast Option Course <sup>3</sup>	3 JOUR 3183	3 JOUR Elective <sup>5</sup>	3 JOUR Elective (3000-4000 level)	3
Broadcast Practicum <sup>5</sup>	1 Broadcast Practicum <sup>5</sup>	1 Elective <sup>2</sup> (3000-4000 level)	8 Elective <sup>2</sup> (3000-4000 level)	11
Elective <sup>2,5</sup>	9 Elective <sup>2,5</sup>	9		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>	<b>17</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements"<sup>2</sup>Recommended electives include SPH 2003, 2013, 3003, 3063, 3073; SOC 1003; PSY 2003; ECON 2003; POLS 2003, 3033.<sup>3</sup>Broadcast option courses include JOUR 2133, 3193, 4143, or 4163.<sup>4</sup>Must be same language.<sup>5</sup>At least 40 of the total hours required for graduation must be 3000-4000 level courses.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Curriculum in Journalism (Print Option)****Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
JOUR 2133	3 MATH 1003 <sup>1,T</sup>	3 Physical Science <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Foreign Language <sup>4,T</sup>	4 Foreign Language <sup>4,T</sup>	4
HIST 1503 <sup>1,T</sup>	3 HIST 1513 <sup>1,T</sup>	3 JOUR 2143	3 Print Option Course <sup>3</sup>	3
BIOL 1014 <sup>1,T</sup>	4 Physical Activity <sup>1,T</sup>	1 Journalism Practicum <sup>5</sup>	1 Journalism Practicum <sup>5</sup>	1
Physical Activity <sup>1,T</sup>	1 Elective <sup>2,T</sup>	6 Social Sciences <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3
			Elective <sup>2,T</sup> (3000-4000 level)	3
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>17</b>
<b>Junior</b>		<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
Humanities <sup>1</sup>	3 Elective <sup>2,5</sup>	1 Print Option Course	3 JOUR 4883	3
JOUR 3143	3 Print Option Course <sup>3</sup>	4 JOUR Elective <sup>5</sup>	3 JOUR Elective (3000-4000 level)	3
Journalism Practicum <sup>5</sup>	1 Journalism Practicum <sup>5</sup>	1 Elective <sup>2</sup> (3000-4000 level)	8 Elective <sup>2</sup> (3000-4000 level)	11
Elective <sup>2,5</sup>	9 Elective <sup>2,5</sup>	9		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>14 Total Hours</b>	<b>17</b>

**Degree Completion Plan Beginning in Spring Semester**

<b>Freshman</b>		<b>Sophomore</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
JOUR 2133	3 MATH 1003 <sup>1,T</sup>	3 Physical Science <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Foreign Language <sup>4,T</sup>	4 Foreign Language <sup>4,T</sup>	4
HIST 1503 <sup>1,T</sup>	3 HIST 1513 <sup>1,T</sup>	3 JOUR 2143	3 JOUR 3143	3
BIOL 1014 <sup>1,T</sup>	4 Physical Activity <sup>1,T</sup>	1 Journalism Practicum <sup>5</sup>	1 Journalism Practicum <sup>5</sup>	1
Physical Activity <sup>1,T</sup>	1 Elective <sup>2,5,T</sup>	6 Social Sciences <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3
			Elective <sup>2,T</sup> (3000-4000 level)	3
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>17</b>
<b>Junior</b>		<b>Senior</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
Humanities <sup>1</sup>	3 Elective <sup>2,5</sup>	1 JOUR 4883	3 Print Option Course <sup>3</sup>	3
Print Option Course <sup>3</sup>	3 Print Option Course <sup>3</sup>	4 JOUR Elective <sup>5</sup>	3 JOUR Elective (3000-4000 level)	3
Journalism Practicum <sup>5</sup>	1 Journalism Practicum <sup>5</sup>	1 Elective <sup>2</sup> (3000-4000 level)	11 Elective <sup>2</sup> (3000-4000 level)	8
Elective <sup>2,5</sup>	9 Elective <sup>2</sup>	9		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>14</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements"<sup>2</sup>Recommended electives include SOC 1003; PSY 2003; ECON 2003; POLS 2003, 3033; SPH 2003, 3003.<sup>3</sup>Print option courses include JOUR 3114, 3153, 4143.<sup>4</sup>Must be same language.

**Curriculum in Journalism (Print Option)**<sup>5</sup>At least 40 of the total hours required for graduation must be 3000-4000 level courses.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Curriculum in Journalism (Public Relations Option)****Suggested Sequence of Courses**

Freshman	Spring	Sophomore	Spring
Fall	Fall	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
HIST 1503 <sup>1,T</sup>	3 HIST 1513 <sup>1,T</sup>	3 Physical Science <sup>1,T</sup>	4 Foreign Language <sup>4,T</sup>
BIOL 1014 <sup>1,T</sup>	4 MATH 1003 <sup>1,T</sup>	3 Foreign Language <sup>4,T</sup>	4 JOUR Elective <sup>T</sup>
JOUR 2133	3 Physical Activity <sup>1,T</sup>	1 JOUR 2143	3 Fine Arts <sup>1,T</sup>
Physical Activity <sup>1,T</sup>	1 Elective <sup>2,T</sup>	6 Journalism Practicum	1 Elective <sup>T</sup>
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
Humanities <sup>1</sup>	3 Elective <sup>3</sup>	10 JOUR 4073	3 JOUR 4173
JOUR 3173	3 JOUR 3273	3 Elective (3000-4000 level)	12 JOUR 4883
Journalism Practicum	1 Journalism Practicum	1 Elective	1 Elective <sup>3</sup> (3000-4000 level)
JOUR Elective (3000-4000 level)	3		
Elective <sup>3</sup>	6		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Recommended PR electives: POLS 3053; PSY 2023, SPH 3073, SPH 4063, SPH 4173; an approved marketing class.<sup>3</sup>Recommended JOUR electives: SOC 1003, PSY 2003, ECON 2003, POLS 2003, POLS 3033, SPH 2003, SPH 3003.<sup>4</sup>Must be in the same language.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Minor  
Journalism**

The minor in journalism is designed for students with any major who wish to better understand the role of media in a free society, and/or who anticipate dealing with media outlets in their future careers. The minor in journalism requires 18 hours of courses:

- JOUR 2133 Introduction to Mass Communication
- JOUR 2143 News Writing
- JOUR 4883 Mass Communication Theory
- JOUR Electives (9 hours of 3000 or 4000 level from the three Journalism Options listed above)

**Speech**

The speech major offers a speech communication option and a theatre option. Both options require 30 semester hours selected from departmental course offerings. Eighteen hours of the 30-hour major must be upper division level. Students planning to teach in the public schools should refer to the suggested curriculum in Speech set forth in this catalog under teacher licensure curricula, College of Education.

Those students choosing the speech communication option must take SPH 1003, SPH 2003, SPH 3003, SPH 3073, SPH 3123, and SPH 4003. Students choosing the speech communication option, in consultation with an adviser, can design a program in one of the following areas of emphasis: (1) communication for the professions; (2) language and culture; (3) organizational communication; and (4) performance studies.

**Curriculum in Speech (Speech Communication Option)****Suggested Sequence in Courses**

Freshman	Spring	Sophomore	Spring
Fall	Fall	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,2,T</sup>	3 Social Sciences <sup>1,2,T</sup>
HIST 1503 <sup>1,T</sup>	3 HIST 1513 <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Arts <sup>1,T</sup>
BIOL 1014 <sup>1,T</sup>	4 MATH 1003 <sup>1,T</sup>	3 SPH 2003 <sup>T</sup>	3 SPH 3123
SPH 1003	3 Elective <sup>2,T</sup>	4 Elective <sup>2,T</sup>	6 Elective <sup>2,T</sup>
SPH Elective <sup>2</sup>	2 Physical Activity <sup>1,T</sup>	2	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
SPH 3003	3 Humanities <sup>1</sup>	3 SPH 4003	3 SPH Elective
SPH 3073	3 SPH Elective (3000-4000 level)	3 Elective (3000-4000 level)	13 Elective
Elective	9 Elective (3000-4000 level)	9	SPH Elective (3000-4000 level)
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Certain electives and social sciences are recommended based on student's emphasis.

**Curriculum in Speech (Speech Communication Option)****Suggested Sequence in Courses**

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor  
Speech  
Communication  
Option**

The minor in speech communication is designed for students with any major who recognize the need for communication skills in order to achieve their career goals. The minor in speech requires 18 hours of courses:

**SPH 2003** Public Speaking  
**SPH 3003** Interpersonal Communication  
**SPH 3073** Group Communication  
**SPH 3123** Argumentation  
**SPH 3043** Advanced Public Speaking  
SPH Elective (3 hours of 3000 or 4000 level)

**Theatre Option**

Those students choosing the theatre option must take **SPH 2013**, **TH 2203**, **TH 2513**, **TH 2703**, **TH 3513**; 3 hours of Theatre History, **TH 4263**, **TH 4273**, **TH 4313**, or **TH 4323**; and 3 hours of production practicum. Students selecting the theatre option, in consultation with an advisor, can utilize their TH electives to design a program in one of the following areas of emphasis: (1) Design/Technical or (2) Performance/History.

**Curriculum in Speech (Theatre Option)****Suggested Sequence of Courses**

Freshman	Spring	Sophomore	Spring
<b>Fall</b>		<b>Fall</b>	
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>Social Sciences<sup>1,4,T</sup></b>	3 <b>Social Sciences<sup>1,4,T</sup></b>
<b>HIST 1503<sup>1,T</sup></b>	3 <b>HIST 1513<sup>1,T</sup></b>	3 <b>Science with Lab<sup>1,T</sup></b>	4 <b>SPH 2013</b>
<b>Biol 1014<sup>1,T</sup></b>	4 <b>MATH 1003<sup>1,T</sup></b>	3 <b>TH 2513</b>	3 <b>Fine Arts<sup>1,4,T</sup></b>
<b>TH 2203</b>	3 <b>Elective<sup>4,T</sup></b>	3 <b>Elective<sup>4,T</sup></b>	6 <b>Elective<sup>4,T</sup></b>
<b>TH 2703</b>	3 <b>Physical Activity<sup>1,T</sup></b>	2	
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
Humanities <sup>1</sup>	3 <b>TH History<sup>2</sup></b>	3 <b>TH Elective (3000-4000 level)<sup>3</sup></b>	3 <b>TH Elective (3000-4000 level)<sup>3</sup></b>
<b>TH 3513</b>	3 <b>TH Elective (3000-4000 level)<sup>3</sup></b>	3 <b>Elective (3000-4000 level)</b>	5 <b>Elective (3000-4000 level)</b>
TH Elective (3000-4000 level) <sup>3</sup>	3 <b>Elective (3000-4000 level)</b>	6 <b>Elective</b>	7 <b>Elective</b>
Elective (3000-4000 level)	6 <b>Elective</b>	3	
Elective	2		
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>
			<b>16</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Choose one: **TH 4263**, **TH 4273**, **TH 4313**, **TH 4323**.

<sup>3</sup>A maximum of seven hours of theatre practicum courses may be counted toward the thirty-hour major.

<sup>4</sup>Certain electives and social sciences are recommended based on student's emphasis.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor  
Theatre Option**

The minor in theatre is designed for students with any major who wish to acquire a better knowledge and understanding of the theatrical arts in order to enrich cultural experiences in their life. The minor in theatre requires 18 hours of courses:

**TH 2203** Play Analysis  
**TH 2703** Acting Theories and Techniques  
**TH 2513** Intro to Theatre Design and Production  
**TH 3513** Stagecraft Techniques  
**TH Elective (3 hours)**

and 3 hours selected from the following:

**TH 4263** Theatre History I: Antiquity to 1564  
**TH 4273** Theatre History II: 1564 to 1900  
**TH 4313** Theatre History III: 1900 to 1960  
**TH 4323** Theatre History IV: 1960 to Present

**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**College of Business**Select a Department 

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Arkansas Tech University has offered baccalaureate degrees with majors in business and accounting since 1950 and 1959 respectively. The degree programs were housed in the Division of Business and then in the School of Systems Science prior to the establishment of the School of Business in 1986. The School of Business became the College of Business in 2009. The College is comprised of a Department of Management and Marketing and a Department of Accounting and Economics. Business students may seek a Bachelor of Science in Business Administration with major fields of study in Accounting, Economics & Finance, and Management & Marketing or a Bachelor of Science with a major in Business Education.

From its early years the College has used full-time faculty to teach primarily full-time undergraduate students. The faculty believe that teaching excellence and the currency of subject matter are best maintained through ongoing professional interaction with peers and the business community. In support of its mission, the faculty participates in service and engages in scholarly activities oriented towards professional practice and pedagogical research.

College of Business faculty and students use current technology to equip students with the necessary business competency skills needed to be successful leaders in business. Students and faculty are encouraged to participate actively in the learning process. A high degree of faculty-student interaction is sought through the management of class sizes and individualized advising. The College adheres to high levels of ethical conduct and promotes this ideal to its students as they prepare for personal and professional success in an evolving global business environment.

**Our Vision**

The Arkansas Tech University College of Business will be recognized as the premier undergraduate business program in the state of Arkansas.

**Our Mission**

The mission of the College of Business is to provide undergraduate students with the intellectual foundation for lifelong learning by combining a quality education in fundamental business management competencies with a broad exposure to the liberal arts.

**Our Guiding Principles**

The College of Business carries out its mission through its commitment to the following guiding principles and core values:

Excellence  
Professionalism  
Collaboration  
Continuous Improvement

The College is committed to:

- High-quality undergraduate learning and faculty development.
- Highest ethical standards of personal and professional conduct for faculty, students and administrators. Professionalism includes maintaining faculty intellectual qualifications and expertise at levels which support the college's mission.
- Cooperative interaction among students and faculty to achieve the college's mission.
- A systems approach to continuously improve all aspects of the learning process. This includes feedback from major stakeholders and a spirit of experimentation.

**Programs of Study**

The College of Business offers programs of study leading to baccalaureate degrees as listed below:

**Bachelor of Science**  
Business Education**Bachelor of Science in Business Administration**  
Accounting  
Economics and Finance  
Management and Marketing

The College of Business is committed to preparing students for meaningful careers in business, industry, government or education; or for admission to and success in quality graduate programs. This commitment is founded on the belief that graduates from the College should have a strong background in the liberal arts as a basis for mature understanding of the problems of business leadership and management. The objective of the general education curriculum required of all College of Business majors is to ensure they acquire a knowledge and understanding of topics in the humanities, sciences, communications, social sciences and other related subjects to support a lifetime of continual learning.

**Learning Goals**

Students who major in any of the bachelor degree programs in the College of Business are required to complete a common core of business courses. The learning goals of the BSBA degree program are to develop students':

1. Ability to use technology to support business decisions.
2. Overall communication skills in a business context.
3. Ability to think critically and reason effectively about business problems.
4. Ethical awareness and ethical decision-making framework in a business context.
5. Foundation knowledge for conducting business in a diverse, global environment.

**Accreditation**

The Bachelor of Science in Business Administration degree programs offered by the College of Business are accredited by AACSB International - The Association to Advance Collegiate Schools of Business. AACSB International is the premier accrediting agency for business schools, stressing academic excellence and a commitment to continuous improvement. Approximately one third of the business schools in the United States and several selected schools internationally have earned AACSB International accreditation.

The Bachelor of Science with a major in Business Education is accredited by the National Council for Accreditation of Teacher Education (NCATE).

**Transfer Students**

In order to meet baccalaureate degree requirements, all transfer students must take in residence a minimum of fifty percent of the College of Business courses required for the degree. Of these courses, at least 24 hours must be 3000-4000 level, 12 hours must be in the student's major field, and 9 hours must be in the business core curriculum.

**Only course credit with a grade of "C" or above will transfer to meet degree requirements for courses offered by the College of Business.**

Business courses taken at other institutions at the 1000-2000 level which are offered by Tech at the 3000-4000 level will be transferred as free electives. Business courses taken at other institutions at the 3000-4000 level are subject to validation by the College of Business.

**The Curriculum**

A student who majors in one of the Bachelor of Science in Business Administration (B.S.B.A.) programs in the College of Business must complete:

1. The general education requirements as described in this catalog.

2. The following business core requirements:

ACCT 2003 Accounting Principles I  
ACCT 2013 Accounting Principles II  
ECON 2003 Principles of Economics I  
ECON 2013 Principles of Economics II  
BLAW 2033 Legal Environment of Business  
BUAD 1003 Introduction to Business Systems  
BUAD 2003 Business Information Systems  
BUAD 2053 Business Statistics  
BUAD 3023 Business Communications  
ACCT 3063 Managerial Accounting **OR ACCT 4023 Cost Accounting**  
ECON 3003 Money and Banking  
FIN 3063 Business Finance  
MKT 3043 Principles of Marketing  
MGMT 2013 Management Productivity Tools  
MGMT 3003 Management and Organizational Behavior  
MGMT 3103 Operations Management  
MGMT 4013 Management Information Systems **OR ACCT 3023 Accounting Information Systems<sup>1</sup>**  
**MGMT 4083 Business Policy**

3. The following courses in the quantitative area:

**MATH 1113 College Algebra<sup>2</sup>**  
**MATH 2223 Quantitative Business Analysis**

4. Requirements that are listed on the following pages under each major.

5. Sufficient elective hours to bring the student's total hours to 124 (the number required for graduation).

In order to enroll in 3000- and 4000-level courses offered by the College of Business, students majoring in business must have the proper course prerequisites and satisfy the following enrollment requirements:

1. **Must have completed a minimum of 54 hours.**
2. **Must have a cumulative grade point average of 2.00 or above.**
3. **Completion of the following eighteen hours of business foundation courses:**

**ACCT 2003 and 2013**  
**ECON 2003 and 2013**  
**Six hours from MGMT 2013, BLAW 2033, BUAD 2053**

**Business students who meet enrollment requirements (1) and (2) above and have only completed fifteen hours of the foundation courses, may enroll in upper division business courses, provided they have the proper course prerequisites and they enroll in the remaining required foundation course in the same semester.**

**Students majoring in fields outside the College of Business may enroll in 3000- and 4000- level College of Business courses provided they have completed 54 credit hours, have a cumulative GPA of at least 2.0, and approval from the College of Business Dean.**

<sup>1</sup>Accounting majors must take **ACCT 3023**. All other business majors must take **MGMT 4013**.

<sup>2</sup>Students who have two years of high school Algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in **MATH 2223**, Quantitative Business Analysis.



## Department of Accounting and Economics

[Back to College of Business](#)

**Dr. Pamela Carr, Head**  
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**Professors:**

R. Brown, Carr

**Associate Professors:**  
Alexander, Benefield,  
Goza, McKnight

**Assistant Professors:**  
Cole, Fusaro, Nagac,  
T. Pennington, Trivitt

**Instructor:**  
Griffin

The Department of Accounting and Economics offers two degree programs. The objective of both degree programs is to offer an academic base equipping students to be life-long learners who will then mature as professionals in the world of business. The accounting curriculum prepares graduates for a variety of careers in public, private and not-for-profit entities as well as entry into graduate programs. The department also provides a major program in economics and finance where graduates can enter professional careers as economic and financial analysts in business or government or continue in graduate studies.

Students who plan to pursue graduate studies should consider the entrance requirements of the graduate degree program which they desire to enter. Faculty advisors will work closely with these students to assist them in planning their course work to meet the graduate degree program requirements. Part of this planning will involve the student sitting for examinations such as the GMAT, GRE, or LSAT.

### Accounting

Since the inception of the program in 1959, accounting graduates have established careers in every segment of the business world. Employment opportunities range from national, regional, and local public accounting firms to corporations, sole proprietorships, and national state and local government entities. The accounting profession offers a promising future for men and women who are comfortable in meeting people, expressing themselves, working in changing environments, and who possess an inquiring and logical thought process.

**Learning Goals for Accounting Major:**

1. Students will be able to demonstrate knowledge of current accounting practices and theory and be conversant in the language of business.
2. Students will be able to demonstrate the ability to think critically about accounting topics.
3. Students will demonstrate the ability to communicate accounting information effectively, both orally and in writing.
4. Students will be able to demonstrate competency in current accounting information technology.
5. Students will be able to demonstrate competency in ethical business and accounting decision making.

Holding the licensure designation as a Certified Public Accountant is viewed as evidence of a professional quality in the discipline of accounting. CPAs are viewed by the business world as individuals who possess a professional knowledge of accounting principles and concepts and have the experiences necessary to make proper application of those principles and concepts. Students who desire to pursue this professional designation can complete the curriculum which will provide them with the necessary academic background to permit the graduate to sit for the uniform certified public accountant examination.

The goal of many students is a career in private accounting rather than public accounting. Professional designations such as Certified Management Accountant (CMA) and Certified Internal Auditor (CIA) are earned by completing examinations offered by their respective professional associations. Accounting majors who desire to complete those certification processes may complete a course of study which will enable them to be a candidate for those professional examinations.

### Professional Examination Requirements

All students who, upon graduation, plan to sit for a professional examination (CPA, CMA, CIA) should obtain a copy of the specific course requirements of the respective examination. The requirements should be considered in planning the student's course of study while completing the degree. The Arkansas State Board of Public Accountancy requires 150 semester hours of credit for first-time CPA Examination candidates effective with the first CPA Examination given in 1998.

The following curriculum in accounting leads to a Bachelor of Science in Business Administration degree with a major in accounting.

### Curriculum in Accounting

Suggested Sequence of Courses

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>
BUAD 1003 <sup>T</sup>	3 Science with Lab <sup>1,T</sup>	4 MGMT 2013	3 U.S. History <sup>3,T</sup>
MATH 1113 <sup>2,T</sup>	3 SPH 2173 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>
BUAD 2003 <sup>T</sup>	3 MATH 2223 <sup>2,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Art/Humanities <sup>1,T</sup>
Physical Activity <sup>1,T</sup>	1		Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
Junior		Senior	

Curriculum in Accounting							
Fall		Spring		Fall		Spring	
ACCT 3003	3	ACCT 3013	3	ACCT 4003	3	ACCT 4013	3
ACCT 3043	3	ACCT 3053	3	ACCT 4033	3	ACCT 4023	3
BUAD 3023	3	ECON 3003	3	MKT 3043	3	FIN 3063	3
Fine Art/Humanities <sup>1,T</sup>	3	ACCT 3023	3	Elective	6	MGMT 4083	3
MGMT 3003	3	MGMT 3103	3			Elective	3
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Students who have two years of high school algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in MATH 2223, Quantitative Business Analysis. If omitted, an additional 3 hours of electives will be required. Students considering graduate school are advised to use free elective hours to take MATH 2914.

<sup>3</sup>Three hours must be taken from the following: HIST 1903 or POLS 2003.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Minor Accounting

The minor in Accounting is available to students who wish to add to their knowledge of accounting for personal edification or for professional purposes. Please note that for non-business majors, no more than 30 hours of courses offered by the College of Business may be counted toward completion of degree requirements.

The minor in Accounting requires 21 hours of courses:

BUAD 2003 or COMS 1003  
 ACCT 2003  
 ACCT 2013  
 ACCT 3003\*  
 ACCT 3013\*  
 ACCT 3043\*

3 hours of either ACCT 3053 or ACCT 4023\*

\*in order to take the upper division (3000-4000 level) ACCT courses, the student must have completed 54 hours including all 2000 level courses listed above, have a cumulative GPA of at least 2.0 and permission from the Dean of Business.

### Economics and Finance

The study of economics and finance equips students to analyze a broad range of socioeconomic phenomena and policy alternatives. Regulation, environmental protection, economic growth and development, the distribution of income, resource allocation, international trade and finance, comparative economic systems, inflation, and the level of employment are some traditional topics of economics. The finance courses focus on financial definitions and concepts involving sources and uses of funds, personal investment strategy, and financial institutions.

The economics and finance course of study contains a theoretical core supporting the finance, accounting, marketing, and management fields. It is designed to prepare graduates for management or analytical careers in business or government. In addition, the major provides a foundation for graduate study in a variety of fields. Faculty advisors will work closely with students to assist them in planning their course work to achieve personal career objectives.

Students who complete the economics and finance program will be able to:

1. Understand economic concepts and relationships.
2. Understand financial decision making at the individual, corporate, and public policy levels.
3. Improve problem-solving skills through the application of economic and financial concepts.
4. Evaluate economic and financial issues in a global context.

### Curriculum in Economics and Finance

Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>
BUAD 1003 <sup>T</sup>	3 HIST 1503 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>
Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 MGMT 2013	3 U.S. History <sup>4,T</sup>
BUAD 2003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MATH 2243 <sup>3,T</sup>	3 BUAD 2053 <sup>T</sup>
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 HIST 1513 <sup>T</sup>	3 BLAW 2033
		Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>16</b> <b>Total Hours</b>	<b>16</b> <b>Total Hours</b>	<b>16</b> <b>Total Hours</b>
Junior		Senior	
Fall	Spring	Fall	Spring
MGMT 3003	3 ECON 3073	3 ECON/FIN Elective (3000-4000 level) <sup>5</sup>	3 MGMT 4083
FIN 3043	3 FIN 3063	3 Elective	3 ECON 4093
ECON 3003	3 MKT 3043	3 MGMT 4013	3 ECON/FIN Elective (3000-4000 level) <sup>5</sup>
ACCT 3063 or 4023	3 Fine Art/Humanities <sup>1,T</sup>	6 FIN 4043	3 Elective
BUAD 3023	3	MGMT 3103	3 Elective
Total Hours	15 Total Hours	15 Total Hours	15 Total Hours

Degree Completion Plan Beginning in Spring Semester

**Curriculum in Economics and Finance**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>
BUAD 1003 <sup>T</sup>	3 HIST 1503 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>
Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 MGMT 2013	3 U.S. History <sup>4,T</sup>
BUAD 2003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MATH 2243 <sup>3,T</sup>	3 BUAD 2053 <sup>T</sup>
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 HIST 1513 <sup>T</sup>	3 BLAW 2033
		Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
MGMT 3003	3 ECON 3073	3 ECON 4093	3 FIN 4043
MKT 3043	3 FIN 3063	3 MGMT 3103	3 MGMT 4083
ECON 3003	3 FIN 3043	3 MGMT 4013	3 Elective
ACCT 3063 or 4023	3 Fine Art/Humanities <sup>1,T</sup>	6 ECON/FIN Elective (3000-4000 level) <sup>5</sup>	3 ECON/FIN Elective (3000-4000 level) <sup>5</sup>
BUAD 3023	3	Elective	3 Elective
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Students who have two years of high school algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in **MATH 2223**, Quantitative Business Analysis. If omitted, an additional 3 hours of electives will be required.<sup>3</sup>Students considering graduate school are advised to take **MATH 2914**.<sup>4</sup>Three hours must be taken from the following:**HIST 1903** or **POLS 2003**.<sup>5</sup> Only three hours of economic/finance internship will apply to this requirement.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Minor  
Economics**

The minor in Economics is available to students who wish to add to their knowledge of business for personal edification or for professional purposes, but not open to College of Business majors. **Please note that for non-business majors, no more than 30 hours of courses offered by the College of Business may be counted toward completion of degree requirements.**

The minor in Economics requires 18 hours of courses:

ACCT 2003

ECON 2003\*

ECON 2013

ECON 3003\*\*

6 hours of 3-4000 level Economics electives\*\*

\*for many majors **ECON 2003** can be used to satisfy 3 hours of the general education social science requirement.

\*\*in order to take the upper division (3000-4000 level) ECON courses, the student must have completed 54 hours including all 2000 level courses listed above, have a cumulative GPA of at least 2.0 and permission from the Dean of Business.

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## Department of Management and Marketing

[Back to College of Business](#)

**Dr. Kevin H. Mason, Head**  
**Rothwell Hall, Room 432**  
**(479) 968-0492**  
**kmason@atu.edu**

The Department of Management and Marketing offers majors in management and marketing and business education. Decision making as a process is stressed. Students are taught to search for and identify important facts and properly analyze them in developing sound alternative courses of action. Modern analytical techniques as well as the importance of the behavioral sciences are introduced.

**Professors:**  
 Black, Mason,  
 Roach , Troboy  
**Associate Professors:**  
 Bean, Cochran, Walton  
**Assistant Professors:**  
 Cannon, S. Jones  
**Instructor:**  
 Batch

The management and marketing major is designed generally to prepare students for careers as professional managers or as self-employed entrepreneurs in either profit-seeking or not-for-profit organizations. The curriculum emphasizes a comprehensive understanding of business principles and economic activities. The required course of study seeks to prepare the graduate not only for initial employment but for subsequent advancement in his/her chosen vocation. Effective education for business responsibility consists not only of the development of an understanding of the principles and methodologies which govern the organization and administration of the individual business enterprise, but also includes an understanding of larger problems and relationships of the economy as a whole.

### Management and Marketing

Specific objectives of the program are to provide students who select the management and marketing major with the following abilities:

1. Effectively apply technology as a problem-solving tool in management and marketing contexts.
2. Critically evaluate management and marketing problems.
3. Identify and evaluate ethical issues related to management and marketing problems.
4. Effectively communicate.
5. Proficiency in the foundation principles of management and marketing.

### Entrepreneur Concentration

### Curriculum in Management and Marketing Entrepreneurship Concentration

#### Degree Completion Plan Beginning in Fall Semester

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>
BUAD 1003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MGMT 2013	3 Science with Lab <sup>1,T</sup>
BUAD 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Art/Humanities <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Senior</b>	<b>Spring</b>
MGMT 3003	3 MGMT 3103	3 MGMT 4053	3 MGMT 4063
MKT 3043	3 FIN 3063	3 Market Strategy elective <sup>4</sup>	3 Behavioral Elective <sup>5</sup>
ECON 3003	3 ACCT 3063 or 4023	3 MGMT 4013	3 MGMT 4083
U.S. History <sup>3,T</sup>	3 MKT 4153	3 Elective	3 Elective
BUAD 3023	3 Elective	3 Elective	3 Fine Art/Humanities <sup>1,T</sup>
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1	
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>

#### Degree Completion Plan Beginning in Spring Semester

<b>Freshman</b>		<b>Sophomore</b>		<b>Fall</b>
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>	3
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>	3
BUAD 1003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MGMT 2013	3 Science with Lab <sup>1,T</sup>	4
BUAD 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>	3
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Art/Humanities <sup>1,T</sup>	3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>	<b>Spring</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	

**Curriculum in Management and Marketing  
Entrepreneurship Concentration**

<b>MGMT 3003</b>	<b>3</b>	<b>MGMT 3103</b>	<b>3</b>	<b>MGMT 4063</b>	<b>3</b>	Market Strategy elective <sup>4</sup>	<b>3</b>
<b>MKT 3043</b>	<b>3</b>	<b>FIN 3063</b>	<b>3</b>	<b>MKT 4153</b>	<b>3</b>	Behavioral elective <sup>5</sup>	<b>3</b>
<b>ECON 3003</b>	<b>3</b>	<b>ACCT 3063 or 4023</b>	<b>3</b>	<b>MGMT 4013</b>	<b>3</b>	<b>MGMT 4083</b>	<b>3</b>
U.S. History <sup>3,T</sup>	3	<b>MGMT 4053</b>	3	Elective	3	Elective	3
<b>BUAD 3023</b>	3	Elective	3	Elective	3	Fine Art/Humanities <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>	1				
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Students who have two years of high school algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in **MATH 2223**, Quantitative Business Analysis. If omitted, an additional 3 hours of electives will be required. Students considering graduate school are advised to use free elective hours to take **MATH 2914**.

<sup>3</sup>Three hours must be taken from the following: **HIST 1903** or **POLS 2003**.

<sup>4</sup>Three hour Market Strategy elective must be taken from: **MGMT 4143** (Marketing Management) or **MKT 3163** (Consumer Behavior) or **MGMT 4113** (E-Commerce).

<sup>5</sup>Three hour Behavioral elective must be taken from: **MGMT 4023** (Human Resource Mgmt) or **MGMT 4093** (Human Behavior) or **MGMT 4213** (leadership) or **MGMT 4223** (Leadership in Film, Hist, Lit.).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**International  
Business  
Concentration**

**Curriculum in Management and Marketing  
International Business Concentration**

**Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>		<b>Spring</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>ENGL 1013<sup>1,T</sup></b>	<b>3</b>	<b>ENGL 1023<sup>1,T</sup></b>	<b>3</b>	<b>ACCT 2003<sup>T</sup></b>	<b>3</b>
<b>HIST 1503<sup>T</sup></b>	<b>3</b>	<b>HIST 1513<sup>T</sup></b>	<b>3</b>	<b>ECON 2003<sup>T</sup></b>	<b>3</b>
<b>BUAD 1003<sup>T</sup></b>	<b>3</b>	<b>SPH 2173<sup>T</sup></b>	<b>3</b>	<b>MGMT 2013</b>	<b>3</b>
<b>BUAD 2003<sup>T</sup></b>	<b>3</b>	<b>PSY 2003<sup>T</sup></b>	<b>3</b>	<b>BLAW 2033<sup>T</sup></b>	<b>3</b>
<b>MATH 1113<sup>2,T</sup></b>	<b>3</b>	<b>MATH 2223<sup>2,T</sup></b>	<b>3</b>	Foreign Lang	<b>4</b>
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		<b>Total Hours</b>	<b>16</b>
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
<b>MGMT 3003</b>	<b>3</b>	<b>MGMT 3103</b>	<b>3</b>	Science with Lab <sup>1,T</sup>	<b>4</b>
<b>MKT 3043</b>	<b>3</b>	<b>FIN 3063</b>	<b>3</b>	<b>MKT 4093</b>	<b>3</b>
<b>ECON 3003</b>	<b>3</b>	<b>ACCT 3063 or 4023</b>	<b>3</b>	<b>MGMT 4013</b>	<b>3</b>
U.S. History <sup>3,T</sup>	3	Science with Lab <sup>1,T</sup>	4	Elective	3
<b>BUAD 3023</b>	<b>3</b>	<b>ECON 4093</b>	<b>3</b>	MGMT Elective (3000-4000 level)	<b>3</b>
Physical Activity <sup>1,T</sup>	1				MGMT Elective (3000-4000 level)
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>14</b>

**Degree Completion Plan Beginning in Spring Semester**

<b>Freshman</b>		<b>Sophomore</b>		<b>Spring</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
<b>ENGL 1013<sup>1,T</sup></b>	<b>3</b>	<b>ENGL 1023<sup>1,T</sup></b>	<b>3</b>	<b>ACCT 2003<sup>T</sup></b>	<b>3</b>
<b>HIST 1503<sup>T</sup></b>	<b>3</b>	<b>HIST 1513<sup>T</sup></b>	<b>3</b>	<b>ECON 2003<sup>T</sup></b>	<b>3</b>
<b>BUAD 1003<sup>T</sup></b>	<b>3</b>	<b>SPH 2173<sup>T</sup></b>	<b>3</b>	<b>MGMT 2013</b>	<b>3</b>
<b>BUAD 2003<sup>T</sup></b>	<b>3</b>	<b>PSY 2003<sup>T</sup></b>	<b>3</b>	<b>BLAW 2033<sup>T</sup></b>	<b>3</b>
<b>MATH 1113<sup>2,T</sup></b>	<b>3</b>	<b>MATH 2223<sup>2,T</sup></b>	<b>3</b>	Foreign Lang	<b>4</b>
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>
<b>Junior</b>		<b>Senior</b>		<b>Total Hours</b>	<b>16</b>
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
<b>MGMT 3003</b>	<b>3</b>	<b>MGMT 3103</b>	<b>3</b>	Science with Lab <sup>1,T</sup>	<b>4</b>
<b>MKT 3043</b>	<b>3</b>	<b>FIN 3063</b>	<b>3</b>	<b>MKT 4093</b>	<b>3</b>
<b>ECON 3003</b>	<b>3</b>	<b>ACCT 3063 or 4023</b>	<b>3</b>	<b>MGMT 4013</b>	<b>3</b>
U.S. History <sup>3,T</sup>	3	Science with Lab <sup>1,T</sup>	4	Elective	3
<b>BUAD 3023</b>	<b>3</b>	<b>MKT 4093</b>	<b>3</b>	<b>MKT 3163 or MKT 4153</b>	<b>3</b>
Physical Activity <sup>1,T</sup>	1				Fine Art/Humanities <sup>1,T</sup>
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>14</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Students who have two years of high school algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in **MATH 2223**, Quantitative Business Analysis. If omitted, an additional 3 hours of electives will be required. Students considering graduate school are advised to use free elective hours to take **MATH 2914**.

<sup>3</sup>Three hours must be taken from the following: **HIST 1903** or **POLS 2003**.

**Curriculum in Management and Marketing  
International Business Concentration**

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Management  
Concentration**

**Curriculum in Management and Marketing  
Management Concentration**

Degree Completion Plan Beginning in Fall Semester					
Freshman		Sophomore			
Fall	Spring	Fall	Spring		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>		3
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>		3
BUAD 1003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MGMT 2013	3 Science with Lab <sup>1,T</sup>		4
BUAD 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>		3
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Art/Humanities <sup>1,T</sup>		3
Total Hours	15 Total Hours	15 Total Hours	16 Total Hours		16
Junior		Senior			
Fall	Spring	Fall	Spring		
MGMT 3003	3 MGMT 3103	3 Behavioral Elective <sup>4</sup>	6 MGMT 3113 or MGMT 4203		3
MKT 3043	3 FIN 3063	3 Elective	6 Behavioral Elective <sup>4</sup>		3
ECON 3003	3 ACCT 3063 or 4023	3 MGMT 4013	3 MGMT 4083		3
U.S. History <sup>3,T</sup>	3 MGMT 3123	3	Elective		3
BUAD 3023	3 Elective	3	Fine Art/Humanities <sup>1,T</sup>		3
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1			
Total Hours	16 Total Hours	16 Total Hours	15 Total Hours		15
Degree Completion Plan Beginning in Spring Semester					
Freshman		Sophomore			
Spring	Fall	Spring	Fall		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>		3
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>		3
BUAD 1003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MGMT 2013	3 Science with Lab <sup>1,T</sup>		4
BUAD 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>		3
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Art/Humanities <sup>1,T</sup>		3
Total Hours	15 Total Hours	15 Total Hours	16 Total Hours		16
Junior		Senior			
Spring	Fall	Spring	Fall		
MGMT 3003	3 MGMT 3103	3 MGMT 3123	3 Behavioral Elective <sup>4</sup>		6
MKT 3043	3 FIN 3063	3 MGMT 3113 or MGMT 4203	3 Fine Art/Humanities <sup>1,T</sup>		3
ECON 3003	3 ACCT 3063 or 4023	3 MGMT 4013	3 MGMT 4083		3
U.S. History <sup>3,T</sup>	3 Behavioral Electives <sup>4</sup>	3 Elective	3 Elective		3
BUAD 3023	3 Elective	3 Elective	3		
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1			
Total Hours	16 Total Hours	16 Total Hours	15 Total Hours		15

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Students who have two years of high school algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in **MATH 2223**, Quantitative Business Analysis. If omitted, an additional 3 hours of electives will be required. Students considering graduate school are advised to use free elective hours to take **MATH 2914**.

<sup>3</sup>Three hours must be taken from the following: **HIST 1903** or **POLS 2003**.

<sup>4</sup>Three hour Behavioral elective must be taken from: **MGMT 4023** (Human Resource Mgmt) or **MGMT 4093** (Human Behavior) or **MGMT 4213** (Leadership) or **MGMT 4223** (Leadership in Film, Hist, Lit.)

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Marketing  
Concentration**

**Curriculum in Management and Marketing  
Marketing Concentration**

Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore			
Fall	Spring	Fall	Spring		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>		3
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>		3
BUAD 1003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MGMT 2013	3 Science with Lab <sup>1,T</sup>		4
BUAD 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>		3
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Art/Humanities <sup>1,T</sup>		3

**Curriculum in Management and Marketing**  
**Marketing Concentration**

Total Hours	15 Total Hours	15 Total Hours	16 Total Hours	16
<b>Junior</b>				
<b>Spring</b>				
MGMT 3003	3 MGMT 3103	3 MKT 4153	3 MKT Electives (3000-4000 level)	3
MKT 3043	3 FIN 3063	3 MKT 4143	3 MGMT or MKT Electives (3000-4000 level)	3
ECON 3003	3 ACCT 3063 or 4023	3 MGMT 4013	3 MGMT 4083	3
U.S. History <sup>3,T</sup>	3 MKT 3163	3 Elective	3 Elective	3
BUAD 3023	3 Elective	3 Elective	3 Fine Art/Humanities <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1		
Total Hours	16 Total Hours	16 Total Hours	15 Total Hours	15
<b>Degree Completion Plan Beginning in Spring Semester</b>				
<b>Freshman</b>				
<b>Sophomore</b>				
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>	3
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>	3
BUAD 1003 <sup>T</sup>	3 SPH 2173 <sup>T</sup>	3 MGMT 2013	3 Science with Lab <sup>1,T</sup>	4
BUAD 2003 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>	3
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>2,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Fine Art/Humanities <sup>1,T</sup>	3
Total Hours	15 Total Hours	15 Total Hours	16 Total Hours	16
<b>Junior</b>				
<b>Senior</b>				
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
MGMT 3003	3 MGMT 3103	3 MKT 3163	3 MKT Elective (3000-4000 level)	3
MKT 3043	3 FIN 3063	3 MKT 4153	3 MGMT or MKT Elective (3000-4000 level)	3
ECON 3003	3 ACCT 3063 or 4023	3 MGMT 4013	3 MGMT 4083	3
U.S. History <sup>3,T</sup>	3 MKT 4143	3 Elective	3 Elective	3
BUAD 3023	3 Elective	3 Elective	3 Fine Art/Humanities <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1		
Total Hours	16 Total Hours	16 Total Hours	15 Total Hours	15

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Students who have two years of high school algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in **MATH 2223**, Quantitative Business Analysis. If omitted, an additional 3 hours of electives will be required. Students considering graduate school are advised to use free elective hours to take **MATH 2914**.

<sup>3</sup>Three hours must be taken from the following: **HIST 1903** or **POLS 2003**.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor  
Business**

The minor in Business is available to students who wish to add to their knowledge of business for personal edification or for professional purposes, but not open to College of Business majors. **Please note that for non-business majors, no more than 30 hours of courses offered by the College of Business may be counted toward completion of degree requirements.**

The minor in Business requires 21 hours of courses:  
**BUAD 1003**  
**BUAD 2003 or COMS 1003**  
**ACCT 2003**  
**ECON 2003\***  
**BLAW 2033**  
**MGMT 3003\*\***  
**MKT 3043\*\***

\*for many majors **ECON 2003** can be used to satisfy 3 hours of the general education social science requirement.

\*\*in order to take the upper division (3000-4000 level) MKT and MGMT courses, the student must have completed 54 hours including all 2000 level courses listed above, have a cumulative GPA of at least 2.0 and permission from the Dean of Business

**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**College of Education**

Select a Department

Dr. Eldon Clary, Dean  
Crabaugh Hall, Room 204  
(479) 968-0418  
[eclary@atu.edu](mailto:eclary@atu.edu)  
Fax: (479) 964-0811

The College of Education provides guidance and professional courses for the teacher candidate who plans to teach in early childhood, middle level, and secondary schools. The teacher education program is accredited by the National Council for Accreditation of Teacher Education (NCATE).

Teacher candidates who plan to teach physical education, early childhood, or middle level must enroll in the College of Education. Those who elect to prepare for teaching in other fields must enroll in schools appropriate to their interests in teaching.

For the freshman or sophomore teacher candidate who has not selected a major or specific teaching level or area, the College recommends enrollment in the undeclared program (see "Undecided Study"). In addition to taking the required general education courses, teacher candidates in this program are encouraged to take such electives as will provide them a good liberal education and help select a major field. Advisors in this program are selected to provide guidance to undecided teacher candidates.

In making a decision to enter the teaching profession, teacher candidates should seriously consider the demands which this choice entails. Among these are scholarship and intellectual curiosity; an interest in children and young people, and an understanding of their interests, problems, and development; a thorough understanding of the principles and skills employed by effective teachers; and an interest in and understanding of the role of the school in our society.

Teacher candidates who elect the professional program in teacher education will complete their study in at least two stages. See the appropriate catalog section for the requirements for specific programs. Some courses in the area of specialization should also be completed. **Admission to Arkansas Tech University is a prerequisite to, but separate from, admission to teacher education.** Declaration of a major in one of the University's teacher education programs is also a prerequisite to making formal application for admission to teacher education. Even though admission to Tech and declaration of a teaching major are necessary conditions for admission to teacher education, they are not the only requirements. Other criteria are listed in the section below.

**Admission &  
Retention in  
Teacher Education  
at Tech**

Professional programs are composed of courses and experiences designed to complete the undergraduate stage of professional preparation for teaching. Admission is by application to the Admission and Retention Committee of the Teacher Education Council. Before a teacher candidate may enroll in professional education courses at the upper division level (the required 3000 and 4000 level professional education courses), he or she must be formally admitted to teacher education at Tech. Application forms may be obtained from the office of the Dean of the College of Education (Crabaugh 204) or the office of the Director of Teacher Education Student Services (Crabaugh 109).

To be admitted to programs in secondary education, teacher candidates must have two assigned advisors, one from the College of Education and one from the department representing their teaching concentration, have the approval of both advisors, satisfactorily complete the pre-admission requirements, have a cumulative grade point average of 2.50 on all college work completed including transfer work, and submit a plan of study approved by both advisors. An early childhood education or middle level education major will have one advisor from the Department of Curriculum and Instruction. Admission to teacher education will be recommended by the academic advisors and determined by the Admission and Retention Committee based on the following considerations: completion of English composition courses, an oral communication course, a college-level mathematics course, and the appropriate introductory education course with grades of "C" or higher, and completion of the Praxis I (PPST) with scores equal to or greater than the scores determined by the Arkansas Department of Education. Other factors which reflect professional competence, including moral and emotional stability, physical and mental health, intellectual curiosity, use of English, social awareness, and professional interest will be considered by the Admission and Retention Committee. Formal screening and subsequent admission into teacher education and the monitoring of satisfactory progress in the teacher preparation program represent institutional obligations to the teaching profession, the schools served by and working with the University's programs, and the agencies that approve and accredit teacher education programs. Once admitted to teacher education, the teacher candidate must maintain satisfactory progress throughout the completion of the teacher education program according to the standards cited above and any additional program standards in effect or lose eligibility to continue in that program. Course sequences and prerequisites will be followed carefully.

**Admission Decision  
Appeals**

A formal appeal of a decision to deny admission to teacher education may be made to the Admission and Retention Committee of the Teacher Education Council. Instructions and forms for such appeals are available in the Office of the Dean of Education. **An appeal should be based upon exceptional or extenuating circumstances and/or other pertinent information not previously available or considered.** A formal appeal must be submitted in writing to the Dean who will transmit it to the Committee. The Committee's decision may be appealed in writing to the Dean of the College of Education regarding admission to teacher education. If the appeal is not resolved at this level the teacher candidate may appeal to the Vice President for Academic Affairs whose decision will be final.

**Criteria for  
Internship**

Internship is normally expected to be the last requirement completed in teacher education programs. Internship requires a full-time academic and professional commitment. Internship requires the teacher candidate to devote one semester of the senior year to full-time internship in an approved school. The teacher candidate should plan the work of internship to provide one semester free of activities and responsibility which would interfere with the requirements of the professional semester. The teacher candidate is expected to follow the direction of the Field-Based Teacher, the School Principal, the Arkansas Tech University Supervisors, and the Arkansas Tech University Director of Teacher Education Student Services.

Admission requirements for secondary education include completion of all professional education courses, a minimum grade of "C" in all courses required for the teaching field and professional education, and a 2.50 grade point average in the courses required for the teaching field with a cumulative grade point average of 2.50 on all work attempted, including transfer work. Admission requirements

for early childhood education and middle level education include no grade below "C" in any course work with a cumulative grade point average of 2.50 on all work attempted, including transfer work. Internship admission requires a Praxis II Specialty Area score which meets or exceeds the minimum scores established by the Arkansas Department of Education.

### Appeals of Internship Eligibility Decisions

Decisions made regarding a teacher candidate's eligibility and readiness for placement or retention in internship may be appealed in writing to the Admission and Retention Committee of the Teacher Education Council. Such an appeal should be submitted to the Dean of the College of Education, who will transmit it to the Committee. The Committee's decision regarding an appeal may be appealed in writing to the Dean. If the appeal is not resolved at that level, the teacher candidate may appeal to the Vice President for Academic Affairs whose decision is final. Appeals should be based on exceptional or extenuating circumstances and/or pertinent information not previously available or considered.

### Internship Application Process

TEACHER CANDIDATE MUST SUBMIT A FORMAL APPLICATION FOR ADMISSION TO INTERNSHIP. APPLICANTS FOR THE SPRING SEMESTER MUST SUBMIT THE APPLICATION PRIOR TO OCTOBER 1 OF THE FALL SEMESTER. APPLICANTS FOR THE FALL SEMESTER MUST SUBMIT THE APPLICATION PRIOR TO MARCH 1 OF THE SPRING SEMESTER. FAILURE TO MEET THESE DEADLINES COULD RESULT IN THE DELAY OF INTERNSHIP FOR A SEMESTER. PRIORITY IN INTERNSHIP PLACEMENT WILL BE GIVEN TO THOSE TEACHER CANDIDATES MEETING THE DEADLINES AND PREREGRISTERING FOR INTERNSHIP FOR THE GIVEN SEMESTER.

Application forms for internship may be obtained during scheduled group meetings with the Director of Teacher Education Student Services.

Early Childhood candidates may accomplish internship by enrolling in **ECED 4915**. Middle level candidates may accomplish internship by enrolling in **MLED 4912**. Secondary candidates may accomplish internship by enrolling in **SEED 4809** or 4909 and **SEED 4503**, and any other courses required in their teaching concentration. **Assignment of the teacher candidate to an approved site for internship is the responsibility of the College of Education based on policies developed by the College of Education. Placements are chosen to provide the best educational experience for the teacher candidate.**

APPLICANTS FOR ADMISSION TO STAGE II OR INTERNSHIP MUST MEET THE REQUIREMENTS THAT ARE IN EFFECT AT THE TIME OF APPLICATION. THE REQUIREMENTS FOR ADMISSION AND RETENTION AS PUBLISHED IN THE POLICIES AND PROCEDURES HANDBOOK OF THE ARKANSAS TECH UNIVERSITY TEACHER EDUCATION PROGRAM WILL SUPERSEDE CATALOG INFORMATION.

The College of Education offers programs of study leading to baccalaureate degrees as listed below:

#### Bachelor of Science

Early Childhood Education

Middle Level Education

Health and Physical Education including a Wellness and Fitness Program option

Secondary Education (teacher licensure programs in life/earth science, business technology, mathematics, physical/earth science.<sup>1</sup>

#### Bachelor of Arts

Secondary Education (teacher licensure programs in art, creative writing, English, foreign language, social studies, music, and speech)<sup>1</sup>

<sup>1</sup>Teacher candidate preparing to teach in secondary schools must complete the courses required for specialization in a teaching concentration. These are listed in departmental sections of the catalog and recommended curricula patterns, including teacher licensure requirements, set forth in the College of Education section of this catalog.

### Transfer Students

Applicability of transfer credit to meet specific degree requirements depends on the major selected by the transfer student. The transfer student should review the Transfer Credit policy in the Admission section of this catalog and meet with their academic advisor to determine final transfer credit eligibility for the selected program of study.

### Requirements for Teacher Licensure

All candidates for licensure must successfully complete the Praxis II, *Principles of Learning and Teaching*, except those taking a Praxis II subject assessment that contains a pedagogy section. These are math, life/earth science, physical/earth science, Spanish and English. Teacher candidates must also successfully complete the appropriate specialty area exams of Praxis II. Scores must be sent directly from the Educational Testing Service to Arkansas Tech University.

### Praxis Series

Please refer to Item E under the "Requirements for Baccalaureate Degrees".

The Congress of the United States, in its reauthorization of Title of the Higher Education Act of 1998, enacted accountability measures requiring institutions of higher education to report data to the public on the pass-rates of teacher candidates on assessments required for state licensure. The pass-rates for 2007-2008 for Arkansas Tech University teacher candidates were 100 percent on the assessments of basic skills, professional knowledge, and academic content knowledge. The average pass-rates for programs in the state were also 100 percent.

Teacher candidates spend an average of 405 hours in the classroom during internship; and the average faculty-teacher candidate ratio in supervised practice teaching is 5.0. All programs are approved by the Arkansas Department of Education. The teacher education program at Tech is not designated by the State of Arkansas as a low-performing program.



## Department of Curriculum and Instruction

[Back to College of Education](#)

Dr. David Bell, Head  
Crabaugh Hall, Room 210  
(479) 968-0392  
[dbell@atu.edu](mailto:dbell@atu.edu)

**Professors:**  
Bell, Clary, Paxton,  
Rollans, Sheets,  
D. Underwood, Womack

**Associate Professors:**  
Carter, Costley,  
V. C. Smith, C. Zimmer

**Assistant Professors:**  
Callaway, Crawford,  
Leggett, Stephenson

The Department of Curriculum and Instruction offers programs leading to a degree and/or licensure in three areas: Early Childhood Education (Pre-K- Grade Four), Middle Level Education (Grade Four-Grade Eight), and Secondary Education (Grade Seven-Grade Twelve).

### Early Childhood Education<sup>1</sup>

The Early Childhood Education program meets the needs of today's children building on the common core of knowledge, performance, and dispositions needed for early childhood professional educators.

There are three stages in the Bachelor of Science Early Childhood Degree program. Teacher candidates begin the first stage by taking general education requirements and are introduced to basic concepts, theory and practices in early childhood courses.

During the second stage teacher candidates complete general education requirements and take courses specifically designed to prepare them for the profession. Admission requires minimum scores as determined by the Arkansas State Board of Education on the Praxis I; a minimum cumulative grade point average of 2.50 on all college work attempted with no grade below "C" (including work from other colleges and universities); and beginning the development of a portfolio which must include a philosophy and documented evidence of observations of young children.

During the third stage of the early childhood program, teacher candidates are placed in an appropriate environment for their internship. Admission to this stage requires a minimum grade point average of 2.50 with no grade below "C" in all courses and a satisfactory score on the licensure exam as established by the Arkansas Department of Education. Teacher candidates should make application for admission to the internship for the spring semester by October 1, or the fall semester by March 1.

<sup>1</sup>Information regarding the Associate Degree in Early Childhood Education is listed under the College of Professional Studies and Community Outreach.

### Middle Level Education

The Middle Childhood/Early Adolescence degree exists to provide quality preservice educational programs and services in preparation for teaching grades 4-8. The program prepares and nurtures interdisciplinary teachers who reflect content knowledge as well as facilitate creative talents.

The program is designed around a conceptual framework which organizes learning expectations and experience into manageable discipline-specific strands including: professional and pedagogical knowledge, knowledge of the student, developmentally appropriate and effective practices, knowledge of integrated disciplines, global and cultural perspectives, technology, and a liberal arts and science background. The teaching candidate entering the middle-level program must complete an integrated math/science or English/social studies curriculum.

The first stage of the middle level program is a pre-professional program and admission to this stage does not constitute approval for admission to the professional program in teacher education. Stage II is the professional stage of the preparation program. Teacher candidates must satisfactorily complete the requirements of the first stage, have a cumulative grade point average of 2.50 on all coursework, completion of English composition courses, an oral communication course, a college-level mathematics course, and completion of **MLED 2003** with grades of "C" or higher. Competence in oral and written grammar will be assessed. Teacher candidates must submit scores on Praxis I (PPST) that meet or exceed the levels established by the Arkansas Department of Education.

After satisfying all of the requirements at this level, the teacher candidate will apply for internship. Admission to internship requires completion of all professional education courses, senior standing, satisfactory completion of all prerequisites listed in the course descriptions, a minimum grade of "C" in all courses with a cumulative grade point average of 2.50, and the minimum score on the licensure examination as required by the Arkansas Department of Education.

Teacher candidates should make application for admission to the internship for the spring semester by October 1 or for the fall semester by March 1. Teacher candidates must present scores on the appropriate licensure examination as directed by the Arkansas Department of Education.

### Secondary Education

The secondary education curriculum is designed to prepare teacher candidates for teaching careers at the junior high school and senior high school levels. Teacher candidates completing the NCATE approved program in secondary education will qualify for licensure in an area appropriate to their major field. The program recognizes three important components in the education of a prospective teacher: a strong general education, an in-depth knowledge in a selected teaching field, and a knowledge of the school, adolescents, and the teaching-learning process.

The unit's conceptual framework is Professionals for the Future. The framework emphasizes the concepts of teacher as instructional leader, reflective decision-maker, and problem solver who has knowledge of the teacher candidate, a strong content and pedagogical knowledge, a commitment to their profession, and a desire to continue their development.

Teacher candidates preparing to teach in secondary schools must complete the courses required for specialization in the appropriate curriculum, see "[Curriculum in Secondary Education](#)".

Teacher candidates desiring entrance to the teacher education program in secondary education should apply for admission to Stage II during the second semester of their sophomore year. Teacher candidates who are admitted to Stage II of the teacher education program for secondary teachers enroll jointly in course work for their degree specialization and course work in the Department of

Curriculum and Instruction. For example, teacher candidates planning to teach mathematics enroll in the math department and the Department of Curriculum and Instruction. The requirements of both departments must be satisfied.

Teacher candidates should make application for admission to internship for the spring semester by October 1 and for the fall semester by March 1. Teacher candidates must present scores on the Praxis II specialty area test equal to or greater than the state-established level in order to be approved for internship. Any questions concerning internship placement should be addressed to the Director of Teacher Education Student Services located in Crabaugh 109.

Professional requirements for the secondary education program include **SEED 2002; SEED 3702, SEED 4503, SEED(VOBE) 4556, and SEED 4809 or 4909**. **SEED 2002, SEED 3702 and SEED 4556** must be completed prior to internship. Secondary teacher education candidates enrolling in internship should register for **SEED 4503** and either **SEED 4809 or SEED 4909**. In addition to the course requirements specified, the state also requires that the applicants for an Arkansas teaching license supply a copy of his/her score on the Praxis II (Principles of Learning and Teaching, if applicable and Specialty Area Tests) and the criminal background check as required by Act 1310. The Specialty Area Test is required for entry into internship. The Principles of Learning and Teaching, if applicable, may be completed during internship (see "[Requirements for Teacher Licensure](#)").

#### **Internship**

Internship is the capstone of the teacher preparation program. Placements are the responsibility of the College of Education and are selected on the basis of providing the best experience available for the teacher candidate.

The assignments require full day experiences for the semester. Teacher candidates should make plans with these requirements in mind.

#### **Praxis II**

All candidates for licensure must meet minimum scores as required by Arkansas Department of Education on the Principles of Learning and Teaching, if applicable and the appropriate specialty area test.

Please refer to "[Requirements for Baccalaureate Degrees](#)".

### **Curriculum in Early Childhood Education**

**Bachelor of Science Degree**

#### **Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
MATH 1113 <sup>3,T</sup>	3 MATH 2033 <sup>T</sup>	3 MATH 2043 <sup>T</sup>	3 ECED 3023 <sup>2,T</sup> 3
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HIST 2003 or 2013 <sup>T</sup>	3 ECED 3033 <sup>2</sup> 3
BIOL 1014 <sup>T</sup>	4 PHSC 1013 & 1021 <sup>T</sup>	4 POLS 2003 <sup>T</sup>	3 GEOL 1004 <sup>T</sup> 4
SOC 1003 or PSY 2003 <sup>T</sup>	3 PE 2513 <sup>T</sup>	3 GEOG 2013 <sup>T</sup>	3 Fine Arts <sup>1,T</sup> 3
HLED 1513 <sup>T</sup>	3 SPH 2003 <sup>T</sup>	3 ECED 2001 <sup>2,T</sup> ECED 2002 <sup>2,T</sup>	1 EDMD 3013 <sup>T</sup> 3 2 Physical Activity <sup>1,T</sup> 1
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ECED 3043 <sup>2</sup>	3 ECED 3162 <sup>2</sup>	2 ECED 3262 <sup>2</sup>	2 ECED 4915 15
ECED 3053 <sup>2</sup>	3 ECED 3172 <sup>2</sup>	2 ECED 3272 <sup>2</sup>	
HIST 2153 <sup>T</sup>	3 ECED 3183 <sup>2</sup>	3 ECED 3283 <sup>2</sup>	
Humanities <sup>1,T</sup>	3 ECED 3192 <sup>2</sup>	2 ECED 3292 <sup>2</sup>	
BIOL 3213 or PHSC 3213	3 ECED 3113 <sup>2</sup> ECED 3122 <sup>2</sup> MATH 3033 <sup>2</sup>	3 ECED 3213 <sup>2</sup> ECED 3222 <sup>2</sup> Physical Activity <sup>1,T</sup>	3 2 1
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>

#### **Degree Completion Plan Beginning in Spring Semester**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
MATH 1113 <sup>3,T</sup>	3 MATH 2033 <sup>T</sup>	3 MATH 2043 <sup>T</sup>	3 ECED 3023 <sup>2,T</sup> 3
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HIST 2003 or 2013 <sup>T</sup>	3 ECED 3033 <sup>2</sup> 3
BIOL 1014 <sup>T</sup>	4 PHSC 1013 & 1021 <sup>T</sup>	4 POLS 2003 <sup>T</sup>	3 GEOL 1004 <sup>T</sup> 4
SOC 1003 or PSY 2003 <sup>T</sup>	3 PE 2513 <sup>T</sup>	3 GEOG 2013 <sup>T</sup>	3 Fine Arts <sup>1,T</sup> 3
HLED 1513 <sup>T</sup>	3 SPH 2003 <sup>T</sup>	3 ECED 2001 <sup>2,T</sup> ECED 2002 <sup>2,T</sup>	1 EDMD 3013 <sup>T</sup> 3 2 Physical Activity <sup>1,T</sup> 1
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
ECED 3043 <sup>2</sup>	3 ECED 3162 <sup>2</sup>	2 ECED 3262 <sup>2</sup>	2 ECED 4915 15
ECED 3053 <sup>2</sup>	3 ECED 3172 <sup>2</sup>	2 ECED 3272 <sup>2</sup>	
HIST 2153 <sup>T</sup>	3 ECED 3183 <sup>2</sup>	3 ECED 3283 <sup>2</sup>	
Humanities <sup>1,T</sup>	3 ECED 3192 <sup>2</sup>	2 ECED 3292 <sup>2</sup>	
BIOL 3213 or PHSC 3213	3 ECED 3113 <sup>2</sup>	3 ECED 3213 <sup>2</sup>	

Curriculum in Early Childhood Education					
Bachelor of Science Degree					
	ECED 3122 <sup>2</sup>	2	ECED 3222 <sup>2</sup>	2	
	MATH 3033 <sup>2</sup>	3	Physical Activity <sup>1,T</sup>	1	
Total Hours	15 Total Hours		17 Total Hours	15 Total Hours	15

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Must be taken concurrently.

<sup>3</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Middle Level Education					
Curriculum in Mathematics and Science Licensure					
Degree Completion Plan Beginning in Fall Semester					
Freshman			Sophomore		
Fall	Spring		Fall	Spring	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3	HIST 2003 or 2013 <sup>T</sup>	3	MATH 2043 <sup>T</sup>
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3	Fine Arts <sup>1,T</sup>	3	MATH Elective <sup>2,T</sup>
BIOL 1114 or 2124 <sup>T</sup>	4 BIOL 2134 <sup>T</sup>	4	GEOL 1004 or 1014 <sup>T</sup>	4	Physical Activity <sup>1,T</sup>
MATH 1113 <sup>3,T</sup>	3 MATH 1203 <sup>T</sup>	3	MATH 2033 <sup>T</sup>	3	CHEM 1114 <sup>T</sup>
POLS 2003 <sup>T</sup>	3 MLED 2003 <sup>T</sup>	3	Physical Activity <sup>1,T</sup>	1	SPH 2003 or 3083 <sup>T</sup>
Total Hours	16 Total Hours	16	Total Hours	14	Total Hours
Junior			Senior		
Fall	Spring		Fall	Spring	
Humanities <sup>1,T</sup>	3 PHYS 1114 <sup>T</sup>	4	BIOL/PHSC 3223	3	MLED 4912
MATH 2163 <sup>T</sup>	3 MATH 2243 or 2914	3-4	MATH 3033	3	
MLED 3012	2 MLED 3041	1	ENGL 4703	3	
MLED 3024	4 MLED 3062	2	MLED 4004	4	
MLED 3034	4 MLED 3072	2	MLED 4023	3	
MLED 3102	2 HIST 2153 <sup>T</sup>	3			
Total Hours	18 Total Hours	15-16	Total Hours	16	Total Hours
Degree Completion Plan Beginning in Spring Semester					
Freshman			Sophomore		
Spring	Fall		Spring	Fall	
SPH 2003 or 3083 <sup>T</sup>	3 ENGL 1023 <sup>1,T</sup>	3	EDMD 3013 <sup>T</sup>	3	MLED 3012
ENGL 1013 <sup>1,T</sup>	3 HIST 1503 <sup>T</sup>	3	HIST 2003 or 2013 <sup>T</sup>	3	MLED 3024
BIOL 1114 or 2124 <sup>T</sup>	4 MATH 1203 <sup>T</sup>	3	Fine Arts <sup>1,T</sup>	3	MLED 3034
MLED 2003	3 POLS 2003 <sup>T</sup>	3	GEOL 1004 or 1014 <sup>T</sup>	4	MLED 3102
MATH 1113 <sup>3,T</sup>	3 HIST 1513 <sup>T</sup>	3	MATH 2033 <sup>T</sup>	3	MATH 2043 <sup>T</sup>
	BIOL 2134 <sup>T</sup>	4			
Total Hours	16 Total Hours	19	Total Hours	16	Total Hours
Junior			Senior		
Spring	Fall		Spring	Fall	
MLED 3041	1 MLED 4004	4	PHYS 1114 <sup>T</sup>	4	MLED 4912
MLED 3062	2 MLED 4023	3	HIST 2153 <sup>T</sup>	3	
MLED 3072	2 Humanities <sup>1,T</sup>	3	MATH 2243 or 2914	3-4	
CHEM 1114 <sup>T</sup>	4 MATH 2163 <sup>T</sup>	3	BIOL/PHSC 3223	3	
MATH Elective <sup>2,T</sup>	3 MATH 3033	3	ENGL 4703	3	
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1			
Total Hours	13 Total Hours	17	Total Hours	16-17 Total Hours	12

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirement](#)".

<sup>2</sup> MATH electives may not be MATH 1003 or 1103.

<sup>3</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Middle Level Education					
Curriculum in English Language Arts/Social Studies Licensure					
Degree Completion Plan Beginning in Fall Semester					
Freshman			Sophomore		
Fall	Spring		Fall	Spring	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3	HIST 2003 <sup>T</sup>	3	HIST 2013 <sup>T</sup>
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3	Fine Arts <sup>1,T</sup>	3	Humanities <sup>1,T</sup>
Biological Science <sup>1,T</sup>	4 Physical Science <sup>1,T</sup>	4	GEOL 1004 or 1014 <sup>T</sup>	4	POLS 2003 <sup>T</sup>

Curriculum in Middle Level Education						
Curriculum in English Language Arts/Social Studies Licensure						
Degree Completion Plan Beginning in Fall Semester						
MATH 1113 <sup>2,T</sup>	3	MATH 2033 <sup>T</sup>	3	SPH 2003 or 3083 <sup>T</sup>	3	ENGL 2043 <sup>T</sup>
GEOG 2013 <sup>T</sup>	3	MLED 2003 <sup>T</sup>	3	ECON 2003 <sup>T</sup>	3	EDMD 3013 <sup>T</sup>
Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>	1			
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>
<b>Junior</b>			<b>Senior</b>			
<b>Fall</b>		<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	
ENGL 4703	3	ENGL 2063	3	ENGL 3013	3	MLED 4912
MLED 3012	2	HIST/POLS Elective <sup>T</sup>	3	ENGL 3323	3	
MLED 3024	4	MLED 3041	1	HIST 2153 <sup>T</sup>	3	
MLED 3034	4	MLED 3062	2	MLED 4004	4	
MLED 3102	2	MLED 3072	2	Elective <sup>T</sup>	2	
				HIST/POLS Elective <sup>T</sup>	3	
				MLED 4023	3	
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>
Degree Completion Plan Beginning in Spring Semester						
<b>Freshman</b>		<b>Sophomore</b>				
<b>Spring</b>		<b>Fall</b>	<b>Spring</b>		<b>Fall</b>	
MLED 2003 <sup>T</sup>	3	Physical Science <sup>1,T</sup>	4	EDMD 3013 <sup>T</sup>	3	MLED 3012
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	GEOG 2013 <sup>T</sup>	3	MLED 3024
MATH 1113 <sup>2,T</sup>	3	HIST 1503 <sup>T</sup>	3	HIST 2003 <sup>T</sup>	3	MLED 3034
SPH 2003 or 3083 <sup>T</sup>	3	HIST 1513 <sup>T</sup>	3	Fine Arts <sup>1,T</sup>	3	MLED 3102
Biological Science <sup>1,T</sup>	4	MATH 2033 <sup>T</sup>	3	GEOL 1004 or 1014 <sup>T</sup>	4	HIST 2013 <sup>T</sup>
				Physical Activity <sup>1,T</sup>	1	Humanities <sup>1</sup>
				Physical Activity <sup>1,T</sup>	1	3
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>
<b>Junior</b>		<b>Senior</b>				
<b>Spring</b>		<b>Fall</b>	<b>Spring</b>		<b>Fall</b>	
ENGL 2063	3	MLED 4004	4	HIST/POLS Elective <sup>T</sup>	3	MLED 4912
MLED 3041	1	MLED 4023	3	ENGL 3013	3	
MLED 3062	2	ECON 2003 <sup>T</sup>	3	HIST 2153 <sup>T</sup>	3	
MLED 3072	2	HIST/POLS Elective <sup>T</sup>	3	Elective <sup>T</sup>	2	
POLS 2003 <sup>T</sup>	3	ENGL 3323	3			
ENGL 2043 <sup>T</sup>	3					
ENGL 4703	3					
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>11</b>	<b>Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Curriculum in Secondary Education

**Curriculum in Art****Bachelor of Arts for Teacher Licensure<sup>2</sup>****Suggested Sequence of Courses**

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ART 2113 <sup>T</sup>	3 ART 2303 <sup>T</sup>
Social Sciences <sup>1,T</sup>	3 ART 2103 <sup>T</sup>	3 ART 2413 <sup>T</sup>	3 Art Elective (3000-4000)
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3 ART 2123 <sup>T</sup>
ART 1303 <sup>T</sup>	3 ART 1503	3 Science with Lab <sup>1,T</sup>	4 SPH 2003 or 3083
ART 1403 <sup>T</sup>	3 ART 2403 <sup>T</sup>	3 SEED 2002	2 Physical Activity <sup>1,T</sup>
		Humanities <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>18 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
ART 3603	3 ART 4823	3 ART 3013	3 ART 4701
ART 3003	3 Art Elective (3000-4000)	3 ART 3803	3 SEED 4503
ART 2703	3 Social Sciences <sup>1,T</sup>	3 Art Elective (3000-4000)	3 SEED 4809
ART 3403 or 3533	3 SEED 3552	2 SEED 4556	6
Art History (3000-4000)	3 SEED 4052	2	
	SEED 3702	2	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>
			13

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)"<sup>2</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Curriculum in Business Education****For Teacher Licensure<sup>3</sup>****Degree Completion Plan Beginning in Fall Semester**

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>
BUAD 1023 <sup>T</sup>	3 BUAD 2043 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>
BUAD 1003 <sup>T</sup>	3 Science with Lab <sup>1,T</sup>	4 MGMT 2013	3 BLAW 2033 <sup>T</sup>
BUAD 2003 <sup>T</sup>	3 POLS 2003 <sup>T</sup>	3 SPH 2003, 2173, or 3083 <sup>T</sup>	3 BUAD 2053 <sup>T</sup>
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>T</sup>	3 SEED 2002	2 HIST 1903 <sup>1,T</sup>
		Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
MGMT 3003	3 VLOBE 4023	3 FIN 3063	3 VLOBE 4701
MKT 3043	3 MGMT 3103	3 SEED 4556	6 SEED 4503
Fine Art/Humanities <sup>1,T</sup>	3 Fine Art/Humanities <sup>1,T</sup>	3 MGMT 4013	3 SEED 4809/4909
ANTH 2003	3 Science with Lab <sup>1,T</sup>	4 MGMT 4083	3
BUAD 3023	3 SEED 3552	2	
SEED 3702	2 SEED 4052	2	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>
			13

**Degree Completion Plan Beginning in Spring Semester**

Freshman		Sophomore	
Spring	Fall	Spring	Fall
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ACCT 2003 <sup>T</sup>	3 ACCT 2013 <sup>T</sup>
BUAD 2043 <sup>T</sup>	3 BUAD 1023 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 ECON 2013 <sup>T</sup>
BUAD 1003 <sup>T</sup>	3 Science with Lab <sup>1,T</sup>	4 MGMT 2013	3 BUAD 2053 <sup>T</sup>
BUAD 2003 <sup>T</sup>	3 POLS 2003 <sup>T</sup>	3 BLAW 2033 <sup>T</sup>	3 SPH 2003, 2173, or 3083 <sup>T</sup>
MATH 1113 <sup>2,T</sup>	3 MATH 2223 <sup>T</sup>	3 HIST 1903 <sup>1,T</sup>	3 SEED 2002
		Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Spring	Fall	Spring	Fall
MGMT 3003	3 BUAD 3023	3 FIN 3063	3 VLOBE 4701
MKT 3043	3 MGMT 3103	3 SEED 4556	6 SEED 4503
Fine Art/Humanities <sup>1,T</sup>	3 Fine Art/Humanities <sup>1,T</sup>	3 MGMT 4013	3 SEED 4809/4909
ANTH 2003	3 Science with Lab <sup>1,T</sup>	4 MGMT 4083	3
VLOBE 4023	3 SEED 3552	2	
SEED 3702	2 SEED 4052	2	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>
			13

**Curriculum in Business Education****For Teacher Licensure<sup>3</sup>**<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>Students who have two years of high school algebra with a grade of "C" or better and a math ACT score of 22 or above may omit College Algebra and enroll directly in **MATH 2223**, Quantitative Business Analysis. If omitted, an additional 3 hours of electives will be required.<sup>3</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Curriculum in Creative Writing****For Teacher Licensure<sup>4</sup>****Degree Completion Plan Beginning in Fall Semester**

Freshman			Sophomore		
Fall	Spring	Fall	Spring	Fall	Spring
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>ENGL 2043<sup>T</sup></b>	3 <b>ENGL 2003<sup>T</sup></b>	3	
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3	
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 ENGL 3023	3	
Physical Activity <sup>1,T</sup>	2 SPH 2003 or 3083 <sup>T</sup>	3 ENGL 2063	3 Fine Arts <sup>1,T</sup>	3	
Beg. Foreign Lang I <sup>2,T</sup>	4 Beg. Foreign Lang II <sup>2,T</sup>	4 Elective <sup>T</sup>	3 SEED 2002	2	
			ENGL 3043	3	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
ENGL 3313 <sup>T</sup>	3 ENGL 3323 <sup>T</sup>	3 ENGL 4093	3 SEED 4503	3	
ENGL 3413	3 ENGL 3423	3 ENGL Elective <sup>3</sup>	3 SEED 4909	9	
ENGL 3093	3 ENGL 3083	3 ENGL 4733	3		
SEED 4052	2 ENGL 3013	3 SEED 4556	6		
SEED 3702 or EDMD 3013	2-3 ENGL 4813	3			
Elective	2-1				
SEED 3552	2				
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>12 Total Hours</b>	

**Degree Completion Plan Beginning in Spring Semester**

Freshman			Sophomore		
Spring	Fall	Spring	Fall	Spring	Fall
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>ENGL 2043<sup>T</sup></b>	3 <b>ENGL 3313<sup>T</sup></b>	3	
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 ENGL 3023	3	
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 ENGL 2003 <sup>T</sup>	3	
Physical Activity <sup>1,T</sup>	2 Beg. Foreign Lang I <sup>2,T</sup>	4 Beg. Foreign Lang II <sup>2,T</sup>	4 Elective <sup>T</sup>	3	
Fine Arts <sup>1,T</sup>	3 SPH 2003 or 3083 <sup>T</sup>	3 ENGL 2063	3 ENGL 3043	3	
			SEED 2002	2	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>	
<b>Junior</b>		<b>Senior</b>			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
ENGL 3323 <sup>T</sup>	3 ENGL 3413	3 ENGL 3423	3 SEED 4503	3	
ENGL 3013	3 ENGL 3093	3 ENGL Elective <sup>3</sup>	3 SEED 4909	9	
ENGL 3083	3 ENGL 4093	3 ENGL 4813	3		
Elective	2-1 ENGL 4733	3 SEED 4556	6		
Social Sciences <sup>1,T</sup>	3 SEED 3552	2			
SEED 3702 or EDMD 3013	2-3 SEED 4052	2			
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>12 Total Hours</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>All minimum college hours (at least three semesters) should be in one language. Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.<sup>3</sup>Any 2-4000 level English courses excluding English 2003, 2013, 2173, 2881, and 4881-4.<sup>4</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university**Curriculum in English****For Teacher Licensure<sup>5</sup>****Degree Completion Plan Beginning in Fall Semester**

Freshman			Sophomore		
Fall	Spring	Fall	Spring	Fall	Spring
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>ENGL 2063</b>	3 <b>ENGL 3023</b>	3	
Social Sciences <sup>1,T</sup>	3				

Curriculum in English For Teacher Licensure <sup>5</sup>							
Mathematics <sup>1,T</sup>	3	Science with Lab <sup>1,T</sup>	4	Science with Lab <sup>1,T</sup>	4	English Elective <sup>3</sup>	3
Physical Activity <sup>1,T</sup>	2	Beg. Foreign Lang.II <sup>2,T</sup>	4	ENGL 2003 <sup>T</sup>	3	Fine Arts <sup>1,T</sup>	3
Beg. Foreign Lang I <sup>2,T</sup>	4	SPH 2003 or 3083 <sup>T</sup>	3	Elective <sup>4,T</sup>	3	SEED 2002	2
						Elective <sup>4,T</sup>	3
Total Hours	15	Total Hours	17	Total Hours	16	Total Hours	17
Junior		Spring		Senior		Spring	
Fall				Fall			
ENGL 3313 <sup>T</sup>	3	ENGL 3323 <sup>T</sup>	3	ENGL 4013	3	SEED 4503	3
ENGL 3413	3	ENGL 3423	3	ENGL (3000-4000)	3	SEED 4909	9
English Elective <sup>3</sup>	6	ENGL 3013	3	ENGL 4733	3		
SEED 3702 or EDMD 3013	2-3	SEED 3552	2	SEED 4556	6		
Elective <sup>4</sup>	2-1	SEED 4052	2				
		Elective <sup>4</sup>	3				
Total Hours	16	Total Hours	16	Total Hours	15	Total Hours	12
Degree Completion Plan Beginning in Spring Semester							
Freshman		Sophomore					
Spring		Fall		Spring		Fall	
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	ENGL 2063	3	ENGL 3313 <sup>T</sup>	3
Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	ENGL 3023	3
Mathematics <sup>1,T</sup>	3	Science with Lab <sup>1,T</sup>	4	Science with Lab <sup>1,T</sup>	4	Elective <sup>4,T</sup>	3
Physical Activity <sup>1,T</sup>	1	Beg. Foreign Lang I <sup>2,T</sup>	4	Beg. Foreign Lang II <sup>2,T</sup>	4	Social Sciences <sup>1,T</sup>	3
Fine Arts <sup>1,T</sup>	3	SPH 2003 or 3083 <sup>T</sup>	3	ENGL 2003 <sup>T</sup>	3	SEED 2002	2
Elective <sup>4,T</sup>	3					Physical Activity <sup>1,T</sup>	1
Total Hours	16	Total Hours	17	Total Hours	17	Total Hours	15
Junior		Senior		Spring		Fall	
Spring		Fall					
ENGL 3323 <sup>T</sup>	3	ENGL 3413	3	ENGL 3423	3	SEED 4503	3
ENGL 3013	3	ENGL 4013	3	English Elective <sup>3</sup>	3	SEED 4909	9
English Elective <sup>3</sup>	6	ENGL 4733	3	English (3000-4000)	3		
SEED 3702 or EDMD 3013	2-3	SEED 3552	2	SEED 4556	6		
Elective <sup>4</sup>	2-1	SEED 4052	2				
		Elective <sup>4</sup>	3				
Total Hours	16	Total Hours	16	Total Hours	15	Total Hours	12

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".<sup>2</sup>All minimum college hours (at least three semesters) should be in one language. Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination<sup>3</sup>Any 2-4000 level English courses excluding English 2003, 2013, 2173, 2881, and 4881-4.<sup>4</sup>At least 40 of the 124 hours required for graduation must be earned in 3000-4000 level courses.<sup>5</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

Curriculum in Foreign Language with Concentration in French For Teacher Licensure <sup>2,6,8</sup>							
Suggested Sequence of Courses							
Freshman		Spring		Sophomore		Spring	
Fall				Fall			
BIOL 1014 <sup>1</sup>	4	ENGL 1023 <sup>1,5</sup>	3	POLS 2003	3	Physical Activity <sup>1</sup>	2
ENGL 1013 <sup>1,5</sup>	3	PHSC 1013 & 1021 <sup>1</sup>	4	FR 3003	3	ANTH 2003	3
FR 2014 <sup>2,3</sup>	4	FR 2024 <sup>2,3</sup>	4	FR 3023	3	FR 3013	3
AMST 2003 <sup>1</sup>	3	HIST 2003 <sup>1</sup>	3	Elective <sup>4</sup>	3	Elective <sup>4</sup>	6
MATH 1113 <sup>5,7</sup>	3			SPH 2003 or 3083	3	SEED 2002	2
Total Hours	17	Total Hours	14	Total Hours	15	Total Hours	16
Junior		Spring		Senior		Spring	
Fall				Fall			
FR 3113	3	ENGL 2003 or 2013	3	FR 4213	3	FR 4701	1
FR 3223	3	FR 3213	3	FR 4703	3	SEED 4503	3
Elective <sup>4</sup>	3	Elective <sup>4</sup>	3	Elective <sup>4</sup>	1	SEED 4909	9
SEED 3552	2	FR 4223	3	SEED 4556	6		
SEED 4052	2	FR 3143 or 3163	3	FR 4003	3		
ART 2123/MUS 2003/TH 2273 <sup>1</sup>	3	SEED 3702	2				
Total Hours	16	Total Hours	17	Total Hours	16	Total Hours	13

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".<sup>2</sup>Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.<sup>3</sup>Lab attendance is required for beginning and intermediate foreign language courses.

**Curriculum in Foreign Language with Concentration in French  
For Teacher Licensure<sup>2,6,8</sup>**

<sup>4</sup>At least 40 of the total hours required for graduation must be 3000 or 4000 level.

<sup>5</sup>Students must complete course with a grade of C or better.

<sup>6</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.

<sup>7</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra

<sup>8</sup>An oral proficiency level of Advanced Low, as demonstrated by a score on the ACTFL Oral Proficiency Interview, will be required of all foreign language education majors for admission to the internship.

**Curriculum in Foreign Language with Concentration in German  
For Teacher Licensure<sup>2,6,8</sup>**

**Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
BIOL 1014 <sup>1</sup>	4 ENGL 1023 <sup>1,5</sup>	3 POLS 2003	3 Physical Activity <sup>1</sup> 2
ENGL 1013 <sup>1,5</sup>	3 PHSC 1013 & 1021 <sup>1</sup>	4 GER 3003	3 ANTH 2003 3
GER 2014 <sup>2,3</sup>	4 GER 2024 <sup>2,3</sup>	4 GER 3023	3 GER 3013 3
AMST 2003 <sup>1</sup>	3 HIST 2003 <sup>1</sup>	3 Elective <sup>4</sup>	3 Elective <sup>4</sup> 6
MATH 1113 <sup>5,7</sup>	3	SPH 2003 or 3083	3 SEED 2002 2
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>14 Total Hours</b>	<b>15 Total Hours</b> <b>16</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
GER 3113	3 ENGL 2003 or 2013	3 GER 4213	3 GER 4701 1
GER 3223	3 GER 3213	3 GER 4703	3 SEED 4503 3
Elective <sup>4</sup>	3 Elective <sup>4</sup>	3 Elective <sup>4</sup>	1 SEED 4909 9
SEED 3552	2 GER 4223	3 SEED 4556	6
SEED 4052	2 GER 3143 or 3163	3 GER 4003	3
ART 2123/MUS 2003/TH 2273 <sup>1</sup>	3 SEED 3702	2	
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b> <b>13</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.

<sup>3</sup>Lab attendance is required for beginning and intermediate foreign language courses.

<sup>4</sup>At least 40 of the total hours required for graduation must be 3000 or 4000 level.

<sup>5</sup>Students must complete course with a grade of C or better.

<sup>6</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.

<sup>7</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra

<sup>8</sup>An oral proficiency level of Advanced Low, as demonstrated by a score on the ACTFL Oral Proficiency Interview, will be required of all foreign language education majors for admission to the internship.

**Curriculum in Foreign Language with Concentration in Spanish  
For Teacher Licensure<sup>2,6,8</sup>**

**Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
BIOL 1014 <sup>1</sup>	4 ENGL 1023 <sup>1,5</sup>	3 POLS 2003	3 Physical Activity <sup>1</sup> 2
ENGL 1013 <sup>1,5</sup>	3 PHSC 1013 & 1021 <sup>1</sup>	3 SPAN 3003	3 ANTH 2003 3
SPAN 2014 <sup>2,3</sup>	4 SPAN 2024 <sup>2,3</sup>	4 SPAN 3023	3 SPAN 3013 3
AMST 2003 <sup>1</sup>	3 HIST 2003 <sup>1</sup>	3 Elective <sup>4</sup>	4 Elective <sup>4</sup> 6
MATH 1113 <sup>5,7</sup>	3 SEED 2002	2 SEED 3702	2 ART 2123/ MUS 2003/TH 2273 <sup>1</sup>
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b> <b>17</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
SPAN 3123 or 3133	3 SPAN 3213	3 SPAN 4213	3 SPAN 4701 1
SPAN 3223	3 SPAN 4223	3 SPAN 4703	3 SEED 4503 3
Elective <sup>4</sup>	3 SPAN 3143 or 3163	3 SPAN 4023	3 SEED 4909 9
SEED 3552	2		
SEED 4052	2 SEED 4556	6 SPH 2003 or 3083	3
ENGL 2003 or 2013	3	SPAN 4003	3
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b> <b>13</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Students with previous study in a foreign language should refer to Foreign Language Advanced Placement and Credit under Credit by Examination.

<sup>3</sup>Lab attendance is required for beginning and intermediate foreign language courses.

<sup>4</sup>At least 40 of the total hours required for graduation must be 3000 or 4000 level.

<sup>5</sup>Students must complete course with a grade of C or better.

<sup>6</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and

**Curriculum in Foreign Language with Concentration in Spanish  
For Teacher Licensure<sup>2,6,8</sup>**

Teaching Tests as determined by the Arkansas Department of Education.

<sup>7</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra

<sup>8</sup>An oral proficiency level of Advanced Low, as demonstrated by a score on the ACTFL Oral Proficiency Interview, will be required of all foreign language education majors for admission to the internship.

**Curriculum in Social Studies  
For Teacher Licensure<sup>3</sup>**

**Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HIST 2003 <sup>T</sup>	3 HIST 2013 <sup>T</sup> 3
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 POLS 2003 <sup>T</sup>	3 HIST/POLS Elective 3
Science (BIOL 1014) <sup>1,T</sup>	4 Science (PHSC 1013) <sup>1,T</sup>	3 PSY 2003 <sup>T</sup>	3 ECON 2003 <sup>T</sup> 3
Mathematics (1003 or 1113) <sup>1,T</sup>	3 Science (PHSC 1021) <sup>1,T</sup>	1 ANTH 2003 <sup>T</sup>	3 GEOG Elective <sup>T</sup> 3
Physical Activity <sup>1,T</sup>	2 SOC 1003 <sup>T</sup> ECON 2013 <sup>T</sup>	3 GEOG 2013 <sup>T</sup>	3 SPH 2003 or 3083 3 SEED 2002 2
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b> 17
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
POLS 3033	3 HIST 4153	3 HIST/POLS 4963	3 SEED 4909 9
HIST/POLS Elective (3000-4000 level)	3 HIST/POLS Elective (3000-4000 level)	3 HIST/POLS Elective (3000-4000 level)	3 SEED 4503 3
SEED 3702	2 SEED 3552	2 SEED 4556	6
PHIL 2003 <sup>T</sup>	3 SEED 4052	2 Elective	3
HIST/POLS Elective (3000-4000 level)	3 Fine Arts <sup>1,T</sup>	3 Physical Activity <sup>1</sup>	1
HIST 4713	3 Elective	3	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b> 12

**Degree Completion Plan Beginning in Spring Semester**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HIST 2003 <sup>T</sup>	3 HIST 2013 <sup>T</sup> 3
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 POLS 2003 <sup>T</sup>	3 HIST/POLS Elective 3
Science (BIOL 1014) <sup>1,T</sup>	4 Science (PHSC 1013) <sup>1,T</sup>	3 PSY 2003 <sup>T</sup>	3 ECON 2003 <sup>T</sup> 3
Mathematics (1003 or 1113) <sup>1,T</sup>	3 Science (PHSC 1021) <sup>1,T</sup>	1 ANTH 2003 <sup>T</sup>	3 GEOG Elective <sup>T</sup> 3
Physical Activity <sup>1,T</sup>	2 SOC 1003 <sup>T</sup> ECON 2013 <sup>T</sup>	3 GEOG 2013 <sup>T</sup>	3 SPH 2003 or 3083 3 SEED 2002 2
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b> 17
<b>Junior</b>		<b>Senior</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
POLS 3033	3 HIST 4153	3 HIST/POLS 4963	3 SEED 4909 9
HIST/POLS Elective (3000-4000 level)	3 HIST/POLS Elective (3000-4000 level)	3 HIST/POLS Elective (3000-4000 level)	3 SEED 4503 3
SEED 3702	2 SEED 3552	2 SEED 4556	6
PHIL 2003 <sup>T</sup>	3 SEED 4052	2 Elective	3
HIST/POLS Elective (3000-4000 level)	3 Fine Arts <sup>1,T</sup>	3 Physical Activity <sup>1</sup>	1
Elective	3 HIST 4713	3	
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b> 12

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Twelve hours of history must be in U.S. History, including HIST 2003 and HIST 4153.

<sup>3</sup>For licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

**Curriculum in Mathematics  
For Teacher Licensure<sup>2</sup>**

**Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MATH 2934 <sup>T</sup>	4 MATH 3243 3
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 MATH 3003	3 MATH 3123 3
BIOL 1014 <sup>1,T</sup>	4 MATH 2703	3 COMS 2803 & 1 hr elect or COMS 2104 <sup>T</sup>	4 ANTH 2003 <sup>T</sup> 3
Social Sciences <sup>1,T</sup>	3 HLED 1513 <sup>T</sup>	3 PHYS 2114 <sup>T</sup>	4 PHYS 2124 <sup>T</sup> 4
Physical Activity <sup>1,T</sup>	1 Social Sciences <sup>1,T</sup>	3 SEED 2002	2 Fine Arts <sup>1,T</sup> 3

Curriculum in Mathematics For Teacher Licensure <sup>2</sup>					
Total Hours	Physical Activity <sup>1,T</sup>	1	17 Total Hours	17 Total Hours	16
Junior			Senior		
Fall	Spring		Fall		Spring
MATH 3153	3 MATH 3203	3	MATH 4772	2 SEED 4503	3
Humanities <sup>1,T</sup>	3 MATH 4123	3	MATH 4033	3 SEED 4909	9
SPH 2003 or 3083 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>	3	MATH 4113		3
MATH 4003	3 SEED 3702	2	SEED 4556		6
SEED 3552	2 MATH 4703	3			
SEED 4052	2 Elective <sup>T</sup>	3			
Total Hours	16 Total Hours	17 Total Hours		14 Total Hours	12
Degree Completion Plan Beginning in Spring Semester					
Freshman		Sophomore			
Spring	Fall	Spring		Fall	
MATH 2914 <sup>T</sup>	4 MATH 2924	4 MATH 2934		4 MATH 3243	3
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 COMS 2803 &1 hr elect or COMS 2104 <sup>T</sup>	4 MATH 3003	3	
BIOL 1014 <sup>1,T</sup>	4 HLED 1513 <sup>T</sup>	3 MATH 2703	3 PHYS 2114 <sup>T</sup>	4	
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 SEED 2002	2 Humanities <sup>1,T</sup>	3	
Physical Activity <sup>1,T</sup>	1 Fine Arts <sup>1,T</sup>	3 ANTH 2003 <sup>T</sup>	3 Elective <sup>T</sup>	3	
	Physical Activity <sup>1,T</sup>	1			
Total Hours	15 Total Hours	17 Total Hours		16 Total Hours	16
Junior		Senior			
Spring	Fall	Spring		Fall	
MATH 3123	3 MATH 4113	3 MATH 3203		3 SEED 4503	3
MATH 4703	3 MATH 4033	3 MATH 4123		3 SEED 4909	9
PHYS 2124 <sup>T</sup>	4 MATH 4003	3 SEED 4556			
MATH 4772	2 Social Sciences <sup>1,T</sup>	3 MATH 3153			
SEED 3552	2 SPH 2003 or 3083 <sup>T</sup>	3			
SEED 4052	2 SEED 3702	2			
Total Hours	16 Total Hours	17 Total Hours		15 Total Hours	12

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

Curriculum in Music Education For Teacher Licensure <sup>8</sup> (Instrumental Music Option)					
Suggested Sequence of Courses					
Freshman	Spring	Sophomore		Spring	
Fall		Fall			
MUS 1000	0 MUS 1000	0 MUS 1000		0 MUS 1000	0
MUS 1_2 <sup>9,T</sup>	2 MUS 1_2 <sup>9,T</sup>	2 MUS 1_2 <sup>9</sup>		2 MUS 1_2 <sup>9,T</sup>	2
MUS 1441 or 1201 <sup>2,T</sup>	1 MUS 1441 or 1201 <sup>2,T</sup>	1 MUS 1441 or 1201 <sup>2,T</sup>		1 MUS 1441 or 1201 <sup>2,T</sup>	1
MUS 1501 <sup>T</sup>	1 MUS 1501 <sup>T</sup>	1 MUS 1501 <sup>T</sup>		1 Piano Exit Exam	0
MUS 1713 <sup>T</sup>	3 MUS 1723	3 MUS 2713		3 MUS 1501 <sup>T</sup>	1
MUS 1731 <sup>T</sup>	1 MUS 1741	1 MUS 2731		1 MUS 2723	3
MUS 2441 <sup>T</sup>	1 ENGL 1023 <sup>1,T</sup>	3 MUS 3401		1 MUS 2741	1
ENGL 1013 <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>		3 MUS 3481	1
Mathematics <sup>1,T</sup>	3	SPH 2003 or 3083 <sup>T</sup>		3 Physical Activity <sup>1,T</sup>	1
		Physical Activity <sup>1,T</sup>		1 Science with Lab <sup>1,T</sup>	4
Total Hours	15 Total Hours	15 Total Hours		SEED 2002 <sup>T</sup>	2
Junior		Senior		Soph Barrier Jury <sup>3</sup>	0
Fall	Spring	Fall			
MUS 3000	0 MUS 3000	0 MUS 3_2 <sup>9</sup>		2 SEED 4556 <sup>5</sup>	6
MUS 3_2 <sup>9</sup>	2 MUS 3_2 <sup>9</sup>	2 MUS 3501		1 MUS 4281	1
MUS 3501	1 MUS 3501	1 MUS 3692		2 MUS 4701	1
MUS 3773	3 MUS 3783	3 MUS 3853 <sup>4</sup>		3 MUS 4001	1
MUS 3802	2 MUS 3762	2 SEED 3552 <sup>5</sup>		2 Social Sciences <sup>1,T</sup>	3
MUS 3421	1 MUS 3281	1 SEED 4052 <sup>5</sup>		2 Fine Arts <sup>1,6,T</sup>	3
MUS 4712	2 MUS 3431	1 Humanities <sup>1,T</sup>			
MUS 4461	1 MUS 3702	2			
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3			
Total Hours	15 Total Hours	15 Total Hours		15 Total Hours	15

**Curriculum in Music Education For Teacher Licensure<sup>8</sup>  
(Instrumental Music Option)**

Suggested Sequence of Courses

**Senior 9th Semester****Fall**

SEED 4503	3
SEED 4809 <sup>7,8</sup>	9
<b>Total Hours</b>	<b>12</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Piano (**MUS 1441** or **MUS 1201**) to be taken each semester until successful completion of Piano Exit Exam.

<sup>3</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion for all music degrees.

<sup>4</sup>Prerequisite: successful completion of Piano Exit Exam.

<sup>5</sup>Prerequisite: admission to Stage II.

<sup>6</sup>**MUS 2003** may not be used to fulfill Fine Arts requirement.

<sup>7</sup>See admission policy and procedure.

<sup>8</sup>For licensure, students must pass the Praxis II music specialty and Principles of Learning and Teaching exam.

<sup>9</sup>See course descriptions for the appropriate applied music course number.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

**Curriculum in Music Education For Teacher Licensure<sup>8</sup>  
(Vocal Music Option)**

Suggested Sequence of Courses

**Freshman****Fall****Spring**

MUS 1000	0	MUS 1000	0	MUS 1000	0
MUS 1232 <sup>T</sup>	2	MUS 1232 <sup>T</sup>	2	MUS 1232 <sup>T</sup>	2
MUS 1441 or 1201 <sup>2,T</sup>	1	MUS 1441 or 1201 <sup>2,T</sup>	1	MUS 1441 or 1201 <sup>2,T</sup>	1
MUS 1571, 1581 or 1681 <sup>T</sup>	1	MUS 1571, 1581 or 1681 <sup>T</sup>	1	MUS 1571, 1581 or 1681 <sup>T</sup>	1
MUS 1713 <sup>T</sup>	3	MUS 1723 <sup>T</sup>	3	MUS 2241	1
MUS 1731 <sup>T</sup>	1	MUS 1741	1	MUS 2713	3
ENGL 1013 <sup>1,T</sup>	3	MUS 1241	1	MUS 2731	1
Mathematics <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	Science with Lab <sup>1,T</sup>	4
Physical Activity <sup>1,T</sup>	1	Social Sciences <sup>1,T</sup>	3	MUS 2741	1

**Total Hours****15 Total Hours****Junior****Fall****Spring**

MUS 3000	0	MUS 3000	0	MUS 3232	2
MUS 3232	2	MUS 3232	2	MUS 3571, 3581 or 3681	1
MUS 3571, 3581 or 3681	1	MUS 3571, 3581 or 3681	1	MUS 3692	2
MUS 3773	3	MUS 3783	3	MUS 3853 <sup>4</sup>	3
MUS 4712	2	MUS 3762	2	MUS 3441	1
MUS 3802	2	MUS 4821	1	SEED 3552 <sup>5</sup>	2
MUS 3821	1	Social Sciences <sup>1,T</sup>	6	SEED 4052 <sup>5</sup>	2
MUS 3702	2			Humanities <sup>1</sup>	2
SPH 2003 or 3083 <sup>T</sup>	3				

**Total Hours****16 Total Hours****Senior 9th Semester****Fall**

SEED 4503	3
SEED 4809 <sup>7,8</sup>	9
<b>Total Hours</b>	<b>12</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Piano (**MUS 1441** or **MUS 1201**) to be taken each semester until successful completion of Piano Exit Exam.

<sup>3</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion for all music degrees.

<sup>4</sup>Prerequisite: successful completion of Piano Exit Exam.

<sup>5</sup>Prerequisite: admission to Stage II.

<sup>6</sup>**MUS 2003** may not be used to fulfill Fine Arts requirement.

<sup>7</sup>See admission policy and procedure.

<sup>8</sup>For licensure, students must pass the Praxis II music specialty and Principles of Learning and Teaching exam.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

**Curriculum in Music Education for Teacher Licensure<sup>8</sup>  
(Keyboard Vocal Music Option)**

Suggested Sequence of Courses

**Freshman****Sophomore**

**Curriculum in Music Education for Teacher Licensure<sup>8</sup>  
(Keyboard Vocal Music Option)**

**Suggested Sequence of Courses**

Fall	Spring	Fall	Spring
MUS 1000	0 MUS 1000	0 MUS 1000	0 MUS 1000
MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>
MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1231 <sup>T</sup>	1 MUS 1231
MUS 1713 <sup>T</sup>	3 MUS 1723	3 MUS 1571, 1581 or 1681 <sup>T</sup>	1 MUS 1571, 1581 or 1681 <sup>T</sup>
MUS 1731 <sup>T</sup>	1 MUS 1741	1 MUS 2713	3 MUS 2201
MUS 2441 <sup>T</sup>	1 MUS 1231	1 MUS 2731	1 MUS 2723
ENGL 1013 <sup>1,T</sup>	3 MUS 2201	1 Science with Lab <sup>1,T</sup>	4 MUS 2741
Mathematics <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 SPH 2003 or 3083 <sup>T</sup>
Physical Activity <sup>1,T</sup>	1 Science with Lab <sup>1,T</sup>	4 Physical Activity <sup>1,T</sup>	1 SEED 2002 <sup>T</sup>
			Sophomore Barrier Jury <sup>2</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
MUS 3000	0 MUS 3000	0 MUS 3202	2 MUS 4001
MUS 3202	2 MUS 3202	2 MUS 3571, 3581 or 3681	1 MUS 3762
MUS 3571, 3581 or 3681	1 MUS 3571, 3581 or 3681	1 MUS 3692	2 MUS 3442
MUS 1231	1 MUS 3783	3 MUS 3853	3 SEED 4556 <sup>5</sup>
MUS 3773	3 MUS 3702	2 MUS 3441	1 Social Sciences <sup>1,T</sup>
MUS 4712	2 MUS 4821	1 SEED 3552 <sup>5</sup>	2 MUS 4701
MUS 3802	2 Social Sciences <sup>1,T</sup>	3 SEED 4052 <sup>5</sup>	
MUS 3821	1 Fine Arts <sup>1,4,T</sup>	3 Humanities <sup>1,T</sup>	
Social Sciences <sup>1,T</sup>	3		
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>
<b>Senior 9th Semester</b>			
Fall			
SEED 4503	3		
SEED 4809 <sup>5,6</sup>	9		
<b>Total Hours</b>	<b>12</b>		

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion for all music degrees.

<sup>3</sup>Prerequisite: admission to Stage II.

<sup>4</sup>MUS 2003 may not be used to fulfill Fine Arts requirement.

<sup>5</sup>See admission policy and procedure.

<sup>6</sup>For licensure, students must pass the Praxis II specialty and Principles of Learning and Teaching exam.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

**Curriculum in Music Education for Teacher Licensure<sup>6</sup>  
(Keyboard Instrumental Music Option)**

**Suggested Sequence of Courses**

Freshman		Sophomore	
Fall	Spring	Fall	Spring
MUS 1000	0 MUS 1000	0 MUS 1000	0 MUS 1000
MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>	2 MUS 1202 <sup>T</sup>
MUS 1501 <sup>T</sup>	1 MUS 1501 <sup>T</sup>	1 MUS 1501 <sup>T</sup>	1 MUS 1501 <sup>T</sup>
MUS 1713 <sup>T</sup>	3 MUS 1723	3 MUS 2713	3 MUS 2723
MUS 1731 <sup>T</sup>	1 MUS 1741 <sup>T</sup>	1 MUS 2731	1 MUS 2741
MUS 2441 <sup>T</sup>	1 MUS 2201 <sup>T</sup>	1 MUS 3401	1 MUS 2201
ENGL 1013 <sup>1</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 MUS 3481
Mathematics <sup>1,T</sup>	3 Science with Lab <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3 SPH 2003 or SPH 3083 <sup>T</sup>
Physical Activity <sup>1</sup>	1		Physical Activity <sup>1,T</sup>
			SEED 2002 <sup>T</sup>
			Sophomore Barrier Jury <sup>2</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
Fall	Spring	Fall	Spring
MUS 3000	0 MUS 3000	0 MUS 3202	2 MUS 4001
MUS 3202	2 MUS 3202	2 MUS 3501	1 MUS 3762
MUS 3501	1 MUS 3501	1 MUS 3692	2 MUS 4281
MUS 3773	3 MUS 3783	3 MUS 3853	3 MUS 4701
MUS 3421	1 MUS 3431	1 SEED 3552 <sup>5</sup>	2 MUS 3442
MUS 4712	2 MUS 3281	1 SEED 4052 <sup>5</sup>	2 SEED 4556 <sup>5</sup>
MUS 3802	2 MUS 4461	1 Humanities <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
MUS 3702	2 Fine Arts <sup>1,4,T</sup>	3	

**Curriculum in Music Education for Teacher Licensure<sup>6</sup>  
(Keyboard Instrumental Music Option)**

Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3		
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>
Senior 9th Semester					
<b>Fall</b>					
SEED 4503	3				
SEED 4809 <sup>5,6</sup>	9				
<b>Total Hours</b>	<b>12</b>				

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Required for enrollment in upper-level applied study for two-hour credit and for completion of all music degrees.

<sup>3</sup>Prerequisite: admission to Stage II.

<sup>4</sup>MUS 2003 may not be used to fulfill Fine Arts requirement.

<sup>5</sup>See admission policy and procedure.

<sup>6</sup> For licensure, students must pass the Praxis II specialty and Principles of Learning and Teaching exam.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

**Curriculum in Life Science and Earth Science  
For Teacher Licensure<sup>2</sup>**

**Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
ENGL 1013 <sup>1</sup>	3 ENGL 1023 <sup>1</sup>	3 MATH 2163	3 BIOL 3114		4
CHEM 2124	4 BIOL 2124 or 2134	4 BIOL 2124 or 2134	4 PHYS 2024		4
BIOL 1114	4 CHEM 2134	4 GEOL 1014	4 POLS 2003		3
MATH 1113 <sup>3</sup>	3 HIST 2003 or 2013	3 PHYS 2014	4 ANTH 2003		3
Physical Activity <sup>1</sup>	1 Physical Activity <sup>1</sup>	1 SEED 2002	2 Fine Art/Humanities <sup>1</sup>		3
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>		<b>17</b>
<b>Sophomore Summer</b>					
SPH 2003 or 3083	3				
<b>Total Hours</b>	<b>3</b>				
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
PHSC 3053	3 PHSC 3033	3 Fine Art/Humanities <sup>1</sup>	3 SEED 4503		3
BIOL 3124 or 3034	4 BIOL 3034 or 3174	4 BIOL 3054 or 4033	3-4 SEED 4909		9
CHEM 3254	4 BIOL 3252	2 BIOL 3233	3 BIOL 4701		1
MATH 2243	3 Social Sciences <sup>1</sup>	3 BIOL 4891	1		
SEED 3702	2 SEED 3552	2 SEED 4556	6		
	SEED 4052	2			
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16-17 Total Hours</b>		<b>13</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>For teacher licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.

<sup>3</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra.

**Curriculum in Physical Science and Earth Science  
For Teacher Licensure<sup>2</sup>**

**Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
PHSC 1001	1 BIOL 1114	4 MATH 2924	4 GEOL 2024		4
ENGL 1013 <sup>1</sup>	3 ENGL 1023 <sup>1</sup>	3 PHYS 2014 or PHYS 2114 and PHYS 2000	4 PHYS 2024 or PHYS 2124 and PHYS 2010		4
MATH 1914	4 MATH 2914	4 CHEM 3254	4 CHEM 2143		3
CHEM 2124	4 CHEM 2134	4 SEED 2002	2 SPH 3083		3
GEOL 1014	4 Physical Activity <sup>1</sup>	1 HIST 2003 or 2013	3 Physical Activity <sup>1</sup>		1
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>		<b>15</b>
<b>Junior</b>					
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
PHYS 3042	2 POLS 2003	3 SEED 3552	2 SEED 4909		9
PHSC 3053	3 PHSC 3033	3 SEED 4052	2 SEED 4503		3
GEOL 3153	3 COMS 2003 or 2803	3 SEED 4556	6 PHSC 4701		1
Fine Arts <sup>1</sup>	3 Humanities <sup>1</sup>	3 PHSC 3233	3		
Social Sciences <sup>1</sup>	3 SEED 3702	2 ANTH 2003	3		
PHYS 3213	3 PHSC 3252	2			
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>		<b>13</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>					

**Curriculum in Physical Science and Earth Science  
For Teacher Licensure<sup>2</sup>**

<b>Freshman</b>		<b>Sophomore</b>			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
ENGL 1013 <sup>1</sup>	3 GEOL 1014	4 SEED 2002	2 PHYS 2014 or PHYS 2114 and PHYS 2000	4	
MATH 1914	4 ENGL 1023 <sup>1</sup>	3 CHEM 2134	4 CHEM 3254	4	
Social Sciences <sup>1</sup>	3 MATH 2914	4 MATH 2924	4 SPH 3083	3	
Physical Activity <sup>1</sup>	1 CHEM 2124	4 COMS 2003 or 2803	3 HIST 2003 or 2013	3	
BIOL 1114	4 PHSC 1001	1 GEOL 2024	4 SEED 3702	2	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>16</b>	
<b>Junior</b>		<b>Senior</b>			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
PHYS 2024 or PHYS 2114 and PHYS 2000	4 PHSC 3053	3 POLS 2003	3 SEED 4909	9	
CHEM 2143	3 PHYS 3042	2 PHSC 3033	3 SEED 4503	3	
ANTH 2003	3 PHSC 3233	3 SEED 3552	2 PHSC 4701	1	
PHSC 3252	2 Humanities <sup>1</sup>	3 SEED 4052	2		
Fine Arts <sup>1</sup>	3 PHYS 3213	3 SEED 4556	6		
Physical Activity <sup>1</sup>	1 GEOL 3153	3			
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>16 Total Hours</b>	<b>13</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>For licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.

**Curriculum in Speech  
For Teacher Licensure<sup>2</sup>**

Suggested Sequence of Courses

<b>Freshman</b>		<b>Sophomore</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Physical Science <sup>1,T</sup>	4 SPH 2013	3	
HIST 1503 <sup>T</sup>	3 HIST 1513 <sup>T</sup>	3 POLS 2003 <sup>T</sup>	3 JOUR 2133	3	
MATH 1003 <sup>1,T</sup>	3 BIOL 1014 <sup>1,T</sup>	4 SEED 2002	2 Elective <sup>3,T</sup>	10	
SPH 1003	3 SPH 2003 <sup>T</sup>	3 TH 2703	3 SPH/TH Elective <sup>3</sup>	1	
HLED 1513	3 Physical Activity <sup>1,T</sup>	1 SPH 3073	3		
Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>	1		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>17</b>	
<b>Junior</b>		<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
SPH 3063	3 Humanities <sup>1</sup>	3 SPH 3123	3 SPH 4701	1	
TH 3513	3 Fine Arts <sup>1</sup>	3 SEED 4556	6 SEED 4503	3	
SPH 2111	1 SPH 2121	1 TH 4263 or 4273	3 SEED 4909	9	
ANTH 2003	3 TH 3803	3 Elective	6		
SEED 3552	2 Elective	5			
SEED 4052	2				
SEED 3702	2				
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>18 Total Hours</b>	<b>13</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>For licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning and Teaching Tests as determined by the Arkansas Department of Education.

<sup>3</sup>Certain electives and social sciences are recommended based on student's emphasis.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university



## COURSE CATALOGS

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### Department of Health and Physical Education

[Back to College of Education](#)

Dr. M. Annette Holeyfield,  
Head  
J.W. Hull Physical  
Education Building, Room  
110  
(479) 968-0344  
aholeyfield@atu.edu

**Professors:**  
Holeyfield, S. Jackson

**Assistant Professors:**

Hanna, Kirkpatrick

**Instructors:**

Bayer, Choi, Davis,  
Dawson, Downey,  
Pacheco Filho, Reed,  
Wallace

The Department of Health and Physical Education has a nationally accredited (NASPE) program that is a part of the University core curriculum and the College of Education professional preparation program curricula designed to serve the students, faculty and staff of Arkansas Tech University.

Following are the NASPE standards:

1. Scientific and Theoretical Knowledge--Physical education teacher candidates know and apply discipline-specific scientific and theoretical concepts critical to the development of physically educated individuals.
2. Skill and Fitness Based Competence--Physical education teacher candidates are physically educated individuals with the knowledge and skills necessary to demonstrate competent movement performance and health enhancing fitness as delineated in the NASPE K-12 Standards.
3. Planning and Implementation--Physical education teacher candidates plan and implement a variety of developmentally appropriate learning experiences and content aligned with local, state, and national standards to develop physically educated individuals.
4. Instructional Delivery and Management--Physical education teacher candidates use effective communication and pedagogical skills and strategies to enhance student engagement and learning.
5. Impact on Student Learning--Physical education teacher candidates utilize assessments and reflection to foster student learning and inform instructional decisions.
6. Professionalism--Physical education teacher candidates demonstrate dispositions essential to becoming effective professionals.

The programs in the Department of Health and Physical Education are designed to prepare students for lifelong growth in the physical, intellectual, cultural, emotional and social dimensions. These goals and objectives are met through the qualified faculty's presentation of research-based information, utilizing the latest technology.

The Department of Health and Physical Education offers the following degree tracks:

1. Wellness/Fitness Programs: This track serves students who want to pursue professional preparation in the broad area of Wellness and Fitness Programs. This would include those students who desire to work in clinical based, commercial and/or corporate settings.
2. Health and Physical Education Teacher Licensure: This track serves students who want to teach K-12 Health and Physical Education, with a coaching license.

#### Driver Education Program

The driver education program has been designed to serve individuals preparing to be driver and traffic education teachers. Additional information about this summer program may be obtained by calling 968-0344.

#### Curriculum in Health and Physical Education (Including Teacher Licensure Requirements)<sup>2</sup>

**Degree Completion Plan Beginning in Fall Semester**

Freshman		Spring		Sophomore	
Fall	Total Hours	Fall	Total Hours	Fall	Total Hours
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	HIST 1903 <sup>1,T</sup>	3
BIOL 1014 <sup>1,T</sup>	4	PHSC 1004 <sup>1,T</sup>	4	Social Sciences <sup>1,T</sup>	3
MATH 1113 <sup>4,T</sup>	3	GEOG 2013 <sup>1,T</sup>	3	SPH 2003 or 3083 <sup>T</sup>	3
HLED 1513 <sup>T</sup>	3	PE 2513 <sup>T</sup>	3	PE 2653 <sup>T</sup>	3
PE 1201	1	PE 2111	1	PE 3101	1
COMS 1003 or Equivalent <sup>T</sup>	3	WS 1002 <sup>T</sup>	2	PE 2101	1
				PE 2523 <sup>T</sup>	3
				PE 3051	1
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>17</b>
Junior		Spring		Spring	
Fall	Total Hours	Fall	Total Hours	Fall	Total Hours
PE 3103	3	PE 3583	3	PE 4203	3
PE 3413	3	PE 3603	3	PE 4523	3
PE 3573	3	PE 3512, 3522, or 3532	2	HLED 4303	3
PE 4033	3	SEED 3552	2	SEED 4556	6
SEED 3702	2	SEED 4052	2		
HLED 4403 <sup>T</sup>	3	PE 4513	3		
		HLED 3203	3		
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>	<b>15</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>					
Freshman	Spring	Fall	Sophomore	Spring	Fall

Curriculum in Health and Physical Education (Including Teacher Licensure Requirements) <sup>2</sup>						
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	HIST 1903 <sup>1,T</sup>	3	ART 2123 <sup>1,T</sup>
BIOL 1014 <sup>1,T</sup>	4	PE 2653 <sup>T</sup>	3	Social Sciences <sup>1,T</sup>	3	ANTH 2003 <sup>T</sup>
MATH 1113 <sup>4,T</sup>	3	GEOG 2013 <sup>1,T</sup>	3	SPH 2003 or 3083 <sup>T</sup>	3	ENGL 2003 <sup>1,T</sup>
HLED 1513 <sup>T</sup>	3	PE 2513 <sup>T</sup>	3	PHSC 1004 <sup>1,T</sup>	4	PE 3661
PE 1201	1	PE 2101	1	PE 3663	3	PE 3101
COMS 1003 or equivalent <sup>T</sup>	3	WS 1002 <sup>T</sup>	2	PE 2111	1	SEED 2002 <sup>T</sup>
				PE 3051	1	PE 2523 <sup>T</sup>
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>
<b>Junior</b>		<b>Fall</b>		<b>Senior</b>		<b>Fall</b>
<b>Spring</b>				<b>Spring</b>		
PE 3103	3	PE 3583	3	PE 4203	3	SEED 4503
HLED 4303	3	PE 3413	3	PE 3603	3	PE 4701
PE 4513	3	PE 4033	3	PE 3573	3	SEED 4809 <sup>3</sup>
SEED 3552	2	PE 3512, 3522 or 3532	2	SEED 4556	6	
SEED 4052	2	PE 4523	3			
SEED 3702	2	HLED 4403 <sup>T</sup>	3			
HLED 3203	3					
<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>For licensure, students must achieve the minimum score on the Praxis II Specialty Area and Principles of Learning Teaching Tests as determined by the Arkansas Department of Education.

<sup>3</sup>Three semester hours of the student teaching requirement must be completed at the elementary or middle school level, below the ninth grade, where the cooperative teacher is certified in Elementary Physical Education OR student must complete a three-semester-hour internship under direct supervision from the staff of the University's Physical Education Department.

<sup>4</sup>Any higher level Mathematics course may be substituted for MATH 1113, College Algebra.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Selected Second Teaching Fields

Students are encouraged to meet at least minimal licensure requirements in a second field of teaching in addition to their major field of study.

Licensure requirements in Driver Education are as follows: Hold or be qualified to hold a standard secondary certificate; Driver Education I, two semester hours; Driver Education II, two semester hours; First Aid, two semester hours. Total of 6 semester hours.

### Wellness and Fitness Programs Option

There are three levels in the Wellness/Fitness program. Students begin the first level by taking general education requirements and are introduced to basic concepts of the wellness/fitness program in PE 1201, Orientation to Health, Physical Education, and Wellness Science and WS 1002, Physical Wellness and Fitness.

During the second level, students complete general education requirements and take courses specific to the wellness profession. Admission to level two requires completion of PE 1201, WS 1002, ENGL 1013, ENGL 1023, MATH 1113, BIOL 1014, and SPH 2173 with a grade of C or better.

The third level is the internship stage of the program. Admission to this level requires completion of all content area courses (HLED, PE, & WS) with a grade of "C" or better and a cumulative GPA of 2.00 or better.

Curriculum in Health and Physical Education (Wellness and Fitness Programs Option)						
Degree Completion Plan Beginning in Fall Semester						
Freshman		Spring	Fall		Spring	
Fall						
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	HIST 1903 <sup>1,T</sup>	3	ART 2123 <sup>1,T</sup>
BIOL 1014 <sup>1,T</sup>	4	PHSC 1004 <sup>1,T</sup>	4	PE 2513 <sup>T</sup>	3	Social Sciences <sup>1,T</sup>
COMS 1003 or Equivalent <sup>T</sup>	3	SOC 1003 <sup>1,T</sup>	3	PE 2653 <sup>T</sup>	3	ENGL 2003 <sup>1,T</sup>
MATH 1113 <sup>1,T</sup>	3	SPH 2173 <sup>T</sup>	3	PE 2523 <sup>T</sup>	3	PE 3663
HLED 1513 <sup>T</sup>	3	WS 1002 <sup>T</sup>	2	WS 2031	1	PE 3661
PE 1201	1			PE 2861	1	ECON 2003 <sup>T</sup>
				WS 2003	3	
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>
<b>Junior</b>		<b>Spring</b>		<b>Senior</b>		<b>Spring</b>
<b>Fall</b>				<b>Fall</b>		
PE 3573	3	HLED 3203	3	Elective <sup>T</sup>	3	WS 4012
PE 4033	3	WS 2081	1	WS 4063	3	
WS 2043	3	WS 3023	3	JOUR 1163, 2133, or 2143	3	
WS 2091	1	PE 4103	3	WS 4003	3	
AHS 2013	3	WS 3003	3	HLED 4403 <sup>T</sup>	3	
MGMT 3003	3	MKT 3043	3			
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>

**Curriculum in Health and Physical Education  
(Wellness and Fitness Programs Option)**

Degree Completion Plan Beginning in Spring Semester

<b>Freshman</b>		<b>Sophomore</b>			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 HIST 1903 <sup>1,T</sup>	3 PE 2523 <sup>T</sup>	3	3
Biol 1014 <sup>1,T</sup>	4 PE 2653 <sup>T</sup>	3 PHSC 1004 <sup>1,T</sup>	4 WS 2003	3	3
COMS 1003 or Equivalent <sup>T</sup>	3 SOC 1003 <sup>1,T</sup>	3 PE 2513 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>	3	3
MATH 1113 <sup>1,T</sup>	3 SPH 2173 <sup>T</sup>	3 WS 2031	1 WS 2043	3	3
HLED 1513 <sup>T</sup>	3 WS 1002 <sup>T</sup>	2 ART 2123 <sup>1,T</sup>	3 PE 3661	1	1
PE 1201	1 PE 2861	1 PE 3663	3 ECON 2003 <sup>T</sup>	3	3
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>16</b>	
<b>Junior</b>					
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
PE 3573	3 ENGL 2003 <sup>1</sup>	3 Elective <sup>T</sup>	3 WS 4012	12	
WS 2091	1 PE 4033	3 MKT 3043	3		
AHS 2013	3 MGMT 3003	3 JOUR 1163, 2133, or 2143	3		
HLED 3203	3 WS 2081	1 PE 4103	3		
WS 3023	3 HLED 4403 <sup>T</sup>	3 WS 4003	3		
WS 3003	3 WS 4063	3			
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>12</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

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**COURSE CATALOGS**[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)**College of Natural and Health Sciences** 

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Dean  
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The College of Natural and Health Sciences is subdivided into four administrative units: the Departments of Biological Science, Mathematics, Nursing, and Physical Science. These departments offer a variety of major programs leading to baccalaureate and associate degrees. The College also serves a special role in providing the principal curricular needs of students seeking to enter professional schools of medicine, dentistry, medical technology, optometry, pharmacy, chiropractic, and others. A secondary service is that of contributing to the general education of those students majoring outside of the College of Natural and Health Sciences.

Students earning degrees in the College of Natural and Health Sciences are in a particularly enviable position. Their undergraduate education makes them eligible to compete for immediate employment in a variety of professional positions or for entry into graduate school. The College of Natural and Health Sciences offers programs of study leading to baccalaureate and associate degrees as listed below:

**Bachelor of Science**

Biology, with General, Environmental and Biomedical options  
Chemistry with A.C.S. approved General, Professional, Environmental, and Biochemistry options  
Engineering Physics  
Fisheries and Wildlife Science  
Geology with Professional, Petroleum, and Environmental options  
Health Information Management  
Mathematics  
Medical Technology  
Physical Science with General, Physics, and Nuclear Physics options

**Bachelor of Science in Nursing**

Nursing

**Associate of Applied Science**

Medical Assistant

**Environmental Science Options**

Three environmental science degree options are available as follows: B.S. in biology-environmental option, B.S. in chemistry-environmental option, and B.S. in geology-environmental option. The student interested in environmental science should choose the program that best suits his or her interest based on background, competencies, and career objectives. Arkansas Tech University's location in the Arkansas River Valley between the Ouachita and Ozark mountains is ideally suited to environmental programs. With the diversity of ecosystems and geological formations found, the area serves as an outdoor laboratory encompassing habitats that range from wetland and riparian ecosystems to upland coniferous and mountaintop deciduous forests. Swamps, streams, rivers, and lakes dot the landscape. Geological formations ranging in age from Ordovician to Pennsylvanian are within easy field trip distance from the University. Crop farming, hog and poultry production, a nuclear-powered electricity generating plant, coal strip mining, urban centers, and a multi-use national forest provide ample opportunities for studying the impact of modern society on ecosystems and the natural environment.

The employment opportunities in environmental science are good and projected to continue to increase. Graduates may find employment with environmental consulting companies, local, state, or federal governmental agencies, and private companies that have significant environmental impact. Environmental scientists are involved in the following types of studies: environmental impact analysis, pollution assessment and control, solid waste landfill location and management, ecosystem analysis, surface and groundwater resources, and air quality, and many others. The student interested in a specific environmental science curriculum should refer to the appropriate section of this book. For example, the B.S. in biology-environmental science option is listed with the other biology curricula.

**Pre-Professional Options**

Arkansas Tech University offers complete pre-professional education for students interested in medicine, dentistry, physical therapy, and pharmacy. Students who study at Arkansas Tech University are very successful at gaining entrance into these professional schools. Although the entrance requirements for medical schools reserve the ability to accept students meeting the minimum core courses, in practice students gaining admission will usually have completed a B.S. degree. Most of these students major either in biology or chemistry, but any field is acceptable as long as they complete specific courses required by their chosen professional school. The Biochemical Option of the Chemistry major and the Biomedical Option of the Biology major were specifically developed to serve these "Pre-med" students in addition to others with plans for post-graduate education. Faculty advisors in chemistry and biology are also available to guide students targeting a wide variety of other allied health sciences including optometry, radiology, dental hygiene, dental pharmacy, pharmacy technician, and others. Course schedules can be customized to meet pre-requisites specified by schools of the student's choice.

**Transfer Students**

Applicability of transfer credit to meet specific degree requirements depends on the major selected by the transfer student. The transfer student should review the Transfer Credit policy in the Admission section of this catalog and meet with their academic advisor to determine final transfer credit eligibility for the selected program of study.



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### Department of Biological Sciences

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Dr. Charles J. Gagen,  
Head  
McEver Hall, Room 34D  
(479) 968-0294  
cgagen@atu.edu

**Professors:**  
Gagen, Kellner,  
Kirkconnell, Nupp,  
Stoeckel, Wilkins

**Associate Professors:**  
Bowman, P. Cox,  
J. Jackson, G. Johnson,  
Lovely, Sparacino,  
Tedford, Yamashita

**Assistant Professors:**  
Chaney, Jacobs, Merle,  
Still, Webb

The Department of Biological Sciences offers baccalaureate degrees in a wide variety of majors and options. We also offer one minor and one associate degree. These different aspects of biological science and associated faculty are organized in the following program areas:

Biology Program:  
Biology major General option  
Biology major Biomedical option  
Biology major Environmental option  
Biology minor  
Fisheries and Wildlife Science Program  
Fisheries and Wildlife Science major  
Allied Health Sciences Programs  
    Health Information Management major  
    Medical Assistant major (Associate of Applied Science)  
    Medical Technology major

Students interested in teaching biology at the secondary level should follow the suggested curriculum in Life Science and Earth Science for Teacher Licensure as outlined under the teacher licensure curricula in the College of Education. A concentration in biology is also offered as part of the International Studies curricula in the College of Arts and Humanities.

Each of the bachelor of science degree programs offered by the department, with the exception of medical technology and teacher licensure curricula, requires a total of 124 hours for graduation. Except for Allied Health Science programs (AHS), which adhere to grade policies recommended by certifying associations, no more than 12 hours of "D's" may be applied toward the baccalaureate degrees listed above. Students in the Department of Biological Sciences, except for AHS program majors, are required to take a common core consisting of: an orientation course; **BIOL 1114**, Principles of Biology; **BIOL 2124**, Zoology; **BIOL 2134**, Botany; **BIOL 3034**, Genetics; an ecology course; a physiology course; and a seminar course. These same students are required to take **MATH 1113**, College Algebra, plus two additional math oriented courses above that level. Courses in computer science, chemistry, and physics are also required. The following descriptions of individual degree programs include specific descriptions and requirements.

Graduating seniors, except those in AHS programs, will be required to take the Major Field Assessment Test (MFAT) in Biology as part of the assessment plan for the department. Students will take the test during assessment week the semester of planned graduation.

**Biology Program**  
Dr. Bruce Tedford,  
Director McEver Hall,  
Room 209 (479) 968-0362  
btedford@atu.edu

The baccalaureate degree program in biology is designed to prepare students for a wide range of career opportunities. It also provides a solid foundation for those wanting to pursue specialization at the graduate level. Specific course requirements are outlined in the following curricula; whereas, more general guidelines are in the previous section.

Arkansas Tech University is affiliated with the Gulf Coast Research Laboratory (GCRL) at Ocean Springs, Mississippi. With prior departmental approval, Arkansas Tech University students may enroll in marine biology courses at GCRL, with the credits applied toward the biology degree at Arkansas Tech. This affiliation makes possible a concentration in marine biology.

The "General Option" is the most flexible and is recommended for students who do not wish to specialize in biomedical or environmental fields.

The "Biomedical Option" is designed for students wishing to study medicine, dentistry, physical therapy, and related fields of specialization. Thus, graduates typically apply to a medical school of some type or a graduate program such as physical therapy. However, while the specified curriculum is well-suited to these studies, professional schools do not specify that entering students have particular majors or options. Graduates who complete the degree option yet do not enter a medical or graduate school program should be prepared for a variety of employment opportunities especially in biomedical or biotechnology-related laboratories.

The "Environmental Option" is designed to cover the aspects of biology, chemistry, and earth science most applicable to employment, consultation, or graduate studies in environmental protection and remediation. Consequently, the overall curriculum and many of the individual courses are interdisciplinary. Furthermore, the program specifically provides opportunities for students to interact with others who are following the Environmental Option associated with Chemistry and Geology majors.

#### Curriculum in Biology (General Option)

##### Degree Completion Plan Beginning in Fall Semester

Fall	Freshman		Sophomore	
	Spring	Fall	Spring	Fall
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	Social Sciences <sup>1,T</sup>
<b>BIOL 1011</b>	1	<b>BIOL 2124 or 2134</b>	4	<b>BIOL 2124 or 2134</b>
<b>BIOL 1114</b>	4	Social Sciences <sup>1,T</sup>	3	<b>CHEM 2124<sup>T</sup></b>
<b>MATH 1113<sup>T</sup></b>	3	Any COMS <sup>T</sup>	3	Elective <sup>T</sup>
Social Sciences <sup>1,T</sup>	3	Physical Activity <sup>1,T</sup>	2	Math Elective <sup>2</sup>
<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>
		Junior		Senior

Curriculum in Biology (General Option)						
Degree Completion Plan Beginning in Fall Semester						
Fall	Spring		Fall	Spring		
Math Elective <sup>2</sup>	3	Elective <sup>5,T</sup>	4	Fine Art/Humanities <sup>1,T</sup>	3	Fine Art/Humanities <sup>1,T</sup>
PHYS 2014	4	PHYS 2024	4	Physiology or Cellular Elective <sup>4</sup>	3-4	Physiology or Cellular Elective <sup>4</sup>
CHEM 3254	4	CHEM 3264	4	Biology Elective <sup>5</sup>	3-4	BIOL 4891
BIOL 3114 <sup>3</sup>	4	Biology Elective (3000-4000 level)	4	Elective <sup>5,T</sup>	6	Elective <sup>4,T</sup>
						Biology Elective <sup>4</sup>
						3-4
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16-17</b>	<b>Total Hours</b>
Degree Completion Plan Beginning in Spring Semester						
Spring		Freshman		Sophomore		
Fall		Spring		Fall		
BIOL 1114	4	BIOL 1011	1	Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	BIOL 2124 or 2134	4	BIOL 3034
MATH 1113 <sup>T</sup>	3	BIOL 2124 or 2134	4	CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>
Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Elective <sup>T</sup>	3	Biology Elective <sup>T</sup>
Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>	1	Math Elective <sup>2</sup>	3	
		Any COMS <sup>T</sup>	3			
<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>
Spring		Junior		Senior		
Fall		Spring		Fall		
Math Elective <sup>2</sup>	3	Elective <sup>5,T</sup>	4	Fine Art/Humanities <sup>1,T</sup>	3	Fine Art/Humanities <sup>1,T</sup>
PHYS 2024	4	PHYS 2014	4	Physiology or Cellular Elective <sup>4</sup>	3-4	Physiology or Cellular Elective <sup>4</sup>
CHEM 3264	4	CHEM 3264	4	Biology Elective <sup>5</sup>	3-4	BIOL 4891
BIOL 3114 <sup>3</sup>	4	Biology Elective(3000-4000)	4	Elective <sup>5,T</sup>	6	Elective <sup>4,T</sup>
						Biology Elective <sup>4</sup>
						3-4
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16-17</b>	<b>Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Six hours of mathematics above MATH 1113 (courses in the areas of statistics and calculus or statistics and biostatistics (FW 3173) are recommended).

<sup>3</sup>Coastal Ecology (BIOL 4094) which is offered during the May mini-term can serve as an alternative to BIOL 3114 in the Biology major.

<sup>4</sup>The physiology choices include: Human Physiology (BIOL 3074), General Physiology (BIOL 3124), Physiological Ecology (BIOL 3174) Endocrinology (BIOL 4014); whereas, choices in the area of cell or molecular biology include: Cell Biology (BIOL 4033), Molecular Genetics (BIOL 4074), Microbiology (BIOL 3054), Immunology (BIOL 4023). One in each area is required. Other alternatives must be approved by your advisor and Department Head. Each 3-hour selection in one of these areas must be balanced by 4-hours (rather than 3-hours) of biology electives.

<sup>5</sup>Sufficient courses at 3000-4000 level to constitute a total of 40 hours.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Biology (Biomedical Option)						
Suggested Sequence of Courses						
Freshman			Sophomore			
Fall	Spring	Fall	Spring			
BIOL 1011	1	COMS Elective	3	CHEM 3254	4	CHEM 3264
BIOL 1114	4	BIOL 2124	4	BIOL 3074	4	BIOL 2134
ENGL 1013 <sup>1</sup>	3	ENGL 1023 <sup>1</sup>	3	SPH 1003 or ENGL 2053	3	SOC 1003 or PSY 2003
CHEM 2124	4	CHEM 2134	4	Social Sciences <sup>1</sup>	3	MATH 2914 or other MATH higher than 1113
MATH 1113 or MATH 1914	3-4	Physical Activity <sup>1</sup>	1	BIOL 2014	4	
Physical Activity <sup>1</sup>	1					
<b>Total Hours</b>	<b>16-17</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>
Junior			Senior			
Fall	Spring	Fall	Spring			
BIOL 3034	4	Statistics <sup>3</sup>	3	Elective <sup>6</sup>	3	Humanities Elective <sup>1</sup>
PHYS 2014	4	PHYS 2024	4	* Elective (see advisor to select two courses from each column below)		
Cellular Elective <sup>2</sup>	3-4	BIOL 3114 or BIOL 4094	4	12-16 Electives <sup>5</sup> (as needed to reach a total of 124 hours for graduation)		
				BIOL 4891		
				1		

**Curriculum in Biology  
(Biomedical Option)**

Social Sciences <sup>1</sup>	3	Social Sciences <sup>1</sup>	3				
Fine Arts Elective <sup>1</sup>	3						
<b>Total Hours</b>	<b>17-18</b>	<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>15-19</b>	<b>Total Hours</b>	
				*Select <sup>4</sup> six to eight hours from:		*Select <sup>4</sup> six to eight hours from:	
				BIOL 3054	4	BIOL 3024	4
				BIOL 4023	3	BIOL 3064	4
				BIOL 4033	3	BIOL 3803	3
				BIOL 4074	4	BIOL 4054	4
				CHEM 3344	4	BIOL 4083	3
				CHEM 3363	3	NUR 2303	3
				BIOL 4951-4	1-4	BIOL 4951-4	1-4

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Cellular electives include the first four courses listed in the left-hand column above..

<sup>3</sup>See advisor for alternatives.

<sup>4</sup>See catalog to assure pre-requisites are met.

<sup>5</sup>At least 40 of the total hours required for graduation must be 3000-4000 level courses.

<sup>6</sup>Select from [AHS 2013](#), [PE 2513](#), [PHIL 3103](#), [PSY 3063](#), [SOC 3173](#), or [SOC 4053](#).

**Curriculum in Biology  
(Environmental Option)**

**Degree Completion Plan Beginning in Fall Semester**

<b>Fall</b>	<b>Freshman</b>		<b>Sophomore</b>	
	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
<b>BIOL 1114<sup>T</sup></b>	4 <b>BIOL 2124</b>	4 <b>ECON 2003<sup>1,T</sup></b>	3 <b>BIOL 2134</b>	4 <b>BIOL 2134</b>
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>2,T</sup></b>	3 <b>POLS 2003<sup>1,T</sup></b>	3 <b>BIOL 2111</b>	1 <b>BIOL 2111</b>
<b>CHEM 2124<sup>T</sup> or BIOL 1004</b>	4 <b>CHEM 2134<sup>T</sup> or CHEM 2124</b>	4 <b>BIOL 1004 or CHEM 2134</b>	4 <b>CHEM 2143</b>	3 <b>CHEM 2143</b>
<b>MATH 1113<sup>T</sup></b>	3 <b>SOC 1003<sup>1,T</sup></b>	3 <b>Statistics or Computer Science<sup>2,T</sup></b>	3 <b>Statistics or Computer Science<sup>2,T</sup></b>	3 <b>Statistics or Computer Science<sup>2,T</sup></b>
<b>Physical Activity<sup>1,T</sup></b>	1 <b>Physical Activity<sup>1,T</sup></b>	1 <b>PHYS 2014<sup>T</sup></b>	4 <b>PHYS 2024<sup>T</sup></b>	4 <b>PHYS 2024<sup>T</sup></b>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>				
<b>Fall</b>	<b>Freshman</b>		<b>Sophomore</b>	
	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
<b>BIOL 3043 or CHEM 3353</b>	3 <b>ENGL 2053</b>	3 <b>CHEM 3353 or BIOL 3043</b>	3 <b>BIOL Elective (3000-4000 level)</b>	4 <b>BIOL Elective (3000-4000 level)</b>
<b>BIOL 3124</b>	4 <b>BIOL 3114</b>	4 <b>BIOL 3054</b>	4 <b>BIOL 4024</b>	4 <b>BIOL 4024</b>
<b>CHEM 3254</b>	4 <b>BIOL 3111</b>	1 <b>BIOL 3034</b>	4 <b>BIOL 4111</b>	1 <b>BIOL 4111</b>
<b>Social Sciences<sup>1,T</sup></b>	3 <b>CHEM 3264</b>	4 <b>Calculus<sup>3,T</sup></b>	3-4 <b>Elective<sup>4,T</sup></b>	3-4 <b>Elective<sup>4,T</sup></b>
<b>Elective<sup>4,T</sup></b>	3 <b>Fine Art/Humanities<sup>1,T</sup></b>	3 <b></b>	<b>Fine Art/Humanities<sup>1,T</sup></b>	3 <b>Fine Art/Humanities<sup>1,T</sup></b>
<b>Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>14-15 Total Hours</b>	<b>15-16 Total Hours</b>
<b>Senior</b>				

**Degree Completion Plan Beginning in Spring Semester**

<b>Spring</b>	<b>Freshman</b>		<b>Sophomore</b>	
	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>BIOL 1114<sup>T</sup></b>	4 <b>BIOL 1004 or 2134</b>	4 <b>BIOL 2124</b>	4 <b>BIOL 2134 or 1004</b>	4 <b>BIOL 2134 or 1004</b>
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>BIOL 2111</b>	1 <b>Social Sciences<sup>1,T</sup></b>	3 <b>Social Sciences<sup>1,T</sup></b>
<b>CHEM 2124<sup>T</sup></b>	4 <b>CHEM 2134<sup>T</sup></b>	4 <b>Statistics or Computer Science<sup>2,T</sup></b>	3 <b>Statistics or Computer Science<sup>2,T</sup></b>	3 <b>Statistics or Computer Science<sup>2,T</sup></b>
<b>MATH 1113<sup>T</sup></b>	3 <b>SOC 1003<sup>1,T</sup></b>	3 <b>CHEM 2143</b>	3 <b>POLS 2003<sup>1,T</sup></b>	3 <b>POLS 2003<sup>1,T</sup></b>
<b>Physical Activity<sup>1,T</sup></b>	1 <b>Physical Activity<sup>1,T</sup></b>	1 <b>PHYS 2014<sup>T</sup></b>	4 <b>PHYS 2024<sup>T</sup></b>	4 <b>PHYS 2024<sup>T</sup></b>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>
<b>Junior</b>				
<b>Spring</b>	<b>Freshman</b>		<b>Sophomore</b>	
	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>BIOL 3111</b>	1 <b>BIOL 3043 or CHEM 3353</b>	3 <b>BIOL 4111</b>	1 <b>CHEM 3353 or BIOL 3043</b>	3 <b>CHEM 3353 or BIOL 3043</b>
<b>BIOL 3114</b>	4 <b>BIOL 3124</b>	4 <b>BIOL 3034</b>	4 <b>BIOL 3054</b>	4 <b>BIOL 3054</b>
<b>CHEM 3254</b>	4 <b>CHEM 3264</b>	4 <b>BIOL 4024</b>	4 <b>BIOL Elective(3000-4000 level)</b>	4 <b>BIOL Elective(3000-4000 level)</b>
<b>ECON 2003<sup>1,T</sup></b>	3 <b>ENGL 2053</b>	3 <b>Calculus<sup>3,T</sup></b>	3-4 <b>Elective<sup>4,T</sup></b>	3-4 <b>Elective<sup>4,T</sup></b>
<b>Elective<sup>4,T</sup></b>	3 <b>Fine Art/Humanities<sup>1,T</sup></b>	3 <b>Fine Art/Humanities<sup>1,T</sup></b>	3 <b>Fine Art/Humanities<sup>1,T</sup></b>	3 <b>Fine Art/Humanities<sup>1,T</sup></b>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>15-16 Total Hours</b>	<b>14-15 Total Hours</b>
<b>Senior</b>				

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Must have one statistics course and one computer science course. See catalog or advisor for alternatives.

<sup>3</sup>**MATH 2914** is recommended if you are considering graduate school in this field. Furthermore, **MATH 2924** should be considered for a general elective. Otherwise **MATH 2243** is recommended.

<sup>4</sup>Recommended electives include: **AGSS 2014**, **FW 4014**, **FW 4034**, **GEOL 1014**, and **3153**, **POLS 2013** and **4103**, or **SPH 2003** (but also see the previous footnote, relative to calculus).

### Curriculum in Biology (Environmental Option)

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

#### Minor Biology

The minor in biology is available to students who wish to add to their knowledge of this increasingly important field for personal education or for professional purposes, but choose not to complete a major in biology. The minor in biology requires 20 hours of courses:

**BIOL 1014** Introduction to Biological Sciences or **BIOL 1114** Principles of Biology

**BIOL 2124** Principles of Zoology

**BIOL 2134** Principles of Botany

\*BIOL Electives (8 hours of 3000 or 4000 level)

\*No more than one credit hour can be a seminar course

#### Fisheries and Wildlife Science

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The fisheries and wildlife science program is a professional program designed to prepare qualified field and research biologists, as well as to provide a sound foundation for those students who intend to pursue graduate studies in wildlife biology, fisheries biology or field ecology. Through selection of appropriate elective courses, graduates are eligible for certification by The Wildlife Society or the American Fisheries Society.

Field biologists are employed by various state and federal agencies concerned with natural resources management including the Arkansas Game and Fish Commission, U.S. Fish and Wildlife Service, U.S. Forest Service, Arkansas Department of Environmental Quality, National Park Service, and the U.S. Army Corps of Engineers. Employment opportunities in the private sector are also available. Timber, mining, and utility companies hire field biologists for advice and management of industrial lands. Environmental consulting firms, commercial fish and game farms, and nature centers require qualified researchers, technicians, and educators.

Majors in fisheries and wildlife science must complete a minimum of 124 semester hours as specified in the following curriculum outline. No more than 12 hours of "D's" may be applied toward the degree. Candidates for graduation are expected to complete a comprehensive series of practical and technical exams to assess mastery of program objectives.

### Curriculum in Fisheries and Wildlife Science

#### Degree Completion Plan Beginning in Fall Semester

Fall	Freshman		Sophomore	
	Spring	Fall	Spring	Fall
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>Social Sciences<sup>1,T</sup></b>	3 <b>PHYS 1114<sup>T</sup></b>	4
<b>FW 1001</b>	1 <b>BIOL 2124</b>	4 <b>BIOL 2134</b>	4 <b>FW 3114</b>	4
<b>BIOL 1114</b>	4 <b>Social Sciences<sup>1,T</sup></b>	3 <b>ENGL 2053 or FW 3084 or 3154<sup>2</sup></b>	3-4 <b>ENGL 2053 or FW 3144<sup>2</sup></b>	3-4
<b>MATH 1113<sup>T</sup></b>	3 <b>CHEM 1114 or 2124<sup>T</sup></b>	4 <b>Statistics or COMS<sup>3,T</sup></b>	3 <b>Statistics or COMS<sup>3,T</sup></b>	3
Social Sciences <sup>1,T</sup>	3 <b>Physical Activity<sup>1,T</sup></b>	2 <b>CHEM 2204 or 3254<sup>T</sup></b>	4	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>17-18 Total Hours</b>	<b>14-15</b>
<b>Junior</b>				
<b>Fall</b>	<b>Spring</b>		<b>Spring</b>	
<b>FW 3053</b>	3 <b>Social Sciences<sup>1</sup></b>		3 <b>FW 4083</b>	
<b>BIOL 4044, FW 4014, or FW 4064<sup>4</sup></b>	4 <b>BIOL 3004 or FW 4024<sup>4</sup></b>		4 <b>BIOL 3034 or FW (3000-4000 level) Elective<sup>4</sup></b>	
<b>BIOL 3124 or Fine Art/Humanities<sup>1,6,T</sup></b>	3-4 <b>BIOL 3174 or Fine Art/Humanities<sup>1,6,T</sup></b>		3-4 <b>Elective<sup>T</sup> or FW (3000-4000 level) Elective<sup>5</sup></b>	
<b>FW 3173 or a Calculus Course (MATH 2243)</b>	3 <b>SPH 2003 (or alternate)<sup>T</sup></b>		3 <b>Fine Art/Humanities<sup>1</sup> or FW 4013<sup>7</sup></b>	
<b>FW 3001</b>	1 <b>Elective<sup>T</sup></b>		2 <b>FW 4001</b>	
<b>Total Hours</b>	<b>14-15 Total Hours</b>	<b>16-17 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>

#### Degree Completion Plan Beginning in Spring Semester

Spring	Freshman		Sophomore	
	Fall	Spring	Fall	Spring
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>Social Sciences<sup>1,T</sup></b>	3 <b>CHEM 2204 or 3254<sup>T</sup></b>	4
<b>BIOL 1114</b>	4 <b>BIOL 2124</b>	4 <b>BIOL 2134</b>	4 <b>FW 3114</b>	4
<b>MATH 1113<sup>T</sup></b>	3 <b>Social Sciences<sup>1,T</sup></b>	3 <b>ENGL 2053 or FW 3144<sup>2</sup></b>	3-4 <b>FW 3084, 3154 or ENGL 2053<sup>2</sup></b>	3-4
Social Sciences <sup>1,T</sup>	3 <b>CHEM 1114 or 2124<sup>T</sup></b>	4 <b>Statistics or Computer Science<sup>3,T</sup></b>	3 <b>Statistics or Computer Science<sup>3,T</sup></b>	3
Physical Activity <sup>1,T</sup>	1 <b>FW 1001</b>	1 <b>PHYS 1114<sup>T</sup></b>	4	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>17-18 Total Hours</b>	<b>14-15</b>
<b>Junior</b>				
<b>Spring</b>	<b>Fall</b>		<b>Fall</b>	
Social Sciences <sup>1</sup>	3 <b>FW 3053</b>		3 <b>FW 4003</b>	

Curriculum in Fisheries and Wildlife Science							
BIOL 3004 or FW 4024 <sup>4</sup>	4	BIOL 4044, FW 4014, or FW 4064 <sup>4</sup>	4	BIOL 3034 or FW(3000-4000 level) Elective <sup>4</sup>	4	BIOL 3034 or FW(3000-4000 level) Elective <sup>4</sup>	4
BIOL 3174 or Fine Art/Humanities <sup>1,6,T</sup>	3-4	BIOL 3124 or Fine Art/Humanities <sup>1,6,T</sup>	3-4	Elective <sup>T</sup> or FW(3000-4000 level) Elective <sup>5</sup>	4	Elective <sup>T</sup> or FW(3000-4000 level) Elective <sup>5</sup>	4
SPH 2003 (or alternate) <sup>T</sup>	3	FW 3173 or a Calculus Course (MATH 2243)	3	Fine Art/Humanities <sup>1</sup> or FW 4043 <sup>7</sup>	3	Fine Art/Humanities <sup>1</sup> or FW 4013 <sup>7</sup>	3
Elective <sup>T</sup>	3	FW 3001	1	FW 4001	1	Elective <sup>T</sup>	2
<b>Total Hours</b>	<b>16-</b> <b>17</b>	<b>Total Hours</b>	<b>14-</b> <b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>Must have one taxonomic course (FW 3084, 3144, or 3154) and ENGL 2053.

<sup>3</sup>Must have one statistics course and one computer science course. See advisor for alternatives.

<sup>4</sup>These alternatives should result in one FW course and one BIOL course within the year.

<sup>5</sup>Must complete at least eight hours of FW electives to complete the degree; general electives can fill the balance of 124 hours.

<sup>6</sup>Must have one "physiological" course and one "Fine Art/Humanities course<sup>1</sup>" within the year.

<sup>7</sup>Must have one "techniques" course and one "Fine Art/Humanities course<sup>1</sup>" within the year.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

## Allied Health Science Programs

The allied health science programs include a two-year curriculum in medical assistant and four-year curricula in health information management and medical technology. Statements and curricula for these programs are listed below.

### Health Information Management

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The degree program in health information management prepares the student for a professional career as an active member of the modern health-care team. In this age of increased computerization and data analysis, the health information management field is an exciting new area with virtually unlimited possibilities. The health information management administrator is an expert in the world of health record systems. He/she is responsible for obtaining complete health records for use in research; for gathering statistical information on which to base long-range health planning goals; for determining the legitimacy of requests for confidential medical information; for controlling the circulation and integrity of health records; and, as department head, is responsible for efficiency of the health information department employees in the performance of daily activities.

The health information department in a medical facility has in its care all the documentation regarding patient-care, physician as well as ancillary information. Responsibility for data validity and integrity play a major role in the health information profession. He/she must be progressive, conscientious, tactful, and knowledgeable, as much work is accomplished in cooperation with other allied health professionals. Above all, the health information professional must adhere to the Code of Ethics of the American Health Information Management Association and to the appropriate institutional behavioral codes that apply.

Professional practice is scheduled at affiliated hospitals in nearby cities for a period of six hours per week during the fall and spring semesters for senior HIM majors. The management affiliation may be assigned to a hospital in a distant city for four weeks (40 hours per week) and normally occurs in the summer immediately following the senior year. Students are responsible for all transportation and lodging expenses during these assignments; however, every effort will be made to minimize such costs.

Students must make at least a "C" in each of the professional courses and demonstrate their proficiency in professional practice and management-affiliation. Upon successful completion of the program, the student is granted a Bachelor of Science degree in health information management and becomes eligible to write the national certification examination. The student already holding a baccalaureate degree may apply for the HIM program as specified in the Application Guidelines and work toward another baccalaureate degree provided the pre-professional course of study has been completed to establish eligibility to write the national certification examination. Registered health information technicians are urged to contact the Program Director for information regarding RHIA progression. The national certification examination is offered year-round by the American Health Information Management Association.

The application process for the Health Information Management Program is as follows:

### Health Information Management Program Application Guidelines

- Application for upper level professional HIM courses must be on file with the HIM Program Director by March 15th prior to the year you wish to take HIM courses.
- To be eligible for application interview, the following must be on file: Application, current copy of all applicable transcripts, including a cumulative GPA of 2.5 on a 4.0 scale, and COMPASS/ACT scores.
- Applicants may be required to complete an interview with an interview team. Consideration will be given to areas such as:
  - Dedication and perseverance
  - Aptitude
  - Knowledge of HIM profession
  - Professional appearance
  - Flexibility
  - Realistic career goals
  - True desire to enter HIM profession
  - Ability to finish HIM program within prescribed time
- Candidates will be ranked based on GPA and number of prerequisite courses completed. The top twenty will be selected. A ranked order waiting list will be maintained by the HIM Program Director.
- Candidates will be notified prior to pre-registration for the fall semester. If accepted, candidates must return a signed statement acknowledging acceptance. Candidates must register for courses indicated on the degree plan. Any change in degree plan requires approval of the student's HIM faculty advisor. Candidates must notify the program director of change in degree choice.
- A late application deadline of August 15th will be observed if positions are available. Late applicants will be notified as soon as possible or during the week of late registration.
- If a candidate fails a course that would preclude graduation, or does not earn at least a "C" in HIM courses, reapplication to the HIM Program will be required.

The Health Information Management Program is accredited by the Commission on the Accreditation for Health Informatics and Information Management Education (CAHIIM) in cooperation with the American Health Information Management Association's Council on Accreditation

### Curriculum in Health Information Management Suggested Sequence of Courses

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>ENGL 1013<sup>1,T</sup></b>	3 <b>ENGL 1023<sup>1,T</sup></b>	3 <b>Social Sciences<sup>1,T</sup></b>	3 <b>Social Sciences<sup>1,T</sup></b>
<b>Elective<sup>2,T</sup></b>	2 <b>BIOL 1014<sup>1,T</sup></b>	4 <b>MGMT 2013<sup>T</sup></b>	3 <b>COMS 2233<sup>T</sup></b>
<b>AHS 1023</b>	3 <b>Social Sciences<sup>1,T</sup></b>	3 <b>BIOL 2004<sup>T</sup></b>	4 <b>CHEM 1114<sup>1,T</sup></b>
<b>Social Sciences<sup>1,T</sup></b>	3 <b>MATH 1113<sup>T</sup></b>	3 <b>AHS 2013 or ACCT 2003<sup>T</sup></b>	3 <b>AHS 2013 or ACCT 2003</b>
<b>Physical Activity<sup>1,T</sup></b>	1 <b>SPH 2003<sup>T</sup></b>	3 <b>Physical Activity<sup>1,T</sup></b>	1 <b>Elective<sup>T</sup></b>
<b>Total Hours</b>	<b>12 Total Hours</b>	<b>16 Total Hours</b>	<b>14 Total Hours</b>
Junior		Senior	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>Fine Arts<sup>1,T</sup></b>	3 <b>HIM 3153</b>	3 <b>HIM 4182</b>	2 <b>HIM 4073</b>
<b>Humanities<sup>1,T</sup></b>	3 <b>HIM 4153</b>	3 <b>HIM 4063</b>	3 <b>HIM 4083</b>
<b>MGMT 3003</b>	3 <b>MGMT 4023 or HA/RP 4113</b>	3 <b>HIM 3043</b>	3 <b>HIM 4292</b>
<b>HIM 3023</b>	3 <b>HIM 3133</b>	3 <b>HIM 4983</b>	3 <b>HIM 4034</b>
<b>PSY 2053<sup>T</sup></b>	3 <b>HIM 3132</b>	2 <b>HIM 3033</b>	3 <b>MGMT 4013</b>
		<b>HIM 4092</b>	2
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>
Senior 9th Semester		15	
Summer		16	
<b>HIM 4895</b>	5		
<b>HIM 4892</b>	2		
<b>Total Hours</b>	<b>7</b>		

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>**HIM 1001** recommended.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

#### **Medical Assistant**

Phyllis Cox, Director  
Tucker Building, Room 17  
(479) 498-6073  
pcox@atu.edu

Medical assistants perform administrative and clinical duties under the direction of physicians in their offices or other medical settings. The medical assistant curriculum is a two-year associate of science degree program. This program offers the student a broad foundation in basic medical assisting skills including an externship in a medical facility under the supervision of clinic personnel and the Medical Assistant Program Director. Basic medical assistant training and education consist of learning experiences in communication skills, examination room procedures, clinical laboratory skills, and general office practices.

Admission to the second year of the program is on a competitive basis and is limited to 12 students a year. Students must make at least a "C" in each of the professional courses. A student is eligible for admission to the second year of the program upon completion of all prerequisites with an overall grade point average of at least 2.00 on a 4.00 scale; presentation of evidence of good health; and satisfactory completion of a personal interview with the program director. If more than 12 students qualify for the second year of the program, they will be ranked by cumulative grade point average. Those not admitted in the first round of selection will be placed on a ranked waiting list.

Students enrolled in **AHS 2034**, **AHS 2044**, and **AHS 2055** are required to carry malpractice liability insurance. A group insurance policy is arranged by the program director, but the premiums are paid by the student and are not included in the tuition and fees paid to the University.

The Arkansas Tech University Medical Assistant Program is accredited by the Commission on Accreditation of Allied Health Education Programs ([www.caahp.org](http://www.caahp.org)) upon the recommendation of the Medical Assisting Education Review Board of the American Association of Medical Assistants Endowment (AAMAE). Students who successfully complete the associate degree program for medical assistants will be eligible to sit for the Certified Medical Assistant (CMA) examination.

### Curriculum in Medical Assistant Suggested Sequence of Courses

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
<b>ENGL 1013<sup>1</sup></b>	3 <b>ENGL 1023<sup>1</sup></b>	3 <b>Social Sciences<sup>1</sup></b>	3 <b>AHS 2034</b>
<b>BIOL 1114 or 2124</b>	4 <b>PSY 2003</b>	3 <b>AHS 2023</b>	3 <b>AHS 2032</b>
<b>AHS 1023</b>	3 <b>PE 2513</b>	3 <b>AHS 2022</b>	2 <b>AHS 2053</b>
<b>MATH 1113<sup>1</sup></b>	3 <b>SPH 1003 or 2003</b>	3 <b>AHS 2013</b>	3 <b>HIM 4073</b>
<b>COMS 1003</b>	3 <b>COMS 2003</b>	3 <b>AHS 2044</b>	4 <b>BIOL 2004</b>
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>18 Total Hours</b>
Summer I		16	
<b>AHS 2055</b>	5		
<b>AHS 2061</b>	1		
<b>Total Hours</b>	<b>6</b>		

## **Curriculum in Medical Assistant**

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

## Medical Technology

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Arkansas Tech University, in affiliation with approved schools of medical technology, offers a four-year program leading to the bachelor of science degree and to certification as a medical technologist. The affiliated schools of medical technology are accredited by the Council on Medical Education and Hospitals of the American Medical Association.

The first three years of the curriculum are taught on the Tech campus and the fourth (professional) year is taught at one of the affiliated schools of medical technology. Admission to the professional year is on a competitive basis, and students must meet the admission standards of the medical technology school.

## **Personnel with Medical Technology Affiliated Institutions**

*Baptist Medical System, Little Rock, Arkansas: John E. Slaven, M.D., Medical Director, School of Medical Technology; Jennie Kyle, M.P.H., MT (ASCP) S.H., Program Director, School of Medical Technology.*

*St. John's Regional Medical Center, Joplin, Missouri: Margaret Janssen, M.D., Medical Director, School of Medical Technology.  
Karen Adkins, MA ED, MT (ASCP), Program Director, School of Medical Technology.*

To qualify for the bachelor of science degree, the student must satisfactorily complete a minimum of 91 semester hours during the first three years of the program and 40 semester hours during the final professional year (52 weeks of class) at an affiliated medical technology school. The third year of the curriculum (30 semester hours) must include 20 semester hours in courses numbered 3000 or above, of which 4 semester hours must be in chemistry and 7 or 8 semester hours in biology. Also, the third year of the curriculum must be completed in residence at Arkansas Tech University.

Tuition and fees for courses taken the senior year at one of the affiliated medical technology schools will be assessed at the current rate charged by the affiliated school and are payable to Arkansas Tech University. Financial aid and scholarship arrangements are also made by Tech.

Upon successful completion of the final 40 hours at an affiliated medical technology school, a student is eligible for a bachelor of science degree, as well as being eligible to write the National Board Examination for licensure. This examination is given at various times throughout the year by the Board of Registry of the American Society of Clinical Pathologists.

## **Curriculum in Medical Technology**

### **Suggested Sequence of Courses**

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3
BIOL 1114 or BIOL 2124 <sup>T</sup>	4	BIOL 2004 <sup>T</sup>	4
BIOL 1011 <sup>T</sup>	1	CHEM 2134 <sup>T</sup>	4
CHEM 2124 <sup>T</sup>	4	MATH 1203 <sup>T</sup>	3
MATH 1113 <sup>T</sup>	3	Physical Activity <sup>1,T</sup>	1
Physical Activity <sup>1</sup>	1		
Total Hours	16	Total Hours	15
Junior		Senior	
Unusual course category - 12 months			
BIOL 3054 <sup>T</sup>	4	Fine Art/Humanities <sup>1,T</sup>	3
BIOL (3034, 3064, 4023 or 4033) <sup>3</sup>	7-8		MEDT 4012-3
CHEM (2204, 3245, 3254, 3264, 3344, or 4414) <sup>3</sup>	13-12		MEDT 4029
PSY 2003	3		MEDT 4035
			MEDT 4048-9
Total Hours		30 Total Hours	8-9 MEDT 4073 MEDT 4081-2
			6-7 MEDT 4056-7 MEDT 4064
			4
			3
			1-2
			40

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".

<sup>2</sup>COMS 1003 or Alternate.

<sup>3</sup>Must have a total of 12-13 hours of upper-level chemistry and 7-8 hours of upper-level biology and a total of at least 29 hours in the junior year to reach the required 91 hour total before entering the senior, off-campus, year.

<sup>†</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

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## COURSE CATALOGS

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### Department of Mathematics

[Back to College of Natural and Health Sciences](#)

Dr. Thomas Limperis,  
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**Professors:**  
Carnahan, Hamm,  
Keisler, Watson  
**Associate Professors:**  
Amirkhanian, Enoch,  
Finan, S. Jordan,  
Limperis, Shores  
**Assistant Professor:**  
Pearson  
**Instructors:**  
K. Brown, Carman,  
Felkins, Hogan, Horton,  
S.M. Jordan, Ketkar,  
Sherrill, Taylor

The Department of Mathematics offers a four-year program in mathematics that leads to the bachelor of science degree and curriculum that leads to a minor in mathematics. The curriculum is designed to meet the needs of three groups of students: (1) those who plan to seek employment in business, industry, or government, (2) those who plan to attend graduate school to continue their study of mathematics or a related field, and (3) those who plan to be secondary school teachers.

Students majoring in mathematics are encouraged to use their elective hours to complete a second major, or at least a concentration of 18 hours or more, in the field of their choice. For example, students interested in computer science are advised to complete the following courses: **COMS 1403, 2003, 2104, 2203, 2213**, and two additional courses selected from **3213, 3503, 3803**, and **4203**. Students interested in business electives are advised to complete **BUAD 2003, 2033, ACTC 2003, 2013**, and **ECON 2003** and **2013**. For other areas of interest, students should consult their advisor to arrange a plan of study.

Students who plan to attend graduate school in mathematics or a related field are advised to complete additional upper-level mathematics courses beyond the minimal degree requirements.  
The curriculum in mathematics for teacher licensure is found in the College of Education section of this catalog.

#### Curriculum in Mathematics

##### Degree Completion Plan Beginning in Fall Semester

Freshman		Spring		Sophomore		Spring	
Fall				Fall			
<b>MATH 2914<sup>T</sup></b>	4	<b>MATH 2924<sup>T</sup></b>	4	<b>MATH 2934<sup>T</sup></b>	4	<b>MATH 3243</b>	3
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	<b>MATH 3003</b>	3	<b>COMS 2803</b> and 1 hr elective or <b>COMS 2104<sup>T</sup></b>	4
<b>BIOL 1014<sup>1,T</sup></b>	4	<b>MATH 2703</b>	3	<b>PHYS 2114<sup>T</sup></b>	4	<b>PHYS 2124<sup>T</sup></b>	4
Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Fine Arts <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1	Elective <sup>3,T</sup>	3			Elective <sup>3,T</sup>	3
		Physical Activity <sup>1,T</sup>	1				
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>17</b>
<b>Junior</b>		<b>Senior</b>		<b>Spring</b>		<b>Spring</b>	
Fall				Fall			
<b>MATH 4003</b>	3	<b>MATH 4123</b>	3	<b>MATH 4033</b>	3	<b>MATH Elective<sup>2</sup></b>	3
<b>MATH 3153</b>	3	<b>MATH 3203</b>	3	<b>MATH Elective<sup>2</sup></b>	3	<b>Elective<sup>3,T</sup></b>	12
Humanities <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Elective <sup>3,T</sup>	10		
Elective <sup>3,T</sup>	6	Elective <sup>3,T</sup>	6				
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15</b>

##### Degree Completion Plan Beginning in Spring Semester

Freshman		Fall		Sophomore		Fall	
<b>Spring</b>		<b>Spring</b>		<b>Spring</b>		<b>Spring</b>	
<b>MATH 2914<sup>T</sup></b>	4	<b>MATH 2924<sup>T</sup></b>	4	<b>MATH 2934<sup>T</sup></b>	4	<b>MATH 3243</b>	3
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	<b>MATH 2703</b>	3	<b>MATH 3003</b>	3
Social Sciences <sup>T</sup>	3	<b>BIOL 1014<sup>1,T</sup></b>	4	Social Sciences <sup>1,T</sup>	3	<b>PHYS 2114<sup>T</sup></b>	4
Fine Arts <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Physical Activity <sup>1,T</sup>	1	Humanities <sup>1,T</sup>	3
Physical Activity <sup>1,T</sup>	1	Elective <sup>3,T</sup>	3	Elective <sup>3,T</sup>	2	Elective <sup>3,T</sup>	3
				<b>COMS 2803</b> and 1 hr elective or <b>COMS 2104<sup>T</sup></b>	4		

Curriculum in Mathematics							
Total Hours	14	Total Hours	17	Total Hours	17	Total Hours	16
Junior				Senior			
<b>Spring</b>		<b>Fall</b>		<b>Spring</b>		<b>Fall</b>	
MATH 4123 3		MATH 3153 3		MATH 3203 3		MATH 4033 3	
MATH Elective <sup>2</sup> 3		MATH 4003 3		MATH Elective <sup>2</sup> 3		Elective <sup>3,T</sup> 12	
PHYS 2124 <sup>T</sup> 4		Social Sciences <sup>1,T</sup> 3		Elective <sup>3,T</sup> 9			
Elective <sup>3,T</sup> 5		Elective <sup>3,T</sup> 6					
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>3000 - 4000 level math elective. MATH 3033, 4703, and 4772 may not be used to satisfy this requirement. MATH 4993 may not be used without prior approval of the department head.

<sup>3</sup>At least 40 of the total hours required for graduation must be 3000-4000 level courses.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university

### Minor Mathematics

For several majors, a minor in mathematics is a natural and popular acquisition. The minor in mathematics requires 20 hours of courses:

MATH 2703 Discrete Mathematics  
 MATH 2914 Calculus I  
 MATH 2924 Calculus II

and 9 hours selected from the following:

MATH 2934 Calculus III  
 MATH 3003 Foundations of Number Systems  
 MATH 3123 College Geometry  
 MATH 3203 Introduction to Analysis  
 MATH 3243 Differential Equations I  
 MATH 4003 Linear Algebra I  
 MATH 4033 Abstract Algebra I  
 MATH 4103 Linear Algebra II  
 MATH 4113 History of Mathematics  
 MATH 4123 Mathematical Modeling  
 MATH 4133 Abstract Algebra II  
 MATH 4153 Applied Statistics II  
 MATH 4173 Advanced Biostatistics  
 MATH 4243 Differential Equations II  
 MATH 4253 Advanced Calculus I  
 MATH 4263 Mathematical Statistics  
 MATH 4273 Complex Variables  
 MATH 4283 Advanced Calculus I  
 MATH 4293 Introductory Topology

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## Department of Nursing

[Back to College of Natural and Health Sciences](#)

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**Professors:**  
Burris, Helms, C. Smith  
**Associate Professors:**  
Daily, C. Jones, McKown  
**Assistant Professors:**  
Ellis-Bosold, Buckholz,  
Christie, Coleman, K.  
Cox, Darnell, Davis,  
Harless, Kennedy, Self

Arkansas Tech University's nursing curriculum is designed to prepare students for beginning professional responsibilities in a variety of health-care settings and to provide the necessary foundations for graduate study.

The Bachelor of Science in Nursing program is approved by the Arkansas State Board of Nursing and the Arkansas Department of Higher Education. The program is accredited by the National League for Nursing Accrediting Commission, Telephone: 404-975-5000.

The Department of Nursing offers undergraduate study in nursing to qualified high school graduates, graduates of diploma and associate degree programs in nursing, licensed psychiatric technician nurses, and licensed practical nurses. The baccalaureate program leads to the degree of Bachelor of Science in Nursing. Satisfactory completion of eight semesters of general education, prerequisites, and upper-division professional nursing courses is required.

Upon completion of degree requirements, the student may be eligible to take the national examination (NCLEX-RN) for licensure as a registered nurse. All nursing students should be aware that the State Board of Nursing requires all applicants for the NCLEX-RN to have a criminal background check performed. If the applicant has ever been convicted of a crime, the Board will review the application and make a decision as to whether the applicant is eligible to take the NCLEX-RN exam and to practice nursing in the State of Arkansas. Any student who has been convicted of a crime should notify his or her advisor before taking the prerequisite courses. This information will be kept strictly confidential. The student will be advised of the method of petitioning the Board and counseled regarding the process. A registered nurse may be subject to losing his or her license if the conviction is discovered after the license is granted.

The Department of Nursing reserves the right to make changes, without prior notice, in the curriculum and program requirements. Changes are made in keeping with the changing health needs of society and/or the best interests of the students and the department to maintain quality professional nursing education.

The Department of Nursing utilizes the clinical facilities and services of the Arkansas River Valley area; however, in order to meet the objectives of certain courses, the student should be prepared to travel out of this area. Students are required to provide their own transportation.

In addition to the on-campus program, ATU offers an RN to BSN completion program on the Web.

### Admission

Admission into lower division foundation courses is open to any Arkansas Tech University student who meets the prerequisites for each course. Nursing majors are encouraged to seek academic advising from the nursing faculty immediately upon acceptance to the University.

Admission to the upper division nursing courses is competitive and subject to evaluation by the Nursing Department's Admission and Progression Committee. Students are considered for admission the spring and fall preceding the semesters they plan to enter upper division nursing courses. All transcripts and/or credentials along with an Application to Upper Division must be submitted to the Department of Nursing by March 1 for fall admission or by October 1 for spring admission. Eligible repeating students applying for readmission must submit all materials by June 30 or January 5.

All students except registered nurses accepted to upper division nursing are required to take a RN entrance exam. This exam must be taken prior to the beginning of Level I nursing courses. Exam results will be used solely for academic advising at this time. Entrance exam dates and information will be posted on the department bulletin board by Dean Hall Room 224.

Minimum requirements for acceptance into the upper division nursing courses are:

1. Prerequisite grade point average of 3.0 on a 4.0 scale. Students will be admitted according to the criteria for selection of upper division students.
2. Completion of the following courses with a grade of "C" or better in each: **ENGL 1013, ENGL 1023, MATH 1113, BIOL 2014, BIOL 3054, BIOL 3074, CHEM 1114, PSY 2003, SOC 1003, and NUR 2303.** Students who attempt the 3000 and 4000 level courses listed above more than twice without achieving a "C" or better will not be considered for upper division. An attempt is "any enrollment in any course and dropping it after the first day of the 10th week of the semester for any reason, and/or failure (grade of "D", "F", or "FE") of the course.
3. Completion of the following courses: Social Science - 3 hours, American History or Government - 3 hours, Humanities - 3 hours; Fine Arts - 3 hours; Electives - 5 hours, and two semester hours of physical education. Six hours of those listed may be outstanding. (See [General Education Requirements](#) for specific course alternatives.)
4. Acquisition of professional/student liability insurance, criminal background check and current certification of Basic CPR for adults, children, and infants as taught by the American Heart Association, or persons currently certified in CPR instruction. These must be renewed each year.
5. Initiation of Hepatitis B Vaccine series.
6. Any student that fails an upper division nursing course (with the exception of nursing electives), withdraws, or has a break in enrollment must apply for readmission into the nursing program by June 30 for readmission to the fall semester, or January 5 for readmission to the spring semester. To reapply, the student must complete the "Reapplication to Upper Division" form and submit a letter of intent addressing reasons for past failure and a plan of action to enhance future success within the nursing program. Readmission will be based on the availability of positions in the level to which the student is applying, letter of intent and current GPA. Should several students reapply for the same level and a limited number of positions are available, GPA ranking, in conjunction with their letter of intent will guide the committee decision-making process.
7. Students who have not attended Arkansas Tech University during the past year must apply for readmission to the University.
8. The nursing program must be completed within four years of entry into level one of the nursing curriculum.

Applicants will be ranked according to admission criteria for selection of upper division students. Criteria are as follows:

For students desiring entry to spring Upper Division (Level 0-preclinical nursing):

1. GPA $\geq$ 3.0 at the time of application and at the end of the fall semester. Student has no more than 6 hours outstanding at the end of the spring semester.
2. Do not admit at this time.

For students desiring entry to fall Upper Division (Level 0-preclinical nursing):

1. GPA $\geq$ 3.0 at the time of application and at the end of the spring semester. Student has no more than 6 hours outstanding at the end of the fall semester.
2. Do not admit at this time.

The student must have completed a minimum of 48 hours of required general education and prerequisite courses (see curriculum plan) with a GPA $\geq$ 3.0 before entering level 0-preclinical nursing courses.

Applications will be ranked according to GPA. Admission will be determined by the resulting rank order. Applicants completing prerequisites prior to or during summer sessions are required to submit transcripts prior to the registration period for fall semester.

Applicants completing prerequisite requirements at an institution other than ATU during summer sessions or fall must submit a written note from the course instructor(s) verifying the grade(s) earned in the course(s). These students will sign a form agreeing to have official transcripts on file in the registrar's office within one month from the first day of the semester.

Should a student have outstanding hours (up to 6 allowed) after completing level 0-preclinical nursing these courses must be general education courses from the following: Fine Arts, Humanities, History, or electives.

A student position may be filled in a discretionary manner for exceptional reasons as determined by the committee and approved by the faculty.

### Progression Policy

Students must achieve a "C" or better in all nursing courses.

A student in the upper division nursing courses may only repeat one nursing course. Following a second failure in any upper division nursing course the student will be dismissed from the program. Upper division nursing courses: 66 hours of course work allotted to the nursing major, inclusive of NUR 2023, all 3000 level nursing courses (with the exception of 3803) and all 4000 level nursing courses (with the exception of 4903).

Students who make less than a "C" in any upper division nursing course may not progress into courses for which that course(s) is a prerequisite until the course(s) has been repeated and the required minimum grade attained.

The following Upper Division required non-clinical courses (NUR 2023, NUR 3103, NUR 3204, NUR 3213, NUR 3303, NUR 3513, NUR 3606, NUR 3402, NUR 3802, NUR 4206, NUR 4303, NUR 4606) must be completed with a grade of "C" or better to graduate. Any students who attempts any one of these courses twice (2 times) and does not achieve a final grade of "C" or better in the course, will be automatically be withdrawn from the Arkansas Tech University Nursing Program and will not be eligible for readmission. An attempt is defined as "any enrollment in any course and dropping it (or changing it to an audit) after the first day of the 10th week of the semester during the Fall or Spring semester, or after the third week of either Summer session for any reason, or failure (grade of "D", "F", or "FE") of the course."

Readmission will not be considered for any student dismissed from the nursing department who obtained a "D", "F", or "FE" in two (2) upper division nursing courses. The Department Head on an individual basis will consider exceptions.

Any student who withdraws from a clinical nursing course (NUR 3404, NUR 3805, NUR 4405, NUR 4804) after the fifth (5th) day of classes must have a passing grade at the time of withdrawal in order to withdraw passing. Students failing ("D" or "F") at the time of withdrawal will receive an "F" after the 5th day of classes. A grade of "F" will count as a failure ("F") for progression purposes. See Progression Criteria #2 and #4.

All seniors are required to pass the NCLEX Review Exam. The student must complete the non-proctored exam with a passing score of 80% prior to sitting for the proctored examinations. The student is allowed five attempts to pass the NCLEX Review exam (two ATI, and three HESI). Any student not achieving a passing score on the 1st attempt must complete a review prior to a 2nd attempt on the exam. This review includes completion of the ATI/HESI non-proctored exams, review of material available from the resource drawer, and/or completion of NCLEX review chapters. If a passing score is not achieved on the 2nd attempt the student must meet with faculty to discuss requirements of review course prior to subsequent attempts. The student must wait at least three weeks between the 2nd and 3rd attempts. If a passing score is not achieved on the 5th attempt the student will receive a "0" for that 30% of the grade, a failing grade for the course and must repeat all components of the course, including the preceptorship. If a student desires to take an official review course such as Kaplan, the student may do so and if successfully completes the course, may forego further testing after the first ATI and first HESI attempts are completed.

Students must achieve a passing grade "C" in both the Theories and corresponding Practicum courses in order to progress within the program. Students who repeat a Theories course are required to show clinical competency in order to progress. Students who repeat Practicum are required to show theoretical competency in order to progress.

Clinical competence can be attained by:

1. Taking for credit the corresponding practicum course
2. Completing NUR 3892, Clinical Competency I or NUR 4892 Clinical Competency II with a grade of "C" or better.

Theoretical competence can be attained by:

1. Taking for credit corresponding Theories course. Student must maintain a 75% average on all exams.
2. Auditing corresponding Theories course. Student must maintain a 75% average on all exams.
3. Making greater than or equal to 75% on corresponding comprehensive Theory exam.

### Advanced Placement

The different types of nursing education programs and vocational-technical school programs give rise to unique transfer problems. Each student's past education is evaluated individually. In addition, the University and the Department of Nursing have established the following policies:

1. Arkansas Tech University offers a baccalaureate degree program in nursing. Licensed registered nurses, licensed practical nurses and licensed psychiatric technical nurses may challenge, validate, or receive credit for general education and nursing courses that are included in the nursing curriculum. CLEP examinations can be used to challenge or validate the general

education courses. The institution's general policy for awarding CLEP credit is followed in determining the successful challenge of courses by these examinations. Transfer credit will be given for prior challenge or validation tests of nursing content credited on official transcripts from other nursing programs. RNs are permitted to receive transfer credit for **NUR 3304/NUR 3303**.

2. Licensed practical nurses (LPNs) and licensed psychiatric technical nurses (LPTNs) who have met all the lower division nursing curriculum requirements and graduated from an approved Arkansas PN or PTN program or an out-of-state NLN accredited program may receive credit for 17 hours of nursing courses (**NUR 3204, NUR 3404, NUR 3103, NUR 3513, NUR 3213**) if they meet the following specific requirements:
  - a. Have a current LPN or LPTN license in Arkansas.
  - b. Graduated less than 12 months prior to entry into the upper division of nursing.
  - c. Have graduated within more than 12 months prior to entry into the upper division of nursing and have 1000 hours of nursing employment during the 24 months immediately prior to entry into the upper division of nursing.
  - d. Have completed all nursing prerequisite courses, **NUR 2023, NUR 3303**, and **NUR 4302** prior to entry into level II nursing (see Curriculum Plan for LPNs).

**NURSING CREDITS WILL BE HELD IN ESCROW PENDING COMPLETION OF THE PROGRAM.**

Licensed practical nurses (LPNs) and licensed psychiatric technical nurses (LPTNs) who do not meet the above criteria can challenge or validate 17 hours of nursing courses that are included in the nursing curriculum. LPNs and LPTNs may challenge or validate nursing courses **NUR 3204** and **NUR 3404** by taking the National League for Nursing ACE I with a decision score of 75 (eight credit hours); **NUR 2303** by taking the National League for Nursing Normal Nutrition examination with a decision score of 50 (three credit hours); and **NUR 3103** and **NUR 3513** by taking a written and demonstration skills test developed by the Department of Nursing faculty with a decision score of 75 (six credit hours). Students must enter upper division within two academic years after passing the challenge examination or the examination will be invalid.

3. Licensed registered nurses have two options:
  - a. Complete the generic curriculum in baccalaureate nursing, or;
  - b. Complete the curriculum in baccalaureate nursing for registered nurses.

Those who have met all the lower division nursing curriculum requirements and graduated from an associate degree or diploma program that was Arkansas State Board approved or NLNAC accredited at the time of graduation may receive credit for 34 hours of nursing courses (**NUR 2023, NUR 2303, NUR 3103, NUR 3513, NUR 3204, NUR 3606, NUR 3404, NUR 3402, NUR 3802** and **NUR 3805**) if they meet the following specific requirements:

  - a. Have a current RN license in the state where they are practicing.
  - b. Have graduated less than 12 months prior to entry into the upper division.
  - c. Have graduated within more than 12 months prior to entry into the upper division of nursing and have 1000 hours of nursing employment during the 24 months immediately prior to entry into the upper division of nursing.
  - d. All nursing major prerequisite courses must be completed prior to entry into the program. Up to 6 hours of General Education courses may be outstanding. These courses must come from the following: Fine Arts, Humanities, History, or electives (see Curriculum Plan for Registered Nurses).

**NURSING CREDITS WILL BE HELD IN ESCROW PENDING COMPLETION OF THE PROGRAM.**

Registered nurses (RNs) who do not meet the above criteria can challenge or validate 34 hours of nursing that are included in the nursing curriculum.

RNs can challenge or validate nursing courses by taking the National League for Nursing ACE II Examination with a decision score of 100 or 50th percentile for Nursing 2023, 3103, 3513, 3204, 3606, 3404, 3402, 3802 and 3805 for 32 credit hours; and by the National League for Nursing Normal Nutrition Examination with a decision score of 50 for Nursing 2303 for three credit hours; all of which total 35 credit hours. Students must enter the senior-level nursing courses within two academic years after passing the challenge examination or the examination will be considered invalid.

4. Students who have had health-care education or experience but are not licensed health-care professionals will be evaluated individually by the Admission and Progression Committee for advanced placement.
5. Students transferring from another nursing program must submit a letter of good standing to the Admission and Progression Committee with the upper division application.
6. Nursing students other than Registered Nurses must comply with the general institutional provisos; i.e., the last 30 semester hours of work toward a degree must be done at ATU; and, normally, a maximum of 68 semester hours of acceptable credit may be transferred from community colleges.
7. Transfer students from senior colleges and universities must comply with the provisions in Item 3 above but are not subject to any credit hour limitations from those institutions.

**Curriculum in Baccalaureate Nursing**  
**Degree Completion Plan Beginning in Fall Semester**

Freshman		Sophomore			
Fall	Spring	Fall	Spring		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 BIOL 3054 <sup>T</sup>	4 PSY 3813 <sup>T</sup>	3	
MATH 1113 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BIOL 3074 <sup>T</sup>	4 NUR 2023 <sup>T</sup>	4	
CHEM 1114 <sup>T</sup>	4 BIOL 2014 <sup>1,2,T</sup>	4 NUR 2303 <sup>T</sup>	3 BIOL/NUR 3803 <sup>T</sup>	3	
SOC 1003 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1 Humanities <sup>1,T</sup>	3 NUR 3103	3	
Physical Activity <sup>1,T</sup>	1 Elective <sup>3,T</sup>	3 Fine Arts <sup>1,T</sup>	3 NUR 3303	2	
		3 Social Sciences <sup>1,T</sup>			
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>17 Total Hours</b>	<b>15</b>	
Junior		Senior			
Fall	Spring	Fall	Spring		
NUR 3204	4 NUR 3606	6 NUR 4206	6 NUR 4606	6	
NUR 3513	3 NUR 3802	2 NUR 4303	3 NUR 4804	4	
NUR 3213	3 NUR 3805 <sup>4</sup>	5 NUR 4405	5 Elective	3	
NUR 3404 <sup>4</sup>	4 Social Sciences <sup>1,T</sup>	3 NUR Elective (3000-4000 level)	1 NUR 4903	3	
NUR 3402	2				
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>16</b>	

**Degree Completion Plan Beginning in Spring Semester**

Freshman		Sophomore			
Spring	Fall	Spring	Fall		
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 BIOL 3054 <sup>T</sup>	4 PSY 3813 <sup>T</sup>	3	
MATH 1113 <sup>T</sup>	3 PSY 2003 <sup>T</sup>	3 BIOL 3074 <sup>T</sup>	4 NUR 2023 <sup>T</sup>	4	
CHEM 1114 <sup>T</sup>	4 BIOL 2014 <sup>1,2,T</sup>	4 NUR 2303 <sup>T</sup>	3 BIOL/NUR 3803 <sup>T</sup>	3	
SOC 1003 <sup>T</sup>	3 Physical Activity <sup>1,T</sup>	1 Humanities <sup>1,T</sup>	3 NUR 3103	3	

Curriculum in Baccalaureate Nursing Degree Completion Plan Beginning in Fall Semester						
Physical Activity <sup>1,T</sup>	1	Elective <sup>3,T</sup>	3	Fine Arts <sup>1,T</sup>	3	NUR 3303
		Social Sciences <sup>1,T</sup>	3			
<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>
<b>Junior</b>		<b>Fall</b>		<b>Senior</b>		
<b>Spring</b>				<b>Spring</b>		<b>Fall</b>
NUR 3204	4	NUR 3606	6	NUR 4206	6	NUR 4606
NUR 3513	3	NUR 3802	2	NUR 4303	3	NUR 4804
NUR 3213	3	NUR 3805 <sup>4</sup>	5	NUR 4405	5	Elective
NUR 3404 <sup>4</sup>	4	Social Sciences <sup>1,T</sup>	3	NUR Elective (3000-4000 level)	1	NUR 4903
NUR 3402	2					
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".<sup>2</sup>Depending on previous preparation, student should recognize that prerequisites may be required before enrolling in BIOL 2014.<sup>3</sup>Nursing students must have 6 hours of electives which could include NUR 1001. (ENGL 2053 recommended).<sup>4</sup>One credit hour equals 3 contact hours.<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.**Nursing Curriculum  
for Licensed  
Practical Nurses****Arkansas State Articulation Agreement for LPNs**

Nursing Skills I (NUR 3103)

Nursing Skills II (NUR 3513)

Theories and Concepts in Nursing I (NUR 3204)

Practicum in Nursing I - Nursing the Individual Client (NUR 3404)

Care of the Older Adult (NUR 3213)

Curriculum in Baccalaureate Nursing Suggested Sequence of Courses for LPNs						
Freshman		Spring		Sophomore		Spring
<b>Fall</b>				<b>Fall</b>		
ENGL 1013 <sup>1</sup>	3	ENGL 1023 <sup>1</sup>	3	NUR 2303	3	PSY 3813
MATH 1113	3	PSY 2003	3	BIOL 3074	4	NUR 2023
CHEM 1114	4	BIOL 2014 <sup>2</sup>	4	Fine Arts <sup>1</sup>	3	BIOL/NUR 3803
SOC 1003	3	Physical Activity <sup>1</sup>	1	Humanities <sup>1</sup>	3	NUR 3303
Physical Activity <sup>1</sup>	1	Elective <sup>3</sup>	3	BIOL 3054	4	NUR 3402
		Social Sciences <sup>1</sup>	3			
<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>
<b>Junior</b>		<b>Spring</b>		<b>Senior</b>		
<b>Fall</b>				<b>Fall</b>		
NUR 3606	6	NUR 4206	6	NUR 4606	6	
NUR 3802	2	NUR 4303	3	NUR 4804	4	
NUR 3805 <sup>4</sup>	5	NUR 4405 <sup>4</sup>	5	NUR 4903 <sup>4</sup>	3	
Social Science <sup>1</sup>	3	NUR 3000-4000	1	Elective	3	
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements".<sup>2</sup>Depending on previous preparation, student should recognize that prerequisites may be required before enrolling in BIOL 2014.<sup>3</sup>Nursing students must have 6 hours of electives which could include NUR 1001. (ENGL 2053 recommended).<sup>4</sup>One credit hour equals 3 contact hours.**Nursing Curriculum  
for Registered  
Nurses****ATU and Nursing General Education Requirements**English Composition I, II (ENGL 1013, 1023)<sup>1</sup>

College Algebra (MATH 1113)

A Survey of Chemistry (CHEM 1114)

Human Anatomy (BIOL 2014)

Fine Arts<sup>1</sup> (3 hours)Humanities<sup>1</sup> (3 hours)

Social Sciences (12)

Introductory Sociology (SOC 1003)

General Psychology (PSY 2003)

U.S. History or Political Science<sup>1</sup> (3 hours)Social Sciences<sup>1</sup> (3 hours)Physical Activity<sup>1</sup> (2 hours)

Electives (6)

**Required Nursing Major Prerequisites**

Microbiology (BIOL 3054)  
 Human Physiology (BIOL 3074)  
 Lifespan Developmental Psychology (PSY 3813)  
 Health Assessment (NUR 3303)  
 Applied Pathophysiology (NUR/BIOL 3803)

#### **Arkansas State Articulation Agreement<sup>2</sup>**

Nutrition (NUR 2303)  
 Introduction to Professional Nursing (NUR 2023)  
 Nursing Skills<sup>1</sup> (NUR 3103)  
 Nursing Skills II (NUR 3513)  
 Theories and Concepts in Nursing I (NUR 3204)  
 Practicum in Nursing I - Nursing the Individual Client (NUR 3404)  
 Theories and Concepts in Nursing II (NUR 3606)  
 Practicum in Nursing II - Nursing the Family (NUR 3805)  
 Pharmacology I (NUR 3402)  
 Pharmacology II (NUR 3802)  
 Care of the Older Adult (NUR 3213)

Licensed registered nurses who have met all of the lower division nursing curriculum requirements and graduated from an associated degree or diploma program that was NLN accredited at the time of graduation may receive credit for 35 hours of nursing courses if they meet specific requirements.

#### **Curriculum in Baccalaureate Nursing for Registered Nurses<sup>4</sup>**

Arkansas Tech University Nursing Courses Specific to Curriculum in Baccalaureate Nursing for Registered Nurses

Spring Start					
Junior		Senior		Fall	
<b>Spring</b>		<b>Summer I, II</b>			
NURN 4002	2	NURN 4024		4	NURN 4034
NURN 4003	3	NURN 4303		3	NURN 4045
NURN 4013	3				Elective <sup>3</sup>
Elective	3				
<b>Total Hours</b>	<b>11</b>	<b>Total Hours</b>		<b>7</b>	<b>Total Hours</b>
			Summer Start		
<b>Junior</b>		<b>Senior</b>			
<b>Summer I, II</b>		<b>Fall</b>			
NURN 4002	2	NURN 4013		3	NURN 4034
NURN 4003	3	NURN 4024		4	NURN 4045
Elective	3	NURN 4303		3	Elective
<b>Total Hours</b>	<b>8</b>	<b>Total Hours</b>		<b>10</b>	<b>Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Licensed registered nurses who have met all of the lower division nursing curriculum requirements and graduated from an associate degree or diploma program that was NLN accredited at the time of graduation may receive credit for 35 hours of nursing courses if they meet specific requirements.

<sup>3</sup>Electives to be approved by Nursing advisor.

<sup>4</sup>All nursing major prerequisite courses must be completed prior to entry into the program with a GPA $\geq$ 2.75. Up to 6 hours of General Education courses may be outstanding. These courses must come from the following: Fine Arts, Humanities, History, or electives (see Curriculum Plan for Registered Nurses).



## COURSE CATALOGS

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### Department of Physical Sciences

[Back to College of Natural and Health Sciences](#)

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**Professors:**

Allen, Baker, Cohoon,  
Hardcastle, Hemmati,  
Robertson

**Associate Professors:**

Bhuiyan, Kondrick, Lasey

**Assistant Professors:**

Gann, G. Jones, Mebi,  
Musser, Patton, Shojaei

**Instructor:**

Fulmer

The Department of Physical Sciences offers majors and minors in chemistry, engineering physics, geology, and physical science including physics and nuclear physics options. Students interested in teaching science in secondary schools should follow the curriculum in science set forth in this catalog under the physical science/earth science teacher licensure curricula, College of Education.

The description and curricula for each of the various degree programs in the physical sciences are listed below. Note that for every degree program in this department, there is a non-course requirement involving an exit interview with the Department Head as part of the formal process for graduation.

#### Chemistry

The program and all of the degrees are certified by the American Chemical Society. The chemists of today are involved in the development of a multitude of new materials such as plastics, drugs, and agricultural products. Research chemists are conducting studies of the fundamental nature of matter which lead to expanded knowledge in medicine and biology. Each course in chemistry stresses laws, theories, and applications in the lecture portion and offers students the opportunity to gain experience in well equipped laboratories.

Chemistry is one of the highly recommended courses of study for students interested in pursuing careers in a variety of professional endeavors such as the health sciences: medicine, pharmacy, dentistry, and para-medical fields.

The "Professional option" is especially recommended for students who plan to pursue graduate studies in chemistry or related fields or those persons wishing to seek employment in industry as chemists.

The "Biochemistry option" is designed to provide the background needed for students seeking entrance into professional medical or dental schools. It will also greatly benefit students seeking technical jobs that require multidisciplinary training in biology and chemistry as well as an abundance of science laboratory skills.

The "General option" is specifically designed with a minimum of required courses so that students, in cooperation with their faculty academic advisors, can exercise a maximum degree of flexibility in tailoring programs to meet their individual aspirations. By judiciously choosing electives, individuals can enrich these minimum chemistry requirements to prepare for futures in law, technical marketing, environmental science, computer science, technical writing, toxicology, education, technical illustration, engineering, health sciences, and business..

Chemistry also offers an "Environmental option". The objective of this curriculum is to bring together the disciplines of chemistry, biology, and geology as applied to the environment. Emphasis will be on interdisciplinary approaches to environmental studies.

Chemistry majors must earn a grade of "C" or better in all chemistry courses (CHEM), including transfer credits, in order to satisfy graduation requirements.

#### Curriculum in Chemistry (General Option)

##### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore		Senior	
Fall	Spring	Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Elective <sup>4</sup>	9 Elective <sup>4</sup>
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 PHYS 2014 or 2114 <sup>T</sup>	4 PHYS 2024 or 2124 <sup>T</sup>	4 CHEM 4414	4 CHEM 4401
CHEM 2124 <sup>T</sup>	4 CHEM 2134 <sup>T</sup>	4 CHEM 3254	4 CHEM 3264	3 CHEM Elective <sup>3</sup>	3 Social Sciences <sup>1</sup>
Social Sciences <sup>1,T</sup>	3 BIOL 1114 <sup>T</sup>	4 COMS 2003 or 2803 <sup>T</sup>	3 CHEM 3245	1	
PHSC 1001	1 PHSC 1011	1 Physical Activity <sup>1,T</sup>	1		
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>
<b>Junior</b>					
Fall	Spring	Fall	Spring		
Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 Elective <sup>4</sup>	9 Elective <sup>4</sup>		
Science Elective <sup>2</sup>	3 Elective <sup>4,T</sup>	5 CHEM 4414	4 CHEM 4401		
CHEM 3301	1 CHEM 3423	3 CHEM Elective <sup>3</sup>	3 CHEM Elective <sup>3</sup>		
CHEM 3324	4 CHEM 3344	4	4		
Elective <sup>4,T</sup>	3 Physical Activity <sup>1,T</sup>	1	1		
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>

##### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore		Senior	
Spring	Fall	Spring	Fall	Spring	Fall
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Elective <sup>4</sup>	9 Elective <sup>4</sup>
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 PHYS 2024 or 2124 <sup>T</sup>	4 PHYS 2014 or 2114 <sup>T</sup>	4 CHEM 4401	4 CHEM 4414
CHEM 2124 <sup>T</sup>	4 CHEM 2134 <sup>T</sup>	4 CHEM 3254	4 CHEM 3264	3 CHEM Elective <sup>3</sup>	3 Social Sciences <sup>1</sup>

Curriculum in Chemistry (General Option)							
Social Sciences <sup>1,T</sup>	3	PHSC 1001	1	CHEM 3245	5	COMS 2003 or 2803 <sup>T</sup>	3
PHSC 1011	1	BIOL 1114 <sup>T</sup>	4			Physical Activity <sup>1,T</sup>	1
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>15</b>
<b>Junior</b>			<b>Senior</b>				
<b>Spring</b>		<b>Fall</b>	<b>Spring</b>		<b>Fall</b>		
Humanities <sup>1,T</sup>	3	Fine Arts <sup>1,T</sup>	3	CHEM 4401	1	CHEM 4414	4
Elective <sup>4,T</sup>	5	Science Elective <sup>2</sup>	3	CHEM Elective <sup>3</sup>	3	CHEM Elective <sup>3</sup>	3
CHEM 3344	4	CHEM 3301	1	Social Sciences <sup>1</sup>	3	Elective <sup>4</sup>	9
CHEM 3423	3	Elective <sup>4,T</sup>	3	Elective <sup>4</sup>			
Physical Activity <sup>1,T</sup>	1	CHEM 3324	4				
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Science electives from BIOL, GEOL, PHYS, PHSC (excluding PHSC 1013 and PHSC 1021), and excluding CHEM.

<sup>3</sup>Excluding CHEM 1114.

<sup>4</sup>German, Statistics, and Technical Communications are encouraged. (Electives must include sufficient upper-division courses to result in 40 upper division hours) (upper division = 3000-4000 level).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Chemistry (Environmental Option)						
Degree Completion Plan Beginning in Fall Semester						
Freshman		Sophomore				
<b>Fall</b>		<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
PHSC 1001	1	Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Physical Activity <sup>1,T</sup>
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	MATH 2163 or PSY 2053	3	CHEM 3245
MATH 2243	3	CHEM 2143	3	(COMS 2003 or 2803) or PHSC 1004 <sup>T</sup>	3-4	CHEM 3264
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	CHEM 3254	4	PHYS 2024 <sup>T</sup>
PHSC 1004 or (COMS 2003 or 2803) <sup>T</sup>	4-3	ECON 2003 <sup>T</sup>	3	PHYS 2014 <sup>T</sup>	4	CHEM 2111
Physical Activity <sup>1,T</sup>	1	PHSC 1011	1			
<b>Total Hours</b>	<b>16-</b> <b>15</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>17-</b> <b>18</b>	<b>Total Hours</b>
<b>Junior</b>		<b>Senior</b>		<b>Spring</b>		
<b>Fall</b>		<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		
Humanities <sup>1,T</sup>	3	CHEM 3111	1	CHEM 4414	4	CHEM 4111
ENGL 2053	3	Fine Arts <sup>1,T</sup>	3	BIOL 3054	4	POLS 4103
BIOL 2124	4	BIOL 2134	4	BIOL 3114	4	CHEM 4991-4
CHEM 3353	3	Social Sciences <sup>1,T</sup>	3	GEOL 3083	3	Elective <sup>T</sup>
GEOL 1014 <sup>T</sup>	4	BIOL 3043	3			8-5
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>
Degree Completion Plan Beginning in Spring Semester						
Freshman		Sophomore				
<b>Spring</b>		<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	CHEM 2111	1	PHYS 2014 <sup>T</sup>
MATH 2243	3	PHSC 1004 or (COMS 2003 or 2803) <sup>T</sup>	4-3	CHEM 2143	3	CHEM 3254
Social Sciences <sup>1,T</sup>	6	CHEM 2134 <sup>T</sup>	4	CHEM 3245	5	(COMS 2003 or 2803) or PHSC 1004 <sup>T</sup>
CHEM 2124 <sup>T</sup>	4	PHSC 1001	1	MATH 2163 or PSY 2053	3	BIOL 2124
PHSC 1011	1	Physical Activity <sup>1,T</sup>	1	Fine Arts <sup>1,T</sup>	3	Physical Activity <sup>1,T</sup>
		Social Sciences <sup>1,T</sup>	3			
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>16-</b> <b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>
<b>Junior</b>		<b>Senior</b>		<b>Fall</b>		
<b>Spring</b>		<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		
PHYS 2024 <sup>T</sup>	4	BIOL 3043	3	CHEM 4111	1	Humanities <sup>1,T</sup>
CHEM 3264	4	CHEM 3353	3	BIOL 3054	4	GEOL 3083
CHEM 3111	1	GEOL 1014 <sup>T</sup>	4	CHEM 4991-4	1-4	CHEM 4414
BIOL 2124	4	BIOL 3114	4	Elective <sup>T</sup>	8-5	POLS 4103
ENGL 2053	3	ECON 2003 <sup>T</sup>	3			
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>

<sup>1</sup>See appropriate choices, alternatives or substitutions in "General Education Requirements". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Chemistry (Professional Option)							
Degree Completion Plan Beginning in Fall Semester							
Freshman	Spring			Sophomore			
<b>Fall</b>	<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	Social Sciences <sup>1,T</sup>	3	
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	<b>PHYS 2114<sup>T</sup></b>	4	<b>PHYS 2124<sup>T</sup></b>	4
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	CHEM 3254	4	CHEM 3264	4
Social Sciences <sup>1,T</sup>	3	BIOL 1114 <sup>T</sup>	4	COMS 2003 or 2803 <sup>T</sup>	3	CHEM 3245	5
<b>PHSC 1001</b>	1	<b>PHSC 1011</b>	1	MATH 2934	4		
Physical Activity <sup>1,T</sup>	1						
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>		<b>16</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>
<b>Junior</b>				<b>Sophomore</b>			
<b>Fall</b>			<b>Spring</b>	<b>Fall</b>			<b>Spring</b>
Fine Arts <sup>1,T</sup>	3	Humanities <sup>1,T</sup>	3	<b>CHEM 3344</b>	4	<b>CHEM 4424</b>	4
CHEM Elective <sup>2</sup>	3	Social Sciences <sup>1,T</sup>	3	<b>CHEM 4414</b>	4	<b>CHEM 4492-4</b>	2-4
CHEM 3301	1	Elective <sup>3</sup>	6	<b>CHEM 4401</b>	1	Elective <sup>3</sup>	7-5
CHEM 3324	4	CHEM 3334	4	<b>CHEM 4433</b>	3		
Elective <sup>3,T</sup>	3			Elective <sup>3</sup>	2		
Physical Activity <sup>1,T</sup>	1						
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>		<b>16</b>	<b>Total Hours</b>	<b>14</b>	<b>Total Hours</b>
Degree Completion Plan Beginning in Spring Semester							
Freshman	Spring			Sophomore			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Sophomore</b>	<b>Spring</b>	<b>Fall</b>	
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	Social Sciences <sup>1,T</sup>	3	<b>COMS 2003 or 2803<sup>T</sup></b>	3
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	CHEM 3245	5	MATH 2934	4
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	CHEM 3254	4	Social Sciences <sup>1,T</sup>	3
Social Sciences <sup>1,T</sup>	3	BIOL 1114 <sup>T</sup>	4	<b>PHYS 2124<sup>T</sup></b>	4	<b>PHYS 2114<sup>T</sup></b>	4
Physical Activity <sup>1,T</sup>	1	<b>PHSC 1001</b>	1			CHEM 3264	4
<b>PHSC 1011</b>	1						
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>		<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>
<b>Junior</b>				<b>Sophomore</b>			
<b>Spring</b>		<b>Fall</b>		<b>Spring</b>		<b>Fall</b>	
CHEM 3334	4	Fine Arts <sup>1,T</sup>	3	<b>CHEM 4424</b>	4	<b>CHEM 3344</b>	4
Humanities <sup>1,T</sup>	3	CHEM Elective <sup>2</sup>	3	<b>CHEM 4492-4</b>	2-4	<b>CHEM 4414</b>	4
Social Sciences <sup>1,T</sup>	3	CHEM 3301	1	Elective <sup>3</sup>	7-5	<b>CHEM 4401</b>	1
Elective <sup>3</sup>	6	CHEM 3324	4			<b>CHEM 4433</b>	3
		Elective <sup>3,T</sup>	3			Elective <sup>3</sup>	2
		Physical Activity <sup>1,T</sup>	1				
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>		<b>15</b>	<b>Total Hours</b>	<b>13</b>	<b>Total Hours</b>
Degree Completion Plan Beginning in Spring Semester							
Freshman	Spring			Sophomore			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Sophomore</b>	<b>Spring</b>	<b>Fall</b>	
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	Social Sciences <sup>1,T</sup>	3	<b>COMS 2003 or 2803<sup>T</sup></b>	3
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	CHEM 3245	5	MATH 2934	4
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	CHEM 3254	4	Social Sciences <sup>1,T</sup>	3
Social Sciences <sup>1,T</sup>	3	BIOL 1114 <sup>T</sup>	4	<b>PHYS 2124<sup>T</sup></b>	4	<b>PHYS 2114<sup>T</sup></b>	4
Physical Activity <sup>1,T</sup>	1	<b>PHSC 1001</b>	1			CHEM 3264	4
<b>PHSC 1011</b>	1						
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>		<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>
<b>Junior</b>				<b>Sophomore</b>			
<b>Spring</b>		<b>Fall</b>		<b>Spring</b>		<b>Fall</b>	
CHEM 3334	4	Fine Arts <sup>1,T</sup>	3	<b>CHEM 4424</b>	4	<b>CHEM 3344</b>	4
Humanities <sup>1,T</sup>	3	CHEM Elective <sup>2</sup>	3	<b>CHEM 4492-4</b>	2-4	<b>CHEM 4414</b>	4
Social Sciences <sup>1,T</sup>	3	CHEM 3301	1	Elective <sup>3</sup>	7-5	<b>CHEM 4401</b>	1
Elective <sup>3</sup>	6	CHEM 3324	4			<b>CHEM 4433</b>	3
		Elective <sup>3,T</sup>	3			Elective <sup>3</sup>	2
		Physical Activity <sup>1,T</sup>	1				
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>		<b>15</b>	<b>Total Hours</b>	<b>13</b>	<b>Total Hours</b>
Degree Completion Plan Beginning in Fall Semester							
Freshman	Spring			Sophomore			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Sophomore</b>	<b>Spring</b>	<b>Fall</b>	
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	Social Sciences <sup>1,T</sup>	3	<b>COMS 2003 or 2803<sup>T</sup></b>	3
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	<b>PHYS 2014 or 2114<sup>T</sup></b>	4	<b>PHYS 2024 or 2124<sup>T</sup></b>	4
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	CHEM 3254	4	CHEM 3264	4
Social Sciences <sup>1,T</sup>	3	BIOL 1114 <sup>T</sup>	4	COMS 2003 or 2803 <sup>T</sup>	3	CHEM 3245	5
<b>PHSC 1001</b>	1	<b>PHSC 1011</b>	1	Physical Activity <sup>1,T</sup>	1		
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>		<b>16</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>
<b>Junior</b>				<b>Sophomore</b>			
<b>Spring</b>		<b>Fall</b>		<b>Spring</b>		<b>Fall</b>	
Fine Arts <sup>1,T</sup>	3	<b>CHEM 3363</b>	3	<b>CHEM 3324</b>	4	Elective <sup>4</sup>	5
BIOL 2124	4	<b>BIOL 2134</b>	4	<b>CHEM 4414</b>	4	Humanities <sup>T</sup>	3
CHEM 3301	1	<b>CHEM 3034</b>	4	Elective <sup>4</sup>	4	<b>Biol 4033</b>	3
CHEM 3344	4	<b>CHEM 3423</b>	3	<b>BIOL 3124 or 3174</b>	4	Social Sciences <sup>1,T</sup>	3
Elective <sup>4,T</sup>	4	Physical Activity <sup>1,T</sup>	1			<b>CHEM 4401</b>	1
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>		<b>15</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>
Degree Completion Plan Beginning in Spring Semester							
Freshman	Spring			Sophomore			
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Sophomore</b>	<b>Spring</b>	<b>Fall</b>	
<b>ENGL 1013<sup>1,T</sup></b>	3	<b>ENGL 1023<sup>1,T</sup></b>	3	Social Sciences <sup>1,T</sup>	3	<b>COMS 2003 or 2803<sup>T</sup></b>	3
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	<b>PHYS 2014 or 2114<sup>T</sup></b>	4	<b>PHYS 2024 or 2124<sup>T</sup></b>	4
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	CHEM 3254	4	CHEM 3264	4
Social Sciences <sup>1,T</sup>	3	BIOL 1114 <sup>T</sup>	4	COMS 2003 or 2803 <sup>T</sup>	3	CHEM 3245	5
<b>PHSC 1001</b>	1	<b>PHSC 1011</b>	1	Physical Activity <sup>1,T</sup>	1		
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>		<b>16</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Excluding CHEM 1114 and CHEM 2204.

<sup>3</sup>German, Statistics, and Technical Communications are encouraged. (Electives must include sufficient upper division courses to result in 40 upper division hours) (upper division = 3000-4000 level)

<sup>4</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

Curriculum in Chemistry (Biochemistry Option)						
Spring	Fall	Spring	Fall			
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>			
MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 PHYS 2024 or 2124 <sup>T</sup>	4 PHYS 2014 or 2114 <sup>T</sup>			
CHEM 2124 <sup>T</sup>	4 CHEM 2134 <sup>T</sup>	4 CHEM 3254	4 CHEM 3264			
Social Sciences <sup>1,T</sup>	3 PHSC 1001	1 CHEM 3245	5 COMS 2003 or 2803 <sup>T</sup>			
Physical Activity <sup>1,T</sup>	1 BIOL 1114 <sup>T</sup>	4	Physical Activity <sup>1,T</sup>			
PHSC 1011	1					
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15</b>	
<b>Junior</b>		<b>Senior</b>				
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>			
Humanities <sup>1,T</sup>	3 Fine Arts <sup>1,T</sup>	3 CHEM 3363	3 BIOL 3124 or 3174			
Elective <sup>4,T</sup>	4 CHEM 3344	4 BIOL 4033	3 CHEM 4414			
BIOL 2124	4 BIOL 2134	4 Elective <sup>4</sup>	3 CHEM 4401			
BIOL 3034	4 CHEM 3324	4 Social Sciences <sup>1,T</sup>	3 Elective <sup>4</sup>			
	CHEM 3301	1 CHEM 3423	3			
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>	

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Science electives from BIOL, GEOL, PHYS, PHSC (excluding PHSC 1013 and PHSC 1021), and excluding CHEM.

<sup>3</sup>Excluding CHEM 1114 and CHEM 2204.

<sup>4</sup>German, Statistics, and Technical Communications are encouraged. (Electives must include sufficient upper-division courses to result in 40 upper division hours) (upper division = 3000-4000 level).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

## Minor Chemistry

The minor in chemistry is designed for science majors who would like to further their studies in chemistry and for students who cannot complete a major in chemistry, but for employment opportunities, would like to gain basic knowledge and competencies in chemistry. The minor in chemistry requires the core chemistry courses:

\*General Chemistry CHEM 2124, 2134

\*Organic Chemistry CHEM 3254, 3264

\*Quantitative Analysis CHEM 3245

## Geology

The science of geology seeks to develop an understanding of the Earth's physical and chemical processes, environmental systems, and natural resources. Geologists work in a variety of areas, discovering new sources of fossil fuels, minerals, and economically important rocks. Volcanoes, earthquakes, landforms, surface and subsurface water, earth history, and fossils are all subjects for study. Also, geologists may work as members of an interdisciplinary team in planning construction projects, sanitary landfills, mine land reclamation, and other environmentally-oriented projects. Employment opportunities for geologists exist in private industry, state and federal government agencies, and teaching at all levels.

Geology students may follow programs designed to prepare them for entry into graduate school, employment in the geotechnical field, or secondary school earth science teaching. The best opportunities exist for students who continue their education and complete the master's or doctor's degree in geology. Major oil and gas companies generally require the master's degree for an entry-level position. Also, excellent employment opportunities are available in the environmental geotechnical field.

The geology major will study for a bachelor of science degree. This degree requires a minimum of 124 semester hours with a minimum of 43 semester hours in geology (professional option), or a minimum of 36 semester hours in geology (environmental option). Students interested in teaching as a profession should follow the Physical Science and Earth Science curriculum listed under teacher licensure curricula, College of Education. Additional departmental courses and related courses may be specified for geology majors following particular emphasis programs, and for some emphasis programs, substitutions of the above list may be required. Strongly recommended are calculus and/or statistics.

The geology program is fully interdisciplinary, and the student and his/her advisor can "build" an academic program through selection of appropriate electives to suit the special needs and interests of the student.

## Curriculum in Geology (Professional Option) Suggested Sequence of Courses

Freshman	Spring	Sophomore	Spring
Fall	Fall	Fall	Fall
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 POLS 2003 <sup>T</sup>	3 Social Sciences <sup>1,T</sup>
PHSC 1001	1 Social Sciences <sup>1,T</sup>	3 CHEM 2124 <sup>T</sup>	4 CHEM 2134 <sup>T</sup>
Biological Science <sup>1,T</sup>	4 GEOG 2013 <sup>T</sup>	3 GEOL 2001	1 GEOL 3124 or Elective <sup>4</sup>
MATH 1113 <sup>T</sup>	3 MATH 1203 <sup>T</sup>	3 GEOL 3014	4 GEOL 3164
GEOL 1014 <sup>T</sup>	4 GEOL 2024	4 Elective	3
Physical Activity <sup>1,T</sup>	1 PHSC 1011	1	
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
PHYS 2014 <sup>T</sup>	4 PHYS 2024 <sup>T</sup>	4 Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>
GEOL 3001	1 Elective or GEOL 3124 <sup>4</sup>	4 GEOL 4001	1 Elective or GEOL 4023 <sup>4</sup>

Curriculum in Geology (Professional Option)						
GEOL 3004	4	GEOL 4023 or Elective <sup>4</sup>	3	Elective(3000-4000 level)	3	Elective(3000-4000 level)
GEOL 3023	3	MATH/COMS Elective <sup>2</sup>	4-3	Elective or GEOL 3044 <sup>4</sup>	4	
GEOL 3044 or Elective <sup>4</sup>	4	Elective <sup>T</sup>	3-4	Physical Activity <sup>1,T</sup>	1	
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>	<b>12</b>	<b>Total Hours</b>

**Ninth Semester****Summer (after Junior or Senior year)**

GEOL 4006 <sup>3</sup>	6
<b>Total Hours</b>	<b>6</b>

<sup>1</sup>See appropriate choices, alternatives or substitutions in "[General Education Requirements](#)". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>COMS 1003, COMS 1103, MATH 2914, or MATH 2163.

<sup>3</sup>GEOL 4006 (6 credit hours of field geology) must be completed during the summer after Junior or Senior year.

<sup>4</sup>Must complete both the GEOL class and one elective (GEOL course offered in alternating years).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Curriculum in Geology (Environmental Option)****Degree Completion Plan Beginning in Fall Semester**

Freshman	Spring	Sophomore	Spring
<b>Fall</b>		<b>Fall</b>	
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 GEOG 2013 <sup>T</sup>	3 POLS 2003 <sup>T</sup>
PHSC 1001	1 COMS 1003 <sup>T</sup>	3 ENGL 2053	3 CHEM 2134
PHSC 1004 <sup>T</sup>	4 MATH 2163 or PSY 2053 <sup>T</sup>	3 CHEM 2124	4 BIOL 1014 <sup>T</sup>
MATH 1113 <sup>T</sup>	3 ECON 2003 <sup>T</sup>	3 GEOL 3014	4 GEOL 3164
GEOL 1014 <sup>T</sup>	4 GEOL 2024	4 Physical Activity <sup>1,T</sup>	1 GEOL 2111
Physical Activity <sup>1,T</sup>	1 PHSC 1011	1	
<b>Total Hours</b>	<b>16</b> <b>Total Hours</b>	<b>17</b> <b>Total Hours</b>	<b>15</b> <b>Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
BIOL3043 or Elective (3000-4000 level) <sup>2</sup>	3 Humanities <sup>1,T</sup>	3 BIOL 3043 or Elective (3000-4000 level) <sup>2</sup>	3 GEOL 3174
GEOL 3004	4 GEOL 3111	1 GEOL 3083	3 GEOL 4111
GEOL 3023	3 Fine Arts <sup>1,T</sup>	3 CHEM 3254	4 Science Elective <sup>2</sup>
GEOL 3044 or 3153	4-3 Science Elective <sup>2,T</sup>	2 GEOL 3153 or 3044	3-4
PHYS 2014 <sup>T</sup>	4 PHYS 2024 <sup>T</sup>	4 Social Sciences <sup>1,T</sup>	3
<b>Total Hours</b>	<b>18-</b> <b>17</b> <b>Total Hours</b>	<b>13</b> <b>Total Hours</b>	<b>16-</b> <b>17</b> <b>Total Hours</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>			
<b>Freshman</b>		<b>Sophomore</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 ENGL 2053	3 MATH 2163 or PSY 2053 <sup>T</sup>
COMS 1003 <sup>T</sup>	3 PHSC 1001	1 CHEM 2134	3 POLS 2003 <sup>T</sup>
MATH 1113 <sup>T</sup>	3 PHSC 1004 <sup>T</sup>	4 GEOL 2111	1 GEOL 3014
BIOL 1014 <sup>T</sup>	4 CHEM 2124 <sup>T</sup>	4 ECON 2003 <sup>T</sup>	3 PHYS 2014 <sup>T</sup>
GEOG 2013 <sup>T</sup>	3 GEOL 1014 <sup>T</sup>	4 GEOL 2024	4 Physical Activity <sup>1,T</sup>
PHSC 1011	1	1	1
<b>Total Hours</b>	<b>17</b> <b>Total Hours</b>	<b>16</b> <b>Total Hours</b>	<b>15</b> <b>Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>	3 GEOL 3174	4 GEOL 3083
GEOL 3111	1 GEOL 3004	4 GEOL 4111	1 GEOL 3153 or 3044
GEOL 3164	4 GEOL 3023	3 Science Elective <sup>2,T</sup>	5 Science Elective <sup>2</sup>
PHYS 2024 <sup>T</sup>	4 BIOL 3043 or Elective (3000-4000 level) <sup>2</sup>	3 CHEM 3254	4 BIOL 3043 or Elective (3000-4000 level) <sup>2</sup>
Social Sciences <sup>1,T</sup>	3 GEOL 3044 or 3153	4-3	
<b>Total Hours</b>	<b>15</b> <b>Total Hours</b>	<b>17-</b> <b>16</b> <b>Total Hours</b>	<b>14-</b> <b>15</b> <b>Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.\*

<sup>2</sup>Electives in Physical or Life Sciences and Mathematics (Geology, Biology, Chemistry, and Math).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Curriculum in Geology (Petroleum Option)****Degree Completion Plan Beginning in Fall Semester**

**Curriculum in Geology (Petroleum Option)**

<b>Freshman</b>				<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	POLS 2003 <sup>T</sup>	3
PHSC 1001	1	GEOG 2013 <sup>T</sup>	3	GEOL 2001	1
BIOL 1014 <sup>T</sup>	4	MATH 1203 (or higher level-math course) <sup>T</sup>	3	CHEM 2124	4
MATH 1113 <sup>T</sup>	3	Social Sciences <sup>1,T</sup>	3	GEOL 3014	4
GEOL 1014 <sup>T</sup>	4	GEOL 2024	4	GEOL 3044	4
Physical Activity <sup>1,T</sup>	1				
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>
<b>Junior</b>				<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	
Social Sciences <sup>1,T</sup>	3	GEOL 3124 or 4023	3-4	General Elective	6
CHEM 3254	4	GEOL 3004	4	GEOL 4001	1
GEOL 3023	3	GEOL 3174 or 4034	4	Humanities <sup>1,T</sup>	3
GEOL 3001	1	PHYS 2024 <sup>T</sup>	4	Fine Arts <sup>1,T</sup>	3
PHYS 2014 <sup>T</sup>	4				
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15-16</b>	<b>Total Hours</b>	<b>13</b>
<b>Ninth Semester</b>					
<b>Summer (after Junior or Senior year)</b>					
GEOL 4006 <sup>2</sup>	6				
<b>Total Hours</b>	<b>6</b>				

**Degree Completion Plan Beginning in Spring Semester**

<b>Freshman</b>				<b>Sophomore</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		<b>Fall</b>	
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	POLS 2003 <sup>T</sup>	3
Physical Activity <sup>1,T</sup>	1	PHSC 1001	1	Physical Activity <sup>1,T</sup>	1
MATH 1113 <sup>T</sup>	3	MATH 1203 (or higher level-math course) <sup>T</sup>	3	GEOL 3164	4
BIOL 1014 <sup>T</sup>	4	GEOL 2001 <sup>T</sup>	1	CHEM 2124	4
GEOL 1014 <sup>T</sup>	4	GEOL 3014 <sup>T</sup>	4	GEOL 2024	4
		GEOG 2013 <sup>T</sup>	3		
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>
<b>Junior</b>				<b>Senior</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>		<b>Fall</b>	
Social Sciences <sup>1,T</sup>	3	COMS Elective <sup>T</sup>	3	GEOL 4001	1
GEOL 3124 or 4023	3-4	PHYS 2014 <sup>T</sup>	4	GEOL 3124 or 4023	3-4
GEOL 3174 or 4034	4	GEOL 3023	3	General Electives	3
GEOL 3004	4	CHEM 3254	4	Humanities <sup>1,T</sup>	3
		GEOL 3001	1	Fine Arts <sup>1,T</sup>	3
<b>Total Hours</b>	<b>14-15</b>	<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>14-15</b>
<b>Ninth Semester</b>					
<b>Summer (after Junior or Senior year)</b>					
GEOL 4006 <sup>2</sup>	6				
<b>Total Hours</b>	<b>6</b>				

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.\*

<sup>2</sup>GEOL 4006 (6 credit hours of field geology) must be completed during the summer after Junior or Senior year

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Minor  
Geology**

The minor in geology is primarily designed for students who are majoring in disciplines where a broader background in geology can aid in recognizing and addressing geological hazards, natural disasters, environmental issues, natural resource management, conservation, and land use planning. The minor in geology requires 20 hours of courses:

\*GEOL Electives (11 hours)

\*GEOL Electives (9 hours of 3000 or 4000 level)

\*no more than one credit hour can be a seminar course or special problem

**Physical Science -  
General Option**

The baccalaureate degree in physical science offers a program of study in which the student can elect a major emphasis in the physical sciences department. The curriculum is designed with enough flexibility so that students may prepare for a number of professions that require technical skills and a broad physical sciences background. It is well suited for students anticipating the teaching of science in the secondary schools and for students planning a military career as it affords a desirable general scientific background.

To qualify for a baccalaureate degree in physical science (general option), the student must complete the following minimum number of semester hours: eight hours in biology, eight hours in chemistry, eleven hours in physics, four hours in geology, and eleven hours

in mathematics. The student must also complete an additional 29 semester hours in four of the following subject areas: chemistry, engineering, geology, mathematics, physics, and physical science (**PHSC 1004**, **1013**, **1021**, **GEOL 1004** may not be counted in these hours)

### Curriculum in Physical Science (General Option)

#### Degree Completion Plan Beginning in Fall Semester

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
PHSC 1001	1 Social Sciences <sup>1,T</sup>	3 PHYS 2014 or 2114 <sup>T</sup>	4 PHYS 2024 or 2124 <sup>T</sup>
Biological Science <sup>1,T</sup>	4 MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 BIOL Elective
CHEM 2124 <sup>T</sup>	4 CHEM 2134 <sup>T</sup>	4 Fine Arts <sup>1,T</sup>	3 Humanities <sup>T</sup>
MATH 1113 <sup>T</sup>	3 PHSC 1011	1 GEOL 1014 <sup>T</sup>	4 Physical Activity <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hour</b>	<b>15 Total Hours</b>	<b>18 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
PHSC/MATH/ENGR Elective <sup>2</sup>	7 PHSC/MATH/ENGR Elective <sup>2</sup>	3 Elective(3000-4000 level)	11 PHSC 3033
PHSC 3053	3 PHSC/MATH Elective (3000-4000 level) <sup>2</sup>	6 PHYS 3213 or Elective (3000-4000level) <sup>3</sup>	3 PHSC/MATH Elective (3000-4000 level) <sup>2</sup>
PHYS 3213 or Elective (3000-4000 level) <sup>3</sup>	3 Social Sciences <sup>1,T</sup>	3 Physical Activity <sup>1,T</sup>	1 PHSC/MATH Elective (3000-4000 level) <sup>2</sup>
COMS 2803	3 Elective	4	Elective
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>
Degree Completion Plan Beginning in Spring Semester			
<b>Freshman</b>		<b>Sophomore</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
ENGL 1013 <sup>1,T</sup>	3 PHSC 1001	1 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
MATH 1113 <sup>T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 PHYS 2024 or 2124 <sup>T</sup>	4 PHYS 2014 or 2114 <sup>T</sup>
Biological Science <sup>1,T</sup>	4 Social Sciences <sup>1,T</sup>	3 MATH 2924 <sup>T</sup>	4 BIOL Elective
CHEM 2124 <sup>T</sup>	4 MATH 2914 <sup>T</sup>	4 Fine Arts <sup>1,T</sup>	3 Humanities <sup>1,T</sup>
Physical Activity <sup>1,T</sup>	1 CHEM 2134 <sup>T</sup>	4 Physical Activity <sup>1,T</sup>	1 GEOL 1014 <sup>T</sup>
PHSC 1011	1		
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>
<b>Junior</b>		<b>Senior</b>	
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>
PHSC/MATH/ENGR Elective <sup>2</sup>	3 PHSC/MATH/ENGR Elective <sup>2</sup>	3 PHSC 3033	3 Elective(3000-4000 level)
PHSC/MATH Elective (3000-4000 level) <sup>2</sup>	3 PHYS 3213 or Elective (3000-4000 level) <sup>3</sup>	3 Elective (3000-4000 level) <sup>3</sup>	3 PHSC/MATH Elective (3000-4000 level) <sup>2</sup>
Elective	6 PHSC/MATH Elective (3000-4000 level) <sup>2</sup>	6 PHSC/MATH Elective (3000-4000 level) <sup>2</sup>	4 PHYS 3213 or Elective (3000-4000 level) <sup>3</sup>
COMS 2803	3 Elective	2 Social Sciences <sup>1,T</sup>	3
	PHSC 3053	3	
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>	<b>13 Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Excluding **MATH 3003**, **MATH 3033**, **MATH 4113**, **PHSC 1013**, and **PHSC 1021**.

<sup>3</sup>Must complete both the PHYS class and one upper division elective (PHYS course offered in alternating years) (upper division = 3000-4000 level)

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### **Physical Science - Physics Option**

The physics curriculum is designed to serve the needs of students in the fields of engineering, medicine, and other sciences. The junior and senior courses are tailored for students who desire a concentration in physics for a bachelor of science degree in physical science and/or wish to pursue graduate study in areas such as physics, meteorology, and astronomy.

To qualify for a bachelor of science degree in physical science, the student must take eight hours in chemistry, three hours in computer and information science, 27 hours in mathematics, and a minimum of 30 hours in physics. Twenty-two semester hours in these courses must be at the 3000 or 4000 level. A minimum of 38 hours must be taken in the Department of Physical Sciences.

### Curriculum in Physical Science (Physics Option)

#### Degree Completion Plan Beginning in Fall Semester

<b>Freshman</b>		<b>Sophomore</b>	
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>
Physical Activity <sup>1,T</sup>	1 Physical Activity <sup>1,T</sup>	1 COMS 2803	3 Biological Science <sup>1,T</sup>
ENGL 1013 <sup>T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 PHYS 2114 <sup>T</sup>	4 PHYS 2124 <sup>T</sup>
MATH 1914 <sup>T</sup>	4 MATH 2914 <sup>T</sup>	4 MATH 2924 <sup>T</sup>	4 MATH 2934
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>
CHEM 2124 <sup>T</sup>	4 CHEM 2134 <sup>T</sup>	4 Elective <sup>3</sup>	3 Elective <sup>3,T</sup>

Curriculum in Physical Science (Physics Option)						
PHSC 1001	1	PHSC 1011	1			
Total Hours	16 Total Hours		16 Total Hours		17 Total Hours	17
<b>Junior</b>			<b>Senior</b>			
<b>Fall</b>		<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	
Humanities <sup>1,T</sup>	3	Fine Arts <sup>1,T</sup>	3	Elective <sup>3</sup>	3	PHYS 4991-4
MATH 3243	3	PHYS Elective (3000-4000 level)	3	MATH Elective (3000-4000 level) <sup>2</sup>	3	MATH Elective (3000-4000 level) <sup>2</sup>
PHYS 3023 or 3213	3	PHYS 3133 or 4013	3	PHYS 3213 or 3023	3	PHYS 4013 or 3133
PHYS Elective (3000-4000) or PHYS 4113 <sup>4</sup>	3	ELEG 2113	3	PHYS Elective (3000-4000) or PHYS 4113 <sup>4</sup>	3	Elective(3000-4000 level) <sup>2,3</sup>
ELEG 2103	3	ELEG 2111	1	Elective (3000-4000 level) <sup>2,3</sup>	3	
		Elective <sup>3</sup>	2			
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>		<b>15 Total Hours</b>	<b>13</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>						
<b>Freshman</b>			<b>Sophomore</b>			
<b>Spring</b>		<b>Fall</b>	<b>Spring</b>		<b>Fall</b>	
Physical Activity <sup>1,T</sup>	1	Physical Activity <sup>1,T</sup>	1	COMS 2803	3	Biological Science <sup>1,T</sup>
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	PHYS 2124 <sup>T</sup>	4	PHYS 2114 <sup>T</sup>
MATH 1914 <sup>T</sup>	4	MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	MATH 2934
Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	Elective <sup>3</sup>	3	Elective <sup>3,T</sup>
PHSC 1011	1	PHSC 1001	1			
<b>Total Hours</b>	<b>16 Total Hours</b>		<b>16 Total Hours</b>		<b>17 Total Hours</b>	<b>17</b>
<b>Junior</b>			<b>Senior</b>			
<b>Spring</b>		<b>Fall</b>	<b>Spring</b>		<b>Fall</b>	
Humanities <sup>1,T</sup>	3	Fine Arts <sup>1,T</sup>	3	Elective <sup>3</sup>	3	PHYS 4991-4
MATH 3243	3	Elective <sup>3</sup>	2	MATH Elective (3000-4000 level) <sup>2</sup>	3	MATH Elective (3000-4000 level) <sup>2</sup>
PHYS 3133 or 4013	3	PHYS 3023 or 3213	3	PHYS 4013 or 3133	3	PHYS 3213 or 3023
ELEG 2103	3	PHYS 4113 or PHYS Elective (3000-4000) <sup>4</sup>	3	Elective(3000-4000 level) <sup>2,3</sup>	3	PHYS 4113 or PHYS Elective (3000-4000) <sup>4</sup>
PHYS Elective (3000-4000 level)	3	ELEG 2113	3			Elective(3000-4000 level) <sup>2,3</sup>
		ELEG 2111	1			
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>		<b>12 Total Hours</b>	<b>16</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Excluding MATH 3003, MATH 3033, and MATH 4113.

<sup>3</sup>Seven hours of electives must be from physical sciences, biology, engineering, computer science.

<sup>4</sup>Must complete both the PHYS 4113 and 3 hours PHYS electives (PHYS course offered in alternating years).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Physical Science - Nuclear Physics Option

The nuclear physics curriculum is designed to provide a baccalaureate degree program for persons employed or those interested in employment in the nuclear power industry. The program provides a combination of courses which form a firm theoretical foundation for those presently employed as nuclear power plant operators. Students without nuclear power industry experience or training will, in addition to the theoretical education provided through the program, receive sufficient training to enter nuclear power plant specific training. Graduates will also be prepared to enter a graduate school in nuclear physics or nuclear engineering.

Curriculum in Physical Science (Nuclear Physics Option)						
Degree Completion Plan Beginning in Fall Semester						
Freshman		Sophomore				
Fall	Spring	Fall		Spring		
PHSC 1001	1	MCEG 2023	3	COMS 2803 <sup>T</sup>	3	Physical Activity <sup>1,T</sup>
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	PHYS 2114 <sup>T</sup>	4	PHYS 2124 <sup>T</sup>
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	MATH 2934	4	MATH 3243
Social Sciences <sup>1,T</sup>	3	CHEM 2134 <sup>T</sup>	4	Social Sciences <sup>1,T</sup>	6	Social Sciences <sup>1,T</sup>
CHEM 2124 <sup>T</sup>	4	PHSC 1011	1			Biological Science <sup>1,T</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>		<b>17 Total Hours</b>	<b>15</b>
<b>Junior</b>			<b>Senior</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		<b>Spring</b>		
PHYS 4113 or PHYS Elective <sup>3</sup>	3	MCEG 3523 or PHYS 3033	3	PHYS 3213 or PHYS elective <sup>3</sup>	3	PHYS 4991-4
ELEG 2103	3	Fine Arts <sup>1,T</sup>	3	Elective	2	Engineering Elective
MCEG 3503	3	MCEG 4403	3	MCEG 4323	3	MCEG 4443
MCEG 3313	3	Business Admin. Elective <sup>T</sup>	3	PHYS 4113 <sup>3</sup> or PHYS Elective (3000-4000)	3	Humanities <sup>1,T</sup>

Curriculum in Physical Science (Nuclear Physics Option)						
<b>PHYS 3213 or PHYS elective<sup>3</sup></b>	<b>3</b>	<b>ELEG 2111 and ELEG 2113</b>	<b>4</b>	<b>PHYS 3143 or ELEG 3103</b>	<b>3</b>	<b>PHYS Elective (3000-4000 level)</b>
Physical Activity <sup>1,T</sup>	1					
<b>Total Hours</b>	<b>16 Total Hours</b>		<b>16 Total Hours</b>		<b>14 Total Hours</b>	<b>16</b>
<b>Degree Completion Plan Beginning in Spring Semester</b>						
<b>Freshman</b>			<b>Sophomore</b>			
<b>Spring</b>	<b>Fall</b>		<b>Spring</b>		<b>Fall</b>	
<b>PHSC 1011</b>	<b>1 MCEG 2023</b>		<b>COMS 2803<sup>T</sup></b>		<b>Physical Activity<sup>1,T</sup></b>	<b>1</b>
<b>ENGL 1013<sup>1,T</sup></b>	<b>3 ENGL 1023<sup>1,T</sup></b>		<b>PHYS 2124<sup>T</sup></b>		<b>PHYS 2114<sup>T</sup></b>	<b>4</b>
<b>MATH 2914<sup>T</sup></b>	<b>4 MATH 2924<sup>T</sup></b>		<b>MATH 2934</b>		<b>MATH 3243</b>	<b>3</b>
Social Sciences <sup>1,T</sup>	3 PHSC 1001		Social Sciences <sup>1,T</sup>		Social Sciences <sup>1,T</sup>	3
<b>CHEM 2124<sup>T</sup></b>	<b>4 CHEM 2134<sup>T</sup></b>				Biological Science <sup>1,T</sup>	4
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>		<b>17 Total Hours</b>	<b>15</b>
<b>Junior</b>			<b>Senior</b>			
<b>Spring</b>	<b>Fall</b>		<b>Spring</b>		<b>Fall</b>	
Fine Arts <sup>1,T</sup>	3 MCEG 4403		Humanities <sup>1,T</sup>		MCEG 4323	3
<b>MCEG 3313</b>	<b>3 MCEG 3503</b>		<b>MCEG 4443</b>		<b>ELEG 3103 or PHYS 3143</b>	<b>3</b>
<b>ELEG 2103</b>	<b>3 PHYS Elective (3000-4000) or PHYS 4113<sup>3</sup></b>		<b>Elective</b>		PHYS Elective (3000-4000) or PHYS 4113 <sup>3</sup>	3
<b>MCEG 3523 or PHYS 3033</b>	<b>3 ELEG 2111 and ELEG 2113</b>		<b>Engineering Elective</b>		<b>PHYS Elective (3000-4000 level)</b>	<b>6-3</b>
Business Admin. Elective <sup>T</sup>	<b>3 PHYS 3213 or PHYS Elective<sup>3</sup></b>		<b>PHYS 4991-4</b>		PHYS Elective or PHYS 3213 <sup>3</sup>	3
Physical Activity <sup>1,T</sup>	1					
<b>Total Hours</b>	<b>16 Total Hours</b>		<b>16 Total Hours</b>		<b>12-15 Total Hours</b>	<b>18-15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "General Education Requirements". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Excluding MATH 3003, MATH 3033, and MATH 4113.

<sup>3</sup>Must complete both the PHYS class and one PHYS upper division elective (PHYS course offered in alternating years). (upper division = 3000-4000 level courses).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Minor Physical Science

The minor in physical science is for students wishing to obtain additional background to enhance their employment opportunities. The minor in physical science requires 20 hours of courses:

\*Electives (11 hours chosen from CHEM, GEOL, PHSC, or PHYS)

\*Electives (9 hours of 3000 or 4000 level chosen from CHEM, GEOL, PHSC, or PHYS)

\*No more than one credit hour can be a seminar course or special problem

### Engineering Physics

Students graduating with an engineering physics degree will be well qualified for jobs requiring highly technical skills and theoretical knowledge. Also, the degree program will prepare students for graduate studies in the fields of physics and engineering. However, those interested in employment immediately after graduation will have numerous alternatives for career choices. Job opportunities for an engineering physics graduate could include employment in industries such as: McDonnell Douglas/Boeing, Texas Instruments, Honeywell, Microsoft, Polaroid, Union Carbide, National Institute of Standards & Technology, Entergy, Tennessee Valley Authority, and Dow Chemical. Also, government agencies such as NASA, National Bureau of Standards, Office of Naval Research, Department of Energy, etc., provide additional employment opportunities for engineering physics graduates.

To qualify for a baccalaureate degree in engineering physics, the student must complete eight hours in chemistry, three hours in computer and information science, 18 hours in mathematics, 33 hours in physics (including the core physics courses), and 26 hours in engineering.

Curriculum in Engineering Physics						
Degree Completion Plan Beginning in Fall Semester						
<b>Freshman</b>			<b>Sophomore</b>			
<b>Fall</b>		<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	
<b>PHSC 1001</b>	<b>1 PHSC 1011</b>		<b>1 Social Sciences<sup>1,T</sup></b>		<b>3 Social Sciences<sup>1,T</sup></b>	<b>6</b>
<b>ENGL 1013<sup>1,T</sup></b>	<b>3 ENGL 1023<sup>1,T</sup></b>		<b>3 PHYS 2124<sup>T</sup></b>		<b>4 PHYS 2114<sup>T</sup></b>	<b>4</b>
<b>MATH 2914<sup>T</sup></b>	<b>4 MATH 2924<sup>T</sup></b>		<b>4 MATH 2934</b>		<b>4 MATH 3243</b>	<b>3</b>
<b>COMS 2803<sup>T</sup></b>	<b>3 MCEG 2023</b>		<b>3 Biological Science<sup>1,T</sup></b>		<b>4 Elective</b>	<b>1</b>
<b>CHEM 2124<sup>T</sup></b>	<b>4 CHEM 2134<sup>T</sup></b>		<b>4</b>		<b>Physical Activity<sup>1,T</sup></b>	<b>1</b>
Physical Activity <sup>1,T</sup>	1					
<b>Total Hours</b>	<b>16 Total Hours</b>		<b>15 Total Hours</b>		<b>15 Total Hours</b>	<b>15</b>
<b>Junior</b>			<b>Senior</b>			
<b>Fall</b>		<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	
<b>PHYS 3023 or 3213</b>	<b>3 PHYS 4013 or 3133</b>		<b>3 PHYS 3213 or 3023</b>		<b>3 PHYS 3133 or 4013</b>	<b>3</b>
Humanities <sup>1,T</sup>	3 PHYS 4003 or 3003		3 PHYS 4991		1 PHYS 4003 or 3003	3

Curriculum in Engineering Physics									
ELEG 2103	3	ELEG 2113	3	ELEG/MCEG Elective (3000-4000 level)	3	ELEG/MCEG Elective (3000-4000 level)	3		
PHYS 4113 <sup>4</sup> or MATH (3000-4000 level) <sup>2</sup>	3	ELEG 2111	1	MATH (3000-4000 level) <sup>2</sup> or PHYS 4113 <sup>4</sup>	3	ELEG/MCEG 4991	1		
PHYS 4213 or MCEG 3013 <sup>3</sup>	3	Business Admin. Elective <sup>T</sup>	3	MCEG 3013 <sup>3</sup> or PHYS 4213	3	MCEG 4403 <sup>3</sup>	3		
		Fine Arts <sup>1,T</sup>	3	Social Sciences <sup>1</sup>	3	MCEG 4443	3		
Total Hours	15	Total Hours	16	Total Hours	16	Total Hours	16		
Degree Completion Plan Beginning in Spring Semester									
Freshman		Sophomore							
Spring	Fall	Spring	Fall						
ENGL 1013 <sup>1,T</sup>	3	ENGL 1023 <sup>1,T</sup>	3	Social Sciences <sup>1,T</sup>	6	Social Sciences <sup>1,T</sup>	6		
MATH 2914 <sup>T</sup>	4	MATH 2924 <sup>T</sup>	4	PHYS 2124 <sup>T</sup>	4	PHYS 2114 <sup>T</sup>	4		
COMS 2803 <sup>T</sup>	3	MCEG 2023	3	MATH 2934	4	MATH 3243	3		
CHEM 2124 <sup>T</sup>	4	CHEM 2134 <sup>T</sup>	4	Biological Science <sup>1,T</sup>	4	Elective	1		
Physical Activity <sup>1,T</sup>	1	PHSC 1001	1			Physical Activity <sup>1,T</sup>	1		
PHSC 1011	1								
Total Hours	16	Total Hours	15	Total Hours	18	Total Hours	15		
Junior		Senior							
Spring	Fall	Spring	Fall						
PHYS 4013 or 3133	3	PHYS 3133 or 4013	3	PHYS 3133 or 3213	3	PHYS 4013 or 3023	3		
PHYS 4003 or 3003	3	ELEG 2113	3	PHYS 3003 or 4003	3	ELEG/MCEG Elective (3000-4000 level)	6		
ELEG 2103	3	ELEG 2111	1	PHYS 4991	1	ELEG/MCEG 4991	1		
Humanities <sup>1,T</sup>	3	PHYS 4113 <sup>4</sup> or MATH (3000-4000 level) <sup>2</sup>	3	MCEG 4403 <sup>3</sup>	3	MATH (3000-4000 level) <sup>2</sup> or PHYS 4113 <sup>4</sup>	3		
Business Admin. Elective <sup>T</sup>	3	PHYS 4213 or MCEG 3013	3	MCEG 4443	3	MCEG 3013 <sup>3</sup> or PHYS 4213	3		
		Fine Arts <sup>1,T</sup>	3						
Total Hours	15	Total Hours	16	Total Hours	13	Total Hours	16		

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)". A specific general education core course does not have to be taken in the semester listed, any other part of the general education core at any time is acceptable as well.

<sup>2</sup>Excluding MATH 3003, MATH 3033, and MATH 4113.

<sup>3</sup>PHYS 3023 and 4003 will satisfy the prerequisites for MCEG 3013 and 4403 for engineering physics majors.

<sup>4</sup>Must complete both the PHYS class and one MATH upper division elective (PHYS course offered in alternating years).

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

### Minor Engineering Physics

The minor in engineering physics is for engineering students or physical science students wishing to obtain additional background to support their major degree and enhance their employment opportunities. The minor in engineering physics requires 20 hours of courses:

\*PHYS Electives (11 hours)

\*PHYS Electives (9 hours of 3000 or 4000 level)

\*No more than one credit hour can be a seminar course or special problem

### Pre-Professional Programs

Dr. Robert Allen  
Dr. Scott Kirkconnell,  
Coordinators  
McEver Hall,  
Room 20C & 13A

Arkansas Tech University offers complete pre-professional training programs in medicine, dentistry, and pharmacy. The pre-professional curriculum is not a major. The major will be selected from the following list of majors that have been approved for the pre-professional curriculum: biology or chemistry. Statements and curricula for these programs are listed below.

### Pre-Medical or Pre-Dental

Students who plan to complete a bachelor of science degree before entering professional school may take their major in another area but must include as electives the specific courses required by the school of their choice.

It is recommended that students pursuing this course of study plan to graduate with a major in biology, chemistry, or physical science even though the professional field requires only two or three years of college work for admission. Requirements are subject to change, and most professional schools are already admitting only students with baccalaureate degrees. Students should contact the school they wish to enter for specific course requirements.

### Pre-Dental Hygiene

The dental hygienist is a valuable member of the dental health team whose major responsibilities involve preventing oral disease through patient education, removing deposits from the teeth, exposing radiographs (x-rays), applying fluoride and sealants to the teeth, administering local anesthesia, and nutritional counseling. Opportunities for employment include working in a private dental office, state or federal government agencies, public and private schools, industry, dental product sales, and dental hygiene education. The future may bring employment opportunities in hospitals, nursing homes, and other treatment sites not now available.

Students pursuing a career in dental hygiene can attend Arkansas Tech for two years to complete general education requirements and then transfer to a dental hygiene department for two years to complete the professional curriculum. Students should contact the dental hygiene program they plan to attend for specific information about degree requirements.

#### Recommended Courses for Pre-Dental Hygiene<sup>4</sup>

English Composition I, II (**ENGL 1013, 1023**)  
Principles of Biology (**BIOL 1114**)  
College Algebra (**MATH 1113**)  
Introductory Sociology (**SOC 1003**)  
Survey of Chemistry (**CHEM 1114**)  
United States History II (**HIST 2013**)<sup>1</sup>  
Microbiology (**BIOL 3054**)  
Introduction to Computer Based Systems (**COMS 1003**)  
World Civilization I, II (**HIST 1503, 1513**)  
General Psychology (**PSY 2003**)  
Introduction to Speech-Communication (**SPH 1003**)  
Fine Arts<sup>2</sup> (3 hours)  
Humanities<sup>3</sup> (3 hours)

<sup>1</sup>United States History I (**HIST 2003**) or American Government (**POLS 2003**) can substitute

<sup>2</sup>**MUS 2003 or ART 2123 or TH 2273 or ENGL 2173 or JOUR 2173**

<sup>3</sup>**ENGL 2003 or ENGL 2013 or PHIL 2003**

<sup>4</sup>With 14 additional credit hours, the student could obtain an associate degree (Associate of Arts in General Studies) before transferring to a professional program.

#### Recommended Courses for Pre-Medical or Pre Dental

English Composition I, II (**ENGL 1013, 1023**)<sup>1</sup>  
Social Sciences<sup>1</sup> (12 hours)  
Principles of Biology (**BIOL 1114**)  
General Chemistry I, II (**CHEM 2124, 2134**)  
College Algebra (**MATH 1113**)  
Plane Trigonometry (**MATH 1203**)  
Physical Activity<sup>1</sup> (2 hours)  
Principles of Zoology (**BIOL 2124**)  
Organic Chemistry (**CHEM 3254, 3264**)  
Physical Principles (**PHYS 2014, 2024**)  
Principles of Botany (**BIOL 2134**)  
English Elective (3 hours)  
Calculus I (**MATH 2914**) or other MATH above **MATH 1113** (3-4 hours)

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

The curriculum for the last two years will depend upon the major area of study chosen by each individual student. Most students choose to major either in biology or chemistry but any field is acceptable. Students pursuing admission to a professional school should seek the advice of a member of the faculty pre-professional committee appropriate to his/her major.

#### Pre-Pharmacy

Few professions can surpass pharmacy in abundance of opportunities. In addition to the very large demand for pharmacists to work in the local pharmacies, many professional pharmacists are medical-service representatives, drug salesmen, executive officers of industry and government, and teachers and researchers in medical fields. Students should contact the pharmacy school of their choice for specific course requirements.

#### Recommended Courses for Pre-Pharmacy

English Composition I, II (**ENGL 1013, 1023**)<sup>1</sup>  
Principles of (**BIOL 1114**)<sup>2</sup>  
Human Anatomy (**BIOL 2014**)<sup>2</sup>  
General Chemistry I, II (**CHEM 2124, 2134**)  
Calculus (**MATH 2914**)  
Physical Principles I (**PHYS 2014**)  
English/Communications Electives<sup>4</sup> (3 hours)  
Organic Chemistry (**CHEM 3254, 3264**)  
Principles of Economics (**ECON 2003**)  
Critical Thinking Electives<sup>5</sup> (6 hours)  
Humanities Electives<sup>3</sup> (15 hours)

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>**BIOL 2014, BIOL 2124, BIOL 3054, or BIOL 3074** can substitute.

<sup>3</sup>Choose from survey courses in art, music, theater, literature, philosophy, religion, foreign language, sign language, psychology, sociology, anthropology, US or world history, political science, ethics, geography.

<sup>4</sup>Choose from **SPH 1003, SPH 2003, ENGL 2043, ENGL 2053**, or any survey of literature course.

<sup>5</sup>Choose from **ACCT 2003, CHEM 3245, MATH 2163, MATH 2924, PHYS 2024, PHIL 3103, BIOL 3034, BIOL 4033, or CHEM 3344**.

#### Pre-Physical Therapy

At the earliest convenience after the decision to study in the field, students should contact an institution of their choice and inquire about the prerequisite study program and other requirements for admission into the professional curriculum. Due to the rapidly changing availability of Physical Therapy degree programs and due to changes in entrance requirements, students should seek the most current information available. Searches on the World Wide Web are the best way to get the most current information. An advisor from the biology department can guide the student's registration at Tech when the student has secured a curriculum and entrance requirements for a Physical Therapy school that can meet his or her needs.

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## COURSE CATALOGS

[Academic Affairs Home](#) | [Tech Home](#) | [Catalog Home](#) | [Course Descriptions](#)

### College of Professional Studies and Community Outreach

Dr. Mary Ann Rollans,  
Dean  
61 Lake Point  
Conference Center  
(479) 968-0318  
mrollans@atu.edu  
Fax: (479) 968-0205

The College of Professional Studies and Community Outreach offers programs of study leading to baccalaureate and associate degrees as listed below:

**Bachelor of Professional Studies**  
 Professional Studies  
 (Areas of Concentration)  
 Agriculture Business  
 Criminal Justice  
 Early Childhood Education  
 Industrial/Organizational Psychology  
 Information Technology  
 Public Relations  
**Accelerated Degree Program**  
**Bachelor of Arts in General Studies**  
**Associate of Science**  
 Early Childhood Education

#### Transfer Students

Applicability of transfer credit to meet specific degree requirements depends on the major selected by the transfer student. The transfer student should review the Transfer Credit policy in the Admission section of this catalog and meet with their academic advisor to determine final transfer credit eligibility for the selected program of study.

#### Bachelor of Professional Studies

Annette Stuckey, Director  
61 Lake Point  
Conference Center  
(479) 356-2095  
astuckey@atu.edu  
Fax (479) 968-0205

The Bachelor of Professional Studies (BPS) degree is a unique program which offers a flexible degree completion path addressing the needs of particular target groups:

- Students graduating from community colleges
- Adults pursuing full-time careers or raising their families
- Degree "stop-outs" who began but never completed a bachelor's degree
- Individuals who have accumulated hours that cannot be applied toward a specific major
- Entering freshmen seeking maximum diversity for career decisions.

The degree's focus is to successfully prepare graduates for entry or advancement in government, nonprofit, corporate, or industrial careers. The curriculum is designed to enhance workplace skills such as planning, organizational behavior, ethics, needs assessment, problem solving, communications, human resources, and technology applications.

Students may select one of the following concentration areas: agriculture business, early childhood education, information technology, industrial/organizational psychology, criminal justice, or public relations. The degree will follow the same guidelines as all other bachelor's degrees in requiring 37 hours of general education coursework and a minimum of 40 hours of upper division courses.

#### Curriculum in Professional Studies

##### Degree Completion Plan Beginning in Fall Semester

Freshman		Sophomore	
Fall	Spring	Fall	Spring
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Humanities <sup>1,T</sup> 3
Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 ENGL 2053 <sup>T</sup>	3 Specialty Course 3
Social Sciences <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 SPH 2003 <sup>T</sup>	3 Technical Course <sup>2,T</sup> 3
Specialty Course	3 MATH 1113 <sup>T</sup>	3 Specialty Course	3 U.S. History <sup>1,T</sup> 3
COMS 1003 or BUAD 2003 <sup>T</sup>	3 Specialty Course	6 Fine Arts <sup>1,T</sup>	3 Elective (3000-4000 Level) 3
		BUAD 2053 or MATH 2163 <sup>T</sup>	3 WS 1002 <sup>1,T</sup> 2
Total Hours	16 Total Hours	19 Total Hours	18 Total Hours 17

Junior		Senior	
Fall	Spring	Fall	Spring
Specialty Course	3 Technical Courses <sup>2,T</sup>	6 PS 3003	3 PS 4006 6
PSY 3093	3 Elective (3000-4000 Level)	3 Technical Courses <sup>2</sup>	6 Technical Courses <sup>2</sup> 9
Technical Courses <sup>2,T</sup>	6 PS 3023	3 Elective (3000-4000 Level)	3
Elective (3000-4000 Level)	3		
Total Hours	15 Total Hours	12 Total Hours	12 Total Hours 15

##### Degree Completion Plan Beginning in Spring Semester

Freshman		Sophomore	
Spring	Fall	Spring	Fall
ENGL 1013 <sup>1,T</sup>	3 ENGL 1023 <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 Humanities <sup>1,T</sup> 3
Science with Lab <sup>1,T</sup>	4 Science with Lab <sup>1,T</sup>	4 ENGL 2053 <sup>T</sup>	3 Specialty Course 3

**Curriculum in Professional Studies**

Social Science <sup>1,T</sup>	3 Social Sciences <sup>1,T</sup>	3 SPH 2003 <sup>T</sup>	3 Technical Courses <sup>2,T</sup>	3
Specialty Course	3 MATH 1113 <sup>T</sup>	3 Specialty Course	3 U.S. HIST <sup>1,T</sup>	3
COMS 1003 or BUAD 2003 <sup>T</sup>	3 Specialty Courses <sup>2</sup>	6 Fine Arts <sup>1,T</sup>	3 Elective (3000-4000 Level)	3
		BUAD 2053 or MATH 2163 <sup>T</sup>	3 WS 1002 <sup>1,T</sup>	2
<b>Total Hours</b>	<b>16 Total Hours</b>	<b>19 Total Hours</b>	<b>18 Total Hours</b>	<b>17</b>
<b>Junior</b>		<b>Senior</b>		
<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	
Specialty Course	3 Technical Courses <sup>2,T</sup>	6 PS 3003	3 PS 4006	6
PS 3023	3 Elective (3000-4000 Level)	3	6 Technical Courses <sup>2</sup>	9
Technical Courses <sup>2,T</sup>	6 PSY 3093	3 Elective (3000-4000 Level)	3	
Elective (3000-4000 Level)	3			
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>12 Total Hours</b>	<b>12 Total Hours</b>	<b>15</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".

<sup>2</sup>Technical courses taken as part of an associate degree or from a community college may be transferred into the BPS degree.

<sup>3</sup>At least 40 of the total hours required for graduation must be 3000-4000 level courses: no more than 30 hours of electives towards the degree may be taken from the College of Business.

<sup>T</sup>Designates a block of courses that would provide for a seamless transfer into this program if equivalent courses are taken at another college or university.

**Specialty/Concentration Areas:**

Early Childhood Education: 18 hours

Information Technology: 19 hours

Take: ECED 2001 and ECED 2002 (concurrent enrollment); ECED 3023 Take: COMS 1333, COMS 1403, COMS 1411, COMS and ECED 3033 (concurrent enrollment); EDMD 3013, MATH 2033, and 2003, COMS 2233, COMS 2700, COMS 2703, and 3 BIOL 3213. hours COMS elective credit.

Industrial/Organizational Psychology: 19 hours

Criminal Justice: 18 hours

Take: PSY 2003, PSY 2053, PSY 2074 and 9 hours from the following: Take: CJ 2003, CJ 2043, CJ 3023, CJ/RS 3063, CJ PSY 2023, PSY 3093, PSY 4033, PSY 4043, PSY 4234. 3103, and CJ 3153.

Public Relations: 18 hours

Agriculture Business: 18 hours

Take: SPH 3033, SPH 4153, JOUR 3173, JOUR 4173, JOUR 3273, and Take: AGBU 2063, AGBU 2073, AGBU 3133, AGBU COMS 2003. 4013, AGBU 4003, and AGBU 4023.

**Accelerated Degree Program (ADP)**

The Bachelor of Professional Studies degree can be delivered as an Accelerated Degree Program (ADP). The accelerated delivery format is designed to ease the financial, time, and geographic constraints adults may face when contemplating a baccalaureate program.

Students who enter the program with a minimum of 60 transferable credits and completion of the required general education courses, should be able to complete the remainder of the degree requirements within an 18-month period.

Under the guidance of advisors who understand the unique needs of the adult learner, the ADP allows each student to complete the necessary hours for the degree within a convenient yet directed scheduling format.

**Bachelor of Arts General Studies**

The Bachelor of Arts in General Studies is designed primarily for students who wish a broad liberal arts degree, without a concentration in a discipline or preparation for a particular profession. The degree also suits students wishing to pursue a four-year baccalaureate in order to obtain an education which will furnish them with good writing, analytical and/or speaking skills. The degree will furnish background for employment in a variety of business, governmental, and managerial careers. General Studies requires completion of the General Education courses, a general core of classes, with the addition of two emphasis blocks.

The Bachelor of Arts degree in General Studies requires completion of 124 hours. In addition to completion of General Education hours, a student must complete two emphasis blocks, 12 hours in upper level Liberal Arts courses, 6 hours in computer/technology courses, and 25 hours of electives.

**Curriculum in General Studies****Degree Completion Plan Beginning in Fall Semester**

<b>Freshman</b>		<b>Sophomore</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
ENGL 1013 <sup>1</sup>	3 ENGL 1023 <sup>1</sup>	3 Social Sciences <sup>1</sup>	3 Social Sciences <sup>1</sup>	3
Social Sciences <sup>1</sup>	3 Social Sciences <sup>1</sup>	3 Fine Art/Humanities <sup>2</sup>	3 Fine Art/Humanities <sup>2</sup>	3
BIOL 1014 <sup>1</sup>	4 PHSC 1013 <sup>1</sup>	3 Computer/Technology	3 Computer/Technology	3
	General Studies			
MATH 1003 <sup>1</sup>	3 Emphasis Block Courses	3 General Studies Emphasis Block Courses	3 General Studies Emphasis Block Courses	6
Physical Activity <sup>1</sup>	1 Physical Activity <sup>1</sup>	1 Elective <sup>3</sup>	3	
	PHSC 1021 <sup>1</sup>	1		
		Elective <sup>3</sup>	3	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>	<b>15</b>
<b>Junior</b>		<b>Senior</b>		
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>	<b>Spring</b>	
General Studies Emphasis Block Courses	General Studies Emphasis Block Courses	Any additional needed General Studies Emphasis Block courses, or Elective	Any additional needed General Studies Emphasis Block courses, or Elective	6

**Curriculum in General Studies****Degree Completion Plan Beginning in Fall Semester**

Upper level Liberal Arts (3000-4000 level)	3	Upper level Liberal Arts (3000-4000 level)	3	Upper level Liberal Arts (3000-4000 level)	3	Upper level Liberal Arts (3000-4000 level)	3
Elective <sup>3</sup>	3	Elective <sup>3</sup>	6	Elective <sup>3</sup>	8	Elective <sup>3</sup>	7
<b>Total Hours</b>	<b>15 Total Hours</b>		<b>15 Total Hours</b>		<b>17 Total Hours</b>		<b>16</b>

**Degree Completion Plan Beginning in Spring Semester**

Freshman Spring	Fall	Sophomore Spring	Fall
<b>ENGL 1013<sup>1</sup></b>	3 <b>ENGL 1023<sup>1</sup></b>	3 Social Sciences <sup>1</sup>	3 Social Sciences <sup>1</sup>
Social Sciences <sup>1</sup>	3 Social Sciences <sup>1</sup>	3 Fine Art/Humanities <sup>2</sup>	3 Fine Art/Humanities <sup>2</sup>
<b>BIOL 1014<sup>1</sup></b>	4 <b>PHSC 1013<sup>1</sup></b>	3 Computer/Technology	3 Computer/Technology
<b>MATH 1003<sup>1</sup></b>	3 General Studies Emphasis Block Course	6 General Studies Emphasis Block Courses	3 General Studies Emphasis Block Courses
Physical Activity <sup>1</sup>	1 Physical Activity <sup>1</sup>	1 Elective <sup>3</sup>	3
		1	
<b>Total Hours</b>	<b>14 Total Hours</b>	<b>17 Total Hours</b>	<b>15 Total Hours</b>
Junior Spring	Fall	Senior Spring	Fall
General Studies Emphasis Block Courses	General Studies Emphasis Block Courses	Any additional needed General Studies Emphasis Block courses, or Elective	Any additional needed General Studies Emphasis Block courses, or Elective
Upper level Liberal Arts (3000-4000 level)	3 Upper level Liberal Arts (3000-4000 level)	3 Upper level Liberal Arts (3000-4000 level)	3 Upper level Liberal Arts (3000-4000 level)
Elective <sup>3</sup>	3 Elective <sup>3</sup>	6 Elective <sup>3</sup>	8 Elective <sup>3</sup>
<b>Total Hours</b>	<b>15 Total Hours</b>	<b>15 Total Hours</b>	<b>17 Total Hours</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)".<sup>2</sup>See appropriate Fine Art/Humanities courses in "[General Education Requirements](#)". 3 hours of Social Sciences or Fine Art/Humanities must be a starred course.<sup>3</sup>At least 40 of the total hours required for graduation must be 3000-4000 level courses.**Emphasis blocks:****Anthropology: 12 hours** Take: **ANTH 1213 and 2003** and 6 hours from the following: **ANTH 3203, 3223, 3243, 4403, or 4993**.**Foreign Language: 15-16 hours** Any catalogue sequence of 4 foreign languages numbered 1014, 1024, 2014, and 2024 in the same foreign language, for a total of 16 hours. If the student begins the foreign language block on a more advanced level, the student must take 15 hours of the same foreign languages, excluding **FR/GER/SPAN 3023**.**Fine Arts: 18 hours** Take: **ART 1303, 1403, 2703, or 3603, ART 2503 or 3533**, 3 hours electives in 3000-4000 level Art History, 3 hours electives in 3000-4000 level art studio courses.**Psychology (Applied Human Services): 18 hours** Take: **PSY 2003, 2053**, and 12 hours from the following: **PSY 2033, 3003, 3063, 3153, 3163, 4043, or PSY/SOC 3013**.**Sociology: 15 hours** Take: **SOC 1003, 3133, and 2083** and 6 hours from the following: **SOC/PSY 3013, SOC 3023, 3063, 3093, 3113, 3173, 4003, 4053, or 4063**.**Criminal Justice: 12 hours** Take: **CJ/SOC 2003** and 9 hours from the following: **CJ/SOC 2043, CJ/POLS 3023, CJ/RS 3063, CJ/SOC 3103, or CJ/SOC 3153**.**Public Relations: 15 hours** Take: **SPH 3033, 4153, JOUR 3173, 4173 and COMS 2003**.**Information Technology: 19 hours** Take: **COMS 1333, 1403, 1411, 2003, 2233, 2700, 2703**, and 3 hours of electives in Computer Science.**Writing: 18 hours** 18 hours from the following:

ENGL 2043, 2053, 2063, 3513, 3013, \*3083, \*3093, \*4093, JOUR 2143, JOUR 3153, or \*BUAD 3023.

\*Prerequisite: **ENGL 2043**\*\*Prerequisite: **BUAD 2003 or COMS 1003****History/Philosophy: 18 hours** 9 hours required in Philosophy and 9 hours required in 3000-4000 level European History or 3000-4000 level American History.**Social Studies: 18 hours** 3 hours required in 3000-4000 level Geography, 3000-4000 level Philosophy, 3000-4000 level Political Science, 3000-4000 level History, and a 6 hour upper level concentration from the following areas: History, Geography, Philosophy, or Political Science.**Graphic Design: 18 hours** Take: **ART 1303, 1403, 1503, 2213, 3203**, and 3 hours elective in 3000-4000 level Art History.**Psychology (Industrial/Organizational): 19 hours** Take: **PSY 2003, 2053, 2074** and 9 hours from the following: **PSY 2023, 3093, 4033, 4043, or 4234**.**\*Rehabilitation Science: 16 hours** Take: **RS 2003, 3004, 3013, 3023, and 3073**. \*Completion of block is not the equivalent to completion of a major in Rehabilitation Science.**English as a Second Language: 15 hours** Take: **ENGL 4023, 4703, 4713, and 4723** and 3 hours from the following: **ENGL 3013, 3023, or 4013**.**Communication: 18 hours** Take: **SPH 2003, 3003, 3073, 3123, 4003, and JOUR 2133**.**Early Childhood Education: 15 hours** Take: **ECED 2001, 2002, 3023, 3033, EDMD 3013, and MATH 2033**.**Literature: 18 hours** 18 hours required from the following: 3 hours required from each of the 3 concentration areas:American Literature and Folklore: **AMST 2003, ENGL 2013, 3303, 3313, 3323, 4213, or 4383**.British and World Literature: **ENGL 2003, 3243, 3413, 3423, 3453, 3463, 4283, or 4483**.Genre and Theme: **ENGL 2213, 2223, 2233, 2263, 2283, 3103, 3173, 3203, 3223, 3293, or 4683**.**Early Childhood Education****Associate of Science**

The Associate of Science degree in Early Childhood Education is structured to provide a seamless acquisition of academic requirements for various career levels in occupations related to child care and early childhood education in the public and private sectors. The early childhood education courses provide the academic requirements for meeting assessment guidelines for the Child Development Associate (CDA) credential. The general education courses can be applied toward the Bachelor of Science degree in Early Childhood Education.

**Curriculum in Early Childhood Education****Suggested Sequence of Courses**

<b>Freshman</b>		<b>Sophomore</b>			
<b>Fall</b>	<b>Spring</b>	<b>Fall</b>		<b>Spring</b>	
ENGL 1013	3	ENGL 1023	3	ART 2123	3
Mathematics <sup>1</sup>	3	PHSC 1013	3	Social Sciences <sup>1</sup>	3
BIOL 1014	4	PHSC 1021	1	Humanities <sup>1</sup>	3
SOC 1003	3	PE 2513	3	ECE 2513	3
ECE 2312	2	WS 1002	2	ECE 2613	3
ECE 2112	2	ECE 2212	2		
		GEOG 2013	3		
<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>17</b>	<b>Total Hours</b>	<b>15</b>
					<b>12</b>

<sup>1</sup>See appropriate alternatives or substitutions in "[General Education Requirements](#)" .

<sup>2</sup>Enrollment must be approved by advisor.

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