

A. SUMMARY

1. College of Engineering & Applied Sciences – Department of Emergency Management
 - a. Add the following courses to the course descriptions:
 - (1) EAM 3073: Safety Standards for Emergency Managers;
 - (2) EAM 3903: Public Health Emergency Management; and
 - (3) EAM 4103: Critical Infrastructure;
 - b. Modify the Curriculum in Emergency Management, as follows:
 - (1) delete COMS 2003: Microcomputer Applications, or Equivalent;
 - (2) add a 3-hour Technology Course requirement which can include the following in footnote 3:
 - BUAD 1023: Keyboarding;
 - BUAD 2003: Business Information Systems;
 - any course with the course subjects COMS, CSEC, BST, or CIS; or
 - GEOG/FW 2833: Introduction to Geographic Information Systems; and
 - (3) add the following courses to the list of approved Emergency Management electives to footnote 2:
 - EAM 2413: UAVs in Emergency Management;
 - EAM 2881, 2882, 2883: Special Topics;
 - EAM 2991, 2992, 2993: Special Problems;
 - EAM 4093: Grants;
 - EAM 4881, 4882, 4883: Advanced Special Topics;
 - EAM 4951, 4952, 4953, 4954: Undergraduate Research in Emergency Administration and Management; and
 - EAM 3073: Safety Standards for Emergency Managers;
 - EAM 3903: Public Health Emergency Management; and
 - EAM 4103: Critical Infrastructure.
2. College of Engineering & Applied Sciences – Department of Mechanical Engineering
 - a. Add MCEG 3663: Engineering Internship, to the course descriptions.
3. College of eTech – Department of Professional Studies
 - a. Add BAS 4363: Project Risk Analysis and Mitigation, to the course descriptions;
 - b. Add OL 4053: Philanthropy and Fundraising, to the course descriptions;
 - c. Modify the Curriculum in Bachelor of Applied Science, as follows: (1) Delete COMM 3073 Group Communication, and BUAD 3123 Management; and (2) Add OL 4043: Ethical Leadership, and BAS 4363: Project Risk Analysis and Mitigation;
 - d. Modify the Curriculum in Bachelor of Arts in Organizational Leadership Child Development Concentration, as follows: (1) Add OL 4043: Ethical Leadership; (2) Allow

selection of OL/PS 4143: Nonprofit Governance, or OL/PS 4343: Community Development; (3) Delete the following courses: EDMD 3013: Integrating Instructional Technology, ENGL 4723: Teaching People of Other Cultures, PSY 3063: Developmental Psychology I, SEED 3552: Child and Adolescent Development, and one hours Elective; and (4) Add the following courses: ECE 2513: Curriculum for Early Childhood Education, ECE 2613: Methods and Materials Using Developmentally Appropriate Practices and Activities for Young Children, ELED 3113 (2113 proposed new course number): Human Development and Learning Theories, NUR 2303: Nutrition, and HA 2813: Basic Human Nutrition in Hospitality Administration; and

- e. Modify the Curriculum in Bachelor of Arts in Organizational Leadership – Agriculture Business Concentration, Criminal Justice Concentration, Industrial/Organizational Psychology Concentration, Inter-College Concentration, and Public Relations Concentration, as follows: (1) Add OL 4043: Ethical Leadership; and (2) Allow selection of OL/PS 4143: Nonprofit Governance, or OL/PS 4343: Community Development.

4. College of Natural & Health Sciences – Department of Biological Sciences

- a. Add BIOL 3033: Bioinformatics, to the course descriptions;
- b. Add BIOL 4043: Conservation Genetics, to the course descriptions;
- c. Modify the Curriculum in Biology Biomedical Option, as follows: add BIOL 3033: Bioinformatics, or COMS 2003: Microcomputer Applications;
- d. Modify the Curriculum in Biology General Option, as follows: add BIOL 3033: Bioinformatics, or Any COMS course;
- e. Modify the Curriculum in Environmental Science, as follows: add BIOL 3033: Bioinformatics, to the list of courses allowed to satisfy the GIS or research requirement; and add BIOL 4043: Conservation Genetics, to the list of courses allowed to satisfy the Life Science Electives; and
- f. Modify the Curriculum in Fisheries & Wildlife Sciences, as follows: add BIOL 3033: Bioinformatics, and BIOL 4043: Conservation Genetics, to the list of courses allowed to satisfy the Biology Group.



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Emergency Management	6-9-2020

Title	Signature	Date
Department Head Sandy M. Smith	<i>Sandy M. Smith</i>	6-17-2020
Dean Judy L. Cezeaux	<i>Judy L. Cezeaux</i>	6/24/2020
Assessment Christine Austin	<i>Christine Austin</i>	7/6/2020
Registrar	<i>Sammy Cezeaux</i>	8/12/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL)	Course Number: (e.g., 1003)	Effective Term:
EAM	3XX3 3073	<input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below)		
Safety Standards for Emergency Managers		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript)		
Safety Standards for EM		

Will this course be cross-listed with another existing course? If so, list course subject and number.

Yes No

Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog?

If so, list course subject and number. Yes No

Is this course repeatable for additional earned hours?

Yes No

How many total hours? _____

Grading: Standard Letter

P/F

Other

Mode of Instruction (check appropriate box):

01 Lecture

02 Lecture/Laboratory

03 Laboratory only

05 Practice Teaching

06 Internship/Practicum

07 Apprenticeship/Externship

08 Independent Study

09 Readings

10 Special Topics

12 Individual Lessons

13 Applied Instruction

16 Studio Course

17 Dissertation Research

18 Activity Course

19 Seminar

98 Other

Does this course require a fee?

Yes

No

How Much? _____

Select Fee Type

If selected other list fee type: _____

Elective

Major

Minor

(If major or minor course, you must complete the Request for Program Change form to add course to program.)

If course is required by major/minor, how frequently will course be offered?

Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.? No.

Will this course require a special classroom (computer lab, smart classroom, or laboratory)? No.

Answer the following Assessment questions:

- a. If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not applicable.
- b. If this course is required for the major or minor, complete the following.
 1. Provide the program level learning outcome(s) it addresses.
 2. Provide tool or measure directly linked to each program learning outcome. (How will student learning in this outcome be measured?)
- c. What is the rationale for adding this course? What evidence demonstrates this need?

According to the International Labor Organization, roughly 317 million accidents occur on the job each year, and per OSHA, 4,836 workers were killed on the job in the United States in 2015. This course is designed to provide students with the knowledge and skills to tailor safer workplaces, ensure employee wellness, and address industry hazards present in work environments.

For the proposed course, attach a syllabus in Word format that includes: **(Items a. through d. should be entered as they should appear in the catalog)**

- a. Course subject
- b. Course number
- c. Catalog course title
- d. Catalog description
 1. Arkansas Course Transfer System (ACTS) course number, if applicable
 2. Cross-listing
 3. Offered (e.g., Fall only, Spring only. Do not enter if offer course fall and spring)
 4. Prerequisites
 5. Co-requisites
 6. Description
 7. Notes (e.g., information not in description such as course may be repeated for credit)
 8. Contact Hours if different than lecture (e.g., Lecture three hours, laboratory three hours)
 9. Fees (e.g., \$36 art fee)
- e. Section for Name of instructor, office hours, contact information (telephone, email)
- f. Text required for course
- g. Bibliography (supplemental reading list)
- h. Justification/rationale for the course
- i. Course objectives
- j. Description of how course meets general education objectives (courses included in the general education component should show how the course meets one or more of the objectives contained in General Education Objectives listed in undergraduate catalog)
- k. Assessment methods (include grading policy with specific equivalents for A, B, C)
- l. Policy on absences, cheating, plagiarism, etc.
- m. Course content (outline of material to be covered in course).

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

3073

EAM ~~3XX3~~ Safety Standards for EM

Department of Emergency Management

Tuesday & Thursday, 9:30 – 10:50 | Dean Hall 104



ARKANSAS
TECH
UNIVERSITY

INSTRUCTOR:

Bethany Swindell
bswindell@atu.edu

Dean Hall 110
479.356.2092

The best way to contact me is via email. Email usually is answered within 24 hours. If you do not receive a response within that time, please resend the email and/or text me. Please note that responses may be delayed on weekends.

When emailing questions, use subject line of "~~3XX3~~ Question ..." and include all your information.

3073

OFFICE HOURS: By appointment only. Please email me to schedule a time.

DESCRIPTION: This course provides students with broad based knowledge and practical skills in the safety field. Students will receive an introduction to accident investigation, hazardous materials, accident prevention, ergonomics, and safety programs. Students are familiarized with OSHA general industry standards, including responsibilities under OSHA regulations, inspections, citations, appeals, and recordkeeping. Explores safety standards from ANSI, NFPA and DOT.

JUSTIFICATION: According to the International Labor Organization, roughly 317 million accidents occur on the job each year, and per OSHA, 4,836 workers were killed on the job in the United States in 2015. The safety management course within the Department of Emergency Management is designed to provide students with the knowledge and skills to design safer workplaces, ensure employee wellness, and address industry hazards present in work environments.

OBJECTIVES: Upon successful completion of this course, students will be prepared to:

- Become effective communicators and ethical facilitators within the practice of safety, health, and environment
- Evaluate, recommend and implement appropriate technical and scientific hazard mitigation strategies
- Apply and integrate knowledge and practice of environmental and occupational health to enhance the safety and well-being of populations
- Recognize and apply international standards and perspectives within environmental and occupational settings
- Ability to anticipate, identify, and evaluate hazardous conditions and practices

COURSE ASSESSMENT:

Point Accumulation		Grade Scale		
Assignments	Points	Accumulated Points	Percent	Grade
Assignments	550	900-1000	90-100	A
Participation, Attendance	50	800-890	80-89	B
Tests	200	700-790	70-79	C
Quizzes	200	600-690	60-69	D
Total Points	1000	590<	0-59	F

Effective communication is a critical part of emergency management. In order to convey important ideas and information effectively in writing, it is important to use complete sentences, proper grammar and correct punctuation. Proper written communication will be considered in addition to the substantive content of all assignments. You will be required to use APA 7 formatting in all written assignments. You may access APA 7 guidelines at the following link: <https://owl.english.purdue.edu/owl/resource/560/01/>

COURSE CONTENT: Topics Include

- Hazard Identification and Job Hazard Assessment
- OSHA
- Accident Investigation
- Hazardous Communication
- Hazardous Materials
- Safety and Health Programs
- Emergency Action Plan
- PPE
- Ergonomics
- Legal Issues

EFFORT & SUBSTANCE: The effort put forth by the student and the substance of the student's answers will be considered in all work submitted for the course. If you find that a question cannot be answered straight from the assigned reading material, the intent is for you to take what you have learned from the reading and extrapolate from it. The question may be answered based on a concept from the reading rather than a verbatim example, or it may require some outside research. The purpose is for the student to develop thinking skills – intellectual activity versus memorization or regurgitation.

POLICIES:

Student Handbook: <https://issuu.com/arkansastechuniversity/docs/studenthandbook-2016>
Students are expected to adhere to all University policies and regulations as set forth in the ATU Catalog and Student Handbook. Please refer to the following pages for clarification about policies related to this course:

- Academic Conduct – page 83
- Academic Dishonesty – page 83
- Academic Misconduct – page 84
- Class Absence – page 81

Assignment Completion - Students must complete their assignment within the timeframe specified by the instructor. Unless arrangements have been made with the instructor **PRIOR** to the due date; assignments must be received by the due date and time. **NO LATE ASSIGNMENTS WILL BE ACCEPTED.** I will not accept hard copies of assignments or work that is emailed. Please plan accordingly to complete your assignments before the posted deadline.

Regular Contact – Email and Blackboard should be checked regularly.

Phones/Electronics – All disruptive electronics must be silenced and put away during class, unless an exception is approved by the instructor.

Academic Dishonesty – Cheating and plagiarism will not be tolerated. Emergency managers should be aware of the fact that because of the major responsibilities associated with their career, they must earn the trust of those they serve. The instructor may adjust the grade as appropriate. At a minimum, the student (and any student caught assisting in the dishonesty) will be given an **automatic** 'F' for the test/assignment in question and possibly an 'F' for the course. This means **no copy and paste.**

Academic Misconduct – Students are expected to act in an appropriate manner while in class and shall not disrupt the learning environment. We will all respect each other and treat each other in a professional manner. In egregious cases of misconduct, the student may be immediately removed from the classroom and/or from the course.

Special Accommodations for Disabilities – A student must be registered with Disability Services in order to qualify for special accommodations. Registration must occur each semester; it does not carry over. In addition, the student should make contact with the instructor to determine which specific accommodations would be appropriate for this particular course.

Excessive Unexcused Absences - If, at any time during the semester, you have unexcused absences or fail to complete and submit assignments, you may be referred to the Tech Early Warning Program. If you are unresponsive to contact attempts, you may be dropped from the course with an “FE” for excessive absences or non-performance.

**It is your responsibility to contact the instructor directly when you cannot attend class; however, excused absence is not guaranteed. You are responsible for explaining to the instructor the reason for absences due to sickness, accident, or death in the family. The instructor is entitled to request verification.

All students must give prompt attention to communications from faculty and staff members of the University. Most communications will be sent to your official Tech e-mail address. University policy dictates that electronic communications to your instructor must be sent from your official Tech e-mail address.

PROFESSIONALISM: It is the policy and expectation of the Department of Emergency Management that students will conduct themselves in a professional manner that is guided by respect, collegiality, honesty, and ethical behavior in all of their interactions and communication with university faculty, staff, each other, and the community. Students are expected to maintain the highest ideals of academic and social conduct and are responsible for knowing the published policies and standards. Students also are expected to respect the views and personal dignity of other members of the university community, though this does not require that you must agree with others' views.

NON-DISCRIMINATION: Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic facts of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: <http://www.atu.edu/titleix/index.php>.

ACCESS/DISABILITY SERVICES: Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit <http://www.atu.edu/disabilities/index.php>.

TECHNICAL ASSISTANCE: Technical support, including Blackboard support, is available via: Telephone Support: 1-800-582-6953 or Email Support: campussupport@atu.edu



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Emergency Management	2-9-2020

Title	Signature	Date
Department Head Sandy M. Smith	<i>Sandy M. Smith</i>	6-17-2020
Dean Judy L. Cezeaux	<i>Judy L. Cezeaux</i>	6/24/2020
Assessment Christine Austin	<i>Christine Austin</i>	7/6/2020
Registrar	<i>Yammy Herrera</i>	8/12/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL)	Course Number: (e.g., 1003)	Effective Term:
EAM	39X3 3903	<input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below)		
Public Health Emergency Management		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript)		
Public Health EM		

Will this course be cross-listed with another existing course? If so, list course subject and number.
 Yes No

Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog?
If so, list course subject and number. Yes No

Is this course repeatable for additional earned hours? Yes N How many total hours?

Grading: Standard Letter P/F Other

Mode of Instruction (check appropriate box):

- | | | |
|--|---|---|
| <input checked="" type="radio"/> 01 Lecture | <input type="radio"/> 02 Lecture/Laboratory | <input type="radio"/> 03 Laboratory only |
| <input type="radio"/> 05 Practice Teaching | <input type="radio"/> 06 Internship/Practicum | <input type="radio"/> 07 Apprenticeship/Externship |
| <input type="radio"/> 08 Independent Study | <input type="radio"/> 09 Readings | <input type="radio"/> 10 Special Topics |
| <input type="radio"/> 12 Individual Lessons | <input type="radio"/> 13 Applied Instruction | <input type="radio"/> 16 Studio Course |
| <input type="radio"/> 17 Dissertation Research | <input type="radio"/> 18 Activity Course | <input type="radio"/> 19 Seminar <input type="radio"/> 98 Other |

Does this course require a fee? Yes No How Much? Select Fee Type

If selected other list fee type:

Elective Major Minor

(If major or minor course, you must complete the Request for Program Change form to add course to program.)

If course is required by major/minor, how frequently will course be offered?

Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.? No

Will this course require a special classroom (computer lab, smart classroom, or laboratory)? No

Answer the following Assessment questions:

- a. If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not Applicable
- b. If this course is required for the major or minor, complete the following.
 1. Provide the program level learning outcome(s) it addresses.
 2. Provide tool or measure directly linked to each program learning outcome. (How will student learning in this outcome be measured?)
- c. What is the rationale for adding this course? What evidence demonstrates this need?
Successful emergency management professionals must have a strong foundation in the guiding principles of the discipline, including public health. As our department prepared its self-study for accreditation of the EAM program in 2018-19, we recognized there was a gap in our curriculum offerings in regards to public health emergency management. Our Advisory Board also highly recommended we add an elective in this area. The current pandemic underscores the necessity of a public health emergency management elective course.

For the proposed course, attach a syllabus in Word format that includes: **(Items a. through d. should be entered as they should appear in the catalog)**

- a. Course subject
- b. Course number
- c. Catalog course title
- d. Catalog description
 1. Arkansas Course Transfer System (ACTS) course number, if applicable
 2. Cross-listing
 3. Offered (e.g., Fall only, Spring only. Do not enter if offer course fall and spring)
 4. Prerequisites
 5. Co-requisites
 6. Description
 7. Notes (e.g., information not in description such as course may be repeated for credit)
 8. Contact Hours if different than lecture (e.g., Lecture three hours, laboratory three hours)
 9. Fees (e.g., \$36 art fee)
- e. Section for Name of instructor, office hours, contact information (telephone, email)
- f. Text required for course
- g. Bibliography (supplemental reading list)
- h. Justification/rationale for the course
- i. Course objectives
- j. Description of how course meets general education objectives (courses included in the general education component should show how the course meets one or more of the objectives contained in General Education Objectives listed in undergraduate catalog)
- k. Assessment methods (include grading policy with specific equivalents for A, B, C)
- l. Policy on absences, cheating, plagiarism, etc.
- m. Course content (outline of material to be covered in course).

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

3903

EAM ~~39X3~~ | Public Health Emergency Management



ARKANSAS
TECH
UNIVERSITY

Department of Emergency Management

Fall 2019 Course Syllabus

T, R 9:30am | Rothwell 317

INSTRUCTOR: Sandy M. Smith, RN; PhD Dean Hall 110A
Ssmith107@atu.edu (479) 356.2092(O) (479) 498-6039 (D)
(501) 529-1396 (C)

The best way to contact me is via text or phone. Texts usually are answered within 4 hours. If you do not receive a response within that time, please resend the text and/or call me. Another option is to text me that you have sent me an email. Please note that responses may be delayed on weekends and after 5:30pm.

When emailing questions, use subject line of "~~39X3~~ PHEM..." and include all information.

OFFICE HOURS: By appointment.

3903

COURSE DESCRIPTION: Provides an introduction to public health from an emergency management stance.

REQUIRED TEXTS: McKinney, S., & Papke, M. E. (2019). *Public health emergency preparedness: A practical approach for the real world*. Jones & Bartlett Learning: Burlington, MA.

SUPPLEMENTAL: Internet research and readings may be required as the semester progresses. For each topic or unit, I may assign additional readings. Students are advised to stay on top of current disaster events. Electronic newspapers are available at <http://www.nytimes.com> or <http://www.washingtonpost.com>. Other useful sites include fema.gov and reliefweb.int.

JUSTIFICATION: Successful emergency management professionals must have a strong foundation in the guiding principles of our discipline, including public health. This course will introduce you to public health emergency management and the various factors that comprise this aspect of emergency management.

COURSE OBJECTIVES: Upon successful completion of this course, you will be prepared to:

- Identify hazards and their potential consequences. [Disaster Risk Management]
- Pose and evaluate arguments based on existing evidence. [Scientific Literacy]
- Explain how political and legal processes can influence disaster preparedness, mitigation, response, and recovery. [Sociocultural Literacy]
- Interpret the care of others in a disaster situation as a means of respecting individuals. [Abide by Professional Ethics]
- Value and contribute to a classroom where diversity of thought is leveraged. [Leadership]
- Objectively discuss laws and legal issues related to public health emergency management. [Governance & Civics]

COURSE ASSESSMENT:

Point Accumulation		Grade Scale	
Description	Points	Percent	Grade
Assignments – Individual and Group	200	90-100	A
Participation (In class and other forms of interactive learning)	150	80-89	B
Quizzes	200	70-79	C
Presentation	100		
Midterm	150	60-69	D
Final Exam	200	<59	F
Total Points	1000		

Effective communication is a critical part of emergency management. In order to convey important ideas and information effectively in writing, it is important to use complete sentences, proper grammar and correct punctuation. Proper written communication will be considered in addition to the substantive content of all assignments. Students are expected to participate fully both in the classroom and via out-of-classroom assignments. You will be required to use APA 7 formatting in all written assignments. Blackboard will be used to record your grade. Do not depend on these averages as they may be incorrect until all scores are recorded. However, it should provide enough information for you to roughly calculate your current grade at any time.

COURSE CONTENT:

Topics to cover include:

- Legal issues in public health emergency preparedness
- The four phases of emergency management as it relates to PHEM
- Hazards and threats
- Epidemiology and Surveillance
- History of public health emergency management
- Previous Epidemics and Pandemics
- Strategic National Stockpile
- Incident Management
- Medical Surge
- PHEM Leadership

The course content is subject to change should the instructor determine such change would better meet the students' educational needs.

EFFORT & SUBSTANCE: The effort put forth by the student and the substance of the student's answers will be considered in all work submitted for the course. If you find that a question cannot be answered straight from the assigned reading material, the intent is for you to take what you have learned from the reading and extrapolate from it. The question may be answered based on a concept from the reading rather than a verbatim example, or it may require some outside research. The purpose is for the student to develop thinking skills – intellectual activity versus memorization or regurgitation.

POLICIES: Student Handbook: <https://issuu.com/arkansastechuniversity/docs/studenthandbook-2016>

Students are expected to adhere to all University policies and regulations as set forth in the ATU Catalog and Student Handbook. Please refer to the following pages for clarification about policies related to this course:

- Academic Conduct – page 83
- Academic Dishonesty – page 83
- Academic Misconduct – page 84
- Class Absence – page 81

Assignment Completion - Students must complete their assignment within the timeframe specified by the instructor. Unless arrangements have been made with the instructor PRIOR to the due date; assignments must be received by the due date and time.

Regular Contact – Email and Blackboard should be checked regularly.

Academic Dishonesty – Cheating and plagiarism will not be tolerated. Emergency managers should be aware of the fact that because of the major responsibilities associated with their career, they must earn the trust of those they serve. The instructor may adjust the grade as appropriate. At a minimum, the student (and any student caught assisting in the dishonesty) will be given an **automatic 'F'** for the test/assignment in question and possibly an 'F' for the course. This means **no copy and paste**.

Academic Misconduct – Students are expected to act in an appropriate manner while in class and shall not disrupt the learning environment. We will all respect each other and treat each other in a professional manner. In egregious cases of misconduct, the student may be immediately be removed from the classroom and/or from the course.

Special Accommodations for Disabilities – A student must be registered with Disability Services in order to qualify for special accommodations. Registration must occur each semester; it does not carry over. In addition, the student should make contact with the instructor to determine which specific accommodations would be appropriate for this particular course. More information provided below.

Excessive Unexcused Absences / Tardiness - If, at any time during the semester, you have unexcused absences or fail to complete and submit assignments, you may be referred to the Tech Early Warning Program. If you are unresponsive to contact attempts, you may be dropped from the course with an “FE” for excessive absences or non-performance. You should make every effort to attend all classes without being tardy. Excessive tardiness will not be tolerated as it is disruptive to everyone else.

**It is your responsibility to contact the instructor directly when you cannot attend class; however, excused absence is not guaranteed. You are responsible for explaining to the instructor the reason for absences due to sickness, accident, or death in the family. The instructor is entitled to request verification.

All students must give prompt attention to communications from faculty and staff members of the University. Most communications will be sent to your official Tech e-mail address. University policy dictates that electronic communications to your instructor must be sent from your official Tech e-mail address.

PROFESSIONALISM: It is the policy and expectation of the Department of Emergency Management that students will conduct themselves in a professional manner that is guided by respect, collegiality, honesty, and ethical behavior in all of their interactions and communication with university faculty, staff, each other, and the community. Students are expected to maintain the highest ideals of academic and social conduct and are responsible for knowing the published policies and standards. Students also are expected to respect the views and personal dignity of other members of the university community, though this does not require that you must agree with others' views.

NON-DISCRIMINATION: Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic facts of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information please visit: <http://www.atu.edu/titleix/index.php>.

ACCESS/DISABILITY SERVICES: Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act in order to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit <http://www.atu.edu/disabilities/index.php>.

TECHNICAL ASSISTANCE: Technical support, including Blackboard support, is available via:
Telephone Support: 1-800-582-6953 or Email Support: campussupport@atu.edu



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Department of Emergency Management	6/12/20

Title	Signature	Date
Department Head Sandy M. Smith	<i>Sandy M. Smith</i>	6-17-2020
Dean Judy L. Cezeaux	<i>Judy L. Cezeaux</i>	6/24/2020
Assessment Christine Austin	<i>Christine Austin</i>	7/6/2020
Registrar	<i>Sammy McLean</i>	8/12/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL)	Course Number: (e.g., 1003)	Effective Term:
EAM	4XX3 4103	<input checked="" type="radio"/> Spring <input type="radio"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below)		
Critical Infrastructure		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript)		
Critical Infrastructure		

Will this course be cross-listed with another existing course? If so, list course subject and number.

Yes No

Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog?

If so, list course subject and number. Yes No EMHS 5XX3 Critical Infrastructure

Is this course repeatable for additional earned hours? Yes N How many total hours?

Grading: Standard Letter P/F Other

Mode of Instruction (check appropriate box):

- 01 Lecture 02 Lecture/Laboratory 03 Laboratory only
 05 Practice Teaching 06 Internship/Practicum 07 Apprenticeship/Externship
 08 Independent Study 09 Readings 10 Special Topics
 12 Individual Lessons 13 Applied Instruction 16 Studio Course
 17 Dissertation Research 18 Activity Course 19 Seminar 98 Other

Does this course require a fee? Yes No How Much? Select Fee Type

If selected other list fee type:

Elective Major Minor

(If major or minor course, you must complete the Request for Program Change form to add course to program.)

If course is required by major/minor, how frequently will course be offered? Not applicable

Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.?

No

Will this course require a special classroom (computer lab, smart classroom, or laboratory)?

No

Answer the following Assessment questions:

- If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not applicable
- If this course is required for the major or minor, complete the following.
 - Provide the program level learning outcome(s) it addresses.
 - Provide tool or measure directly linked to each program learning outcome. (How will student learning in this outcome be measured?)
- What is the rationale for adding this course? What evidence demonstrates this need?

This course is strongly recommended by the Department of Emergency Management External Advisory Board. As commonly known, critical infrastructure of a nation consists of a body of systems, networks, and key assets that are essential to continued operation of that nation's economy, security, public health and safety. This course focuses on critical infrastructure protection, risk management, risk assessment, evolution of laws, regulations, and policy that make up the homeland security enterprise.

For the proposed course, attach a syllabus in Word format that includes: **(Items a. through d. should be entered as they should appear in the catalog)**

- a. Course subject
- b. Course number
- c. Catalog course title
- d. Catalog description
 1. Arkansas Course Transfer System (ACTS) course number, if applicable
 2. Cross-listing
 3. Offered (e.g., Fall only, Spring only. Do not enter if offer course fall and spring)
 4. Prerequisites
 5. Co-requisites
 6. Description
 7. Notes (e.g., information not in description such as course may be repeated for credit)
 8. Contact Hours if different than lecture (e.g., Lecture three hours, laboratory three hours)
 9. Fees (e.g., \$36 art fee)
- e. Section for Name of instructor, office hours, contact information (telephone, email)
- f. Text required for course
- g. Bibliography (supplemental reading list)
- h. Justification/rationale for the course
- i. Course objectives
- j. Description of how course meets general education objectives (courses included in the general education component should show how the course meets one or more of the objectives contained in General Education Objectives listed in undergraduate catalog)
- k. Assessment methods (include grading policy with specific equivalents for A, B, C)
- l. Policy on absences, cheating, plagiarism, etc.
- m. Course content (outline of material to be covered in course).

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

COURSE SYLLABUS**Critical Infrastructure**4103
EAM ~~4XX3~~**Semester/Year****COURSE NUMBER:** EAM ~~4XX3~~ 4103**COURSE TITLE:** Critical Infrastructure**DAY AND TIME:** _____**BUILDING AND ROOM:** _____**PROFESSOR:** Ekong J. Peters, PhD

Office: Dean Hall 107F

Office Hours: MW 9:00 am – NOON, by Appointment, or Virtual

Office: 479-356-2159; Dept.: 479-356-2092

E-mail: epeters@atu.edu**COURSE DESCRIPTION**

Examines the nation's critical infrastructure protection, risk management, and resilience from a policy perspective.

Prerequisite: None

REQUIRED TEXTBOOKS

Pesch-Cronin, K. A. & Marion, N. E. (2016 or 2017). *Critical Infrastructure Protection, Risk Management, and Resilience: A Policy Perspective*. Boca Raton, FL: CRC Press

ISBN-13: 978-1498734905

ISBN-10: 1498734901

Reference Textbook

APA. (2019). *Publication manual of the American Psychological Association* (7th ed.). Washington, DC

ISBN 13: 978-1-4338-0561-5

ISBN 10: 1-4338-0561-8

JUSTIFICATION

Critical infrastructure protection, risk management, and resiliency for service delivery has become vital and increasingly challenging in light of natural, man-made, and technological disasters. It is incumbent on emergency management professionals and policy students to be familiar with government policies, strategies, and methodologies of protecting the nation's

infrastructure and assets from adversaries that are bent to harm us. This includes strengthening our cybersecurity. Interruptions in the nation's critical infrastructure can have devastating effect on the nation's economy, security and safety as well as the welfare of the public. This course addresses issues threatening critical infrastructure, their protection, and partnership with infrastructure stakeholders. The course is a gateway to policy application, risk assessment and management with an intent of developing strategies and methodologies to protect the nation's critical infrastructure and assets. The goal is continued operations and delivery of services.

COURSE OBJECTIVES

By the end of this course, the student will be able to:

- Discuss means for protecting the nation's critical infrastructure from potential threats by adversaries
- Assess risks posed to critical infrastructure by natural and man-made hazards using the all-hazards approach
- Demonstrate an understanding of public policies and strategies relating to critical infrastructure and assets protection
- Examine the need for public-private partnership in critical infrastructure and asset protection for continuity operations and service delivery
- Devise strategies to prepare for, respond to, mitigate against, and quickly recover from an event if ever it occurs based on previous analysis of such event

COURSE ASSESSMENT

Students will be assessed based on assignments, class participation, use of APA style format, and final project/paper. Please note your grade will be distributed as shown in the accompanying tables:

Point Accumulation	
Assignments	Points
Class Participation (5 x 20 points)	100
Progress Exam (4 x 25)	100
Group Assigned Final Project	200
Group Final Project Presentation	100
Total	500

Grade Scale		
Accumulated Points	Percent (%)	Grade
450 – 500	90 – 100	A
400 – 445	80 – 89	B
350 – 395	70 – 79	C
300 – 345	60 – 69	D
0 – 295	0 – 59	F

COURSE CONTENT

Course Topics:

- Critical Infrastructure and Risk Assessment Methods
- History of Critical Infrastructure Protection
- Current Critical Infrastructure Protection
- Federal Risk Management Agencies, including Department of Homeland Security
- Public-Private Partnership
- Laws and Regulations
- Department of Homeland Security Perspective on Risk
- Sector-Specific Agencies' Approach to Risk
- Future of Critical Infrastructure Protection: Risk, Resilience, and Policy

Readings

Students should read the assigned material(s) in order to have a general understanding of the topics which will be covered for the week/day. Reading the materials prior to class period, will enable you ask questions to clarify some points you did not understand from the readings as well as have meaningful discussion. All required readings not assigned from the textbooks or not available in the library will be made available on the Blackboard (Bb) or reference source provided in the course schedule.

Class Participation

Active class participation is essential in this course and is assigned 100 points of the course grade.

Progress Exams

There will be four essay type progress exams in this class. Date, time, and the mode of the exams will be posted on the Bb under announcement.

Assigned Final Group Project

200 points of the student's grade will be determined by assigned final group project submitted in Word and PowerPoint presentation. Instruction for the project will be posted on the Bb.

Assigned Final Group Project Presentation

There will be assigned final group project presentation by the end of the semester. Each group will make a PowerPoint presentation lasting 10-15 minute. The presentation is worth 100 points.

Supportive software

Students interested in using Kaltura in their respective class projects should contact the ATU IT Department at 479-968-0646

Subject to Change

The course content is subject to change should the instructor determine such change would better meet the student's educational needs.

Effort and Substance

The effort put forth by the student and the substance of the student's answers will be considered in all work submitted for the course.

If you find that a question cannot be answered straight from the assigned reading material, the intent is for you to take what you have learned from the reading and extrapolate from it. The question may be answered based on a concept from the reading rather than a verbatim example, or it may require some outside research.

The purpose is for the student to develop critical thinking skills – intellectual activity versus memorization or regurgitation. Throughout the course the student will be asked to use critical, practical, and creative thinking, which will be significantly more beneficial than memorizing or copying material and forgetting it shortly thereafter.

In all cases, papers should be prepared in 12-point Times New Roman with 1-inch margins, double-spaced, using the APA citation style, formatting, and reference listing.

COURSE POLICIES

Assignment Completion

Students must complete their assignments within the timeframe specified by the instructor.

Assignment Submission

Each assignment/work is due on the scheduled day, date, and time and should be posted on the Blackboard. **E-mail submission will not be accepted.**

Late Work

Work must be received by the due date and time as given by the instructor. If you have not made arrangements with the instructor prior to the due date, late assignments will be given a reduction in points (-10 points). Any assignment that is past due over one class will not be accepted except under special circumstances. If late assignments are accepted, there will be some penalty as indicated here (-10 points).

E-Mail Correspondence

In all emails to the instructor, list the course number and section number. And, if applicable, list the name or number of the assignment in the "Subject Line" of the email. Also, be sure your name is somewhere on the email and on any attached assignment.

All students must give prompt attention to communications from faculty and staff members of the University. Most communications will be sent to your official Tech e-mail address. University policy dictates that electronic communications to your instructor must be sent from your official Tech e-mail address.

Abandoning the Class

If at any time during the semester, you abandon the class or fail to complete and submit assignments, you may be referred to the Tech Early Warning Program. If you are unresponsive

to contact attempts, you may be dropped from the course by your instructor with an “FE” for abandoning the class or non-performance. It is your responsibility to contact the instructor directly when you cannot complete your class work on time.

Campus policy outlines the dates for dropping a course with a “W”. If you have a failing score and do not drop before the stated deadline, you will receive an “F” on your transcript for the course; therefore, it is in your best interest to monitor your status in the course and take advantage of the opportunity to withdraw with a “W” rather than remaining in the course and receiving an “F.”

You are responsible for explaining to the instructor the reason for absences due to sickness, accident, or death in the family. The instructor is entitled to request verification. For absences which make it difficult for you to contact the instructor, such as an emergency, you should contact the Student Services Office, Doc Bryan Student Services Center, Room 233, (479-968-0239) to have the instructor notified.

Academic Misconduct

Academic misconduct concerns a student's inappropriate behavior in a class regardless of the class format and delivery. Such behavior includes interacting with the professor and other students in a manner that disrupts the learning environment of a class. Examples include but are not limited to: a) engaging in a discussion with other students that is not beneficial to the class or acceptable to the professor; b) interrupting class unnecessarily; c) attempting to monopolize the professor's time and attention; d) being chronically late to the class; and e) failing to engage in a class in a manner that is required by the professor, such as chronically late submission of assignments. Misconduct also covers verbal or nonverbal harassment and threats in relation to classes. Student behavior must not infringe on the rights of other students or faculty during a class, including the online environment.

Course, Department, and University policies will be followed in handling academic misconduct.

A student will be notified when his or her conduct is inappropriate. If the student does not respond to the notification and/or the inappropriate conduct continues, the student will be removed from the classroom and/or Blackboard. If the student subsequently engages in misconduct, the student will be removed from the course. If the student continues to engage in misconduct, he or she may be removed from the program entirely; and the professor may begin university procedures for removal from the university.

Please note - In egregious cases of misconduct, such as verbal or written abuse or threats, the student may immediately be removed from the classroom and/or Blackboard, from the course, and from the program entirely. In such cases, the professor may begin university procedures for removal from the university.

Academic Dishonesty

Academic dishonesty refers to the various categories of cheating and plagiarism in a class, regardless of the class format and delivery.

- Cheating on an examination, quiz, or homework assignment involves any of several categories of dishonest activity. Examples include but are not limited to: a) copying from an examination, quiz, or any other assignment of another student; b) utilizing notes, messages, or crib sheets in any format which gives the student extra help on an exam or quiz, and which were not approved by the professor of the class; c) obtaining advance copies of exams or quizzes by any means; d) hiring a substitute to take an exam or bribing any other individual to obtain exam or quiz questions; e) buying term papers or other assignments from the Internet or any other source; and f) using the same paper to fulfill requirements in several classes without the consent of the professors teaching those classes.
- Plagiarism is stealing the ideas or writing of another person and using them as one's own. This includes not only passages, but also sentences and phrases that are incorporated in the student's written or oral work without acknowledgement to the true author. Any assignment, including but not limited to lab work, report, paper, presentation, or discussion board, written by copying or cutting and pasting from the Internet or any other source is plagiarized. Slight modifications in wording do not change the fact the sentence or phrase is plagiarized. Acknowledgment of the source of ideas must be made through a recognized footnoting or citation format. Plagiarism includes recasting the phrase or passage in the student's own words of another's ideas that are not considered common knowledge. Acknowledgement of source must be made in this case as well.

Course, Department, and University policies will be followed in handling academic dishonesty.

At a minimum, the student (and any student caught assisting in the dishonesty) will be given an *automatic* "F" for the test/assignment in question and possibly an "F" for the course. Subsequent cases of plagiarism or cheating will result in a minimum of one letter grade course reduction for each incident or an "F" for the course. If the student continues to engage in any academic dishonesty, he or she will be removed from the program entirely.

In addition, any student who aids another student in academic dishonesty (e.g., answers or provides a paper or a completed homework assignment to another student for submission) will be treated as also being involved in the dishonesty and appropriate penalties will apply.

Egregious cases of plagiarism (i.e., large sections copied from another source) will result in an automatic "F" for the course. THIS MEANS NO COPYING & PASTING IN ANY ASSIGNMENT.

Professionalism, Communication, & Respect

It is the policy and expectation of the Department of Emergency Management that students will conduct themselves in a professional manner that is guided by respect, collegiality, honesty, and ethical behavior in all of their interactions and communication with university faculty, staff, each other, and the community. Students are expected to maintain the highest ideals of academic and social conduct and are responsible for knowing the published policies and standards. Students also are expected to respect the views and personal dignity of other members of the university community, though this does not require that you must agree with others' views. The purposes of this policy are to promote excellence and integrity in all of our activities; to ensure that all persons are treated with respect, dignity, and courtesy; and to promote constructive communication and collaborative teamwork.

COURSE EXPECTATIONS

- All reading assignments should be completed within the assigned week. This will allow more class participation and increase a student's ability to identify important ideas
- **Class attendance and participation are mandatory; student may be dropped from the class for not doing assignments**
- Be respectful and courteous to the instructor and your classmates whether you are online or in a face-to-face class
- All assignments are to be submitted on the due date. **NO LATE ASSIGNMENTS WILL BE ACCEPTED**, if accepted, there will be a penalty (-10 points).
- It is up to you to determine the grade you want to receive in this class. You should perform according to your grade expectation

COURSE EVALUATION

By the end of the semester, students will get requests from the university administration asking them to take a minute to evaluate their respective courses. Please take this opportunity seriously and assess this course for future improvement.

STUDENT NEEDS STATEMENT

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to notify the instructor, if they are comfortable in doing so. Community resources are available for students and can be found at the following webpage: <https://www.atu.edu/localresources/>. If a student finds they need more support, they are encouraged to contact the Office of the Vice President for Student Services (479-968-0238).

NON-DISCRIMINATION POLICY

Arkansas Tech University does not discriminate on the basis of color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of its practices, policies, or procedures. This includes, but is not limited to, employment, admissions, educational services, programs or activities which it operates, or financial aid. 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, Title IX of the Educational Amendments of 1972, Section 503 of the Rehabilitation Act of 1973, Section 504 of the Rehabilitation Act Amendments of 1974, Age Discrimination Act, Vietnam Era Veterans Readjustment Assistance Act, Uniformed Services Employment and

Reemployment Act, the Civil Rights Restoration Act of 1987, the Americans with Disabilities Act of 1990, and the Civil Rights Act of 1991. Responsibility for implementation and compliance with this Non-Discrimination Policy has been delegated to Jennifer Fleming, Affirmative Action officer who can be reached by emailing jfleming@atu.edu or calling (479)498-6020.

If you or someone you know has been subjected to discrimination, please contact Jennifer Fleming at 479-498-6020 or email at jfleming@atu.edu.

For information on the options available for filing a complaint of discrimination please click here: [Resolution Options](#)

[Complaint Form](#)

DISABILITY SERVICES

Arkansas Tech University values diversity and inclusion and is committed to a climate of mutual respect and full participation of all students. My goal is to create a learning environment that is useable, equitable, inclusive and welcoming. If there are aspects of the instruction or design of this course that result in barriers to your inclusion or prevent an accurate assessment of your achievement, please meet with me privately to discuss your needs and concerns. You may also contact the Office of Disability Services, located in Doc Bryan Student Center, Suite 141, in person, via phone at (479) 968-0302 or TTY (479) 964-3290, via email at disabilities@atu.edu, or visit their website at <https://www.atu.edu/disabilities/index.php> in order to initiate a request for accommodations.

BLACKBOARD TECHNICAL ASSISTANCE

Technical support, including Blackboard support, is available online, via email, or by phone: Telephone Support: (479) 968-0646; 1-866-400-8022; Email Support: campussupport@atu.edu

Additional information may be found at: <https://ois.atu.edu/>

Hours of Operation:

24 hours a day - 7 days a week ** Excluding holidays **

When the library is closed, there will only be email and telephone support available.

Supportive software

Students interested in using Kaltura in their class projects should contact the ATU IT Department at 479-968-0646

****** In all cases, papers should be prepared in 12-point Times New Roman with 1-inch margins, double-spaced, using the APA citation, formatting, and reference listing style.***

ADDENDUM

College of Engineering and Applied Sciences Academic Integrity Policy

The Arkansas Tech Student Handbook describes the policies and procedures for academic integrity under Article V: Classroom Provisions and Academic Dishonesty is covered in subparagraph E to which the College of Engineering and Applied Sciences has added the following addendum:

- (1) The College of Engineering and Applied Sciences has a zero-tolerance policy on cheating and plagiarism. Cheating or plagiarism includes sharing material when unauthorized, using cellular phones or electronic media when unauthorized, and using websites that promote sharing solutions to course assignments. Any cheating or plagiarism offense will be reported to the head of your respective department, and a note will be placed in your permanent departmental file.
- (2) Repercussions for any cheating or plagiarism offense:
 - a) Your first offense of academic integrity policy involving cheating or plagiarism will result in a zero for the graded assignment.
 - b) A second offense of cheating or plagiarism within the same course as the first offense or in any other course within the college will result in a failing grade, "F", or you will be dropped from the course at the discretion of the instructor. You may be reported to the Department of Student Conduct and/or other offices for adjudication.
- (3) You have the right to appeal any violation of the academic integrity policy following the guidelines outlined in the student handbook. The consequences will occur only after each charge is verified through the process outlined in the handbook.
- (4) Each offense will be recorded within the college and will carry over from class to class during your entire program of study.
- (5) Upon request, smartphones, smartwatches, and all material (backpacks, notebooks, notes, etc.) will be left at a location designated by the instructor. Failure to comply with this policy will be viewed as a violation of the academic integrity policy.
- (6) Calculators will either be provided by the instructor or you will be allowed to use your own calculator that adheres to the guidelines specified by the instructor. If you use your own calculator, the instructor will have the option to randomly inspect it to verify that it is within the guidelines specified for the course.
- (7) Please refer to the syllabus for additional information regarding academic integrity for the course.
- (8) You will receive a grade of zero for any graded activity until you have acknowledged that you have read and understood the College of Engineering and Applied Sciences Academic Integrity Policy by completion of the Academic Integrity quiz on Blackboard or in class.

Policy Completion

Remember to complete:

1. The Federal Attendance Policy located in the Federal Attendance Module area
2. The College of Engineering and Applied Sciences Academic Integrity Policy (EAS Academic Integrity Policy) in the “Information” area.

Revised: June 12, 2020



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Department of Emergency Management	6/9/2020

Title	Signature	Date
Department Head	<i>Sandy M. Smith</i>	6-11-2020
Dean Judy L. Cezeaux	<i>Judy L. Cezeaux</i>	6/24/2020
Assessment Christine Austin	<i>Christine Austin</i>	7/7/20
Registrar	<i>Jimmy Cezeaux</i>	8/12/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title:
Emergency Administration and Management

Outline change in program:

- (1) Remove requirement for COMS 2003 *or Equivalent*
- (2) Add "Technology Course" requirement (3 hours). *List courses in footnote 3.*
 - BUAD 1023 KEYBOARDING
 - BUAD 2003
 - COMS *
 - CSec *
 - BST *
 - CIS *
 - GEOG/FW 2833

(* any course with this Prefix)
- (3) Add the following to the approved list of EM Electives: *in footnote 2.*
 - ~~2431~~ UAVs in EM *2413*
 - 2881, 2882, 2883 Special Topics
 - 2991, 2992, 2993 Special Problems
 - 4093 Grants
 - 488X series
 - 4951-4 Research
 - ~~3XX3~~ Safety Standards for Emergency Managers *3073*
 - ~~39X3~~ Public Health Emergency Management *3903*
 - ~~4XX3~~ Critical Infrastructure *4103*

Answer the following Assessment questions:

- a. How does the program change align with the university mission?

This program change requiring a Technology Course instead of one specific course (COMS 2003) should encourage students to seek technology courses where the student will learn new technological knowledge. Most ATU students have a working knowledge of the technological skills in COMS 2003 from their high school courses. This change aligns with the university mission for student success, access, and excellence by providing students with a broad range of technology courses for the EM field.

- b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. **NOT APPLICABLE**

- c. What is the rationale for this program change?

1. How will the program change impact learning for students enrolled in this program?

Currently we require 18 hours of electives (so students can pursue a minor); however, with the requirement of COMS 2003, they must take the pre-requisite COMS 1003 which is not on the degree plan and reduces the elective hours for a minor. The reason for requiring COMS 2003 in the beginning was to ensure students had adequate computer knowledge before entering the workforce. We believe this change provides more opportunities for students to take other forms of technology courses to meet this need.

Emergency Management is a dynamic field that is ever-changing. The list of courses requested as approved EAM electives (in #3 above) are courses that have been taught for our majors to keep our students' skillset current and to provide students with cutting edge information.

2. Provide an example or examples of student learning assessment evidence which supports the changes in the program.

Currently students are required to take COMS 2003; this change will follow recommendations of our Advisory Board for students to take a variety of Technology Courses without changing the required number of hours.

- d. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions.

Based on the ever-changing field of emergency management and the growing need for students with Cyber Security and GIS knowledge, this change will allow students to broaden their capabilities making them more marketable in the field. Many other EM programs have limited or no technology requirement; however, our Advisory Board regularly discusses how this requirement is vital and sets our students apart.

e. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

The Department's program learning objective of Technological Literacy is measured at the mastery level in EAM 4606 Capstone. It is expected that broadening the variety of technological adjunctive courses for the EAM degree will provide different methods for students to master our program's Technological Literacy learning objective.

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.
 This requested change does not affect the current curriculum matrix.

Curriculum Matrix for Catalog Curriculum in <u>Emergency Administration Management</u> (enter title for program changing)	
Freshman Fall Semester Add/Change: Delete: Total Hours:	Freshman Spring Semester Add/Change: Technology course 3hrs³ Delete: COMS 2003 or Equivalent Total Hours:
Sophomore Fall Semester Add/Change: Delete: Total Hours:	Sophomore Spring Semester Add/Change: Delete: Total Hours:
Junior Fall Semester Add/Change: Delete: Total Hours:	Junior Spring Semester Add/Change: Delete: Total Hours:
Senior Fall Semester Add/Change: Delete: Total Hours:	Senior Spring Semester Add/Change: Delete: Total Hours:

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM

This form must be completed for every department affected by the course change.

Department Affected: Computer and Information Science	This department <input checked="" type="checkbox"/> supports <input type="checkbox"/> does not support the change.
Comments: The Department of Computer and Information Science supports the Department of Emergency Management proposal to have the technology requirement be not only COMS 2003, but also another COMS or CSEC course (students are expected to meet the course pre-requisites and co-requisites).	

Department Head Signature: _____ *Lina Washah*

Date: 6/14/2020

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM

This form must be completed for every department affected by the course change.

Department Affected: History & Political Science	This department <input checked="" type="checkbox"/> supports <input type="checkbox"/> does not support the change.
Comments:	


Department Head Signature:

_____ Date: 6/12/20 _____

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM

This form must be completed for every department affected by the course change.

Department Affected: Biological Sciences	This department x supports <input type="checkbox"/> does not support the change.
Comments:	

Department Head Signature: John Jackson
Date: 6/15/20

**Arkansas Tech University
DEPARTMENTAL SUPPORT FORM**

This form must be completed for every department affected by the course change.

Department Affected: Management & Marketing	This department <input checked="" type="checkbox"/> supports <input type="checkbox"/> does not support the change.
Comments: BUAD 1023 and BUAD 2003 to be added as options for "Technology Course" requirement.	

Department Head Signature: Tracy Cole
Date: 6-12-20



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Mechanical Engineering	06/15/2020

Title	Signature	Date
Department Head John L. Krohn	<i>John L. Krohn</i>	6/26/2020
Dean Judy L. Cezeaux	<i>Judy L. Cezeaux</i>	6/28/2020
Assessment Christine Austin	<i>Christine Austin</i>	7/6/2020
Registrar	<i>[Signature]</i>	9/8/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL)	Course Number: (e.g., 1003)	Effective Term:
MCEG	3663	<input type="checkbox"/> Spring <input checked="" type="checkbox"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below)		
Engineering Internship		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript)		
Engineering Internship		

Will this course be cross-listed with another existing course? If so, list course subject and number.
 Yes No

Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog?
 If so, list course subject and number. Yes No

Is this course repeatable for additional earned hours? Yes N How many total hours?

Grading: Standard Letter P/F Other

Mode of Instruction (check appropriate box):

<input type="radio"/> 01 Lecture	<input type="radio"/> 02 Lecture/Laboratory	<input type="radio"/> 03 Laboratory only
<input checked="" type="radio"/> 05 Practice Teaching	<input checked="" type="radio"/> 06 Internship/Practicum	<input type="radio"/> 07 Apprenticeship/Externship
<input type="radio"/> 08 Independent Study	<input type="radio"/> 09 Readings	<input type="radio"/> 10 Special Topics
<input type="radio"/> 12 Individual Lessons	<input type="radio"/> 13 Applied Instruction	<input type="radio"/> 16 Studio Course
<input type="radio"/> 17 Dissertation Research	<input type="radio"/> 18 Activity Course	<input type="radio"/> 19 Seminar <input type="radio"/> 98 Other

Does this course require a fee? Yes No How Much? Select Fee Type

If selected other list fee type:

Elective Major Minor

(If major or minor course, you must complete the Request for Program Change form to add course to program.)

If course is required by major/minor, how frequently will course be offered?

Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.?
 None needed

Will this course require a special classroom (computer lab, smart classroom, or laboratory)?
 No

Answer the following Assessment questions:

- If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not applicable
- If this course is required for the major or minor, complete the following.
 - Provide the program level learning outcome(s) it addresses.
 - Provide tool or measure directly linked to each program learning outcome. (How will student learning in this outcome be measured?)
- What is the rationale for adding this course? What evidence demonstrates this need?

The course will give students participating in engineering internships with regional industries the opportunity to gain course credit and transcript recognition for these experiential learning experiences.

Will the course affect other departments: No, only MCEG majors may take the course

DEPARTMENT OF MECHANICAL ENGINEERING


- A. Course Subject:** MCEG
- B. Course Number:** 3663
- C. Catalog Title:** Engineering Internship
- D. Catalog Description:**
- 1. ACTS Course number:** N/A
 - 2. Cross-listing:** N/A
 - 3. Offered:** All
 - 4. Prerequisites:** Mechanical engineering major with junior standing and a minimum GPA of 2.75/4.00; MCEG 3013, 3313
 - 5. Co-requisites:** N/A
 - 6. Description:** Students will gain experiential learning in an industrial environment by participation in an engineering internship with an approved industry partner. Students will be required to participate in engineering project(s) under supervision of an engineer at the selected partner industry, complete written and oral reports.
 - 7. Notes:** May not be repeated for credit
 - 8. Contact Hours:** Minimum of 300 contact hours over minimum 8 weeks internship
 - 9. Fees:** N/A
- E. Instructor:** Varies
Office Hours: Varies
Contact Info: Varies
- F. Required Text:** None
- G. Bibliography:** None
- H. Justification:** This course will allow students who participate in approved industrial internships the opportunity to gain course credit and transcript recognition of this experiential learning experience. Completion of an internship will help prepare students for career success.
- I. Course Objectives:** Students completing the internship course will gain valuable experience in engineering projects and activities while receiving on-the-job training as in actual engineering settings.
- J. General Education Objectives:** N/A
- K. Grading Policy:** Grades will be based on two written reports demonstrating successful application of engineering principles, learned in previous courses, submitted by the student during the internship period and a written evaluation from the student's industrial supervisor.
- L. Attendance Policy:** As representatives of the Mechanical Engineering department, students are expected to act in a professional manner at all times during their internship experience. Attendance at the internship location is required for the minimum number of weeks/hours set forth in the course description.
- M. Course Content:** The course content will vary with the company/industry involved but will generally include experience with typical projects undertaken by engineers in that company/industry including analysis and design of systems or components in mechanical, thermal or related systems.



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Professional Studies	7.1.20

Title	Signature	Date
Department Head Dr. Jeremy Schwehm	Jeremy Schwehm <small>Digitally signed by Jeremy Schwehm Date: 2020.07.28 14:49:55 -05'00'</small>	7/28/2020
Dean Dr. Jeff Aulgur	Jeffrey Aulgur <small>Digitally signed by Jeffrey Aulgur Date: 2020.09.04 10:43:07 -05'00'</small>	9.4.2020
Assessment Dr. Christine Austin	Dr. Christine Austin <small>Digitally signed by Dr. Christine Austin Date: 2020.09.08 10:06:46 -05'00'</small>	9.8.2020
Registrar Mrs. Tammy Weaver		9/8/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs Dr. Barbara Johnson		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL)	Course Number: (e.g., 1003)	Effective Term:
BAS	4363	<input type="checkbox"/> Spring <input checked="" type="checkbox"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below)		
Project Risk Analysis and Mitigation		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript)		
Project Risk Mitigation		

Will this course be cross-listed with another existing course? If so, list course subject and number.
 Yes No _____

Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog?
 If so, list course subject and number. Yes No _____

Is this course repeatable for additional earned hours? Yes No How many total hours? _____

Grading: Standard Letter P/F Other _____

Mode of Instruction (check appropriate box):

<input checked="" type="checkbox"/> 01 Lecture	<input type="checkbox"/> 02 Lecture/Laboratory	<input type="checkbox"/> 03 Laboratory only
<input type="checkbox"/> 05 Practice Teaching	<input type="checkbox"/> 06 Internship/Practicum	<input type="checkbox"/> 07 Apprenticeship/Externship
<input type="checkbox"/> 08 Independent Study	<input type="checkbox"/> 09 Readings	<input type="checkbox"/> 10 Special Topics
<input type="checkbox"/> 12 Individual Lessons	<input type="checkbox"/> 13 Applied Instruction	<input type="checkbox"/> 16 Studio Course
<input type="checkbox"/> 17 Dissertation	<input type="checkbox"/> 18 Activity Course	<input type="checkbox"/> 19 Seminar <input type="checkbox"/> 98 Other

Does this course require a fee? Yes No How Much? _____ Select Fee Type _____

If selected other list fee type: _____

Elective Major Minor

(If major or minor course, you must complete the Request for Program Change form to add course to program.)

If course is required by major/minor, how frequently will course be offered?

 Fall / Spring; selected summer terms based on demand

Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.? NA

Will this course require a special classroom (computer lab, smart classroom, or laboratory)? NA

Answer the following Assessment questions:

- If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not applicable
- If this course is required for the major or minor, complete the following.

1. Provide the program level learning outcome(s) it addresses.

Bachelor of Applied Science Learning Objectives

1. Communication: Proficiency of writing communication skills for a variety of audiences.
2. Critical Thinking and Problem Solving: Analyzing and evaluation evidence to deliver data-drive solutions.
3. Analytical Skills: Developing conclusions through quantitative and qualitative reasoning.
4. Ethics: Applying ethical principles in personal, professional, and societal contexts.
5. Diversity: Demonstrating understanding and consideration of diverse cultural perspectives and intercultural complexities.
6. Teamwork: Demonstrating teamwork fundamentals through participation and engagement.

7. Technical Expertise: Demonstrating proficiency in project management, computer literacy, technology, financial management, and knowledge application.
8. Leadership and Management: Applying leadership and management strategies in professional settings, to include human resources management, conflict management, and conflict resolution.
2. **Provide tool or measure directly linked to each program learning outcome. (How will student learning in this outcome be measured?)** Please see attached BAS 4363 Course Map for additional information.

PLO 1 Communication: Module 7 > Assignment 5 Conducting Risk Interviews

PLO 2 Critical Thinking and Problem Solving > Module 11 > Assignment 7 Summary Risk Report

PLO 3 Analytical Skills > Module 14 > Project Application Step 7: Final Submission

PLO 4 Ethics > Start Here! Module > Project Management Institute (PMI) Code of Ethics Quiz

PLO 5 Diversity > Module 2 > Project Application Step 1: Stakeholder Analysis Template

PLO 6 Teamwork > Module 10 > Project Application Step 5: Risk Review Agenda Meeting

PLO 7 Technical Expertise > Module 12 > Project Application Step 6: Full Risk Report Content

PLO 8 Leadership and Management > Module 15 > Assignment 10: Explicit Program Risk Management

c. What is the rationale for adding this course? What evidence demonstrates this need?

1. BAS 4363 Project Risk Management replaces COMM 3073 Group Communication within the degree program's required core. BAS 4363 supports all eight Program Learning Outcomes for the Bachelor of Applied Science degree program; COMM 3073 Group Communication supports a limited number of Program Learning Outcomes (most of which are replicated in OL 3023 Professional Communication).
2. BAS 4363 Project Risk Management builds upon the knowledge acquired via completion of BAS 4353 Workflow Monitoring and Industrial Environments. BAS 4353 provides the student with a substantive background in project management effective for deployment in multiple industrial, manufacturing, and technical domains, and the course is designed for those with minimal project experience and is intended to demonstrate the student's understanding of the fundamental knowledge, terminology, and processes of effective project management.
3. As defined by the Project Management Institute (PMI) Project Risk Management "includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project. The objectives of project risk management are to increase the probability and/or impact of positive risks and to decrease the probability and/or impact of negative risks, in order to optimize the chances of success" (PMI Project Management Body of Knowledge (6th ed.), 2017, p. 395). BAS 4363 Project Risk Management, by utilizing Active Threat and Opportunity Management (ATOM) model, delivers a risk management protocol scalable to any size project, applicable to any business, industry, or environment with inherent risk.
4. The Bachelor of Applied Science degree program provides students who have earned an Associate of Applied Science (A.A.S.) degree in any discipline a seamless transition to a four-year degree program. This stackable education sequence enhances an individual's academic qualifications and increases potential upward mobility. As evidence, the Department of Professional Studies and the Ozark Campus have collaborated to form the "Transition to Leadership" path for students earning an A.A.S. degree in Logistics Management, Law Enforcement, and Banking Services.

For the proposed course, attach a syllabus in Word format that includes: **(Items a. through d. should be entered as they should appear in the catalog)**

- a. Course subject
- b. Course number
- c. Catalog course title
- d. Catalog description
 1. Arkansas Course Transfer System (ACTS) course number, if applicable
 2. Cross-listing
 3. Offered (e.g., Fall only, Spring only. Do not enter if offer course fall and spring)
 4. Prerequisites
 5. Co-requisites
 6. Description
 7. Notes (e.g., information not in description such as course may be repeated for credit)
 8. Contact Hours if different than lecture (e.g., Lecture three hours, laboratory three hours)
 9. Fees (e.g., \$36 art fee)
- e. Section for Name of instructor, office hours, contact information (telephone, email)
- f. Text required for course
- g. Bibliography (supplemental reading list)
- h. Justification/rationale for the course
- i. Course objectives
- j. Description of how course meets general education objectives (courses included in the general education component should show how the course meets one or more of the objectives contained in General Education Objectives listed in undergraduate catalog)
- k. Assessment methods (include grading policy with specific equivalents for A, B, C)
- l. Policy on absences, cheating, plagiarism, etc.
- m. Course content (outline of material to be covered in course).

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

Arkansas Tech University

BAS 4363 Project Risk Analysis and Mitigation

Term

Instructor:

Phone:

Office:

E-mail:

Office Hours:

Course Description

BAS 4363 Project Risk Analysis and Mitigation explores the essential process of risk management mitigation in defined projects. Students assess the failures of risk management to deliver expected risk mitigation results, apply a risk management process with a focus on achieving efficacy, and the implementation of risk management to various types of projects in organizations (nonprofit, governmental and for-profit) and individual endeavors. The Active Threat and Opportunity Management (ATOM) process is designed to meet the need for a simple scalable risk management process applicable to all projects.

Prerequisite Knowledge

BAS 4353 Workflow Monitoring and Industrial Environments or instructor consent.

Required Course Text (Purchase Not Required)

Simon, P., & Hillson, D. (2012). *Practical project risk management*. Management Conceptions.

Bachelor of Applied Science Learning Objectives

1. Communication: Proficiency of writing communication skills for a variety of audiences.
2. Critical Thinking and Problem Solving: Analyzing and evaluation evidence to deliver data-drive solutions.
3. Analytical Skills: Developing conclusions through quantitative and qualitative reasoning.
4. Ethics: Applying ethical principles in personal, professional, and societal contexts.
5. Diversity: Demonstrating understanding and consideration of diverse cultural perspectives and intercultural complexities.
6. Teamwork: Demonstrating teamwork fundamentals through participation and engagement.

7. Technical Expertise: Demonstrating proficiency in project management, computer literacy, technology, financial management, and knowledge application.
8. Leadership and Management: Applying leadership and management strategies in professional settings, to include human resources management, conflict management, and conflict resolution.

Course Objectives

1. Analyze project risks (uncertainties and unknowns) in the defining, planning, executing, and delivering stages.
2. Integrate the Active Threat and Opportunity Management (ATOM) methodology with risk assessment and mitigation design.
3. Apply Active Threat and Opportunity Management (ATOM) stages (Initiation, Identification, Assessment, Response Planning, Reporting, Implementation, Major Review, Minor Reviews, Post-Project Review) to the project life cycle.
4. Analyze project role and scope to deploy appropriate variations in the ATOM risk mitigation methodology.
5. Assess the aim and scope of risk (strategic, technical, environmental or personal) in a program or project
6. Implement the nine-step ATOM process in the analysis of a comprehensive risk mitigation case study.

BAS 4363 Project Risk Analysis and Mitigation, through both the course-level objectives and learner achievement of the module-level learning objectives, supports all eight program-level objectives for the Bachelor of Applied Science degree.

Bachelor of Applied Science Core (40 hours)	
PYS 3093	Industrial Psychology
OL 3023	Professional Communication
OL 3133	Applied Principles of Personnel Management
OL 4043	Ethical Leadership
OL 4443	Professional Leadership
OL 4543	Workplace Supervision
OL 4643 or OL 4743	Occupational Globalization & Diversity or Organizational Change

BAS 4253	Quality Control and Continuous Improvement
BAS 4353	Workflow Monitoring and Industrial Environments
BAS 4453	Problem Solving and Root Cause Analysis
BAS 4363	Project Risk Analysis and Mitigation
BAS 4553	Workplace Health and Safety
BAS 4653	Manufacturing Systems
BAS 4751	Career Planning and Personnel Development

Learning Outcomes Map

BAS Learning Outcome	OL 3023	OL 3133	PSY 3093	OL 4043	OL 4443	OL 4543	OL 4643/4743
LO1	I	R		R		R	
LO2			I		R		R
LO3			I				
LO4		I		R		R	M
LO5		I		R	R	R	M
LO6		I			R	R	
LO7	I		R			R	
LO8		I	R	R	R	R	M

BAS Learning Outcome	BAS 4253	BAS 4353	BAS 4453	BAS 4363	BAS 4553	BAS 4653	BAS 4751
LO1				R			M
LO2	R		R	R	R	R	M
LO3	R	R	R	R	R	M	
LO4			R	R			
LO5				R			
LO6	R	R	R	R		R	M

LO7	R	R	R	R	R	R	M
LO8				R		M	

I (Introduction) R (Reinforcement) M (Mastery)

Course Justification

Risk, a situation involving exposure to danger or a negative outcome, is an inherent and ever-present factor in organizations, projects, and activities of daily living. Risk cannot be eliminated, but it can be mitigated. The implementation of effective risk management protocols, when integrated into a project or process, should deliver benefits to the organization or the individual. Risk management protects the three critical constraints to achieving successful outcomes in projects and processes: time, material, and people.

How Course Meets General Education Requirements

The general education curriculum at Arkansas Tech University is designed to provide a foundation for knowledge common to educated people and to develop the capacity for individuals to expand that knowledge over his or her lifetime. The University has identified a set of comprehensive goals that will allow students to accomplish these general education objectives. This course addresses the following specific Arkansas Tech University general education goals:

Communicate effectively

Think critically

Develop ethical perspectives

Apply scientific and quantitative reasoning

Methodology

The objectives will be achieved through readings, supplemental readings, on-line discussions boards, individual assignments, case study, video lectures and a group exercise. Students are required to post on the discussion board as assigned and provide feedback to peers based on the week's assignment to create an interactive dialogue. The group project requires students to collaborate on a project through the use of technology to reflect real world application.

Technology Competencies

Students are expected to demonstrate mastery and appropriate application of related technology competencies as determined by the Professional Studies Department. Those competencies include: word processing (MS Office), PowerPoint (2007 version or ability to see later version of power-point), on-line research, email, Blackboard, discussion board postings and list-serve knowledge.

Basic Technical Skills for Success

- Using Blackboard (and seeking assistance as soon as possible)
- Using email to communicate with your instructor (include course section)
- Creating and submitting files in Word or a similar format
- Submitting written assignments in Word to Blackboard
- Asking for help. (I cannot stress this enough to you).

Technology Requirements for Success

Click [here](#) to view recommended Blackboard technology compatibility.

1. Determine if you are a good fit for an online class.

Ask yourself and those around you who know you very well, such as parents, siblings, good friends, or a teacher or mentor who you respect, to tell you if you are:

- a. A self-motivated, self-driven person who wants to learn, and is willing to make it a priority
- b. Willing to initiate conversation and communication with new people whom you have just met
- c. Someone who possesses effective time management and is rarely known to procrastinate
- d. Someone who doesn't give up easily under pressure, is persistent, and perseveres through challenges
- e. Willing to admit "I don't know," and ask for help

2. Research the status of your devices for accessing online learning environments.

What type of devices do you have for accessing the online learning environment and completing your online assignments? Which one of them is your primary device?

3. Know your limitations with regards to literacy with media and digital skills.

Having a computer and knowing how to use it is not enough to ensure success in the online learning environment. Today, digital literacy is the primary way to gather information. You must have the ability to find, access, manage, evaluate, analyze, synthesize, utilize, share and create new knowledge and content using information technologies and the Internet.

4. Identify your primary connection to the Internet and backup connection.

- a. Do you have reliable internet access?
- b. How close are you to a public library with computers, internet access, and Wi-Fi access?
- c. How close are you to other public places that have internet access such as Starbucks, Panera, Whole Food Markets, Target, etc.?
- d. What are your alternative plans for internet access?
- e. In addition to Wi-Fi, do you have the possibility to connect to the internet at home directly?

- f. If you are also working, does your workplace allow you to use the internet and Wi-Fi access to do your school assignments before and after work?

5. Talk to other students who have taken courses online to get information about the online learning platform.

Getting information about the online learning platform by talking to those students that have taken courses online is very useful for any student who is thinking of taking online courses. You can learn a lot from a recent student about the kind of personal characteristics that you must have to succeed in the online learning environment. Also, you will learn about the types of digital skills that will be required using the interface and the support systems that are available.

6. Find a mentor.

Colleges and universities provide students with mentors and advisors through the Student Services and Advising departments. Students who take advantage of this opportunity, perform better in their online classes.

Class Assignments

Class assignments will be posted every Monday by 12 p.m. CST unless noted otherwise. Class assignments can be located on Blackboard under the “Content” tab.

Assessments

Discussion Boards

Discussion board posts regarding the assigned reading will be required from each student, as well as providing feedback to a post of at least two peers to create a dynamic, intellectual exchange. All discussion board posts will be due by 11:59 p.m. CST on the due date specified on the “Course Schedule” section of the syllabus. All assignments must be submitted through Blackboard in order to receive credit.

Case Studies

The term case study refers to both a method of analysis and a specific research design for examining a problem, both of which are used in most circumstances to generalize across populations. This tab focuses on the latter--how to design and organize a research paper in the social sciences that analyzes a specific case.

A case study research paper examines a person, place, event, phenomenon, or another type of subject of analysis in order to extrapolate critical themes and results that help predict future trends, illuminate previously hidden issues that can be applied to practice, and/or provide a means for understanding an critical research problem with greater clarity. A case study paper usually examines a single subject of analysis, but case study papers can also be designed as a parallel investigation that shows relationships between two or among more than two topics.

Assignments

In conjunction with the reading assignments, students must complete the identified assignments for each module as assigned in Blackboard. The materials and background information for each exercise will be located in the Course Material section on Blackboard, if required.

Examinations and Quizzes

Quizzes are associated with each module and are designed to assess a student's mastery of the materials presented in a respective module. A final exam will be administered over the course material. Examinations will be timed once you begin the examination.

Rubrics

Each learning activity and assessment item above is evaluated by a rubric designed for each. The rubric for each type of assignment may be found in every module containing an assignment. It is highly recommended you read and review the rubric before initiating (and submitting) a learning activity or assessment.

E-mail/Discussion Board Decorum

This is an online course; therefore a majority of our conversations will take place through Messages within Blackboard and the assignment discussion boards. Please use common sense (no slang, use correct grammar, etc.) when sending messages and posting to discussion boards. This is an upper division level course and I expect you to be on a college student level with your postings and emails. I do not expect you to be a perfectionist, but I do expect you to be courteous and respectful. I will deduct points for poor grammar, lack of punctuation and spelling.

Netiquette

Netiquette (net + etiquette) is the code of proper conduct applied to virtual online spaces. This system is dictated by common sense rules (manners) and social conventions.

Source: [Educational Technology and Mobile Learning](#)

- Before posting your question on a discussion board, check if anyone has asked it already and received a reply.
- Stay on topic. Don't post irrelevant links, comments, thoughts or pictures.
- Don't type in ALL CAPS! If you do, it will look like you are screaming.
- Don't write anything that sounds angry or sarcastic even as a joke, because without hearing your tone of voice, your peers might not realize you're joking.
- Always remember to say "please" and "thank you" when soliciting help from your classmates.
- Respect the opinion of your classmates. If you feel the need to disagree, do so respectfully and acknowledge the valid points in your classmate's argument. If you reply to a question from a classmate, make sure your answer is accurate!

- If you ask questions, many people respond. Summarize all answers and post that summary to benefit your whole class.
- Be brief. If you write a long dissertation in response to a simple question, it's unlikely that anyone will spend the time to read through it all.
- Don't badmouth others or call them stupid. You may disagree with their ideas but don't mock the person.
- If you refer to something your classmate said earlier in the discussion, quote just a few key lines from their post so that others won't have to go back and figure out which post you are referring.
- Before asking a question, check the class FAQs or search the Internet to see if the answer is obvious or easy to find.
- Check the most recent comments before you reply to an older comment.
- Be forgiving. If your classmate makes a mistake, don't badger him or her for it. Just let it go.
- Run a spelling and grammar check before posting anything to the discussion board.

Please include the section number of your course in the subject line when sending your instructor an email.

Course Schedule Outline

Week 1 The Challenge of Managing Risk

Week 2 Critical Success Factors for Risk Management

Week 3 Introducing ATOM: Active Threat and Opportunity Management

Week 4 Applying ATOM to a Project: Initiation

Week 5 Exposing Challenges: Identification

Week 6 Understanding the Risk Exposure: Assessment

Week 7 Options and Actions (Response Planning)

Week 8 Communications (Reporting)

Week 9 Launching the Plan (Implementation)

Week 10 In-Progress Evaluation and Assessment (Major Reviews)

Week 11 Revising the Plan (Minor Reviews)

Week 12 Reflection and Future Planning (Post-Project Review)

Week 13: ATOM for Small Projects

Week 14: ATOM for Large Projects

Week 15: Managing Risk in Programs (Multi-Project Alignment)

Grading Summary

Total Points Available: 1400 points

A 1260 points – 1400 points

B 1120 points – 1259 points

C 980 points – 1119 points

D 840 points – 979 points

F 839 points and below

Syllabus Scavenger Hunt 15 points

Introduction Discussion Forum 20 points

Chapter Quizzes (14) 10 points each 140 points

Discussion Forums (4) 50 points each 200 points

Mid-term Examination 125 points

Application Assignments (12) 50 points each 600 points

Application Project Steps (7) 25 points each 175 points

Case Study Application Final Exam 125 points

Grading of Assignments

As noted above, individual numerical points are not given for any assignment in this course. You will be provided with written feedback on each assignment, indicating areas of strength and areas of potential improvement. Multiple check-in opportunities are provided during the term.

Guidance and feedback as to your standing in the course is always available through communication with your professor. A key component to your self-assessment and your instructor assessment are demonstrating improvement throughout the course and accepting the guidance provided by your professor.

Make-Up Policy/Late Work

Discussion Board: Discussion board participation will not be accepted past the due date except in cases where you have worked something out with me beforehand or if there is a documented emergency. The discussion board will be made unavailable at 11:59 PM on the due date.

Assignments, Exercises, Blogs, and Quizzes: Any assignment not submitted by the due date can still be submitted for half credit up to **ONE WEEK** past the due date. Assignments will not be accepted more than a week past the due date.

Midterm and Final: The midterm and final will not be accepted after the due date except in cases where you have worked something out with me beforehand or if there is a documented emergency.

Course Policies

Academic Misconduct

University policy will be followed. At a minimum, the student (and any student caught assisting in the misconduct) will be given an automatic “F” for the test/assignment in question and possibly an “F” for the course. Subsequent cases of plagiarism will result in a minimum of one letter grade course reduction for each incident. In addition, any student who aids another student in plagiarism (e.g., provides a completed homework assignment to another student for submission) will be treated as also being involved in plagiarism and appropriate penalties will apply. Egregious cases of plagiarism (i.e., large sections copied from another source) will result in an automatic “F” for the course.

Academic Integrity

A university exists for the purpose of educating students and granting degrees to all students who complete graduation requirements. Therefore, Arkansas Tech University requires the highest standards of academic integrity and conduct from all students. Students at Arkansas Tech University will refrain from committing any of the violations of academic integrity as detailed below. Further, Arkansas Tech University expects that all classes maintain an academic and courteous atmosphere. The classroom is under the control of the professor who will give students a statement of his or her classroom expectations and policies in a syllabus at the beginning of the semester.

A violation of academic integrity refers to various categories of inappropriate academic behavior with respect to a course. Students must refrain from cheating, plagiarism, fabrication, impersonation, forgery, collusion and/or other dishonest practices.

Arkansas Tech University respects the right of the instructor of record for the course to determine and apply all academic sanctions for violations of academic integrity. The classroom (to include online and hybrid courses) is under the control of the instructor, who will give students a statement of his/her classroom expectations and policies in a syllabus at the beginning of the semester. Typical penalties *can include, but are not limited to* giving an ‘F’ on a particular quiz or exam, giving an ‘F’ on a term paper or other written work, or giving the student an ‘F’ or ‘W’ for the course. Instructors may also have different penalties depending on the number and severity of violations.

As an institution, Arkansas Tech University may deem it necessary to apply additional sanctions beyond the academic penalties imposed through the course. Examples of the types of penalties Arkansas Tech may choose to apply *include but are not limited to* required completion of academic integrity training, as well as disciplinary probation, suspension or expulsion from the

university. Any institutional penalties that may be applied will vary based on the number and severity of violations.

Academic Misconduct

University policy will be followed. At a minimum, the student (and any student caught assisting in the misconduct) will be given an automatic “F” for the test/assignment in question and possibly an “F” for the course. Subsequent cases of plagiarism will result in a minimum of one letter grade course reduction for each incident. Also, any student who aids another student in plagiarism (e.g., provides a completed homework assignment to another student for submission) will be treated as also being involved in plagiarism, and appropriate penalties will apply. Egregious cases of plagiarism (i.e., large sections copied from another source) will result in an automatic “F” for the course.

Excessive Unexcused Absences/Missed Assignments

If, at any time during the semester, you miss three assignments, you will be referred to the Tech Early Warning Program. If you are unresponsive within the following two class sessions, you will be dropped from the course by your instructor with an “F” for excessive absences or non-performance. It is your responsibility to contact the instructor when you cannot attend class or are having a problem completing an assignment.

Campus policy outlines the dates for dropping a course with a “W”. If you have a failing score and do not drop before the stated deadline, you will receive an “F” on your transcript for the course; therefore, it is in your best interest to monitor your status in the course and take advantage of the opportunity to withdraw with a “W” rather than remaining in the course and receiving an “F”. Tech has a very lenient withdrawal policy which allows a student to withdraw with an “W” until almost the end of the semester.

You are responsible for explaining to the instructor the reason for absences due to sickness, accident or death in the family. For absences which make it difficult for you to contact the instructor, such as an emergency, you should contact the Student Services Office, Doc Bryan Student Services Center, Room 233, (479-968-0239) to have the instructor notified.

Every effort is made to respond to students in 24 hours.

Arkansas Tech University does not discriminate by color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g., sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University’s Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information, please visit: <http://www.atu.edu/titleix/index.php>.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit <http://www.atu.edu/disabilities/index.php>

University Testing and Disability Services- <http://www.atu.edu/disabilities/>

If a student has a disability that qualifies under the Americans with Disabilities Act (ADA) and requires accommodations, he/she should contact the Office of University Testing and Disability Services for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact the Office of University Testing and Disability Services if they are not certain whether a medical condition/disability qualifies.

Contact Information on the Following Page

Contact Information:

University Testing and Disability Services-Arkansas Tech University

Doc Bryan, Suite 171

Russellville, AR 72801-2222

Voice Telephone: (479) 968-0302 Fax: (479) 968-0375 TTY Service: (479) 964-3290

Begins 7:00 a.m.	Bb Module	BAS 4363 Project Risk Analysis and Mitigation Module Requirements and Recommended Order of Work	Due 11:59 p.m.
<p>All items in the Course Schedule are presented in the order in which you should work. Use the Course Schedule as a checklist for each module.</p>			
Week 1	Start Here! Module 1 The Challenge of Managing Risk	<input type="checkbox"/> View <i>First Task: View this Presentation</i> <input type="checkbox"/> Read <i>BAS 4363 Syllabus</i> <input type="checkbox"/> Review <i>BAS 4363 Course Schedule</i> <input type="checkbox"/> Submit <i>Syllabus and Schedule Scavenger Hunt (Three attempts) (15 points)</i> <input type="checkbox"/> Read <i>Chapter 1: The Challenge of Managing Risk (pp. 3-8)</i> <input type="checkbox"/> Locate the <i>Ask the Class! Discussion Forum (Hint: Course Content)</i> <input type="checkbox"/> Submit <i>Introductory Discussion (Located in Start Here) (10 points)</i>	
Week 2	Module 2 Critical Success Factors for Managing Risk	Read <i>Chapter 2: Making it Work (pp. 9-20)</i> Submit <i>Chapter 2 Quiz (10 points)</i> Submit <i>Discussion 1 Initial Post: Why don't we do it? (50 points)</i> Submit <i>Application Project Step 1: Stakeholder Analysis Template (25 points)</i>	
Week 3	Module 3 Introducing ATOM: Active Threat & Opportunity Management	<input type="checkbox"/> Read <i>Chapter 3: Active Threat & Opportunity Management (pp. 23-34)</i> <input type="checkbox"/> Submit <i>Chapter 3 Quiz (10 points)</i> <input type="checkbox"/> Submit <i>Discussion 1 Peer Responses</i> <input type="checkbox"/> Submit <i>Assignment 1: Project Sizing Application (50 points)</i> <input type="checkbox"/> Submit <i>Application Project Step 2: Project Sizing Tool (25 points)</i>	
Week 4	Module 4 Start at the Beginning (Initiation)	Read <i>Chapter 4: Start at the Beginning (Initiation) (pp. 37-53)</i> Submit <i>Chapter 4 Quiz (10 points)</i> Submit <i>Discussion 2 Initial Post: Descriptions of Different Stakeholders (50 points)</i> Submit <i>Assignment 2: Double Probability Impact Matrix (50 points)</i>	
Week 5	Module 5 Exposing the Challenge (Identification)	<input type="checkbox"/> Read <i>Chapter 5: Exposing the Challenge (Initiation) (pp. 55-66)</i> <input type="checkbox"/> Submit <i>Chapter 5 Quiz (10 points)</i> <input type="checkbox"/> Submit <i>Discussion 2 Peer Responses</i> <input type="checkbox"/> Submit <i>Assignment 3: Risk Metalanguage (50 points)</i> <input type="checkbox"/> Submit <i>Application Project Step 3: Risk Breakdown Structure (25 points)</i>	
Week 6	Module 6 Understand the Exposure (Assessment)	Read <i>Chapter 6: Understand the Exposure</i> Submit <i>Chapter 6 Quiz (10 points)</i> Submit <i>Discussion 3 Initial Post: Probability and Impacts (50 points)</i> Submit <i>Assignment 4: Risk Register Application (50 points)</i> Submit <i>Project Application Step 4: Assumptions & Constraints (25 points)</i>	
Week 7	Module 7 Options and Actions (Response Planning)	<input type="checkbox"/> Read <i>Chapter 7: Option and Actions (Response Planning)</i> <input type="checkbox"/> Submit <i>Chapter 7 Quiz (10 points)</i> <input type="checkbox"/> Submit <i>Discussion 3 Peer Responses</i> <input type="checkbox"/> Submit <i>Assignment 5: Conducting Risk Interviews (50 points)</i>	
Week 8	Module 8 Communications (Reporting)	<input type="checkbox"/> Read <i>Chapter 8: Spread the Word (Reporting)</i> Submit <i>Chapter 8 Reading Quiz (10 points)</i> Submit <i>Mid-Term Examination (125 points)</i>	
Week 9	Module 9 Launching the Plan (Implementation)	<input type="checkbox"/> Read <i>Chapter 9: Launching the Plan (Implementation)</i> <input type="checkbox"/> Submit <i>Module 9 Readings Quiz (10 points)</i>	

		<p>Submit <i>Discussion 4 Initial Post: Implementation Flowchart (50 points)</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Submit <i>Assignment 6: Risk Status Value Relationships (50 points)</i> 	
Week 10	Module 10 In-Progress Evaluation and Assessment (Major Reviews)	<p>Read <i>Chapter 10: In-Progress Evaluation & Assessment</i></p> <p>Submit <i>Chapter 10 Quiz (10 points)</i></p> <p>Submit <i>Discussion 4 Peer Responses</i></p> <p>Submit <i>Assignment 7: Updating the Risk Register (50 points)</i></p> <p>Submit <i>Project Application Step 5: Risk Review Meeting Agenda (25 points)</i></p>	
Week 11	Module 11 Revising the Plan (Minor Reviews)	<ul style="list-style-type: none"> <input type="checkbox"/> Read <i>Chapter 11: Ongoing Updates (Minor Reviews)</i> <input type="checkbox"/> Submit <i>Chapter 11 Quiz (10 points)</i> <input type="checkbox"/> Submit <i>Assignment 8: Summary Risk Report (50 points)</i> 	
Week 12	Module 12 Reflection and Future Planning (Post-Project Review)	<p>Read <i>Chapter 12 Learn from Experience</i></p> <p>Submit <i>Chapter 12 Quiz (10 points)</i></p> <p>Submit <i>Assignment 9: Post-Project Review Meeting (50 points)</i></p> <p>Submit <i>Application Project Step 6: Full Risk Report Contents (25 points)</i></p>	
Week 13	Module 13 ATOM for Small Project	<ul style="list-style-type: none"> <input type="checkbox"/> Read <i>Chapter 13 ATOM for Small Projects</i> <input type="checkbox"/> Submit <i>Chapter 13 Quiz (10 points)</i> <input type="checkbox"/> Submit <i>Assignment 10: ATOM Activities for Small Projects (50 points)</i> 	
Week 14	Module 14 ATOM for Large Projects	<p>Read <i>Chapter 14 ATOM for Large Projects</i></p> <p>Submit <i>Chapter 14 Quiz (10 points)</i></p> <p>Submit <i>Assignment 11: SWOT Analysis & Risk Analysis (50 points)</i></p> <p>Submit <i>Application Project Step 7: Final Submission (25 points)</i></p>	
Week 15	Module 15 Managing Risk in Programs (Multi-Project Alignment)	<p>Read <i>Chapter 16 Managing Risk in Programs</i></p> <p>Submit <i>Chapter 16 Quiz (10 points)</i></p> <p>Submit <i>Assignment 12: Explicit Program Risk Management (50 points)</i></p> <p>Submit <i>Final Examination (125 points)</i></p>	
		Intentionally Left Vacant	

Course: BAS 4363 Project Risk Analysis and Mitigation Course Map

Bachelor of Applied Science Program Level Objectives (PLOs)

9. Communication: Proficiency of writing communication skills for a variety of audiences.
10. Critical Thinking and Problem Solving: Analyzing and evaluation evidence to deliver data-drive solutions.
11. Analytical Skills: Developing conclusions through quantitative and qualitative reasoning.
12. Ethics: Applying ethical principles in personal, professional, and societal contexts.
13. Diversity: Demonstrating understanding and consideration of diverse cultural perspectives and intercultural complexities.
14. Teamwork: Demonstrating teamwork fundamentals through participation and engagement.
15. Technical Expertise: Demonstrating proficiency in project management, computer literacy, technology, financial management, and knowledge application.
16. Leadership and Management: Applying leadership and management strategies in professional settings, to include human resources management, conflict management, and conflict resolution.

Course Learning Objectives (CLOs)

1. Analyze project risks (uncertainties and unknowns) in the defining, planning, executing, and delivering stages.
2. Integrate the Active Threat and Opportunity Management (ATOM) methodology with risk assessment and mitigation design.
3. Apply Active Threat and Opportunity Management (ATOM) stages (Initiation, Identification, Assessment, Response Planning, Reporting, Implementation, Major Review, Minor Reviews, Post-Project Review) to the project life cycle.
4. Analyze project role and scope to deploy appropriate variations in the ATOM risk mitigation methodology.
5. Assess the aim and scope of risk (strategic, technical, environmental or personal) in a program or project
6. Implement the nine-step ATOM process in the analysis of a comprehensive risk mitigation case study.

Module	Program Level Outcome Alignment	Course Learning Objectives	Learning Activities	Assessments
Start Here: The Challenge of Managing Risk	PLO 1 Communication PLO 4 Ethics PLO 3 Analytical Skills	<ul style="list-style-type: none"> ○ CLO 4 Analyze project role and scope 	<ul style="list-style-type: none"> ○ View <i>First Task</i> ○ Read <i>Course Syllabus</i> ○ Read <i>Chapter 1</i> ○ Locate <i>Ask the Class! Discussion Forum</i> ○ Review <i>PMI Code of Ethics</i> 	<ul style="list-style-type: none"> ○ Syllabus and Scavenger Hunt ○ Introductory Discussion Forum: PMI Code of Ethics
2. Critical Success Factors for Managing Risk	PLO 1 Communication PLO 5 Diversity PLO 6 Teamwork PLO 8 Leadership & Management	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks ○ CLO 4 Analyze project role and scope ○ CLO 6 Implement the ATOM process 	<ul style="list-style-type: none"> ○ Read <i>Chapter 2</i> 	<ul style="list-style-type: none"> ○ Chapter 2 Quiz ○ Discussion Forum 1 Initial Post ○ Application Project Step 1: Stakeholder Analysis Template

3. Introducing ATOM: Active Threat & Opportunity Management	PLO 2 Critical Thinking and Problem Solving PLO 3 Analytical Skills PLO 7 Technical Expertise	<ul style="list-style-type: none"> ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages ○ CLO 4 Analyze project role and scope 	<ul style="list-style-type: none"> ○ Read <i>Chapter 3</i> 	<ul style="list-style-type: none"> ○ Chapter 3 Quiz ○ Submit Discussion 1 Peer Responses ○ Assignment 1: Project Sizing Application ○ Application Project Step 2: Project Sizing Tools
4. Start at the Beginning (Initiation)	PLO 2 Critical Thinking and Problem Solving PLO 3 Analytical Skills PLO 7 Technical Expertise	<ul style="list-style-type: none"> ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages ○ CLO 4 Analyze project role and scope 	<ul style="list-style-type: none"> ○ Read <i>Chapter 4</i> 	<ul style="list-style-type: none"> ○ Chapter 4 Quiz ○ Discussion Forum 2 Initial Post: Descriptions of Different Stakeholders ○ Assignment 2 Double Probability Impact Matrix
5. Exposing the Challenge (Identification)	PLO 2 Critical Thinking and Problem Solving PLO 3 Analytical Skills PLO 7 Technical Expertise PLO 8 Leadership & Management	<ul style="list-style-type: none"> ○ CLO 3 Apply ATOM stages ○ CLO 4 Analyze project role and scope ○ CLO 5 Assess role and scope ○ CLO 6 ATOM case study implementation 	<ul style="list-style-type: none"> ○ Read <i>Chapter 5</i> 	<ul style="list-style-type: none"> ○ Chapter 5 Quiz ○ Discussion Forum 2 Peer Responses ○ Assignment 3 Risk Metalanguage Application ○ Project Step 3: Risk Breakdown Structure
6. Understand the Exposure (Assessment)	PLO 2 Critical Thinking and Problem Solving PLO 3 Analytical Skills PLO 7 Technical Expertise	<ul style="list-style-type: none"> ○ CLO 3 Apply ATOM stages ○ CLO 4 Analyze project role and scope ○ CLO 5 Assess role and scope ○ CLO 6 ATOM case study implementation 	<ul style="list-style-type: none"> ○ Read <i>Chapter 6</i> 	<ul style="list-style-type: none"> ○ Chapter 6 Quiz ○ Discussion Forum 3 Initial Post: Probability and Impacts ○ Assignment 4 Risk Register Application ○ Application Project Step 4: Assumptions & Constraints
7. Options and Actions (Response Planning)	PLO 1 Communication PLO 5 Diversity PLO 8 Leadership & Management	<ul style="list-style-type: none"> ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages ○ CLO 6 ATOM case study implementation 	<ul style="list-style-type: none"> ○ Read <i>Chapter 7</i> 	<ul style="list-style-type: none"> ○ Chapter 7 Quiz ○ Discussion Forum 3 Peer Responses ○ Assignment 5 Conducting Risk Interviews

8. Communications (Reporting)	<p>PLO 1 Communication</p> <p>PLO 2 Critical Thinking and Problem Solving</p> <p>PLO 3 Analytical Skills</p> <p>PLO 5 Diversity</p> <p>PLO 6 Teamwork</p> <p>PLO 7 Technical Expertise</p> <p>PLO 8 Leadership & Management</p>	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages ○ CLO 4 Analyze project role and scope ○ CLO 5 Assess role and scope ○ CLO 6 ATOM case study implementation 	<ul style="list-style-type: none"> ○ Read Chapter 8 	<ul style="list-style-type: none"> ○ Chapter 8 Quiz ○ Mid-Term Examination
9. Launching the Plan (Response Planning)	<p>PLO 2 Critical Thinking and Problem Solving</p> <p>PLO 3 Analytical Skills</p> <p>PLO 7 Technical Expertise</p>	<ul style="list-style-type: none"> ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages 	<ul style="list-style-type: none"> ○ Read Chapter 9 	<ul style="list-style-type: none"> ○ Chapter 9 Quiz ○ Discussion Forum 4 Initial Post: Implementation Flowchart ○ Assignment 6 Risk Status Value Relationships
10. In-Progress Evaluation and Assessment (Major Reviews)	<p>PLO 1 Communication</p> <p>PLO 6 Teamwork</p> <p>PLO 8 Leadership & Management</p>	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks ○ CLO 2 Integrate ATOM methodology ○ CLO 6 ATOM case study implementation 	<ul style="list-style-type: none"> ○ Read Chapter 10 	<ul style="list-style-type: none"> ○ Chapter 10 Quiz ○ Discussion 4 Peer Responses ○ Assignment 7 Updating the Risk Register ○ Application Project Step 5 Risk Review Meeting Agenda
11. Revising the Plan (Minor Reviews)	<p>PLO 2 Critical Thinking and Problem Solving</p> <p>PLO 3 Analytical Skills</p> <p>PLO 7 Technical Expertise</p>	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks ○ CLO 2 Integrate ATOM methodology ○ CLO 6 ATOM case study implementation 	<ul style="list-style-type: none"> ○ Read Chapter 11 	<ul style="list-style-type: none"> ○ Chapter 11 Quiz ○ Assignment 7 Summary Risk Report
12. Reflection and Future	<p>PLO 6 Teamwork</p> <p>PLO 7 Technical Expertise</p>	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks 	<ul style="list-style-type: none"> ○ Read Chapter 12 	<ul style="list-style-type: none"> ○ Chapter 12 Quiz ○ Assignment 8 Post-Project

Planning (Post-Project Review)	PLO 8 Leadership & Management	<ul style="list-style-type: none"> ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages 		<ul style="list-style-type: none"> ○ Review Meeting ○ Project Application Step 6 Full Risk Report Content
13. ATOM for Small Projects	PLO 2 Critical Thinking and Problem Solving PLO 3 Analytical Skills PLO 7 Technical Expertise	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages 	<ul style="list-style-type: none"> ○ Read Chapter 13 	<ul style="list-style-type: none"> ○ Chapter 13 Quiz ○ Assignment 9 ATOM Activities for Small Projects
14. ATOM for Large Projects	PLO 2 Critical Thinking and Problem Solving PLO 3 Analytical Skills PLO 7 Technical Expertise	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages 	<ul style="list-style-type: none"> ○ Read Chapter 14 	<ul style="list-style-type: none"> ○ Chapter 14 Quiz ○ Assignment 9 SWOT Analysis & Risk Management ○ Project Application Step 7 Final Submission
15. Managing Risk in Program (Multi-Project Alignment)	PLO 1 Communication PLO 2 Critical Thinking and Problem Solving PLO 3 Analytical Skills PLO 5 Diversity PLO 6 Teamwork PLO 7 Technical Expertise PLO 8 Leadership & Management	<ul style="list-style-type: none"> ○ CLO 1 Analyze project risks ○ CLO 2 Integrate ATOM methodology ○ CLO 3 Apply ATOM stages ○ CLO 4 Analyze project role and scope ○ CLO 5 Assess role and scope ○ CLO 6 ATOM case study implementation 	<ul style="list-style-type: none"> ○ Read Chapter 16 	<ul style="list-style-type: none"> ○ Chapter 16 Quiz ○ Assignment 10 Explicit Program Risk Management ○ Final Examination

Bachelor of Applied Science

College of eTech

Program Objectives, Learning Outcomes, and Assessment (Summer 2021)

Following are the program objectives, student learning outcomes, and assessment information for the Bachelor of Applied Science. Student learning outcomes were developed to align closely with the Association of American Colleges and Universities' VALUE rubrics, as well as the Competency Model Clearinghouse

Program Objectives

Graduates of the Bachelor of Applied Science program will demonstrate proficiency in the following areas:

- **Communication:** demonstrate competency in written and oral communication skills
- **Research and Problem Solving:** apply empirical research to solve complex organizational problems
- **Project Management:** implement relevant strategies needed to develop a business proposal or applied project
- **Leadership/Critical Thinking:** assume a leadership role in identifying and addressing issues in a professional environment
- **Collaboration/Teamwork:** demonstrate the ability to effectively function in multiple roles as part of a team
- **Political, Social, and Global Awareness:** demonstrate an understanding of the importance of cultural diversity in the local and global community

Program Learning Outcomes

Communication Skills (PO1) – Students will demonstrate proficiency of written communication skills to address issues of audience, purpose, structure, format, and knowledge dissemination;

students will exhibit proficiency in spelling, grammar, mechanics, word choice, and format appropriate to the writing task.

Critical Thinking and Problem Solving Skills (PO2) – Students will examine complex systems to identify root causes of problems, critically analyze and evaluate evidence, and apply data-driven solutions to complex problems that reflect an informed, well-reasoned evaluation.

Analytical Skills (PO3) – Students will apply quantitative and qualitative reasoning, synthesize information that represents differing perspectives, organize evidence to reveal similarities and differences, and develop conclusions that are a logical extrapolation of the evidence.

Ethics (PO4) – Students will apply ethical principles in personal, professional, and societal contexts.

Diversity (PO5) – Students will demonstrate an understanding of the relationships between diversity, inequality, and economic/social/political power, consider diverse perspectives in decision making, express an understanding of intercultural complexities, and articulate ways in which race, class, gender, and sexual orientation influence individual experiences and perspectives.

Teamwork (PO6) – Students will demonstrate teamwork fundamentals through participation and engagement, the fulfillment of team roles, responsibilities, and obligations, address conflict directly and constructively, and assess the effectiveness and contributions of oneself, team members, and the overall team.

Technical Expertise (PO7) – Students will demonstrate proficiency in project management, computer literacy, technology, financial management, and knowledge application.

Leadership and Management (PO8) – Students will examine leadership and management theories, articulate their leadership style, values, and goals, apply leadership and management

strategies in professional settings, and demonstrate proficiency in human resources management, conflict management, and conflict resolution.

Assessment (Office of Assessment & Institutional Effectiveness)

Assessment Process

1. BAS program faculty review current course/outcome alignments and determine plan for measures and criterion for success for each outcome statement.
 - a. Resource: Alignment review of courses to learning outcomes
 - b. Resource: Common rubrics selected to measure learning for each outcome. (Investigate adopting/adapting VALUE rubrics from AAC&U.)
2. BAS program faculty teaching OL/BAS/PSY courses review rubrics, achievement benchmarks, and select representative assignments for each outcome.
 - a. Resource: BAS program faculty finalize agreement on use of rubric and achievement levels to guide assignment design.
 - b. Resource: Representative assignments from each course selected and agreed upon per learning outcome.
3. BAS program faculty apply rubrics to designated assignments and collect course level data on student outcome.
 - a. Resource: Overall data on BAS learning outcomes per course.
 - b. Resource: Random sample of student assignments aligned to outcome for BAS program faculty review.
4. BAS program faculty uses chosen rubrics to measure student achievement on selected outcomes.
5. Results of assessment will be disseminated to institution.
 - a. Resource: BAS program faculty meet for in-depth review and recommendations.
6. Recommendations reviewed and improvements made to curriculum and/or assessments.

Bachelor of Applied Science Core (40 hours)	
PYS 3093	Industrial Psychology
OL 3023	Professional Communication
OL 3133	Applied Principles of Personnel Management
OL 4043	Ethical Leadership
OL 4443	Professional Leadership
OL 4543	Workplace Supervision
OL 4643 or OL 4743	Occupational Globalization & Diversity or Organizational Change
BAS 4253	Quality Control and Continuous Improvement
BAS 4353	Workflow Monitoring and Industrial Environments
BAS 4453	Problem Solving and Root Cause Analysis
BAS 4363	Project Risk Analysis and Mitigation
BAS 4553	Workplace Health and Safety
BAS 4653	Manufacturing Systems
BAS 4751	Career Planning and Personnel Development

Learning Outcomes Map							
BAS Learning Outcome	OL 3023	OL 3133	PSY 3093	OL 4043	OL 4443	OL 4543	OL 4643/4743
LO1	I	R		R		R	
LO2			I		R		R
LO3			I				
LO4		I		R		R	M
LO5		I		R	R	R	M
LO6		I			R	R	
LO7	I		R			R	
LO8		I	R	R	R	R	M
BAS Learning Outcome	BAS 4253	BAS 4353	BAS 4453	BAS 4363	BAS 4553	BAS 4653	BAS 4751
LO1				R			M
LO2	R		R	R	R	R	M
LO3	R	R	R	R	R	M	
LO4			R	R			
LO5				R			
LO6	R	R	R	R		R	M
LO7	R	R	R	R	R	R	M
LO8				R		M	

I (Introduction) R (Reinforcement) M (Mastery)



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Department of Professional Studies	8/24/2020

Title	Signature	Date
Department Head Dr. Jeremy Schwehm		9-4-2020
Dean Dr. Jeff Aulgur		9.4.20
Assessment Dr. Christine Austin		9.8.2020
Registrar Mrs. Tammy Weaver		9/8/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs Dr. Barbara Johnson		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL) OL	Course Number: (e.g., 1003) 4053	Effective Term: <input type="radio"/> Spring <input checked="" type="radio"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below) Philanthropy and Fundraising		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript) Philanthropic Fundraising		

Will this course be cross-listed with another existing course? If so, list course subject and number. <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="text"/>	
Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog? If so, list course subject and number. <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="text"/>	
Is this course repeatable for additional earned hours? <input type="radio"/> Yes <input checked="" type="radio"/> No How many total hours? <input type="text"/>	
Grading: <input checked="" type="radio"/> Standard Letter <input type="radio"/> P/F <input type="radio"/> Other <input type="text"/>	
Mode of Instruction (check appropriate box):	
<input checked="" type="radio"/> 01 Lecture	<input type="radio"/> 02 Lecture/Laboratory
<input type="radio"/> 05 Practice Teaching	<input type="radio"/> 06 Internship/Practicum
<input type="radio"/> 08 Independent Study	<input type="radio"/> 09 Readings
<input type="radio"/> 12 Individual Lessons	<input type="radio"/> 13 Applied Instruction
<input type="radio"/> 17 Dissertation	<input type="radio"/> 18 Activity Course
<input type="radio"/> 03 Laboratory only	<input type="radio"/> 07 Apprenticeship/Externship
<input type="radio"/> 10 Special Topics	<input type="radio"/> 16 Studio Course
<input type="radio"/> 19 Seminar	<input type="radio"/> 98 Other
Does this course require a fee? <input type="radio"/> Yes <input checked="" type="radio"/> No How Much? <input type="text"/> Select Fee Type	
If selected other list fee type: <input type="text"/>	
<input checked="" type="checkbox"/> Elective <input type="checkbox"/> Major <input type="checkbox"/> Minor	
(If major or minor course, you must complete the Request for Program Change form to add course to program.)	
If course is required by major/minor, how frequently will course be offered? <input type="text"/> At least once per academic year	
Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.? Access to a computer, the internet, and webcam or other video capture technology.	
Will this course require a special classroom (computer lab, smart classroom, or laboratory)? No.	
Answer the following Assessment questions:	
<ol style="list-style-type: none"> If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. N/A If this course is required for the major or minor, complete the following. N/A What is the rationale for adding this course? What evidence demonstrates this need? OL 4053 is proposed as an elective course in the Bachelor of Arts in Organizational Leadership program. Each academic year the program offers, and fills to capacity, multiple sections of OL 4143 Nonprofit Governance and OL 4343 Community Development. The focus and learning outcomes of both courses examines the efficacy, mission, and structure of nonprofit organizations. A review of the projects submitted for OL 4943 Applied Leadership Project demonstrates substantial integration of nonprofit organizations as the project outcome. While introduced as appropriate in the three 	

aforementioned courses, none provide a detailed and comprehensive exploration of philanthropy, advancement, and fundraising in the nonprofit sector. As revenue generation is key to the efficacy and sustainability of the Third Sector, OL 4053 Philanthropy and Fundraising provides an elective option for student who desire an enhanced focused on nonprofit organizations.

For the proposed course, attach a syllabus in Word format that includes: **(Items a. through d. should be entered as they should appear in the catalog)**

- a. Course subject
- b. Course number
- c. Catalog course title
- d. Catalog description
 1. Arkansas Course Transfer System (ACTS) course number, if applicable
 2. Cross-listing
 3. Offered (e.g., Fall only, Spring only. Do not enter if offer course fall and spring)
 4. Prerequisites
 5. Co-requisites
 6. Description
 7. Notes (e.g., information not in description such as course may be repeated for credit)
 8. Contact Hours if different than lecture (e.g., Lecture three hours, laboratory three hours)
 9. Fees (e.g., \$36 art fee)
- e. Section for Name of instructor, office hours, contact information (telephone, email)
- f. Text required for course
- g. Bibliography (supplemental reading list)
- h. Justification/rationale for the course
- i. Course objectives
- j. Description of how course meets general education objectives (courses included in the general education component should show how the course meets one or more of the objectives contained in General Education Objectives listed in undergraduate catalog)
- k. Assessment methods (include grading policy with specific equivalents for A, B, C)
- l. Policy on absences, cheating, plagiarism, etc.
- m. Course content (outline of material to be covered in course).

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

Arkansas Tech University

Course Addition

Assessment Form

OL 4053: Philanthropy and Fundraising

Our Mission

Tech is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

Provide an answer for each question. Your answers are to be typed single spaced.

- a. How does this course fit with the university mission? This course serves as an elective offering in the Bachelor of Arts in Organizational Leadership (BA-OL) degree. The BA-OL degree supports strategic plan goal 2.6 by increasing academic opportunities for interdisciplinary and stackable degree options.
- b. If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not applicable.
- c. Provide up to three student learning outcomes students will achieve after completing this course? Students will: Assess organizational philanthropic readiness principles and guidelines; apply the fundraising process (research, planning, cultivation, solicitation, stewardship, and evaluation); employ the process of raising external funds, to include elements of a well-developed, comprehensive fundraising plan.
- d. What assessment tool or measure will you use to assess student learning? Student learning will be assessed using a variety of methods. These include: a) discussion boards and other collaborative communication activities, b) tests/quizzes, c) writing assignments, d) prepared oral presentations, e) applied projects, and f) critical perspective journal entries.
- e. What will students demonstrate, represent, or produce to provide evidence of their learning? Students will complete a variety of conceptual and applied activities to demonstrate proficiency in course and module level learning objectives. These include completion of examinations to assess understanding of core concepts and recall of key terminology, application assignments which require the student to apply core concepts in a practical setting, and critical perspective journal entries designed to provide learners an opportunity to engage in a private, one-on-one conversation with the instructor.
- f. Provide an example or examples of student learning assessment evidence which supports the addition of this course. OL 4053 is proposed as an elective course in the Bachelor of Arts in Organizational Leadership program. Each academic year the program offers, and fills to capacity, multiple sections of OL 4143 Nonprofit Governance and OL 4343 Community Development. The focus and learning outcomes of both courses examines the efficacy, mission, and structure of nonprofit organizations. A review of the projects submitted for OL 4943 Applied Leadership Project demonstrates substantial integration of nonprofit organizations as the project outcome. While introduced as appropriate in the three aforementioned courses, none provide a detailed and comprehensive exploration of philanthropy, advancement, and fundraising in the nonprofit sector. As revenue generation is key to the efficacy and sustainability of the

Third Sector, OL 4053 Philanthropy and Fundraising provides an elective option for student who desire an enhanced focused on nonprofit organizations.

- g. How does this course fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions. The University of Arkansas at Little Rock offers a undergraduate 18-hour Nonprofit Leadership Studies option. NPLS 4310 Strategic Fund Development is a core requirement, while RHET 4375 Grantwriting is an elective option. The University of Arkansas, Arkansas State University, and the University of Arkansas at Little Rock offer graduate programs related to public administration and nonprofit studies. As of 2019, the nonprofit sector in the United States includes over 1.5 million organizations and the sector contributed over \$1.047 trillion to the U.S. economy in 2016 (5.6% of national gross domestic product). In 2018, the aggregated giving to nonprofit organizations from individuals, foundations, and private business exceeded \$425 billion. The size of the nonprofit sector within the United States continue to expand, as the number of nonprofit organizations in the decade between 2006 – 2016 increased by 4.5%. Even so, the data underrepresents the size of the sector in the United States, as religious congregations and organizations with less than \$5,000 in revenue are not required to register with the Internal Revenue Service (National Center for Charitable Statistics).

Arkansas Tech University
OL 4053 Philanthropy and Fundraising
Term

Instructor:

Office:

Phone:

Email:

CRITICAL DATES

Last day for attendance accounting:

Last day to withdraw with 100% tuition:

Last day to withdraw with 80% tuition:

Last day to withdraw or change to audit:

Course Description:

Students develop a comprehensive knowledge of philanthropy, advancement, and fundraising and their application to nonprofit organizations and nongovernmental entities, regardless of size, structure, or mission. Through the development, analysis, and application of a philanthropic framework, students will create and convey an organizational case for support and a fundraising/advancement plan based upon organizational mission and capacity.

Required Texts:

Hanberg, E. (2011). *The little book of gold: Fundraising for small (and very small) nonprofits*. CreateSpace Independent Publishing Platform.

Panas, J. (2013). *Asking: A 59-minute guide to everything board members, volunteers, and staff must know to secure the gift*. Emerson & Church Publishers

Weinstein, S. (2017). *The complete guide to fundraising management (4th ed)*. Hoboken, NJ: Wiley & Sons.

Note: Select modules will require students to identify and annotate a scholarly peer-reviewed journal article, published within the past five years.

Prerequisite Knowledge: This course does not require any prior knowledge for success. As an online course, written dialogue and assignments are the “coin of the realm.” You do not have to be an expert grammarian to succeed. However, you must be professional and attempt to submit work generally free of errors. Proofreading is queen. You must be willing to improve your writing as the course progresses. Those who strive to write professionally enjoy enhanced career success. It is a game-changer for many employers.

Critical Pedagogy:

This course is designed to make you apply critical thinking and problem-solving. The materials in this course examine leadership through equality, liberation, freedom from oppression and anti-marginalization. We will explore leadership through an inclusive lens of many socio-cultural perspectives. Critical pedagogy establishes a learner-to-learner agreement between the instructor and the student. I, as your instructor, intend to learn from you and your lived experience. You are challenged to be active learners and to develop your criticality and creativity. Many of the learning methodologies in this course do not have a “right or a wrong” answer. Your assessment often depends on the depth and content of your response and your willingness to explore the topic through your lens and the lenses of others.

Justification for the Course

If all nongovernmental and civil society organizations were combined into a single economy, it would comprise the 16th largest economy in the world. Nonprofit organizations account for 6% of the United States gross domestic product. A critical component of such organizations is active resource development through multiple avenues, to include planned giving, annual giving, major gifts, and grantsmanship.

Purpose of the Course

As of 2019, the nonprofit sector in the United States includes over 1.5 million organizations and the sector contributed over \$1.047 trillion to the U.S. economy in 2016 (5.6% of national gross domestic product). In 2018, the aggregated giving to nonprofit organizations from individuals, foundations, and private business exceeded \$425 billion. The size of the nonprofit sector within the United States continues to expand, as the number of nonprofit organizations in the decade between 2006 – 2016 increased by 4.5%. Even so, the data underrepresents the size of the sector in the United States, as religious congregations and organizations with less than \$5,000 in revenue are not required to register with the Internal Revenue Service (National Center for Charitable Statistics, 2020).

Course Learning Objectives (CLOs):

- CLO 1: Analyze charitable giving patterns and trends in philanthropy and the motivations for giving
- CLO 2: Assess organizational philanthropic readiness principles and guidelines
- CLO 3: Apply the fundraising process (research, planning, cultivation, solicitation, stewardship, and evaluation)
- CLO 4: Demonstrate the parameters within which nonprofit managers raise funds
- CLO 5: Analyze the historical, organizational, legal, ethical, and theoretical contexts of fundraising
- CLO 6: Employ the process of raising external funds, to include the elements of a well-developed fundraising plan
- CLO 7: Apply course material (as necessary) to improve critical thinking, problem solving, and decisions regarding nonprofit fundraising

How the Course Meets the General Education Requirements

The general education curriculum at Arkansas Tech University is designed to provide a foundation for knowledge common to educated people and to develop the capacity for individuals to expand that knowledge over his or her lifetime. The University has identified a set of comprehensive goals that will allow students to accomplish these general education objectives. This course addresses the following specific Arkansas Tech University general education goals:

Think critically

Develop ethical perspectives

Communicate effectively

Methodology

The objectives will be achieved through textbook readings, video presentations, supplemental readings, PowerPoint presentations on assigned topics, online discussions, blogs, wikis, journals and individual assignments. Each week, at least, one PowerPoint presentation is available to correlate with the assigned textbook readings.

Course Structure

- Pre-Course Module
- Module 1: Introduction to Fundraising
- Module 2: Organizations and the Nonprofit World
- Module 3: Managing the Resource Development Function
- Module 4: The Case for Support and Fundraising Materials
- Module 5: Managing Information
- Module 6: Prospect Identification and Research
- Module 7: Mid-Term Examination
- Module 8: Nurturing Relationships
- Module 9: Major Gift Programs
- Module 10: Donor Cultivation and Stewardship
- Module 11: Mail, Telephone, and Digital Solicitation
- Module 12: Special Events and Grantsmanship
- Module 13: Planned Giving
- Module 14: Capital Campaigns and Evaluation

Methodology

The objectives will be achieved through textbook readings, supplemental readings, PowerPoint presentations on assigned topics, on-line discussions, and individual assignments.

Class Lectures

Class lectures will be posted by 9AM Central Time on the first day of the learning module unless noted otherwise. Class lectures can be located in weekly learning modules in Blackboard under the “Content” tab. Typically, modules will be posted by 9 a.m. CT on Mondays and due by 11:59 p.m. CT on Sundays.

Assessments

Throughout the course, assignments will be given to reinforce the student’s understanding of the course material as well as to apply different leadership concepts. All assignments will be posted in the “Course Content” tab in Blackboard. All assignments will be due by 11:59 p.m. Central Time on the due date specified in the “Tentative Course Schedule and Assignments” section of the syllabus. All assignments must be submitted through Blackboard to receive credit.

Examinations

During the course, a midterm and final exam will be administered over the course material. The mid-term examination covers the first half of the course. The final examination is comprehensive.

Assignments

Analysis assignments reinforce the student's understanding of the course material as well as to apply different leadership concepts. In select modules, students will submit assignments which require direct application of course content in one's profession. Students will produce documents, questionnaires, plans, objectives, or other items to demonstrate an understanding of theory and practical application. All assignments can be found in the weekly learning module folder in Blackboard. All assignments will be due by 11:59 p.m. Central Time on the due date specified. All assignments must be submitted through Blackboard in order to receive credit.

Participation/Discussion Board

Each week there is a lecture posted on Blackboard. Some include discussion board questions that I expect you to answer as part of getting the week's participation points. New discussion forums will post on the first day of the learning module. You are expected to make your initial post each week by 11:59 p.m. Central Time three days prior to the end of the module, with all other posts due by 11:59 p.m. on the last day of the learning module. Points will be deducted for each posting that is not submitted. Your answers should be relevant to the discussion topic and demonstrate your understanding of the topic. Participation will be assessed on the extent to which you reply to my questions as well as to the extent that you communicate with your other classmates regarding their posts. Remember, you will get out of the discussion boards what you put into them. Thus, meeting the minimum participation requirements does not mean you will receive full credit each week.

Policy Papers

In select modules, students will complete short essays focused on specific module content. The purpose of these short essays is to demonstrate understanding and application of concepts covered in the learning modules. Essays vary in length from 1500 – 2500 words and must be in APA format.

Critical Perspectives Journal

Over the course of the semester, students will submit entries in a critical perspectives journal, accessible only to the student and the instructor. The journal provides students with an opportunity to reflect on course concepts and apply course concepts to professional, academic, and personal experiences.

Personal Code of Ethics

Students must develop a clear and concise knowledge of philanthropic fundraising. During the course of the term, students write a developing Personal Code of Ethics to demonstrate one's ability to analyze any fundraising technique or campaign through a professional ethical lens.

Instructor Communication

Please include the section number of your course in the subject line when sending your instructor an email.

This course is an online course; therefore, a majority of our conversations will take place via email and discussion board. Please use common sense (no slang, use correct grammar, etc.) when sending emails and

posting on discussion boards. This endeavor is a senior-level course, and I expect you to be on a college student level with your postings and emails. I do not expect you to be a perfectionist, but I do expect you to be courteous and respectful.

I will send course materials graded assignments to your ATU e-mail account; therefore, it is necessary that you check your account frequently. To avoid the emails you send going into my junk file; you should use your ATU e-mail account for ALL communications. In most cases, I will respond to your emails within a 24 hour period.

Returning of Assignments

Assignments will be graded and returned to you within seven working days. Working days are defined as Monday-Friday, no weekends or holidays.

Make-Up Policy/Late Work

Discussion Board: Discussion board participation will not be accepted past the due date except in cases where you have worked something out with me beforehand or if there is a documented emergency. The discussion board will be made unavailable at 11:59 PM on the due date.

Assignments, Exercises, and Quizzes: Any assignment not submitted by the due date can still be submitted for up to 75% credit up to one week past the due date. Assignments will not be accepted more than a week past the due date.

Midterm and Final: The midterm and final will not be accepted after the due date except in cases where you have worked something out with me beforehand or if there is a documented emergency.

Course Schedule

A comprehensive course schedule is located in Blackboard under the Course Information tab. The course schedule is subject to change at the discretion of the instructor.

Grading Summary

A list of all required activities for OL 4053 Philanthropy and Fundraising is identified by the module in the Course Schedule. The Course Schedule is available to you in the Course Information folder.

Your final grade is determined by the percentage of total points you earn during the duration of the course. For example, as noted below, a total of 1,100 points are available in the course. To earn a final grade of an A for the course, you must earn a minimum point total of 990 points ($1,100 \times 0.90 = 990$)

Policy Papers	200
Discussion Forums	125
Application Assignments	475

Mid-Term Exam	100
Critical Perspectives Journal	100
Final Exam	100
Total Points:	1,100

Grading Scale (as a percentage of total points)

90-100	=	A
80-89	=	B
70-79	=	C
60-69	=	D
Under 60	=	F

Course Policies

Academic Misconduct

University policy will be followed. At a minimum, the student (and any student caught assisting in the misconduct) will be given an automatic “F” for the test/assignment in question and possibly an “F” for the course. Subsequent cases of plagiarism will result in a minimum of one letter grade course reduction for each incident. Also, any student who aids another student in plagiarism (e.g., provides a completed homework assignment to another student for submission) will be treated as also being involved in plagiarism, and appropriate penalties will apply. Egregious cases of plagiarism (i.e., large sections copied from another source) will result in an automatic “F” for the course.

Excessive Unexcused Absences/Missed Assignments

If at any time during the semester you miss three assignments, you will be referred to the Tech Early Warning Program. If you are unresponsive to the following two class sessions, you will be dropped from the course by your instructor with an “F” for excessive absences or non-performance. It is your responsibility to contact the instructor when you are having a problem completing an assignment.

Campus policy outlines the dates for dropping a course with a “W”. If you have a failing score and do not drop before the stated deadline, you will receive an “F” on your transcript for the course; therefore, it is in your best interest to monitor your status in the course and take advantage of the opportunity to withdraw with a “W” rather than remaining in the class and receiving an “F”. Tech has a very lenient withdrawal policy that allows a student to withdraw with a “W” until almost the end of the semester.

You may access current student policies in the [Arkansas Tech University Student Handbook](#)

You are responsible for explaining to the instructor the reason for absences due to sickness, accident or death in the family. For absences that make it difficult for you to contact the instructor, such as an emergency, you should contact the Student Services Office, Doc Bryan Student Services Center, Room 233, (479-968-0239) to have the instructor notified.

Arkansas Tech University does not discriminate by color, sex, sexual orientation, gender identity, race, age, national origin, religion, veteran status, genetic information, or disability in any of our practices, policies, or procedures. If you have experienced any form of discrimination or harassment, including sexual misconduct (e.g., sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the institution. If you report such an incident of misconduct to a faculty or staff member, they are required by law to notify Arkansas Tech University's Title IX Coordinator and share the basic fact of your experience. The Title IX Coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus. For more information, please visit: <http://www.atu.edu/titleix/index.php>.

Arkansas Tech University adheres to the requirements of the Americans with Disabilities Act to prevent barriers to academic accessibility. If you need an accommodation due to a disability, please contact the ATU Office of Disability Services, located in Doc Bryan Student Center, Suite 171, or visit <http://www.atu.edu/disabilities/index.php>

University Testing and Disability Services- <http://www.atu.edu/disabilities/>

If a student has a disability that qualifies under the Americans with Disabilities Act (ADA) and requires accommodations, he/she should contact the Office of University Testing and Disability Services for information on appropriate policies and procedures. Disabilities covered by ADA may include learning, psychiatric, physical disabilities, or chronic health disorders. Students can contact the Office of University Testing and Disability Services if they are not certain whether a medical condition/disability qualifies.

Contact Information:

University Testing and Disability Services-Arkansas Tech University

Doc Bryan, Suite 171

Russellville, AR 72801-2222

Voice Telephone: (479) 968-0302 Fax: (479) 968-0375 TTY Service: (479) 964-3290

Module	Module Objectives	Course Objectives
Module 1	<ul style="list-style-type: none"> • Familiarize students with one another, the purpose of the course, and the online format • Assess the role of fundraising in the nonprofit and philanthropic sector(s) • Analyze the development to the fundraising profession 	1, 2
Module 2	<ul style="list-style-type: none"> • Discuss opportunities and challenges in the Third Sector • Analyze organizational preparedness for support • Assess organizational implementation of strategic management 	1, 2, 3
Module 3	<ul style="list-style-type: none"> • Distinguish between effectiveness and efficiency in fundraising • Assess development and advancement budget and financial resources 	3, 6, 7
Module 4	<ul style="list-style-type: none"> • Develop a case statement of support for a nonprofit entity • Analyze the market- and situation-specific cases of support 	2, 3, 6
Module 5	<ul style="list-style-type: none"> • Apply targeted communications in the philanthropic context • Conduct preliminary fundraising research for an organization 	3, 4, 6, 7
Module 6	<ul style="list-style-type: none"> • Deploy multiple approaches to prospect development, to include diverse populations • Assess and deploy prospect ratings and evaluations 	3, 4, 6, 7
Module 7	<ul style="list-style-type: none"> • Mid-Term Examination 	1-7
Module 8	<ul style="list-style-type: none"> • Integrate fundraising activities with relationship building activities • Appraise the Four Part Acknowledgement Program • Deploy Moves Management strategies to cultivate donor relations 	3-7
Module 9	<ul style="list-style-type: none"> • Assess major gift programs in the organizational context • Create a Solicitation Interview • Analyze solicitation training and role playing 	3-7
Module 10	<ul style="list-style-type: none"> • Explore how to cultivate relationships with donors • Examine strategies for donor retention • Develop an effective donor recognition strategy for a nonprofit organization 	1-7
Module 11	<ul style="list-style-type: none"> • Differentiate acquisition campaigns and renewal/upgrade campaigns • Develop a strategy to recover lapsed donors • Assess the elements of a comprehensive appeals package • Analyze a professional telephone solicitation campaign • Examin the role of special events in an organization’s fundraising strategy • 	1-7

Module 12	<ul style="list-style-type: none">• Explore the role of grantsmanship in multiple contexts (governmental, foundations, and local resources)• Analyze the efficacy of internal acknowledgment and reporting requirements	1-7
Module 13	<ul style="list-style-type: none">• Analyze instruments of donor-education and planned giving• Discuss the various charitable gift instruments	1-7
Module 14	<ul style="list-style-type: none">• Deploy the constructs of a capital campaign organization and structure• Apply the instruments of fundraising evaluation and assessment	1-7

OL 4053: Philanthropy and Fundraising - Course Schedule

Schedule is tentative and subject to change. Students will be notified via email of any changes.

Begins 7:00 a.m.	Module	Required Reading and Graded Assignments	Module Learning Objectives
Due 11:59 p.m.			
<p>Before you can begin course assignments for this course, you MUST complete the Federal Initial Attendance and Participation Module located in Blackboard. You are required by law to receive 3/3 on the assignment before you can begin participating in regular course activities.</p>			
	Module 1 Introduction to Fundraising (75 points)	<ul style="list-style-type: none"> • Weinstein Chapter 1 “Five Major Fundraising Principles” (pp. 1-6) • Panas Chapters 1-5 (pp. 1-20) • Course Syllabus and Schedule • Introduction to Critical Pedagogy 	<ul style="list-style-type: none"> • Familiarize students with one another, the purpose of the course, and the online format • Assess the role of fundraising in the nonprofit and philanthropic sector(s) • Analyze the development of the fundraising profession
		<ul style="list-style-type: none"> • Student Introductions Forum (25 points) • Application Assignment 1 Five Major Fundraising Principles and Enthusiasm (50 points) 	
	Module 2 Organizations and the Nonprofit World (75 points)	<ul style="list-style-type: none"> • Weinstein Chapter 2 “Your Organization in the Nonprofit World” (pp. 7-16) • Hanbert Chapter 1 “Planning Ahead” (pp. 9-16) • Panas Chapters 6-10 (pp. 21-38) 	<ul style="list-style-type: none"> • Discuss fundraising opportunities and challenges in the Third Sector • Analyze organizational preparedness for support • Assess organizational implementation of strategic management
		<ul style="list-style-type: none"> • Discussion Forum 2 Opportunities and Challenges (25 points) • Policy Paper 1 Analyzing and Assessing Organizational Preparedness (50 points) 	

	<p>Module 3 Managing the Resource Development Function (75 points)</p>	<ul style="list-style-type: none"> • Weinstein, Chapter 3 “Managing the Resource Development Function” (pp. 17-41) • Hanberg Chapter 2 “Board Giving: Your First \$1,000” (pp. 17-42) 	<ul style="list-style-type: none"> • Distinguish between effectiveness and efficiency in fundraising • Assess development and advancement budget and financial resources
		<ul style="list-style-type: none"> • Discussion Forum 3 Organizational Fundraising Profile Discussion (25 points) • Application Assignment 2 Organizational Case Study (50 points) 	
	<p>Module 4 The Case for Support and Fundraising Materials (100 points)</p>	<ul style="list-style-type: none"> • Weinstein Chapter 4 “The Case for Support and Fundraising Materials” (pp. 51-60) • Hanberg Chapter 3 “Asking Outside the Board” (pp. 43-62) • Panas Chapters 11-15 (pp. 39-55) 	<ul style="list-style-type: none"> • Develop a case statement of support for a nonprofit entity • Analyze the market- and situation-specific cases of support
		<ul style="list-style-type: none"> • Policy Paper 2 Individual Leadership and Organizational Change (50 points) • Application Assignment 3 The Case Statement (25) • Critical Perspectives Journal 1 Donors Give to the Magic of an Idea (25 points) 	
	<p>Module 5 Managing Information (75 points)</p>	<ul style="list-style-type: none"> • Weinstein Chapter 5 “Managing Information” (pp. 61-78) • Panas Chapters 16-20 (pp. 56-69) 	<ul style="list-style-type: none"> • Apply targeted communications in the philanthropic context • Conduct preliminary fundraising research for an organization
		<ul style="list-style-type: none"> • Application Assignment 4 Revenues and Contributions (50 points) • Critical Perspectives Journal 2 The Line Between Success and Failure (25 points) 	

	Module 6 Prospect Identification and Research (50 points)	<ul style="list-style-type: none"> Weinstein Chapter 6 “Prospect Identification, Research, and Segmentation” (pp. 79-96) Panas Chapters 21-25 (pp. 70-88) 	<ul style="list-style-type: none"> Deploy multiple approaches to prospect development, to include diverse populations Assess and deploy prospect ratings and evaluations
		<ul style="list-style-type: none"> Policy Paper 3 Assessing and Deploying Prospect Development (50 points) 	
	Module 7 Mid-Term Examination (100 points)	<ul style="list-style-type: none"> No readings assigned 	<ul style="list-style-type: none"> Mid-Term Examination
		<ul style="list-style-type: none"> Mid-Term Examination (100 points) 	
	Module 8 Nurturing Relationships (50 points)	<ul style="list-style-type: none"> Weinstein Chapter 7 “Nurturing Relationships” (pp. 97-114) 	<ul style="list-style-type: none"> Integrate fundraising activities with relationship building activities Appraise the Four Part Acknowledgement Program Deploy Moves Management strategies to cultivate donor relations
		<ul style="list-style-type: none"> Application Assignment 5 Moves Management Strategies (50 points) 	
	Module 9 Major Gifts Programs (100 points)	<ul style="list-style-type: none"> Weinstein Chapter 8 “Major Gift Fundraising” (pp. 115-136) Hanberg Chapter 5 “Big Asks” (pp. 81-92) 	<ul style="list-style-type: none"> Assess major gift programs in the organizational context Create a Solicitation Interview Analyze solicitation training and role playing
		<ul style="list-style-type: none"> Application Assignment 6 Case for Support (50 points) Policy Paper 4 The Solicitation Interview (50 points) 	

	Module 10 Donor Cultivation and Stewardship (75 points)	<ul style="list-style-type: none"> Hanberg Chapter 6 “Finding New Donors” (pp. 95-100) 	<ul style="list-style-type: none"> Explore how to cultivate relationships with donors Examine strategies for donor retention Develop an effective donor recognition strategy for a nonprofit organization
		<ul style="list-style-type: none"> Application Assignment 7 Donor Recognition (50 points) Critical Perspectives Journal 3 Cultivating Donor Relationships (25 points) 	
	Module 11 Special Events and Crowdfunding (75 points)	<ul style="list-style-type: none"> Weinstein Chapter 11 “Special Event Fundraising, Cause-Related Marketing, and Crowdfunding” (pp. 183-192) Hanberg Chapter 4 “Events Will Kill You” (pp. 63-80) 	<ul style="list-style-type: none"> Differentiate between acquisition campaigns and renewal/upgrade campaigns Develop a strategy to recover lapsed donors Discuss the elements of a comprehensive appeals package Analyze a professional telephone solicitation campaign Examine the role of special events in an organization’s fundraising strategy
		<ul style="list-style-type: none"> Application Assignment 8 Acquisition and Renewal (50 points) Discussion Forum 4 The Comprehensive Appeals Package (25 points) 	
	Module 12 Grantsmanship (75 points)	<ul style="list-style-type: none"> Weinstein Chapter 12 “Grants” (pp. 193-202) Hanberg Chapter 7 “Grant Requests” (pp. 101-104) 	<ul style="list-style-type: none"> Explore the role of grantsmanship in multiple contexts (governmental, foundations, and local resources) Analyze the efficacy of internal acknowledgment and reporting requirements
		<ul style="list-style-type: none"> Critical Perspectives Journal 4 Personal Code of Ethics (25) Application Assignment 9 Critiquing a Proposal for Funding (50 points) 	

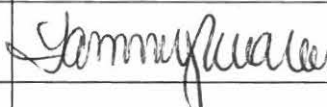
	Module 13 Planned Giving (75 points)	<ul style="list-style-type: none"> Weinstein Chapter 13 “Planned Giving” (pp. 203-224) Hanberg Chapter 8 “Really Big Asks: Planned Giving and Capital Campaigns” (pp. 105-112) 	<ul style="list-style-type: none"> Analyze instruments of donor-education and planned giving Discuss the various charitable gift instruments
		<ul style="list-style-type: none"> Discussion Forum 5 Charitable Gift Instruments (25 points) Application Assignment Donor Education and Planned Giving (50 points) 	
	Module 14 Capital and Endowment Campaigns (100 points)	<ul style="list-style-type: none"> Weinstein Chapter 14 “Capital and Endowment Campaigns” (pp. 225-252) 	<ul style="list-style-type: none"> Deploy the constructs of a capital campaign organization and structure Apply the instruments of fundraising evaluation and assessment
		<ul style="list-style-type: none"> Final Examination (100) 	



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Professional Studies	

Title	Signature	Date
Department Head Dr. Jeremy Schwehm	Jeremy Schwehm <small>Digitally signed by Jeremy Schwehm Date: 2020.07.28 14:49:14 -05'00'</small>	7/28/2020
Dean Dr. Jeff Aulgur	Jeffrey Aulgur <small>Digitally signed by Jeffrey Aulgur Date: 2020.09.04 10:42:27 -05'00'</small>	9.4.2020
Assessment Dr. Christine Austin	Dr. Christine Austin <small>Digitally signed by Dr. Christine Austin Date: 2020.09.08 10:06:15 -05'00'</small>	9.8.2020
Registrar Mrs. Tammy Weaver		9/18/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs Dr. Barbara Johnson		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title:
Bachelor of Applied Science (BAS)

Outline change in program: (e.g., list changes in program such as (1) delete three hours of elective and (2) add three hours of approved major electives)

1. DELETE

- COMM 3073 Group Communication
- BUAD 3123 Management

2. ADD

- OL 4043 Ethical Leadership
- BAS 4363 Project Risk Analysis and Mitigation

What impact will the change have on staffing, on other programs and space allocation?

The departments affected by the removal of COMM 3073 Group Communication and BUAD 3123 Management provided Departmental Support Forms in support of the recommended changes to the program.

Space allocation and institutional assets are unaffected by the proposed changes to the degree program. The Bachelor of Applied Science core curriculum requirements within the major are delivered 100% online.

The balance between the Department of Professional Studies two undergraduate programs (Bachelor of Arts in Organizational Leadership and the Bachelor of Applied Science) allows the reallocation of faculty assignments to deliver both OL 4034 Ethical Leadership and BAS 4363 Project Risk Analysis and Mitigation. Additional faculty (full-time or adjunct) are not required to add the two proposed course changes to the degree program.

Answer the following Assessment questions:

a. How does the program change align with the university mission?

The Bachelor of Applied Science (BAS) provide students who have earned an Associate of Applied Science (A.A.S.) degree in any discipline a seamless transition to a four-year undergraduate degree. The BAS program's target learner population also included students graduating from community colleges with credentials other than an AAS degree, degree "stop-outs" who began but never completed a bachelor's degree, and individuals who have accumulated hours that cannot be applied toward a specific major. This stackable education sequence enhances an individual's academic qualifications and increases potential career upward mobility. In a continuous effort to offer a degree plan current with Arkansas' population and economic engines, the proposed changed enhance a degree program with a focus on student success and learner access through 100% virtual delivery, while providing an opportunity for progressive intellectual development.

b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable.

Not applicable.

c. What is the rationale for this program change?

1. How will the program change impact learning for students enrolled in this program?

1. BAS 4363 Project Risk Analysis and Mitigation replaces COMM 3073 Group Communication within the degree program's required core. BAS 4363 supports all eight Program Learning Outcomes for the Bachelor of Applied Science degree program; COMM 3073 Group Communication supports a limited number of Program Learning Outcomes (most of which are replicated in OL 3023 Professional Communication).

2. BAS 4363 Project Risk Analysis and Mitigation builds upon the knowledge acquired via completion of BAS 4353 Workflow Monitoring and Industrial Environments. BAS 4353 provides the student with a substantive background in project management effective for deployment in multiple industrial, manufacturing, and technical domains, and the course is designed for those with minimal project experience and is intended to demonstrate the student's understanding of the fundamental knowledge, terminology, and processes of effective project management.

3. As defined by the Project Management Institute (PMI) Project Risk Management "includes the processes of conducting risk management planning, identification, analysis, response planning, response implementation, and monitoring risk on a project. The objectives of project risk management are to increase the probability and/or impact of positive risks and to decrease the probability and/or impact of negative risks, in order to optimize the chances of success" (PMI Project Management Body of Knowledge (6th ed.), 2017, p. 395). BAS 4363 Project Risk Analysis and Mitigation, by utilizing Active Threat and Opportunity Management (ATOM) model, delivers a risk management protocol scalable to any size project, applicable to any business, industry, or environment with inherent risk.

4. The Bachelor of Applied Science degree program provides students who have earned an Associated of Applied Science (A.A.S.) degree in any discipline a seamless transition to a four-year degree program. This stackable education sequence enhances an individual's academic qualifications and increases potential upward mobility. As evidence, the Department of Professional Studies and the Ozark Campus have collaborated to form the "Transition to Leadership" path for students earning an A.A.S. degree in Logistics Management, Law Enforcement, and Banking Services.

5. According to a 2018 survey of industry executives and hiring managers conducted by the Association of American Colleges and Universities (AACU), proficiency in ethical judgement was identified as one of the most desirable skills for job applicants to possess (<https://www.aacu.org/research/2018-future-of-work>). OL 4043: Ethical Leadership is proposed as a core course in the Bachelor of Applied Science program. The addition of OL 4043 will strengthen the core curriculum of the BAS program by providing enhanced instruction in a skill area identified as important by potential employers. Additionally, a course on organizational ethics will align the BAS curriculum with similar degree programs in the state and region. For example, the Bachelor of Science degree at the University of Arkansas – Fort Smith includes LEAD 3133: Organization Ethics. The Bachelor of Applied Science degree offered by the University of Arkansas-Little Rock includes ACOM 3320 Communication Ethics as a program elective. The Bachelor of Applied Science degree at Arkansas State University does not require a course in ethics. A review of the current and proposed assessment plan (see attached) demonstrates the enhanced focus on ethics within the BAS program as a core requirement. Currently, ethics is taught across the curriculum. The addition of OL 4043 will provide students with specific instruction on the application of ethical principles within organizations. OL 4043 Ethical Leadership supports the following Program Learning Outcomes: PO1 Communication Skills, PO4 Ethics, PO 5 Diversity, and PO 8 Leadership and Management.

2. Provide an example or examples of student learning assessment evidence which supports the changes in the program.

The Department of Professional Studies launched the Bachelor of Applied Science degree in fall 2017, reaching an enrollment of 100 students for the fall 2019 term. The department expects to reach a similar enrollment for fall 2020. The proposed course deletions and additions are not fundamentally based upon student learning assessment evidence, but are proposed with the intent to modify the core curriculum to eliminate redundancies and to further align the program of study to enhance the mastery of program learning objectives (as referenced above).

d. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions.

Comparable degree programs within Arkansas include the Bachelor of Applied Science degree offered by the University of Arkansas at Fort Smith (UAFS), Bachelor of Applied Science degree offered by the University of Arkansas -Little Rock, and the Bachelor of Applied Science in Organizational Supervision offered by Arkansas State University. All identified programs project similar target student populations and offer comparable program learning outcomes; however, the addition of OL 4033 Ethical Leadership and BAS 4363 distinguish the Arkansas Tech University Bachelor of Applied Science program from others offered within Arkansas.

e. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

Please find attached the revised Bachelor of Applied Science Program Assessment Plan.

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.

Curriculum Matrix for Catalog Curriculum in Bachelor of Applied Science (120 hours)	
<p>Freshman Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 15</p>	<p>Freshman Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 15</p>
<p>Sophomore Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 15</p>	<p>Sophomore Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 15</p>
<p>Junior Fall Semester</p> <p>Add: OL 4043 Ethical Leadership</p> <p>Delete: COMM 4073 Group Communication</p> <p>Total Hours: 16</p>	<p>Junior Spring Semester</p> <p>Add: OL 3133 Applied Principles/Personnel Management</p> <p>Delete: BUAD 3123 Management</p> <p>Total Hours: 16</p>
<p>Senior Fall Semester</p> <p>Add: BAS 4353 Workflow Monitoring and Industrial Environments</p> <p>Change: OL 3133 Applied Principles/Personnel Management to Junior Spring Semester.</p> <p>Total Hours: 15</p>	<p>Senior Spring Semester</p> <p>Add: BAS 4363 Project Risk Analysis and Mitigation</p> <p>Change: BAS 4353 Workflow Monitoring and Industrial Environments to Senior Fall Semester.</p> <p>Total Hours: 13</p>

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM
Department of Professional Studies

This form must be completed for every department affected by the course change.

Department Affected: Management and Marketing	This department <input checked="" type="checkbox"/> supports <input type="checkbox"/> does not support the change.
Comments: The Department of Professional Studies deletes BUAD 3123 Management from the Bachelor of Applied Science required core.	

Department Head Signature: Kevin Mason

Date: 7/21/20

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM
Department of Professional Studies

This form must be completed for every department affected by the course change.

Department Affected: Communication and Journalism	This department <input checked="" type="checkbox"/> supports <input type="checkbox"/> does not support the change.
Comments: The Department of Professional Studies deletes COMM 3073 from the Bachelor of Applied Science required core.	

Department Head Signature: _____



Date: 7.23.20



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Professional Studies	9/2/2020

Title	Signature	Date
Department Head Dr. Jeremy Schwehm	<i>[Signature]</i>	9/2/2020
Dean Dr. Jeff Aulgur	<i>Jeff Aulgur</i>	9/2/2020
Assessment Dr. Christine Austin	<i>Christine Austin</i>	9.8.2020
Registrar Ms. Tammy Weaver	<i>Tammy Weaver</i>	9/8/2020
Vice President for Academic Affairs Dr. Barbara Johnson		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title:
Bachelor of Arts in Organizational Leadership – Child Development Concentration

Outline change in program: (e.g., list changes in program such as (1) delete three hours of elective and (2) add three hours of approved major electives)

- (1) Add OL 4043: Ethical Leadership;
- (2) Allow selection of OL/PS 4143: Nonprofit Governance, or OL/PS 4343: Community Development;
- (3) Delete PSY 3063: Developmental Psychology, SEED 3552: Child and Adolescent Development, ENGL 4723: Teaching People of Other Cultures, and EDMD 3013: Integrating Instructional Technology, and one hour of elective; and
- (4) Add ECE 2513: Curriculum for Early Childhood Education, ECE 2613: Methods and Materials for Young Children, ELED 2113 Human Development and Learning Theories, and NUR 2303: Nutrition, OR HA 2813: Basic Human Nutrition in Hospitality Administration.

What impact will the change have on staffing, on other programs and space allocation? The revision of the Child Development concentration will impact the following courses: PSY 3063, SEED 3552, ENGL 4723, EDMD 3013, ECE 2513, ECE 2613, ELED 2113, NUR 2303 and HA 2813. The proposed revision of the concentration in Child Development does not impact current faculty staffing requirements for the Bachelor of Arts in Organizational Leadership required courses for the degree program. The effected departments provided a Departmental Support Form for the proposed concentration revisions. There are no additional implications for any other academic units. The proposed concentration does not require additional space allocation as a 100% online program.

Answer the following Assessment questions:

- a. How does the program change align with the university mission?
The proposed program change does not fundamentally change the Child Development concentration's alignment with the university's mission; however, the proposed course changes supports enhanced intellectual development by realigning the concentration with the Associate of Science in Early Childhood Education degree. This realignment enhances the direct stackability of the AS-Early Childhood Education and the BA-Organizational Leadership (Child Development concentration). By maintaining a 100% virtual delivery curriculum, the program provides access to learners across the state of Arkansas, while preparing individuals to lead child development programs in multiple settings.
- b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not applicable.
- c. What is the rationale for this program change?
 1. How will the program change impact learning for students enrolled in this program?
The change does not negatively impact learning for students enrolled in the program. The program change aligns the BAOL-CD with the AS-ECE. The program changes create greater alignment with the AS-ECE and incorporates the learning outcomes associated with the AS-ECE.
 2. Provide an example or examples of student learning assessment evidence which supports the changes in the program. See BAOL assessment attached.
- b. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions. Undergraduate degrees in organizational leadership are offered by the following institutions in Arkansas, none of which offer a concentration in Child Development. The proposed concentration offers a degree pathway unique to the state of Arkansas: John Brown University (B.S. in Organizational

Leadership), University of Arkansas – Fort Smith (B.S. in Organizational Leadership), Arkansas State University – (Bachelor of Applied Science in Organizational Supervision).

- c. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.

Curriculum Matrix for Catalog Curriculum in <u>BA-OL with a concentration in Child Development</u> (enter title for program changing)	
<p>Freshman Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 17</p>	<p>Freshman Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 16</p>
<p>Sophomore Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 15</p>	<p>Sophomore Spring Semester</p> <p>Add: Add ECE 2513 Curriculum for Early Childhood Education</p> <p>Delete: PSY 3063 Developmental Psychology I</p> <p>Total Hours: 15</p>
<p>Junior Fall Semester</p> <p>Add: 2613 Methods and Materials for Young Children</p> <p>Delete: SEED 3552 Child and Adult Development</p> <p>Delete: Electives (one hour)</p> <p>Total Hours: 15</p>	<p>Junior Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 12</p>
<p>Senior Fall Semester</p> <p>Add: NUR 2303 Nutrition</p> <p>Delete: EDMD 3013 Integrating Instructional Technology</p> <p>Total Hours: 15 hours</p>	<p>Senior Spring Semester</p> <p>Add: ELED 3113 Human Development and Learning Theories</p> <p>Delete: ENGL 4723 Teaching People of Other Cultures</p> <p>Total Hours: 15</p>

Bachelor of Arts in Organizational Leadership

Assessment Map

Bachelor of Arts in Organizational Leadership – Program Learning Outcomes

Upon successful completion of BA in Organizational Leadership, the student will be able to:	
1	Effective Communication – students will communicate effectively, ethically, and competently through written and oral/verbal delivery in interpersonal, group, and organizational settings.
2	Critical Thinking/Problem Solving/Ethical Decision Making – students will ethically and accurately interpret empirical evidence, identify relevant arguments, question assumptions, examine dynamics of power and privilege, and evaluate alternative points of view in solving complex interpersonal and organizational problems.
3	Leadership Dynamics & Change Management – students will demonstrate an understanding of the foundational aspects of change management, including individual and organizational change, adult learning and change, apply models for diagnosing, implementing, and assessing organizational change, evaluate change within organizational cultures and systems, and articulate the role of change leaders in organizations.
4	Team Building – students will demonstrate the ability to effectively function in multiple roles as part of a team, apply group development models to the team building process, examine motivational models for team achievement, and articulate their own capabilities as leaders and followers within team environments.
5	Adult Learning & Talent Management – students will apply concepts and theories of adult learning, organizational/workplace learning, training, coaching, mentoring, and consultancy to assess, evaluate, and develop individuals in hiring, training, and retaining effective employees.
6	Financial Literacy - students will demonstrate competency in basic concepts of budgeting and financial strategy, apply basic techniques of financial statement review and interpretation, evaluate organizational financial strategy, and prepare a written financial plan.
7	Social Responsibility and Global Understanding – students will articulate a vision of social responsibility and demonstrate the ability to act on this vision for the betterment of local, state, national, and global communities through collaboration and ethical leadership.

Bachelor of Arts in Organizational Leadership – Curriculum Map

Course	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7
OL 3013	I	I	I	I	I	I	I
OL 3023	R	R		R			
OL 3133	R	R		R		R	
OL 3143	R	R		R			
OL 4143		R	R	R	R	R	R
OL 4243					R		
OL 4343	R		R	R		R	R
OL 4443			R				
OL 4543		R				R	
OL 4643		R		R			
OL 4743		R	R		R		R
OL 4843			R		M	R	R
OL 4943	M	M	M			M	
OL 4963	M	M		M			M

I – Introduced; R – Reinforced; M - Mastered

- **Learning Outcome 1 (LO1 Effective Communication)** – students will communicate effectively, ethically, and competently through written and oral/verbal delivery in interpersonal, group, and organizational settings. (**Written & Oral Communication VALUE Rubric**)
 - Proficiency Criteria 1 – ability to produce junior/senior level academic writing that addresses the assigned task
 - Proficiency Criteria 2 – present and analyze complex ideas supported with relevant evidence and authoritative sources
 - Proficiency Criteria 3 – communicate with organization or agency stakeholders in an organized and professional manner
 - Proficiency Criteria 4 – awareness of basic communication theory, the communication process, and organizational models
 - Proficiency Criteria 5 – develop error-free prose that meets the standards of style set by the American Psychological Association
 - Proficiency Criteria 6 – demonstrate the use of organizational pattern (introduction, supporting material, transitions, conclusion) to present a clear, cohesive presentation
 - Proficiency Criteria 7 – exhibit appropriate delivery techniques, such as posture, gesture, eye contact, vocal expression, and confidence
 - Proficiency Criteria 8 – demonstrate the use of language that is appropriate in a professional setting
 - Proficiency Criteria 9 – demonstrate the ability to present research findings in a professional manner through a formal presentation process to a group of stakeholders responsible for implementing business strategies

- **Learning Outcome 2 (LO2 – Critical Thinking/Problem Solving/Ethical Decision Making)** – students will ethically and accurately interpret empirical evidence, identify relevant arguments, question assumptions, examine dynamics of power and privilege, and evaluate alternative points of view in solving complex interpersonal and organizational problems. (**Problem Solving & Ethical Reasoning VALUE Rubric**) –
 - Proficiency Criteria 1 – demonstrate the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors
 - Proficiency Criteria 2 – identify multiple approaches for solving complex problems that apply within a specific context
 - Proficiency Criteria 3 – evaluate solutions using logic and reasoning supported by consideration of the history of the problem, the context, and the feasibility of implementation
 - Proficiency Criteria 4 – implement solutions in a manner that thoroughly addresses all contextual factors of the problem
 - Proficiency Criteria 5 – recognize the nature of conflict and its impact on interpersonal relationships and organizations
 - Proficiency Criteria 6 - demonstrate the role of communication in generating productive conflict outcomes and to use communication skills effectively in a range of specific conflict situations
 - Proficiency Criteria 7 - integrate and appropriately apply a broad range of theoretical concepts, processes and methodologies in analyzing, managing and resolving conflicts relevant to organization(s)
 - Proficiency Criteria 8 – recognize ethical issues when presented in a complex, multilayered context
 - Proficiency Criteria 9 – present assumptions and implications of different ethical perspectives and concepts
 - Proficiency Criteria 10 – apply ethical concepts to an ethical question accurately and considers full implications of the application

- **Learning Outcome 3 (LO3 – Leadership Dynamics & Change Management)** – Students will demonstrate knowledge and application of leadership theory to leading change, resolving conflict, and motivation, as well as understanding of the foundational aspects of change management, including individual and organizational change, adult learning and change, apply models for diagnosing, implementing, and assessing organizational change, evaluating change within organizational cultures and systems, and articulating the role of change leaders in organizations.
 - Proficiency Criteria 1 – demonstrates mastery of basic principles of leadership theory, change theory, and development theory
 - Proficiency Criteria 2 – identifies evidence-based practices in leadership, followership, and leadership ethics
 - Proficiency Criteria 3 – develops theory-based plans for strategic training, human development, and organizational change
 - Proficiency Criteria 4 – compare and contrast theories and models of motivation in the workplace, change management, and leadership dynamics
 - Proficiency Criteria 5 – understand the role of the leader in creating and sustaining vision, and leading change
 - Proficiency Criteria 6 – examine the role of trust and its impact of leadership, organizational culture, and change initiatives

- **Learning Outcome 4 (LO4 – Team Building)** – students will demonstrate the ability to effectively function in multiple roles as part of a team, apply group development models to the team building process, examine motivational models for team achievement, and articulate their own capabilities as leaders and followers within team environments. **(Teamwork VALUE Rubric)**
 - Proficiency Criteria 1 – engages team members in ways that facilitate their contributions to projects by building upon the contributions of others and engaging nonparticipants
 - Proficiency Criteria 2 – fosters a constructive team climate by a) treating team members with respect, b) exhibiting positive attitude, c) motivating team members to complete tasks, and d) provide assistance to team members
 - Proficiency Criteria 3 – addresses destructive conflict directly and constructively, helps manage/resolve conflict in a way that strengthens overall team cohesiveness.

- **Learning Outcome 5 (LO5 – Adult Learning & Talent Management)** – students will apply concepts and theories of adult learning, organizational/workplace learning, training, coaching, mentoring, and consultancy to assess, evaluate, and develop individuals in hiring, training, and retaining effective employees.
 - Proficiency Criteria 1 – explain the historical, current, and future role of training and development (training, coaching, mentoring, etc) in organizations
 - Proficiency Criteria 2 – apply principles of training and development theory, organizational learning, coaching, mentoring, and adult learning theory to the training and development process
 - Proficiency Criteria 3 – articulates the links between effective leadership and lifelong learning
 - Proficiency Criteria 4 – develops theory-based plans for strategic training, human development, and organizational change
 - Proficiency Criteria 5 - evaluate training/coaching effectiveness, including training/coaching costs, assessment/test development, program development, and ROI

- **Learning Outcome 6 (LO6 – Financial Literacy)** – students will demonstrate competency in basic concepts of budgeting and financial strategy, apply basic techniques of financial statement review and interpretation, evaluate organizational financial strategy, and prepare a written financial plan.
 - Proficiency Criteria 1 – describe and apply basic techniques of financial statement (P&L, balance sheet, etc) review and interpretation

- Proficiency Criteria 2 – describe the budgeting process, including importance of budgeting, budgeting strategy, and short- and long-term budget planning
 - Proficiency Criteria 3 – evaluate the budget and financial strategy of an organization, unit, or improvement initiative in a professional setting
 - Proficiency Criteria 4 – prepare a written financial plan, including budget, for a proposed improvement initiative in a professional setting
- **Learning Outcome 7 (LO7 – Social Responsibility & Global Understanding)** – students will demonstrate an understanding of the importance of cultural diversity in the global and local community, articulate a vision of social responsibility, and demonstrate the ability to act on this vision for the betterment of local, state, national, and global communities through collaboration and ethical leadership.
(Intercultural Knowledge and Competence VALUE Rubric)
 - Proficiency Criteria 1 – articulate insights into own cultural rules and biases and how to recognize and respond to cultural biases
 - Proficiency Criteria 2 – demonstrate an understanding of the complexity of elements important to members or another culture, including history, values, politics, communication style, beliefs, and practices
 - Proficiency Criteria 3 – articulate ways in which race, class, gender, and sexual orientation influence individual experiences and perspectives
 - Proficiency Criteria 4 – develop complex questions about other cultures and consider questions from multiple cultural perspectives

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM

This form must be completed for every department affected by the course change.

Department Affected: Nursing	This department <input checked="" type="checkbox"/> supports <input type="checkbox"/> does not support the change.
Comments: The Department of Professional Studies adds NUR 2303 Nutrition to the Child Development concentration in the Bachelor of Arts in Organizational Leadership degree program.	

Department Head Signature: Shelly Daily
Date: 7/27/20

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM
Department of Professional Studies

This form must be completed for every department affected by the course change.

Department Affected: English and World Languages	This department <input type="checkbox"/> supports <input type="checkbox"/> does not support the change.
Comments: The Department of Professional Studies removes ENGL 4723 Teaching People of Other Cultures from the Bachelor of Arts in Organizational Leadership concentration in Child Development.	

Department Head Signature: 

Date: _____

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM
Department of Professional Studies

This form must be completed for every department affected by the course change.

Department Affected: Department of Behavioral Science	This department x supports the change.
Comments: The Department of Professional Studies deletes PSY 3063 Development Psychology I from the Bachelor of Arts in Organizational Leadership Child Development concentration.	

Department Head Signature: _____



Date: 7/27/20

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM
Department of Professional Studies

This form must be completed for every department affected by the course change.

Department Affected: Curriculum and Instruction	This department x supports <input type="checkbox"/> does not support the change.
Comments: The Department of Professional Studies removes EDMD 3013 integrating Instructional Technology and SEED Child and Adolescent Development from the Bachelor of Arts in Organizational Leadership concentration in Child Development. The Department of Professional Studies adds the following courses to the concentration in Child Development: ECE 2513 Curriculum for Early Childhood Education ECE 2613 Methods and Materials Using Developmentally Appropriate Practices for Young Children ELED 2113 Human Development and Learning Theories	

Department Head Signature: _____
Sharon Walker
 Date: _____

Arkansas Tech University
DEPARTMENTAL SUPPORT FORM

This form must be completed for every department affected by the course change.

Department Affected: Department of Parks, Recreation and Hospitality Administration (PRHA)	This department x supports <input type="checkbox"/> does not support the change.
Comments: The Department of Professional Studies add HA 2813 Basic Human Nutrition in Hospitality Administration to the Child Development concentration in the Bachelor of Arts in Organizational Development degree program of study.	

Department Head Signature: Cathi Mc Mahan

Date: 9/04/2020



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Professional Studies	

Title	Signature	Date
Department Head Dr. Jeremy Schwehm		9-2-2020
Dean Dr. Jeff Aulgur		9.4.2020
Assessment Dr. Christine Austin		9.8.2020
Registrar Ms. Tammy Weaver		9/8/2020
Vice President for Academic Affairs Dr. Barbara Johnson		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title:

Bachelor of Arts in Organizational Leadership – Agriculture Business Concentration, Criminal Justice Concentration, Industrial/Organizational Psychology Concentration, Inter-College Concentration, and Public Relations Concentration

Outline change in program: (e.g., list changes in program such as (1) delete three hours of elective and (2) add three hours of approved major electives)

- (1) Add OL 4043: Ethical Leadership; and
- (2) Allow selection of OL/PS 4143: Nonprofit Governance, or OL/PS 4343: Community Development.

What impact will the change have on staffing, on other programs and space allocation? The proposed change will reduce departmental reliance on adjunct faculty while avoiding issues with course availability for student progression toward degree completion.

Answer the following Assessment questions:

- a. How does the program change align with the university mission? The proposed changes provide students with more choice in course selection, which aligns with increased student access and success in attaining educational goals. Increasing course selection will allow the department to stagger course offerings, which will reduce departmental reliance on adjunct faculty while avoiding issues with course availability for student progression toward degree completion.
- b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable. Not applicable.
- c. What is the rationale for this program change?
 1. How will the program change impact learning for students enrolled in this program? The change to course selection in courses with similar content will increase student access while continuing to meet learning outcomes in critical thinking, social responsibility, and adult learning and talent management. Each course serves to reinforce outcomes that are introduced in 3000-level courses. Based on assessment data (see item 2), outcome mastery can still be attained through course selection.
 2. Provide an example or examples of student learning assessment evidence which supports the changes in the program. Providing students with a selection of courses covering similar content will not impact content mastery. Each course selection provides similar reinforcement for various program outcomes. For example, students are introduced to program learning outcomes 2, 3, 6, and 7 in OL 3013: Foundations of Organizational Leadership. OL 4143: Nonprofit Governance and OL 4343: Community Development, both reinforce the concepts introduced in the foundational course. Students are required to demonstrate mastery of these concepts in their capstone course, OL 4963. Program assessment procedures (see attached) show student learning outcome attainment in the capstone course is similar for students who completed each course and those who complete one of the two courses.
- b. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions. Undergraduate degrees in organizational leadership are offered by the following institutions in Arkansas: John Brown University (B.S. in Organizational Leadership), University of Arkansas – Fort Smith (B.S. in Organizational Leadership), Arkansas State University – (Bachelor of Applied Science in Organizational Supervision).
- c. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment

plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.

Curriculum Matrix for Catalog Curriculum in <u>BA-OL</u> (enter title for program changing)	
<p>Freshman Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 17</p>	<p>Freshman Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours: 16</p>
<p>Sophomore Fall Semester</p> <p>Add/Change: OL 4043: Ethical Leadership</p> <p>Delete:</p> <p>Total Hours: 15</p>	<p>Sophomore Spring Semester</p> <p>Total Hours: 15</p>
<p>Junior Fall Semester</p> <p>Total Hours: 15</p>	<p>Junior Spring Semester</p> <p>Add/Change: OL 4143: Nonprofit Governance OR OL 4343: Community Development</p> <p>Total Hours: 12</p>
<p>Senior Fall Semester</p> <p>Total Hours: 15 hours</p>	<p>Senior Spring Semester</p> <p>Total Hours: 15</p>

Bachelor of Arts in Organizational Leadership

Assessment Map

Bachelor of Arts in Organizational Leadership – Program Learning Outcomes

Upon successful completion of BA in Organizational Leadership, the student will be able to:	
1	Effective Communication – students will communicate effectively, ethically, and competently through written and oral/verbal delivery in interpersonal, group, and organizational settings.
2	Critical Thinking/Problem Solving/Ethical Decision Making – students will ethically and accurately interpret empirical evidence, identify relevant arguments, question assumptions, examine dynamics of power and privilege, and evaluate alternative points of view in solving complex interpersonal and organizational problems.
3	Leadership Dynamics & Change Management – students will demonstrate an understanding of the foundational aspects of change management, including individual and organizational change, adult learning and change, apply models for diagnosing, implementing, and assessing organizational change, evaluate change within organizational cultures and systems, and articulate the role of change leaders in organizations.
4	Team Building – students will demonstrate the ability to effectively function in multiple roles as part of a team, apply group development models to the team building process, examine motivational models for team achievement, and articulate their own capabilities as leaders and followers within team environments.
5	Adult Learning & Talent Management – students will apply concepts and theories of adult learning, organizational/workplace learning, training, coaching, mentoring, and consultancy to assess, evaluate, and develop individuals in hiring, training, and retaining effective employees.
6	Financial Literacy - students will demonstrate competency in basic concepts of budgeting and financial strategy, apply basic techniques of financial statement review and interpretation, evaluate organizational financial strategy, and prepare a written financial plan.
7	Social Responsibility and Global Understanding – students will articulate a vision of social responsibility and demonstrate the ability to act on this vision for the betterment of local, state, national, and global communities through collaboration and ethical leadership.

Bachelor of Arts in Organizational Leadership – Curriculum Map

Course	Outcome 1	Outcome 2	Outcome 3	Outcome 4	Outcome 5	Outcome 6	Outcome 7
OL 3013	I	I	I	I	I	I	I
OL 3023	R	R		R			
OL 3133	R	R		R		R	
OL 3143	R	R		R			
OL 4143		R	R	R	R	R	R
OL 4243					R		
OL 4343	R		R	R		R	R
OL 4443			R				
OL 4543		R				R	
OL 4643		R		R			
OL 4743		R	R		R		R
OL 4843			R		M	R	R
OL 4943	M	M	M			M	
OL 4963	M	M		M			M

I – Introduced; R – Reinforced; M - Mastered

- **Learning Outcome 1 (LO1 Effective Communication)** – students will communicate effectively, ethically, and competently through written and oral/verbal delivery in interpersonal, group, and organizational settings. (**Written & Oral Communication VALUE Rubric**)
 - Proficiency Criteria 1 – ability to produce junior/senior level academic writing that addresses the assigned task
 - Proficiency Criteria 2 – present and analyze complex ideas supported with relevant evidence and authoritative sources
 - Proficiency Criteria 3 – communicate with organization or agency stakeholders in an organized and professional manner
 - Proficiency Criteria 4 – awareness of basic communication theory, the communication process, and organizational models
 - Proficiency Criteria 5 – develop error-free prose that meets the standards of style set by the American Psychological Association
 - Proficiency Criteria 6 – demonstrate the use of organizational pattern (introduction, supporting material, transitions, conclusion) to present a clear, cohesive presentation
 - Proficiency Criteria 7 – exhibit appropriate delivery techniques, such as posture, gesture, eye contact, vocal expression, and confidence
 - Proficiency Criteria 8 – demonstrate the use of language that is appropriate in a professional setting
 - Proficiency Criteria 9 – demonstrate the ability to present research findings in a professional manner through a formal presentation process to a group of stakeholders responsible for implementing business strategies

- **Learning Outcome 2 (LO2 – Critical Thinking/Problem Solving/Ethical Decision Making)** – students will ethically and accurately interpret empirical evidence, identify relevant arguments, question assumptions, examine dynamics of power and privilege, and evaluate alternative points of view in solving complex interpersonal and organizational problems. (**Problem Solving & Ethical Reasoning VALUE Rubric**) –
 - Proficiency Criteria 1 – demonstrate the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors
 - Proficiency Criteria 2 – identify multiple approaches for solving complex problems that apply within a specific context
 - Proficiency Criteria 3 – evaluate solutions using logic and reasoning supported by consideration of the history of the problem, the context, and the feasibility of implementation
 - Proficiency Criteria 4 – implement solutions in a manner that thoroughly addresses all contextual factors of the problem
 - Proficiency Criteria 5 – recognize the nature of conflict and its impact on interpersonal relationships and organizations
 - Proficiency Criteria 6 - demonstrate the role of communication in generating productive conflict outcomes and to use communication skills effectively in a range of specific conflict situations
 - Proficiency Criteria 7 - integrate and appropriately apply a broad range of theoretical concepts, processes and methodologies in analyzing, managing and resolving conflicts relevant to organization(s)
 - Proficiency Criteria 8 – recognize ethical issues when presented in a complex, multilayered context
 - Proficiency Criteria 9 – present assumptions and implications of different ethical perspectives and concepts
 - Proficiency Criteria 10 – apply ethical concepts to an ethical question accurately and considers full implications of the application

- **Learning Outcome 3 (LO3 – Leadership Dynamics & Change Management)** – Students will demonstrate knowledge and application of leadership theory to leading change, resolving conflict, and motivation, as well as understanding of the foundational aspects of change management, including individual and organizational change, adult learning and change, apply models for diagnosing, implementing, and assessing organizational change, evaluating change within organizational cultures and systems, and articulating the role of change leaders in organizations.
 - Proficiency Criteria 1 – demonstrates mastery of basic principles of leadership theory, change theory, and development theory
 - Proficiency Criteria 2 – identifies evidence-based practices in leadership, followership, and leadership ethics
 - Proficiency Criteria 3 – develops theory-based plans for strategic training, human development, and organizational change
 - Proficiency Criteria 4 – compare and contrast theories and models of motivation in the workplace, change management, and leadership dynamics
 - Proficiency Criteria 5 – understand the role of the leader in creating and sustaining vision, and leading change
 - Proficiency Criteria 6 – examine the role of trust and its impact of leadership, organizational culture, and change initiatives

- **Learning Outcome 4 (LO4 – Team Building)** – students will demonstrate the ability to effectively function in multiple roles as part of a team, apply group development models to the team building process, examine motivational models for team achievement, and articulate their own capabilities as leaders and followers within team environments. (**Teamwork VALUE Rubric**)
 - Proficiency Criteria 1 – engages team members in ways that facilitate their contributions to projects by building upon the contributions of others and engaging nonparticipants
 - Proficiency Criteria 2 – fosters a constructive team climate by a) treating team members with respect, b) exhibiting positive attitude, c) motivating team members to complete tasks, and d) provide assistance to team members
 - Proficiency Criteria 3 – addresses destructive conflict directly and constructively, helps manage/resolve conflict in a way that strengthens overall team cohesiveness.

- **Learning Outcome 5 (LO5 – Adult Learning & Talent Management)** – students will apply concepts and theories of adult learning, organizational/workplace learning, training, coaching, mentoring, and consultancy to assess, evaluate, and develop individuals in hiring, training, and retaining effective employees.
 - Proficiency Criteria 1 – explain the historical, current, and future role of training and development (training, coaching, mentoring, etc) in organizations
 - Proficiency Criteria 2 – apply principles of training and development theory, organizational learning, coaching, mentoring, and adult learning theory to the training and development process
 - Proficiency Criteria 3 – articulates the links between effective leadership and lifelong learning
 - Proficiency Criteria 4 – develops theory-based plans for strategic training, human development, and organizational change
 - Proficiency Criteria 5 - evaluate training/coaching effectiveness, including training/coaching costs, assessment/test development, program development, and ROI

- **Learning Outcome 6 (LO6 – Financial Literacy)** – students will demonstrate competency in basic concepts of budgeting and financial strategy, apply basic techniques of financial statement review and interpretation, evaluate organizational financial strategy, and prepare a written financial plan.
 - Proficiency Criteria 1 – describe and apply basic techniques of financial statement (P&L, balance sheet, etc) review and interpretation

- Proficiency Criteria 2 – describe the budgeting process, including importance of budgeting, budgeting strategy, and short- and long-term budget planning
 - Proficiency Criteria 3 – evaluate the budget and financial strategy of an organization, unit, or improvement initiative in a professional setting
 - Proficiency Criteria 4 – prepare a written financial plan, including budget, for a proposed improvement initiative in a professional setting
- **Learning Outcome 7 (LO7 – Social Responsibility & Global Understanding)** – students will demonstrate an understanding of the importance of cultural diversity in the global and local community, articulate a vision of social responsibility, and demonstrate the ability to act on this vision for the betterment of local, state, national, and global communities through collaboration and ethical leadership.
(Intercultural Knowledge and Competence VALUE Rubric)
 - Proficiency Criteria 1 – articulate insights into own cultural rules and biases and how to recognize and respond to cultural biases
 - Proficiency Criteria 2 – demonstrate an understanding of the complexity of elements important to members or another culture, including history, values, politics, communication style, beliefs, and practices
 - Proficiency Criteria 3 – articulate ways in which race, class, gender, and sexual orientation influence individual experiences and perspectives
 - Proficiency Criteria 4 – develop complex questions about other cultures and consider questions from multiple cultural perspectives



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Biological Sciences	7/24/2020

Title	Signature	Date
Department Head	<i>John Johnson</i>	7/24/2020
Dean	<i>Jeff W. Ralston</i>	2020 July 29
Assessment Christine Austin	<i>Christ Austin</i>	7/31/20
Registrar	<i>Yammy Weaver</i>	8/27/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL)	Course Number: (e.g., 1003)	Effective Term:
BIOL	3xx3 3033	<input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below)		
Bioinformatics		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript)		
Bioinformatics		

Will this course be cross-listed with another existing course? If so, list course subject and number. _____

Yes No

Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog? _____

If so, list course subject and number. Yes No

Is this course repeatable for additional earned hours? Yes No How many total hours? _____

Grading: Standard Letter P/F Other _____

Mode of Instruction (check appropriate box):

- | | | |
|--|---|---|
| <input checked="" type="radio"/> 01 Lecture | <input type="radio"/> 02 Lecture/Laboratory | <input type="radio"/> 03 Laboratory only |
| <input type="radio"/> 05 Practice Teaching | <input type="radio"/> 06 Internship/Practicum | <input type="radio"/> 07 Apprenticeship/Externship |
| <input type="radio"/> 08 Independent Study | <input type="radio"/> 09 Readings | <input type="radio"/> 10 Special Topics |
| <input type="radio"/> 12 Individual Lessons | <input type="radio"/> 13 Applied Instruction | <input type="radio"/> 16 Studio Course |
| <input type="radio"/> 17 Dissertation Research | <input type="radio"/> 18 Activity Course | <input type="radio"/> 19 Seminar <input type="radio"/> 98 Other |

Does this course require a fee? Yes No How Much? _____ Select Fee Type _____

If selected other list fee type: _____

Elective Major Minor

(If major or minor course, you must complete the Request for Program Change form to add course to program.)

If course is required by major/minor, how frequently will course be offered?

Once each year.

Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.? No

Will this course require a special classroom (computer lab, smart classroom, or laboratory)? Computer Lab

Answer the following Assessment questions:

- a. If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable.

Not Applicable

- b. If this course is required for the major or minor, complete the following.
1. Provide the program level learning outcome(s) it addresses.

The biology department faculty defined five learning outcomes for students majoring in biology. They mapped the introduction, reinforcement, and mastery expectations for courses in the biology curriculum. Then a subset of courses on the map identified projects or assignments that could be scored on a common rubric assessing student learning.

1. Students will construct reports which analyze data using scientific models to justify their conclusions.
2. Students will evaluate the interactions between human and biological systems, and to articulate and convey societal relevance to the general public.
3. Students will describe characteristics and diversity of life.

4. Students will demonstrate common lab procedures, operate lab and field equipment, perform sterile techniques, and conduct online data analyses.
5. Students will find, analyze, and critique current scientific literature and present their evaluation in written and oral formats.

This course relates to #1. It is not required but an elective choice (or an alternative to a computer skills course) so it will not be included in the core program assessment, but student learning will be assessed and included in future program assessment reports.

The Bioinformatics course will expand the software skills of students in the biology program with an emphasis on command line programming and introduction to the R program. It will introduce the students to the program R, a command line software system increasing seen in biology for statistical and graphical analyses. Students in the special topics bioinformatics course did not show much knowledge of command line programs and had no experience with the R package.

2. Provide tool or measure directly linked to each program learning outcome. (How will student learning in this outcome be measured?)

Student learning outcomes assessment- one important assignment to measure student learning is through their ability to manipulate data sets in the R package through producing summary statistics of the dataset along with a graphical analysis of the data. Furthermore, they will create summary explanations that describe the biological significance of their dataset. This course will expand specific software skills seen as an important criteria in the environmental science program assessment.

Criteria for success: students will be assessed on their abilities to complete the three areas: summary statistics, graphical data analysis, and summary explanations. The success of each area will be dependent upon completeness and extent of details each student provides.

- c. What is the rationale for adding this course? What evidence demonstrates this need?

As bioinformatics is seen as the interface between large biological data sets and their analysis, it has become a key component in many biology programs. Increasingly, students from biology programs need data analysis skills to manage large data sets and genetic data from online repositories and show knowledge of the programs to manipulate these datasets. In addition, the computer packages employed for these analyses have become common in graduate and professional schools and seen as needed skills for data analysis. Many skills learned in this class are specific to biological data (e.g., DNA sequences) and are not taught in other disciplines. Student evaluations from this special topics course indicated students learned online analysis of DNA and manipulated genetic datasets with the R package not conducted in other courses. Bioinformatics is taught at UA-F as a 4XXX course, UALR and UAMS have created an entire degree for this concentration, and UCA has a research group for bioinformatics

For the proposed course, attach a syllabus in Word format that includes: **(Items a. through d. should be entered as they should appear in the catalog)**

- a. Course subject
- b. Course number
- c. Catalog course title
- d. Catalog description
 1. Arkansas Course Transfer System (ACTS) course number, if applicable
 2. Cross-listing
 3. Offered (e.g., Fall only, Spring only. Do not enter if offer course fall and spring)
 4. Prerequisites
 5. Co-requisites
 6. Description
 7. Notes (e.g., information not in description such as course may be repeated for credit)
 8. Contact Hours if different than lecture (e.g., Lecture three hours, laboratory three hours)
 9. Fees (e.g., \$36 art fee)
- e. Section for Name of instructor, office hours, contact information (telephone, email)
- f. Text required for course
- g. Bibliography (supplemental reading list)
- h. Justification/rationale for the course
- i. Course objectives
- j. Description of how course meets general education objectives (courses included in the general education component should show how the course meets one or more of the objectives contained in General Education Objectives listed in undergraduate catalog)
- k. Assessment methods (include grading policy with specific equivalents for A, B, C)
- l. Policy on absences, cheating, plagiarism, etc.
- m. Course content (outline of material to be covered in course).

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at

http://www.atu.edu/registrar/curriculum_forms.php.

~~Biol 3XX3~~ ³⁰³³ **Bioinformatics**

Instructor: Dr. T Yamashita

Office: McEver 111. MWR: 11-12pm & 2-5; and by appointment. If you find the door closed, just knock & come on in. If I'm not in, I'm probably down in the Biotech lab (Rm 122) or botany lab (Rm 9).

Phone: 968-0327

Email tyamashita@atu.edu N.B. I try to answer emails within 24hrs; however, Weekend and evenings will wait till the next work day.

Catalogue description:

This course focuses upon the principles and major concepts in bioinformatics. Course topics may include the following: blast searching, retrieving, and analyzing DNA & protein sequences; Metagenomic data analysis; molecular phylogenetic tree creation; bacterial genome isolation, sequencing, genome assembly, and annotation; gene data analysis in R.

Prerequisites: Biol 1114, and Math 1113 and/or the permission of the instructor. A laptop computer with internet capabilities and operating R Studio is required.

No textbook, online materials

Helpful Books: YaRr! The pirate's guide to R

R for Dummies 2nd ed

Statistical Analysis with R for Dummies

Course Justification: Big data and bioinformatics have become an important consideration in the biological sciences. Understanding the consequences and manipulating large datasets will be critical in the genomics age as online repositories expand and collect increasing diverse and complex datasets. In addition, data analysis with R has become commonplace in the sciences and basic knowledge of this program is beneficial.

Course Learning Objectives: This course will show the importance of bioinformatics to biology and highlight how bioinformatics is employed in biology careers. Students will gain an appreciation for the impact of bioinformatics and develop skills with the tools used in this field. You will also conduct online exercises aimed at introducing you to Bioinformatics databases, practice R and BASH commands to manipulate large datasets.

General educational objectives: This course will help participants to understand how bioinformatics has become an important consideration in biological research and careers. It fulfills the objectives through an emphasis on critical thinking through evaluating journal articles and communicating results and improves scientific reasoning with quantitatively assessing datasets.

Requirements:

There will be three exams: an early semester exam, a midterm and a final. The early semester exam will be given in the early months of the term & worth 75 pts. The other two exams will be worth 120 points. The majority of questions will be written types or problems.

There will also be several in-class quizzes and homework. These quizzes/homework will

be worth about 10 to 50pts and will cover any part of the course content (e.g., readings, class materials).

You will also be required to complete two term papers/assignments/project: a short one (6-8 typed pages: 4000 words) due at midterm and an assignment due at the end of the term. I will not extend the date that the papers/assignments are required. Each paper/assignments must have one inch margins with a font no larger than 12 pts.

The assignment may be a project on a dataset you locate or I will assign.

You will need to check your paper through Turnitin.com prior to class submission. I'll give you the details later.

Short paper: This paper may focus on any part of bioinformatics you find interesting. However, it must have a central focus (thesis, problem, or question to be answered - not just a collection of facts or a book report/encyclopedia entry). **It should be a critical analysis of a subject with some insight on your part that supports a particular position.** The paper must conform to proper format with a title, an abstract, introduction, discussion, and references. You must use at least 10 **JOURNAL** references. Web based references can be used for general background but 10 specific journal references are important. You will be graded on content, originality, style, grammar, format, length, etc. **An outline and reference list is due in one month and is worth 10 pts.** More on this topic later.

Discussions: Each Friday we'll have a discussion over assigned papers. Each student will be responsible for a discussion period and we'll rotate among the class. All the other students should participate with questions and topics related to the chapter for the discussion. Each student should turn in a list of five questions and a summary of thoughts related to the readings for that period- these question & summary sheets will be worth 10 pts each.

***We may change some assignments.

Early Exam	75		
Midterm	75	Grades:	90-100: A
Midterm Paper	110		79-89 : B
Late term Paper	110		67-78 : C
Final	100		58-66 : D
Quizzes	100		<57 : F
<u>Discussion reports</u>	<u>100</u>		
	670		

Attendance:

Attendance regulations as per the current university catalogue will be followed. Failure to attend class may jeopardize a student's scholastic standing. Attendance records will be kept for each lecture period of this course. After 5 unexcused absences, you may be dropped from the course with a failing grade. An excused absence consists of illness, accident, jury duty. etc. You will need to bring validation to me signed by a professional. It is the student's responsibility to obtain the material presented during a missed lecture. **I WILL NOT** provide my notes for this purpose.

Examinations and Class assignments:

No tests are to be removed from the classroom by students.

Questions that concern a test will be addressed for two weeks after an exam is given. Test grades will usually be posted the next class period after a test is given.

Make up exams will be given for excused absences only. Make up exams will be given up to two weeks after an exam is given and may be different from the original exam. i.e., essay exams

All make up Exams and other assignments must be completed before November 23rd.

Pop quizzes/homework/discussion essays will be given at any time. They will cover previous material from the lecture and will be open book or homework problems. Bonus points may be available as homework, extra quiz questions, or discussion essays. Homework and other class/lab assignments will be due the period after they are assigned. Late materials will have points deducted.

Do your own work on homework problems and other class or lab materials!!!! Identical papers will be **given major negative points** and will be considered cheating/plagiarism. Do not copy directly from the textbook and other references! Antiplagiarism software will be used.

On August 15, 2019, the ATU Board of Trustees approved a revised Code of Academic Integrity for use and inclusion in the Faculty and Student Handbooks starting this fall 2019. The code will provide guidance to students and faculty on the definition, types, and process for addressing academic integrity and possible violations. This code reserves the right of faculty to set the academic sanctions for violations of academic integrity in their classes.

Students who violate the Code of Academic Integrity (cheating, plagiarism, etc.) face penalties ranging from being required to redo the assignment (i.e., properly cite sources in cases of plagiarism) to failure of the assignment and/or class. The sanction is dependent on the severity of the violation as well as the number of times a student has violated the policy in the class. Egregious or multiple violations may result in additional university level sanctions.

The Code can be found in the Faculty Handbook (2019 update) and in the Student Handbook, as well as (coming soon) a university web site dedicated to Academic Integrity resources. The URL for the website will be <https://www.atu.edu/academic-integrity>

Other Regulations:

Tobacco products are not to be used in lecture or in lab.

Cheating will result in an automatic "F" grade. See your student handbook for definitions/extensions.

Plagiarism is considered as any use of another's work without proper references. This definition extends to web and internet based sources.

Please turn cell phones off when coming to class.

Sleeping, eating, reading the newspaper, and general inattentiveness in class will be considered a disruption and you will be asked to leave.

Useful online links:

R studio

<https://www.rstudio.com/>

Comprehensive R Archive network

<https://cran.revolutionanalytics.com/>

Getting started in Data analysis using Stata and R

<https://libguides.princeton.edu/dss>

Empowering the Development of Genomics Expertise

<https://bioedge.lanl.gov/>

Galaxy

<https://usegalaxy.org/>

Corn Bioinformatics

http://ensembl.gramene.org/Zea_mays/Info/Index

Protein DataBank

<https://www.rcsb.org/>

NCBI

<https://www.ncbi.nlm.nih.gov/>

European Bioinformatics Institute EMBL-EBI

<https://www.ebi.ac.uk/>

ExPASy Bioinformatics resource portal

<https://www.expasy.org/>

UCSC Genome Browser

<https://genome.ucsc.edu/>

Babraham Bioinformatics FastQC

<http://www.bioinformatics.babraham.ac.uk/projects/>

Bioinformatics for the terrified

<https://www.ebi.ac.uk/training/online/course/bioinformatics-terrified-0>

Bioinformatics

Readings and Class Schedule

First month

Intro to course
Syllabus and discussion of grading
Big Data...What is it? Why do we need to worry about it?
First Discussion and readings
Molecular biology and bioinformatics

**Review course requirements and points for grading
NEJM article video
Video Sanger sequencing
NGS video via Applied Biological Materials

Second month

Molecular biology and bioinformatics (cont.)
Online data repositories: NCBI, ENSEMBL, RCSB protein
Databank
Second Discussion and readings
Data Formats – FASTA, etc...
Blast searches

Exam 1

***Gene structure homework
Chris Mason Ted talk
K Thomas Sequencing technologies slides
Chromatogram interpretation
NGS workflow
pET 41 Cloning
metadata importance
Fasta, fastq formats
Phylogenetic tree creation

Third Month

Dynamic Genome – Corn Genetics
Online Data analysis – Cyverse, DNA subway, Genome browsers,
Galaxy
Bacterial genomes – sequencing, assembly, & annotation
Third Discussion and readings
R studio Basics – graphing
R studio Basics – stats
R studio Basics – genomes, transcriptomes, and metagenomics
First Paper Due

*** BASH commands & Ron work
Maize browser

Joseph's bacterial genome assembly & annotation pipeline
PATRIC bacterial genome assembly & annotation pipeline

Fourth month

Intro to BASH commands

Fourth Discussion and readings

Second Paper Due

.....
***Rstudio Exploratory data analysis

***Note--This is a Tentative schedule.



ARKANSAS TECH UNIVERSITY

REQUEST FOR COURSE ADDITION

Department Initiating Proposal	Date
Biological Sciences	7/24/2020

Title	Signature	Date
Department Head	<i>John Gibson</i>	7/24/2020
Dean	<i>Jeff W. Ralston</i>	2020 July 29
Assessment Christine Austin	<i>Christ Austin</i>	7/31/20
Registrar	<i>Gammay W. W. W.</i>	8/27/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Course Subject: (e.g., ACCT, ENGL)	Course Number: (e.g., 1003)	Effective Term:
BIOL	4xx3- 4043	<input checked="" type="checkbox"/> Spring <input type="checkbox"/> Summer I
Official Catalog Title: (If official title exceeds 30 characters, indicate Banner Title below)		
Conservation Genetics		
Banner Title: (limited to 30 characters, including spaces, capitalize all letters — this will display on the transcript)		
Conservation Genetics		

Will this course be cross-listed with another existing course? If so, list course subject and number.

Yes No

Will this course be cross-listed with a course currently not in the undergraduate or graduate catalog?

If so, list course subject and number. Yes No

Is this course repeatable for additional earned hours? Yes No How many total hours?

Grading: Standard Letter P/F Other

Mode of Instruction (check appropriate box):

- | | | |
|---|--|---|
| <input checked="" type="checkbox"/> 01 Lecture | <input type="checkbox"/> 02 Lecture/Laboratory | <input type="checkbox"/> 03 Laboratory only |
| <input type="checkbox"/> 05 Practice Teaching | <input type="checkbox"/> 06 Internship/Practicum | <input type="checkbox"/> 07 Apprenticeship/Externship |
| <input type="checkbox"/> 08 Independent Study | <input type="checkbox"/> 09 Readings | <input type="checkbox"/> 10 Special Topics |
| <input type="checkbox"/> 12 Individual Lessons | <input type="checkbox"/> 13 Applied Instruction | <input type="checkbox"/> 16 Studio Course |
| <input type="checkbox"/> 17 Dissertation Research | <input type="checkbox"/> 18 Activity Course | <input type="checkbox"/> 19 Seminar <input type="checkbox"/> 98 Other |

Does this course require a fee? Yes No How Much? Select Fee Type

If selected other list fee type:

Elective Major Minor

(If major or minor course, you must complete the Request for Program Change form to add course to program.)

If course is required by major/minor, how frequently will course be offered?

Once each year.

Will this course require any special resources such as unusual maintenance costs, library resources, special software, distance learning equipment, etc.? No

Will this course require a special classroom (computer lab, smart classroom, or laboratory)? No

Answer the following Assessment questions:

- a. If this course is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable.

Not Applicable

- b. If this course is required for the major or minor, complete the following.
1. Provide the program level learning outcome(s) it addresses.

The biology department faculty defined five learning outcomes for students majoring in biology. They mapped the introduction, reinforcement, and mastery expectations for courses in the biology curriculum. Then a subset of courses on the map identified projects or assignments that could be scored on a common rubric assessing student learning.

1. Students will construct reports which analyze data using scientific models to justify their conclusions.
2. Students will evaluate the interactions between human and biological systems, and to articulate and convey societal relevance to the general public.

3. Students will describe characteristics and diversity of life.
4. Students will demonstrate common lab procedures, operate lab and field equipment, perform sterile techniques, and conduct online data analyses.
5. Students will find, analyze, and critique current scientific literature and present their evaluation in written and oral formats.

This course addresses #2 and #3 above. It is not required but an elective choice so it will not be included in the core program assessment but student learning will be assessed and included in future program assessment reports.

This course expands knowledge of natural populations and their management with an emphasis on criteria important for conservation. Thus, it improves knowledge important in disseminating scientific information to the public. Students who completed the special topics conservation genetics course had very little understanding of genetics for conservation purposes prior to the class, and through their readings, discussions, and term papers were able to understand the terms and significance of the genetic underpinnings of conservation efforts.

2. Provide tool or measure directly linked to each program learning outcome. (How will student learning in this outcome be measured?)

Student learning outcomes assessment—one example of a learning assessment will be a project where students will describe population genetic parameters important for conservation as they analyze a population genetic dataset from two populations and create summary statistics that describe each population, they will also create graphical summaries of the two populations, and summarize conservation concerns for each population. This course will strengthen the knowledge base of biology students through a better understanding of the genetic criteria important for natural population management.

Criteria for success: assessment of the exercise will consist of the degree of completeness and details in the summary statistics, graphical summaries, and significant findings in the population concerns.

- c. What is the rationale for adding this course? What evidence demonstrates this need?

Conservation genetics is an important consideration when managing natural populations. Most conservation efforts are now directed through genetic data and considerations. Many students at ATU (Fisheries and Wildlife) do not enroll in the genetics course and do not gain the knowledge helpful in their careers as FW professionals. As this course focuses on natural populations, it is better suited to biology students with an ecological focus or students in the FW/Environmental sciences. Student evaluations from this special topics course were positive with students commenting that they better understood the terms and the knowledge base for genetics in conservation efforts and the class would be helpful in their careers or as graduate students. Conservation genetics is taught at UA-F as a 4xxx course, topics in conservation genetics are taught within the conservation courses at UCA, UALR, & SAU. These universities do not offer a MS in FW, thus, the range of more detailed topical classes are not offered.

For the proposed course, attach a syllabus in Word format that includes: **(Items a. through d. should be entered as they should appear in the catalog)**

- a. Course subject
- b. Course number
- c. Catalog course title
- d. Catalog description
 1. Arkansas Course Transfer System (ACTS) course number, if applicable
 2. Cross-listing
 3. Offered (e.g., Fall only, Spring only. Do not enter if offer course fall and spring)
 4. Prerequisites
 5. Co-requisites
 6. Description
 7. Notes (e.g., information not in description such as course may be repeated for credit)
 8. Contact Hours if different than lecture (e.g., Lecture three hours, laboratory three hours)
 9. Fees (e.g., \$36 art fee)
- e. Section for Name of instructor, office hours, contact information (telephone, email)
- f. Text required for course
- g. Bibliography (supplemental reading list)
- h. Justification/rationale for the course
- i. Course objectives
- j. Description of how course meets general education objectives (courses included in the general education component should show how the course meets one or more of the objectives contained in General Education Objectives listed in undergraduate catalog)
- k. Assessment methods (include grading policy with specific equivalents for A, B, C)
- l. Policy on absences, cheating, plagiarism, etc.
- m. Course content (outline of material to be covered in course).

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

4043

Biol ~~4XX3~~ Conservation Genetics

Instructor: Dr. T Yamashita

Office: McEver 111. MWR: 11-12pm & 2-5; and by appointment. If you find the door closed, just knock & come on in. If I'm not in, I'm probably down in the Biotech lab (Rm 122) or botany lab (Rm 9).

Phone: 968-0327

Email tyamashita@atu.edu N.B. I try to answer emails within 24hrs; however, Weekend and evenings will wait till the next work day.

Catalogue description:

This course focuses upon the principles and major concepts in conservation genetics from a contemporary viewpoint. Evolutionary genetics of natural populations, the effects of population size reduction, and practical applications of conservation genetics are among the topics examined in the course. Offered: spring. Prerequisites: Biol 1114, Biol 2124, and Biol 2134 and/or the permission of the instructor.

Introduction to Conservation genetics, 2nd ed.
R Frankham, JD Ballou, DA Briscoe, & KH McInnes
Cambridge University Press 978-0-521-70271-3

***We'll be following and reading from the book so it will be important for you to read the chapters before coming to class.

Course Justification: Conservation genetics has become an important consideration in the management of natural populations. Too often undergraduate biology and FW majors have little training in genetics and the current impact of conservation genetics. This course will show how contemporary conservation genetics have impacted natural populations and their management.

Course Objectives: This course will show the importance of conservation genetics to biology and highlight the many examples of conservation genetics studies. Students will gain an appreciation for the molecular, population level, and societal impact of conservation biology.

General educational objectives: This course will help participants to understand how conservation genetics has become an important consideration in biology. It fulfills the objectives through an emphasis on critical thinking and communication by evaluating journal articles and datasets, and scientific reasoning with quantitatively assessing datasets.

Requirements:

There will be three exams: an early semester exam, a midterm and a final. The early semester exam will be worth 75 pts. The other two exams will be worth 120 points. The majority of questions will be written types or problems. Some of the questions for the exams/quizzes will come from the chapter questions.

There will also be several in class quizzes. These quizzes will be worth about 10 to 50pts and will cover any part of the course content (readings, class materials, and labs).

You will also be required to complete two term papers: a short one (6-8 typed pages: 4000 words) due at midterm and a longer paper (10-15 typed pages: 5500 words) due at the end of term. I will not extend the date that the papers are required. Each paper must have

one inch margins with a font no larger than 12 pts.

You will need to check your paper through Turnitin.com prior to class submission. I'll give you the details later.

Short paper: This paper may focus on any part of conservation genetics you find interesting. However, it must have a central focus-not just a collection of facts or a book report/encyclopedia entry. **It should be a critical analysis of a subject with some insight on your part that supports a particular position.** The paper must conform to proper format with a title, an abstract, introduction, discussion, and references. You must use at least 5 **JOURNAL** references. Web based references can be used for general background but 5 specific journal references are important. You will be graded on content, originality, style, grammar, format, length, etc. **An outline and reference list is due October 2nd and is worth 10 pts.** More on this topic later.

Longer paper: This paper should be a more extensive analysis/update/improvement of your shorter paper or you can focus on another area of interest. This paper should (if at all possible) focus on the last section of the textbook – Chapters 16 through 22 (From theory to practice). You may be responsible for helping to teach this part of the course in the Friday discussions. It should follow the same guidelines as above but with more extensive references (**at least 10 journal references**) and should include figures and tables you have created or included from your references.

Discussions: Each Friday we'll have a discussion over assigned papers. Each student will be responsible for a discussion period and we'll rotate among the class. All the other students should participate with questions and topics related to the chapter for the discussion. Each student should turn in a list of five questions and a summary of thoughts related to the readings for that period- these question & summary sheets will be worth 10 pts each.

***We may change some assignments. There may be one where you develop a management plan for an Threatened/endangered species with the campus area as your conservation area.

Early Exam	75	
Midterm	120	Grades:90-100 : A
First Paper	110	79-89 : B
Second Paper	110	67-78 : C
Final	120	58-66 : D
Quizzes	150	<57 : F
Discussion reports	130	
	815	

Attendance:

Attendance regulations as per the current university catalogue will be followed. Failure to attend class may jeopardize a student's scholastic standing. Attendance records will be kept for each lecture period of this course. After 5 unexcused absences, you may be dropped from the course with a failing grade. An excused absence consists of illness, accident, jury duty, etc. You will need to bring validation to me signed by a professional. It is the student's responsibility to obtain the material presented during a missed lecture. **I WILL NOT** provide my notes for this purpose.

Examinations and Class assignments:

No tests are to be removed from the classroom by students.

Questions that concern a test will be addressed for two weeks after an exam is given. Test grades will usually be posted the next class period after a test is given.

Make up exams will be given for excused absences only. Make up exams will be given up to two weeks after an exam is given and may be different from the original exam. i.e., essay exams

All make up Exams and other assignments must be completed before drop date.

Pop quizzes/homework/discussion essays will be given at any time. They will cover previous material from the lecture and will be open book or homework problems. Bonus points may be available as homework, extra quiz questions, or discussion essays. Homework and other class/lab assignments will be due the period after they are assigned. Late materials will have points deducted.

Do your own work on homework problems and other class or lab materials!!!! Identical papers will be **given major negative points** and will be considered cheating/plagiarism. Do not copy directly from the textbook and other references! Antiplagiarism software will be used.

Other Regulations:

Tobacco products are not to be used in lecture or in lab.

Cheating will result in an automatic "F" grade. See your student handbook for definitions/extensions.

Plagiarism is considered as any use of another's work without proper references. This definition extends to web and internet based sources.

Please turn cell phones off when coming to class.

Sleeping, eating, reading the newspaper, and general inattentiveness in class will be considered a disruption and you will be asked to leave.

*** Graduate student may be responsible for additional discussion leading, notetaking, longer papers, etc... Please see me for details.

Conservation genetics

Syllabus sample Readings and Class Schedule

First Month

Intro to course
Chapter 1: The Sixth Extinction
Overview of Conservation genetics
Chapter 2: Genetics & extinction

Second Month

Section I: Evolutionary genetics of Natural Populations

Chapter 3: Genetic diversity
Discussion: Chapter
Chapter 4: Characterizing genetic diversity – single loci

Exam 1

Chapter 5: Characterizing genetic diversity – quantitative variation
** gene mapping with molecular markers
Chapter 6: Evolutionary impacts of natural selection in large populations

Third Month

Chapter 7: Evolutionary impacts of mutation and migration, and their interactions with selection in large populations

Paper Outline and references due

Chapter 8: Genetic consequences of small population sizes
Discussion: Chapter
Chapter 9: Maintenance of genetic diversity

Exam 2

Discussion: Chapter–
Chapter 10 : Population genomics

First Paper Due

Fourth Month

Section II: Effects of population size reduction

Chapter 11: Loss of genetic diversity in small populations
Chapter 12: Inbreeding
Chapter 13: Inbreeding depression
Chapter 14: Population fragmentation
Chapter 15: Genetically viable populations

Last “W” Day

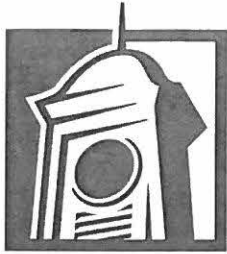
Section III: From theory to practice

***We will select three of these chapters to cover.

Chapter 16: Resolving taxonomic uncertainties & defining management units
Chapter 17: Genetic management of wildlife populations
Chapter 18: Genetic issues in introduced and invasive species
Chapter 19: Genetic management of captive populations
Chapter 20: Genetic management for reintroduction
Chapter 21: Use of molecular genetics in forensics and to understand species biology
Chapter 22: The broader context: population viability analysis (PVA)

Second Paper Due

***Note--This is a Tentative schedule.



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Biological Sciences	7/20/2020

Title	Signature	Date
Department Head	<i>John Jackson</i>	7/24/2020
Dean	<i>Jeff R. R. R.</i>	2020 July 29
Assessment Christine Austin	<i>Christine Austin</i>	7/31/20
Registrar	<i>Yammy Williams</i>	8/27/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title: Biology Biomedical Option

Outline change in program: ~~3XX3~~ **3033**
Add Bioinformatics BIOL BIOL ~~3XX3~~ as an optional course to COMS 2003. The new course Bioinformatics BIOL 3XX3 provides overlapping skills and learning outcomes as the computer course so we propose to allow this course to count as an option in this program.

What impact will the change have on staffing, on other programs and space allocation?

Some students (approximately 15-20) may select this option over COMS 2003 each year.

Answer the following Assessment questions:

- a. How does the program change align with the university mission?

ATU Mission

Arkansas Tech University is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

The proposed program changes will improve student success and excellence by providing the needed learning outcomes necessary to be a successful environmental science professional today and in the future.

- b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable.

No Applicable

- c. What is the rationale for this program change?

1. How will the program change impact learning for students enrolled in this program?

The Bioinformatics addition will allow greater flexibility in meeting the **computer related electives** requirement for the students and introduce the students to R, an increasingly important computer program in the sciences.

2. Provide an example or examples of student learning assessment evidence which supports the changes in the program.

The Bioinformatics course will introduce the students to the program R, a command line software system increasing seen in biology for statistical and graphical analyses. Students in the special topics bioinformatics course did not show much knowledge of command line programs and had no experience with the R package. As bioinformatics is seen as the interface between large biological data sets and their analysis, it has become a key component in many biology programs. Increasingly, students from biology programs need data analysis skills to manage large data sets and genetic data from online repositories and show knowledge of the programs to manipulate these datasets. In addition, the computer packages employed for these analyses have become common in graduate and professional schools and seen as needed skills for data analysis. Many skills learned in this class are specific to biological

data (e.g., DNA sequences) and are not taught in other disciplines. Student evaluations from this special topics course indicated students learned online analysis of DNA and manipulated genetic datasets with the R package not conducted in other courses. Bioinformatics is taught at UA-F as a 4XXX course, UALR and UAMS have created an entire degree for this concentration, and UCA has a research group for bioinformatics

- b. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions.

UAMS, ARCOM, ASU NYIT, UT Memphis, UCA PT and did not find any reference to a computer science course as a prerequisite for their professional programs. So, adding bioinformatics as an alternative for COMS 2003 in the biomedical option would work from that perspective.

- c. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

See the included assessment report for the biology program for the five program assessment learning outcomes. Since Bioinformatics is a focused computer skills course to give a biology focused computer course it is not directly assessed by our program learning assessments, instead it will have its own assessment if it is meeting the computer skills of our majors.

Program learning outcomes assessment- students will be assessed through their ability to manipulate data sets in the R package through producing summary statistics of the dataset along with a graphical analysis of the data. Furthermore, they will create summary explanations that describe the biological significance of their dataset. This course will expand specific software skills seen as an important criteria in the environmental science program assessment.

Criteria for success: students will be assessed on their abilities to complete the three areas: summary statistics, graphical data analysis, and summary explanations. The success of each area will be dependent upon completeness and extent of details each student provides.

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.

Curriculum Matrix for Catalog Curriculum in _____ Biology Biomedical Option _____ (enter title for program changing)	
<p>Freshman Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Freshman Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Sophomore Fall Semester</p> <p>Add/Change: Bioinformatics BIOL 3XX3 ³⁰³³ OR <u>COMS 2003 Microcomputer Applications</u></p> <p>Delete: <u>COMS 2003 Microcomputer Applications</u></p> <p>Total Hours:</p>	<p>Sophomore Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Junior Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Junior Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Senior Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Senior Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Biological Sciences	7/20/2020

Title	Signature	Date
Department Head	<i>John Johnson</i>	7/24/2020
Dean	<i>Jeff W. Roberts</i>	2020 July 29
Assessment Christine Austin	<i>Christ Austin</i>	7/31/20
Registrar	<i>Sammy Kuebler</i>	8/27/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title:
Biology General Option

Outline change in program:

The new course Bioinformatics BIOL ~~3XX3~~ ³⁰³³ provides overlapping skills and learning outcomes as the computer course so we propose to allow Bioinformatics BIOL ~~3XX3~~ ³⁰³³ to count as the computer elective in this program.

What impact will the change have on staffing, on other programs and space allocation?

None.

Answer the following Assessment questions:

- a. How does the program change align with the university mission?

ATU Mission

Arkansas Tech University is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

The proposed program changes will improve student success and excellence by providing the needed learning outcomes necessary to be a successful environmental science professional today and in the future.

- b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable.

Not Applicable

- c. What is the rationale for this program change?

1. How will the program change impact learning for students enrolled in this program?

This Bioinformatics course addition will allow greater flexibility in meeting the **important computer related skills relevant for this career path.**

2. Provide an example or examples of student learning assessment evidence which supports the changes in the program.

This Bioinformatics course will introduce the students to the program R, a command line software system increasing seen in biology for statistical and graphical analyses. Students in the special topics bioinformatics course did not show much knowledge of command line programs and had no experience with the R package.

As bioinformatics is seen as the interface between large biological data sets and their analysis, it has become a key component in many biology programs. Increasingly, students from biology programs need data analysis skills to manage large data sets and genetic data from online repositories and show knowledge of the programs to manipulate these datasets. In addition, the computer packages employed for these analyses have become common in graduate and professional schools and seen as needed skills for data analysis. Many skills learned in this class are specific to biological

data (e.g., DNA sequences) and are not taught in other disciplines. Student evaluations from this special topics course indicated students learned online analysis of DNA and manipulated genetic datasets with the R package not conducted in other courses. Bioinformatics is taught at UA-F as a 4XXX course, UALR and UAMS have created an entire degree for this concentration, and UCA has a research group for bioinformatics

- b. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions.

As bioinformatics is seen as the interface between large biological data sets and their analysis, it has become a key component in many biology programs. Bioinformatics is taught at UA-F as a 4XXX course, UALR and UAMS have created an entire degree for this concentration, and UCA has a research group for bioinformatics.

- c. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

See the included assessment report for the biology program for the five program assessment learning outcomes. Since Bioinformatics is a focused computer skills course to give a biology focused computer course it is not directly assessed by our program learning assessments, instead it will have its own assessment if it is meeting the computer skills of our majors.

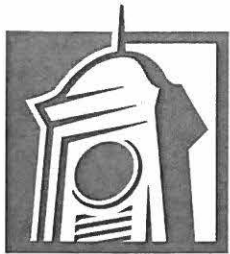
Bioinformatics students will be assessed through their ability to manipulate data sets in the R package through producing summary statistics of the dataset along with a graphical analysis of the data. Furthermore, they will create summary explanations that describe the biological significance of their dataset. This course will expand specific software skills seen as an important criteria in the biology program assessment.

Criteria for success: students will be assessed on their abilities to complete the three areas: summary statistics, graphical data analysis, and summary explanations. The success of each area will be dependent upon completeness and extent of details each student provides about their dataset.

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.

Curriculum Matrix for Catalog Curriculum in __ Biology General Option _____ (enter title for program changing)	
<p>Freshman Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Freshman Spring Semester</p> <p>Add/Change: Math Elective²</p> <p>Delete: Any COMS</p> <p>Total Hours:</p>
<p>Sophomore Fall Semester</p> <p style="text-align: center; color: red; font-weight: bold;">3033</p> <p>Add/Change: Bioinformatics BIOL 3xx3 or any COMS</p> <p>Delete: Math Elective²</p> <p>Total Hours:</p>	<p>Sophomore Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Junior Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Junior Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Senior Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Senior Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Biological Sciences	7/20/2020

Title	Signature	Date
Department Head	<i>John Johnson</i>	7/23/2020
Dean	<i>Jeff W. Ralston</i>	2020 July 29
Assessment Christine Austin	<i>Christ Austin</i>	7/31/20
Registrar	<i>Yammy Wallace</i>	8/27/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title:
Environmental Science

Outline change in program:

3083

3133

The new course Bioinformatics BIOL ~~3XX3~~ provides overlapping skills and learning outcomes as the computer, research, GIS courses so we propose to allow Bioinformatics BIOL ~~3XX3~~ count as one of the two research, GIS, computer related electives in this program and change footnote 4 to include the new course.

4043

The new course Conservation Genetics BIOL ~~4XX3~~ overlapping skills and learning outcomes as the life science electives so we propose to allow Conservation Genetics BIOL ~~4XX3~~ to count as a life science elective in this program and change footnote 2 to include the new course.

4043

What impact will the change have on staffing, on other programs and space allocation?

None.

Answer the following Assessment questions:

- a. How does the program change align with the university mission?

ATU Mission

Arkansas Tech University is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

The proposed program changes will improve student success and excellence by providing the needed learning outcomes necessary to be a successful environmental science professional today and in the future.

- b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable.

Not Applicable

- c. What is the rationale for this program change?

1. How will the program change impact learning for students enrolled in this program?

This Bioinformatics addition will allow greater flexibility in meeting the **research, GIS, computer related electives** requirement for the students. The Conservation Genetics will allow greater flexibility in meeting the life science electives. These additions will also allow students alternative areas of focus with the curriculum.

2. Provide an example or examples of student learning assessment evidence which supports the changes in the program.

The Bioinformatics course will introduce the students to the program R, a command line software system increasing seen in biology for statistical and graphical analyses.

Students in the special topics bioinformatics course did not show much knowledge of command line programs and had no experience with the R package.

Students who completed the special topics conservation genetics course had very little understanding of genetics for conservation purposes prior to the class, and through their readings, discussions, and term papers were able to understand the terms and significance of the genetic underpinnings of conservation efforts.

As bioinformatics is seen as the interface between large biological data sets and their analysis, it has become a key component in many biology programs. Increasingly, students from biology programs need data analysis skills to manage large data sets and genetic data from online repositories and show knowledge of the programs to manipulate these datasets. In addition, the computer packages employed for these analyses have become common in graduate and professional schools and seen as needed skills for data analysis. Many skills learned in this class are specific to biological data (e.g., DNA sequences) and are not taught in other disciplines. Student evaluations from this special topics course indicated students learned online analysis of DNA and manipulated genetic datasets with the R package not conducted in other courses. Bioinformatics is taught at UA-F as a 4XXX course, UALR and UAMS have created an entire degree for this concentration, and UCA has a research group for bioinformatics

- d. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions.

As bioinformatics is seen as the interface between large biological data sets and their analysis, it has become a key component in many biology programs. Bioinformatics is taught at UA-F as a 4XXX course, UALR and UAMS have created an entire degree for this concentration, and UCA has a research group for bioinformatics.

Conservation genetics is an important consideration when managing natural populations. Most conservation efforts are now directed through genetic data and considerations. Conservation genetics is taught at UA-F as a 4xxx course, topics in conservation genetics are taught within the conservation courses at UCA, UALR, & SAU. These universities do not offer a MS in FW, thus, the range of more detailed topical classes are not offered.

- e. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

See the included assessment report for the biology program for the five program assessment learning outcomes. Both conservation genetics and bioinformatics are electives for Environmental Science and are therefore not part of the core assessment plan. However, student learning will be assessed as follows and included in future program assessment reports.

a. bioinformatics:

Program learning outcomes assessment- students will be assessed through their ability to manipulate data sets in the R package through producing summary statistics of the dataset

along with a graphical analysis of the data. Furthermore, they will create summary explanations that describe the biological significance of their dataset. This course will expand specific software skills seen as an important criteria in the environmental science program assessment.

Criteria for success: students will be assessed on their abilities to complete the three areas: summary statistics, graphical data analysis, and summary explanations. The success of each area will be dependent upon completeness and extent of details each student provides.

b. conservation genetics:

Program learning outcomes assessment—students will describe population genetic parameters important for conservation as they analyze a population genetic dataset from two populations and create summary statistics that describe each population, they will also create graphical summaries of the two populations, and summarize conservation concerns for each population. This course will strengthen the knowledge base of environmental science students through a better understanding of the genetic criteria important for natural population management.

Criteria for success: assessment of the exercise will consist of the degree of completeness and details in the summary statistics, graphical summaries, and significant findings in the population concerns.

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.

Curriculum Matrix for Catalog Curriculum in <u>Environmental Science</u> (enter title for program changing)	
Freshman Fall Semester Add/Change: Delete: Total Hours:	Freshman Spring Semester Add/Change: Delete: Total Hours:
Sophomore Fall Semester Add/Change: Delete: Total Hours:	Sophomore Spring Semester Add/Change: Delete: Total Hours:
Junior Fall Semester Add/Change: Delete: Total Hours:	Junior Spring Semester Add/Change: Delete: Total Hours:
Senior Fall Semester Add/Change: Delete: Total Hours:	Senior Spring Semester Add/Change: Delete: Total Hours:

Delete: ²Take two Life Science Elective courses from the following: BIOL 3004: Plant Taxonomy, BIOL 3034: Genetics, BIOL 3054: Microbiology, BIOL 3064: Parasitology, BIOL/FW 3084: Ichthyology, BIOL/AGPM 3104: Introduction to Entomology, BIOL 3134: Invertebrate Zoology, BIOL/FW 3144: Ornithology, BIOL 3174: Physiological Ecology, BIOL/FW 3224: Herpetology, BIOL 4064: Evolutionary Biology, BIOL/FW 4163: Biodiversity and Conservation Biology..

⁴Take two GIS and Research courses from the following: ENVS 4114: Environmental Science Internship, ENVS 4884: Advanced Topics in Environmental Science, ENVS 4954: Undergraduate Research in Environmental Science, FW/GEOG 2833: Introduction to Geographic Information Systems, FW 3074: Habitat Evaluation, FW 4034: Geographic Information Systems in Natural Resources.

BIOL 4043

Add: ²Take two Life Science Elective courses from the following: Conservation Genetics, BIOL 3004: Plant Taxonomy, BIOL 3034: Genetics, BIOL 3054: Microbiology, BIOL 3064: Parasitology, BIOL/FW 3084: Ichthyology, BIOL/AGPM 3104: Introduction to Entomology, BIOL 3134: Invertebrate Zoology, BIOL/FW 3144: Ornithology, BIOL 3174: Physiological Ecology, BIOL/FW 3224: Herpetology, BIOL 4064: Evolutionary Biology, BIOL/FW 4163: Biodiversity and Conservation Biology.

BIOL 3033

⁴Take two GIS and Research courses from the following: Bioinformatics, ENVS 4114: Environmental Science Internship, ENVS 4884: Advanced Topics in Environmental Science, ENVS 4954: Undergraduate Research in Environmental Science, FW/GEOG 2833: Introduction to Geographic Information Systems, FW 3074: Habitat Evaluation, FW 4034: Geographic Information Systems in Natural Resources.



ARKANSAS TECH UNIVERSITY

REQUEST FOR PROGRAM CHANGE

Department Initiating Proposal	Date
Biological Sciences	7/20/2020

Title	Signature	Date
Department Head	<i>John Jackson</i>	7/24/2020
Dean	<i>Jeff W. Ralston</i>	2020 July 29
Assessment Christine Austin	<i>Christ Austin</i>	7/31/20
Registrar	<i>Gammylee</i>	8/27/2020
Graduate Dean (Graduate Proposals Only)		
Vice President for Academic Affairs		

Committee	Approval Date
General Education Committee (Undergraduate Proposals Only)	
Teacher Education Committee (Graduate or Undergraduate Proposals)	
Curriculum Committee (Undergraduate Proposals Only)	
Faculty Senate (Undergraduate Proposals Only)	
Graduate Council (Graduate Proposals Only)	

Program Title: Fisheries and Wildlife Science

3033

Outline change in program: The new courses Bioinformatics BIOL ~~2XX3~~ and Conservation Genetics BIOL 4XX3 provides additional upper division biology elective choices for students in the Fisheries and Wildlife Science Program.

What impact will the change have on staffing, on other programs and space allocation?

None.

Answer the following Assessment questions:

- a. How does the program change align with the university mission?

ATU Mission

Arkansas Tech University is dedicated to student success, access, and excellence as a responsive campus community providing opportunities for progressive intellectual development and civic engagement. Embracing and expanding upon its technological traditions, Tech inspires and empowers members of the community to achieve their goals while striving for the betterment of Arkansas, the nation, and the world.

The proposed program changes will improve student success and excellence by providing the needed learning outcomes necessary to be a successful environmental science professional today and in the future.

- b. If this change in the program is mandated by an accrediting or certifying agency, include the directive. If not, state not applicable.

No Applicable

- c. What is the rationale for this program change?

1. How will the program change impact learning for students enrolled in this program?

This Bioinformatics and Conservation Genetics additions will allow greater flexibility in meeting the **important computer related skills relevant for this career path.**

2. Provide an example or examples of student learning assessment evidence which supports the changes in the program.

In our annual student exit interviews, students have expressed difficulty with program R, a command line software system increasing seen in biology for statistical and graphical analyses and used in Dr. Kellner's Forest Ecology course. Dr. Kellner has echoed the difficulty students have with the exercises in R. The Bioinformatics course will also use program R which would provide another avenue for students to hone their skills in this important subject area.

Over the last decade, FW students have scored lower in the genetics section of the MFAT test than Biology student and the national average. We expect that students completing Conservation Genetics will have a better general knowledge of genetics (see Biology Learning Outcomes report). We received positive comments from students who completed the special topics conservation genetics course. Students in

particular mentioned the coordination of conservation and genetics topics which increased their understanding of this important field.

- b. How does this program fit in the current state of the discipline? Include Arkansas institutional comparisons. If Arkansas educational institutions do not have the course or program provide comparative examples from regional educational institutions.

A variety of institutions require Genetics in some form in the Fisheries and/or Wildlife Science degree. For instance, Arkansas State University requires Genetics in their B.S. in Wildlife, Fisheries and Conservation degree. Similarly, Tennessee Tech University also requires Genetics in their B.S. in Wildlife and Fisheries Science degree. Conservation Genetics is particularly appropriate for the FW field as many of our graduates work in the conservation field.

Bioinformatics is a relatively new subject offering, involving the investigation of large data sets often associated with genetic and other techniques. As a new area of inquiry it is not offered at very many Universities, but is an exciting, emerging field.

- c. Attach a detailed assessment plan including three to five specific program student learning outcomes, means or instructional measures to assess each outcome, identify program courses where learning will be assessed, and performance standards or criteria for success which demonstrate student learning for each outcome. (Examples for assessment plans/curriculum mapping can be found at the Office of Assessment and Institutional Effectiveness web page.)

Conservation Genetics and Bioinformatics would both be included as Biology Electives in the FW Science curriculum. Currently, the B.S. in FW science requires two Biology elective courses from a list that includes: Plant Taxonomy, Dendrology, Parasitology, Entomology, Genetics, Physiological Ecology, Coastal Ecology, Animal Behavior, and/or Evolutionary Biology. Addition of Conservation Genetics and Bioinformatics would give students more options to fit Biology electives that meet their interests and schedules. Conservation Genetics would help FW students meet the program learning objective having students achieve mastery of basic biological principles. As this is a 4000-level course we would expect students to obtain mastery of conservation genetics principles. We assess these biology elective courses annually through student exit interviews and performance on MFAT tests. In addition, we will ask Dr. Yamashita to share results of his course assessment for FW students. Bioinformatics would help students become proficient in the use of quantitative and analytical skills applicable to Fisheries and Wildlife. We assess these biology elective courses annually through student exit interviews and performance on MFAT tests. In addition, we will ask Dr. Yamashita to share results of his course assessment for FW students.

If this course will affect other departments, a Departmental Support Form for each affected department must be attached. The form is located on the Curriculum forms web page at http://www.atu.edu/registrar/curriculum_forms.php.

In the attached matrix, include requested changes in the matrix and include course number and title.

Curriculum Matrix for Catalog Curriculum in _____ Fisheries and Wildlife Science _____ (enter title for program changing)	
<p>Freshman Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Freshman Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Sophomore Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Sophomore Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Junior Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Junior Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>
<p>Senior Fall Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>	<p>Senior Spring Semester</p> <p>Add/Change:</p> <p>Delete:</p> <p>Total Hours:</p>

⁴Must include at least two courses from the biology group (BIOL 3174 Physiological Ecology, BIOL 3034 Genetics, BIOL 4064 Evolutionary Biology, BIOL 3064 Parasitology, AGPM 3104 Introduction to Entomology, BIOL 3184 Animal Behavior, BIOL 3004 Plant Taxonomy, BIOL 4044 Dendrology, BIOL 4094 Coastal Ecology, BIOL 3XX4 Bioinformatics, BIOL 4XX4 Conservation Genetics)

3033

4043

Biology Program 2019-2020 Learning Outcomes Report

The biology department faculty defined five learning outcomes for students majoring in biology. They mapped the introduction, reinforcement, and mastery expectations for courses in the biology curriculum (see appendix). Then a subset of courses on the map identified projects or assignments that could be scored on a common rubric assessing student learning.

1. Students will construct reports which analyze data using scientific models to justify their conclusions.
2. Students will evaluate the interactions between human and biological systems, and to articulate and convey societal relevance to the general public.
3. Students will describe characteristics and diversity of life.
4. Students will demonstrate common lab procedures, operate lab and field equipment, perform sterile techniques, and conduct online data analyses.
5. Students will find, analyze, and critique current scientific literature and present their evaluation in written and oral formats.

1. Students will construct reports which analyze data using scientific models to justify their conclusions.

Scientific reports are introduced in Principles of Biology (BIOL 1114). The concept is reinforced in Zoology (BIOL 2124), Botany (BIOL 2134), and Genetics (BIOL 3034). Mastery level of this concept is expected by Ecology (BIOL 3114). In 2018 and 2019, assessment of this learning outcome was reported for BIOL 1114, 2124, 3034, and 3114. The rubric used had 14 criteria. Patterns within the 14 criteria indicate that the most challenging aspects of scientific reports for our students include the following:

- Hypotheses are clearly stated, testable and consider plausible alternative explanations.
- Conclusion is clearly and logically drawn from data provided. A logical chain of reasoning from hypothesis to data to conclusions is clearly and persuasively explained. Conflicting data, if present, are adequately addressed.
- Limitations of the data and/or experimental design and corresponding implications discussed.
- Paper gives a clear indication of the significance of the research and its future directions.

Proficiency in this criteria shows a healthy progression from 1114 to 2124 or 3034 to 3114. However, is the current level of proficiency satisfactory? Action items for 2020? Are all 14 criteria necessary? What is best method for calculating composite score? What level of proficient or emerging is satisfactory? If you teach courses that construct reports, consider how we can improve this learning outcome.

Ty Yamashita commented, “In much of my courses, we do not conduct report analyses that utilize all the criteria in the rubric. The only class where we do such is in seminar where the students conduct a review of an experimental paper. In other classes we hit on a few parts of the rubric: Introduction: Context; Discussion: Limitations of design; Discussion: Significance of research; References and use of Primary Literature. The rubric should be adjusted as it appears to focus upon research or experimental data presentation (lab reports) and may not be appropriate for class term papers or assignments regularly required by faculty. Undergraduate research posters and presentations are another avenue for assessment of this outcome with this rubric.”

Jamie Dalton suggested, “The current level of proficiency for students in Biology 1114 needs to improve. I have started doing peer reviews for their first formal lab report as I think most of us are doing. Also, when I give directions for doing the reports at the beginning of the

semester, I lead students as they work in groups to write out a sample report based on an experiment and data I give them. We go step-by-step through each part of the report. In 2020 I plan to hand out the rubric, and have the students look at it as they write out each section of the report. I know this is time consuming, but I think it is worth it because many of these students have limited writing skills. I think it is good to have very detailed criteria, so the 14 we have now are important. However, we do not have time for repetition in the experiments, so that could be eliminated in Biol 1114. For composite scores we could give 1 point for emerging, 2 for developing, 3 for intermediate, and 4 for proficient for each criteria.”

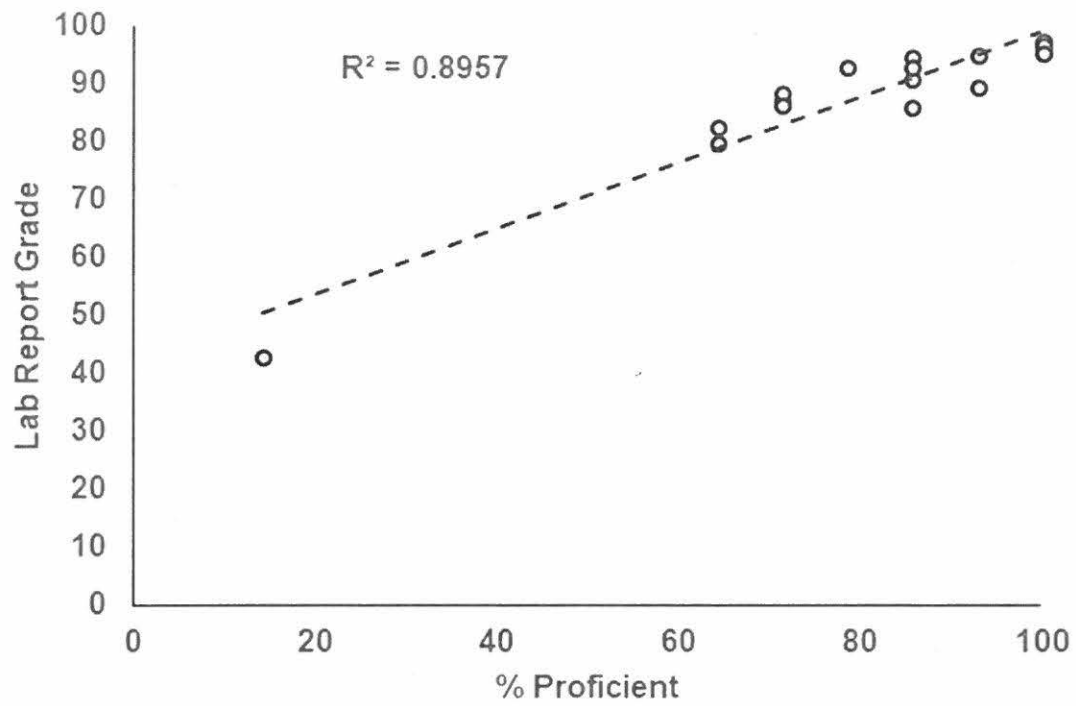
Doug Barron commented, “Based on our discussions I propose that we modify the LO1 rubric to something similar to what is attached. This broadens the criteria and consolidates them when possible. I think this will make it easier to analyze and interpret the data. I also propose that for mastery-level courses (e.g. Ecology) the student grade be substituted for the LO1 rubric. This is because a) the rubric used in grading should include all criteria of the LO1 rubric, b) scores on the grading rubric are the basis from which we complete the LO1 rubric, and c) the relationship between LO1 score and grade is extremely tight ($R^2 > 0.75$; pasted below). For this we would basically consider Proficient to be grades A or B, Intermediate to be C, and Basic to be D and F. The use of grades does not seem appropriate for introductory or reinforcement courses - since in those cases grades do not necessarily reflect proficiency (e.g. an A in Principles might only be "Basic" or "Intermediate").

While I wish it were higher, I think 70-80% proficiency in Ecology is satisfactory. Particularly considering this includes FW students (for which Ecology is not a mastery level course)

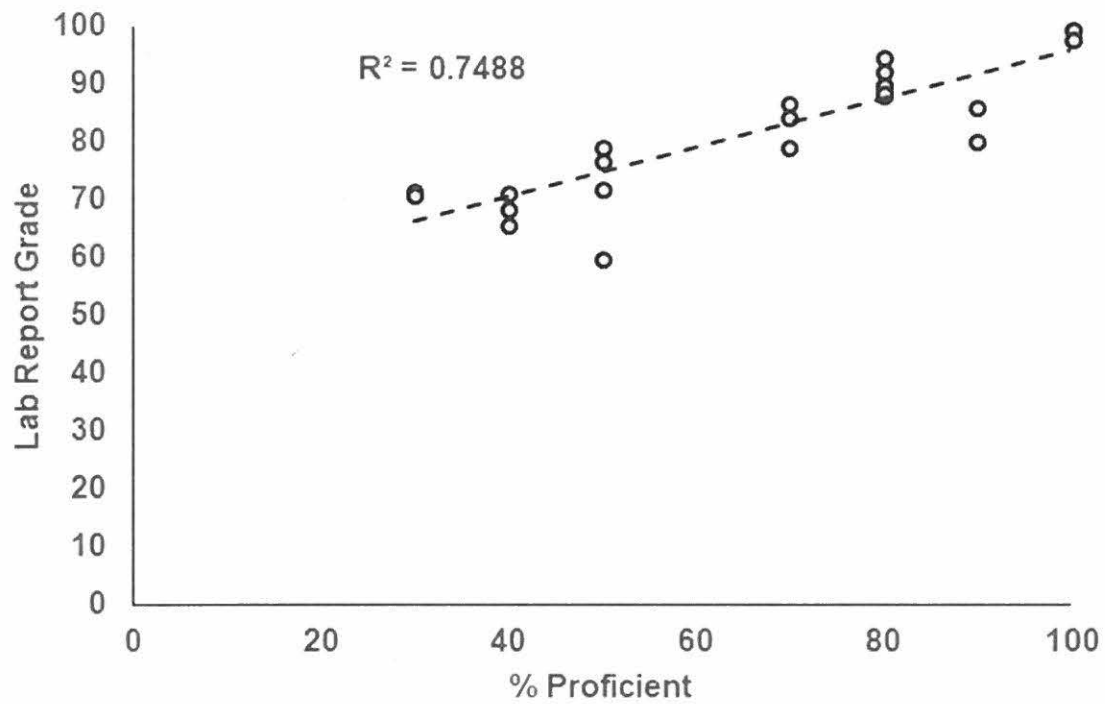
It seems like it would be best if everyone used the same reporting template in Excel. I know this consistent format would be easier on you, plus it could be set up to auto calculate a composite score (e.g. % of proficiency across criteria). I could help you set this up if desired.

Now that we have identified challenging areas we can focus more clearly as we guide students in future semesters.

I will say I love the design of the Natural Resource Communications course – which spends many weeks carefully drafting and revising lab reports. I think this in-depth exposure is ultimately what is required to instill a solid understanding of scientific writing, though I don’t know how it could be integrated into our BIOL curriculum.”



Fall 2018 Ecology regression

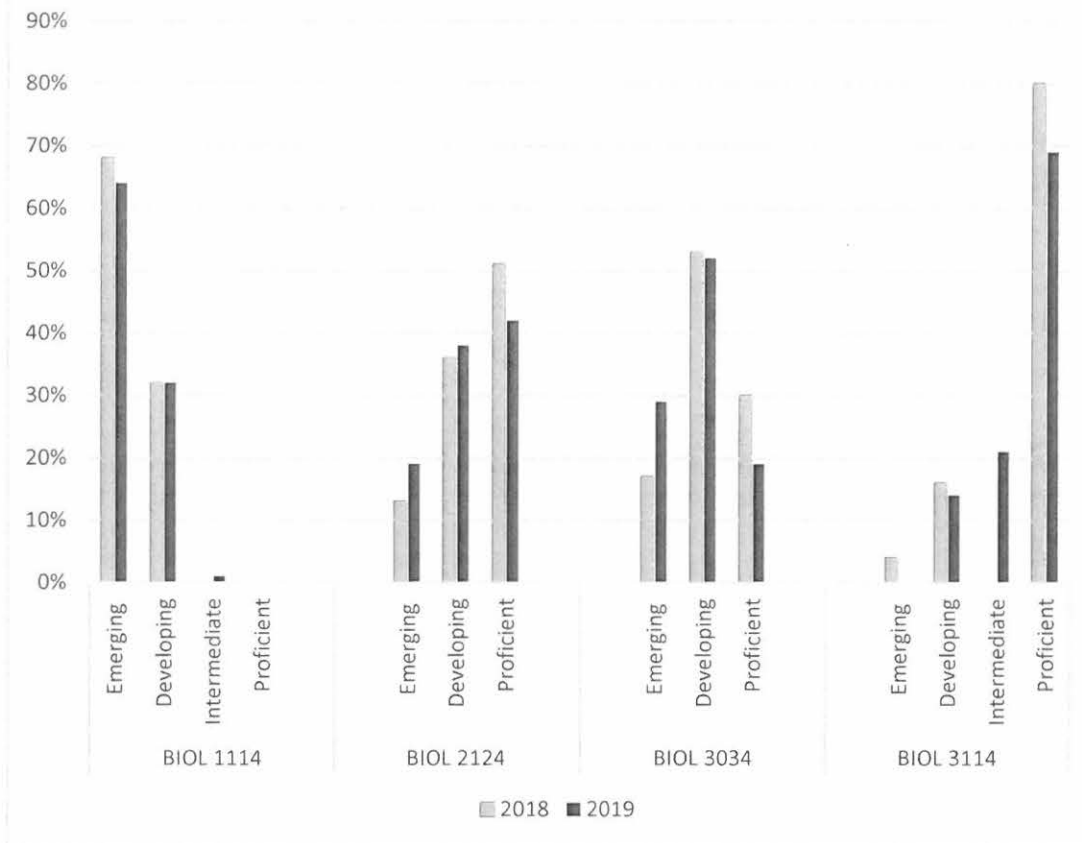


Fall 2019 Ecology regression

Doug Barron suggest modifying the current rubric as follows...

Criteria	Basic	Intermediate	Proficient
INTRODUCTION			
Provides accurate and relevant context			
States and justifies valid hypotheses			
METHODS			
Provides detailed and well-designed methods			
RESULTS			
Clearly presents data in tables/figures			
Describes results concisely and completely (including statistical analyses as relevant)			
DISCUSSION			
Bases interpretation on stated results			
Places findings in broader scientific context			
Considers study limitations			
REFERENCES			
Properly cites primary literature			

Construct reports which analyze data using scientific models to justify their conclusions.



2. Students will evaluate the interactions between human and biological systems, and to articulate and convey societal relevance to the general public.

Human interactions with biological systems are introduced in Principles of Biology (BIOL 1114). The concept is reinforced in Botany (BIOL 2134), and Genetics (BIOL 3034). Mastery level of this concept is expected by Ecology (BIOL 3114). In 2018 and 2019, assessment of this learning outcome was reported for 3034, and 3114. Assessment of this criteria show most students are proficient in BIOL 3034 and 3114.

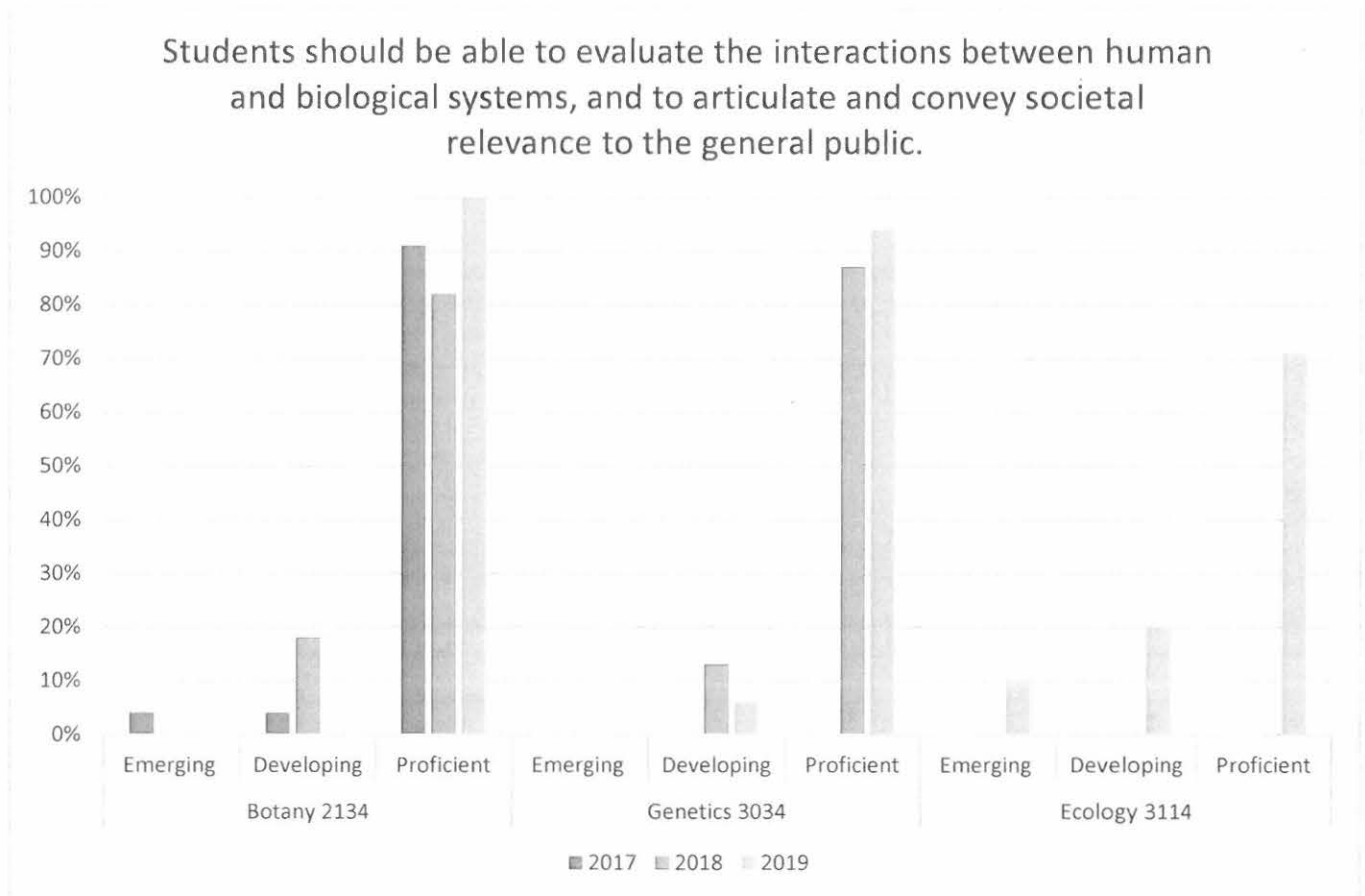
Action items for 2020? Do we need to assess introduction of this concept? Is the current level of proficiency satisfactory? If you teach courses that are mapped for this outcome, consider how we can improve this learning outcome.

Jamie Dalton suggested, “I think in Biol 1114 we could add some case studies that address the effect of human activity on the environment. We really focus mostly on biochemistry, cell biology, genetics and the basics of evolution. We don’t have much time to get into environmental issues, but I think through case studies, we could definitely stress those issues more.”

Ty Yamashita commented, “I do not think we need to modify this outcome and the proficiency level appears fine. The rubric for this outcome is better for most of my courses but unless a paper assignment is reviewed, you may not fully measure each component of the rubric. I have short (2-3 pp) paper assignment in genetics and then a question on a lab report. I can glean some aspects of the rubric for the learning outcome, but full consideration is not conducted. In molecular genetics,

seminar, and bioinformatics, the rubric is more appropriate for student papers, and I can glean data from those courses. In the molecular genetics and seminar courses, we conduct assigned readings with student discussions. I am unsure how to adequately apply the rubric to these discussions.”

Doug Barron commented, “I am not altogether convinced that my asking a single essay question about human/biological interactions adequately assesses proficiency in this learning outcome for Ecology. Unfortunately I do not currently have space for a more in-depth assignment, though I will consider other options for this upcoming year.”

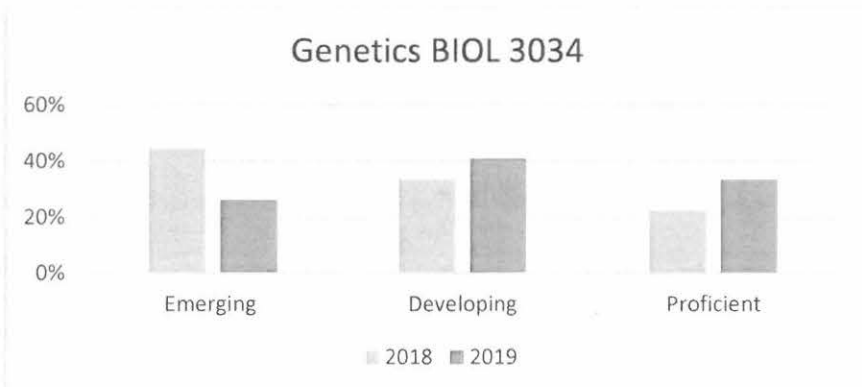


3. Students will describe characteristics and diversity of life.

Describing the characteristics and diversity of life is the core of biological concepts. It is introduced in Principles of Biology (BIOL 1114). The concept is reinforced in Zoology (BIOL 2124) and Botany (BIOL 2134). Mastery level of this concept is expected by Genetics (BIOL 3034) and the MFAT exam. In 2018 and 2019, assessment of this learning outcome was reported for BIOL 3034, 4094 and the MFAT exam.

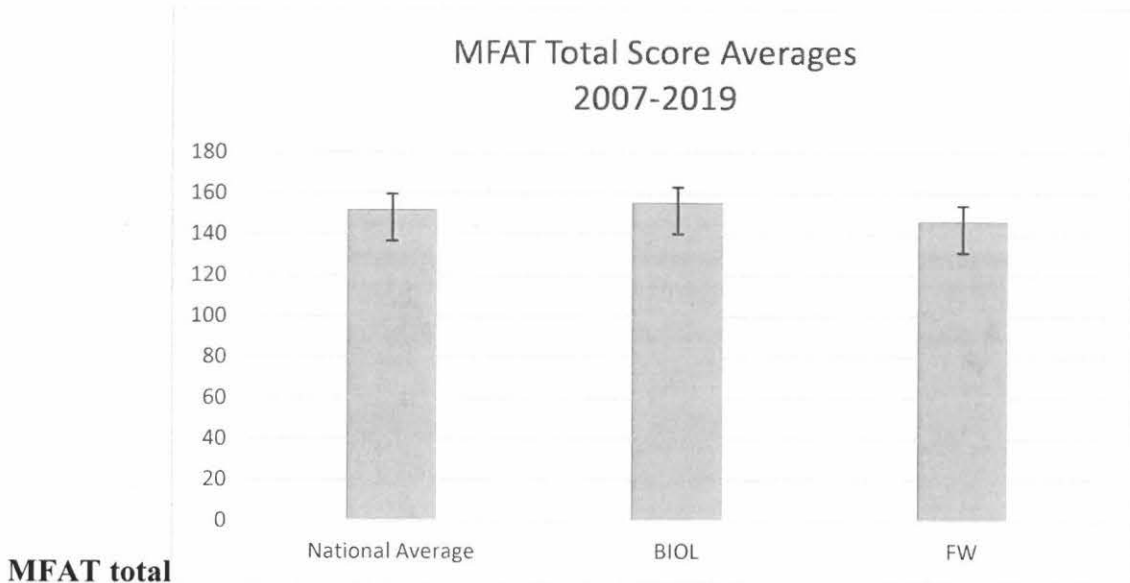
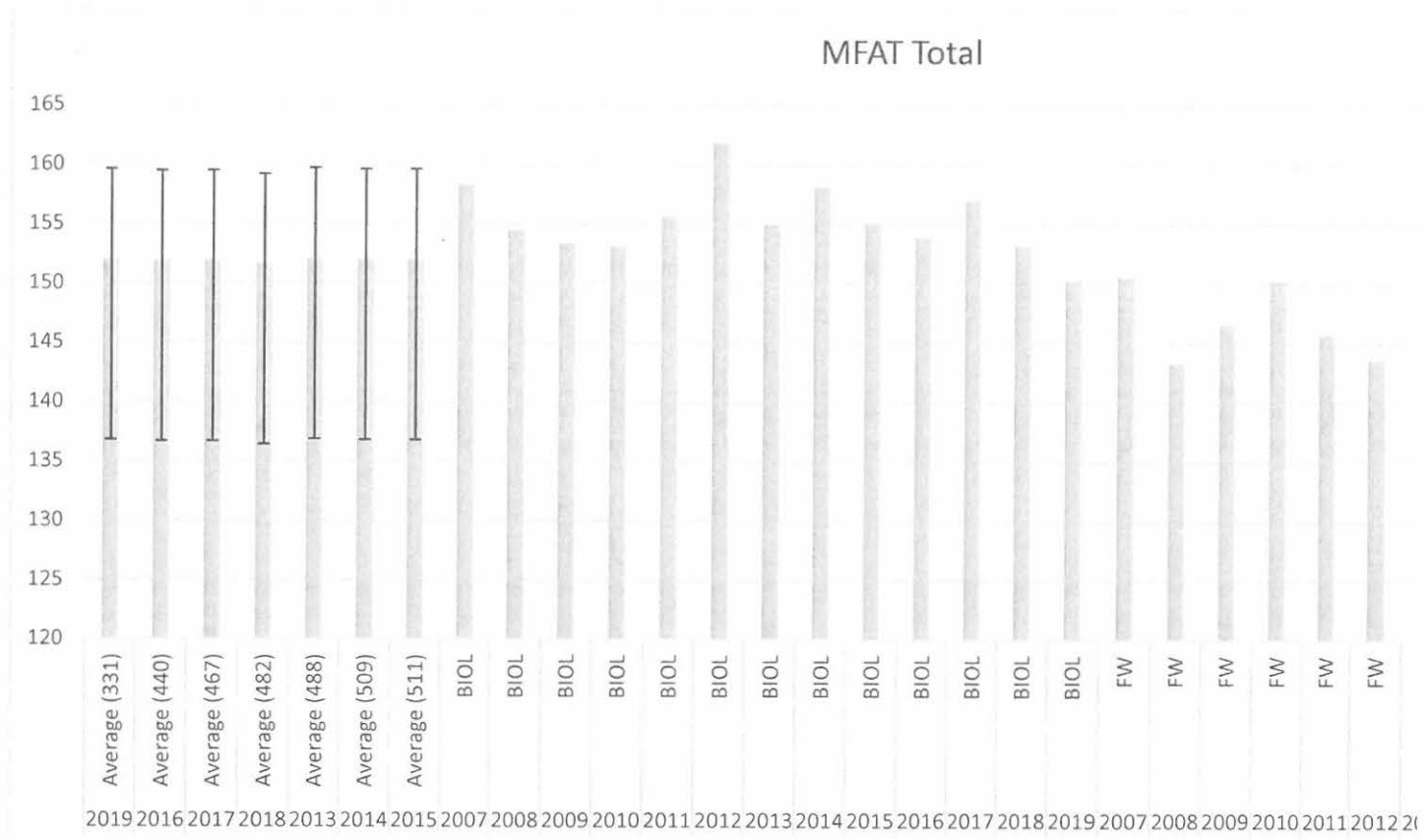
Ivan Still suggests, “Mastery of this should be achieved by the END of the core courses, and so Genetics, Micro, Physiology and Ecology should all be in here. One of the big things we are missing is relevant progression data for LO3 from BIOL1114 to the 3000 level mastery core courses, especially as the MFAT not only deals with content knowledge but also critical thinking. So I think that that is a huge action item for 2020, if we are thinking about how the curriculum may need to be developed to meet our expectations and, of course, for students to be competitive in the workplace. So having indicated an issue, here's a proposal to deal with that issue: I suggest that specialists in their fields develop a set of questions that could be input to final exams/course assignments to assess elements of this LO in the different core courses (I believe I had forwarded such multiple choice questions for Cell aspects to Eric when we initially started all this discussion, but I can re-email them as necessary).”

Ty Yamashita commented, “My genetics course tangentially examines this outcome from a molecular perspective and investigate two rubric components: Characteristic of life and Making Connections (How mechanisms, pathways, organelles, organs, and organ are involved in each the characteristics of life). The MFAT may not capture more nuanced aspects of this outcome, but a good background knowledge of this outcome will be reflected in MFAT scores.”

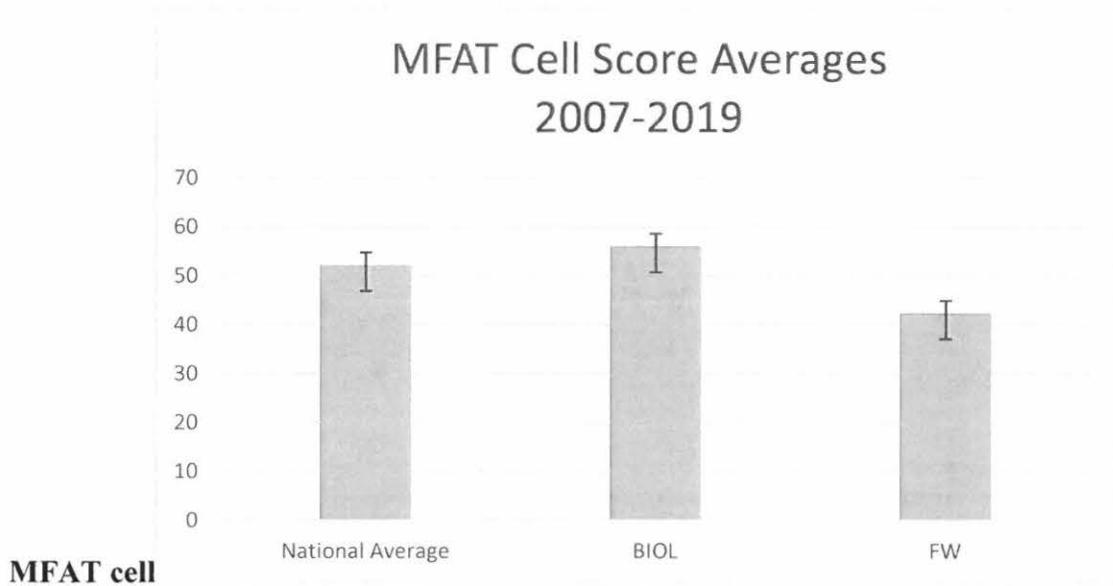
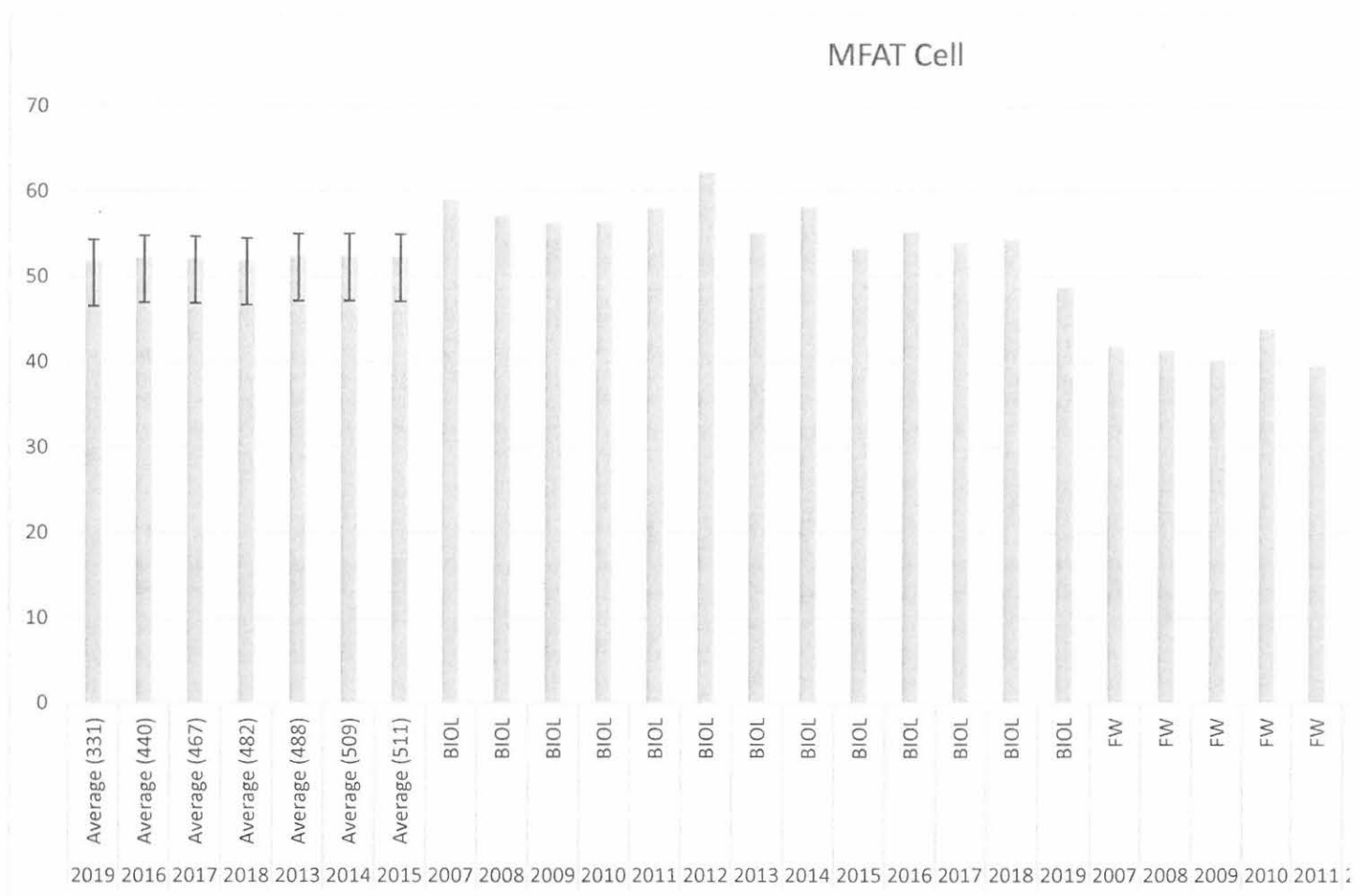


MFAT scores for BIOL are usually typically satisfactory and occasionally mastery level. On the following graphs the national averages including between 331 and 511 institutions. The positive error bars are +5% of the national average and the negative error bars are -10% of national average. Then compared to the following table to determine learning outcome.

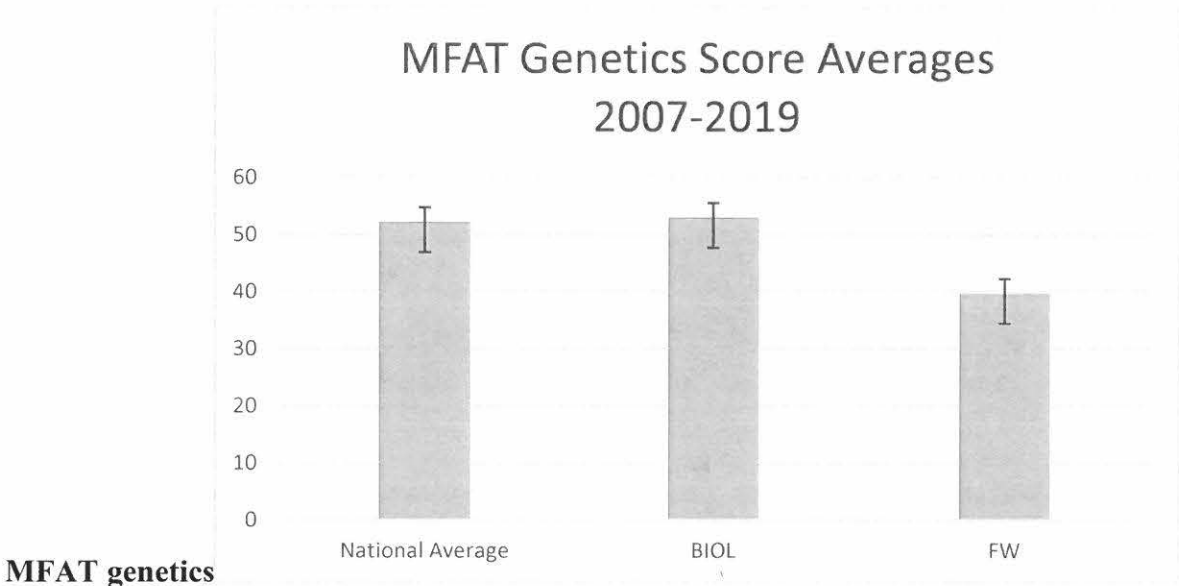
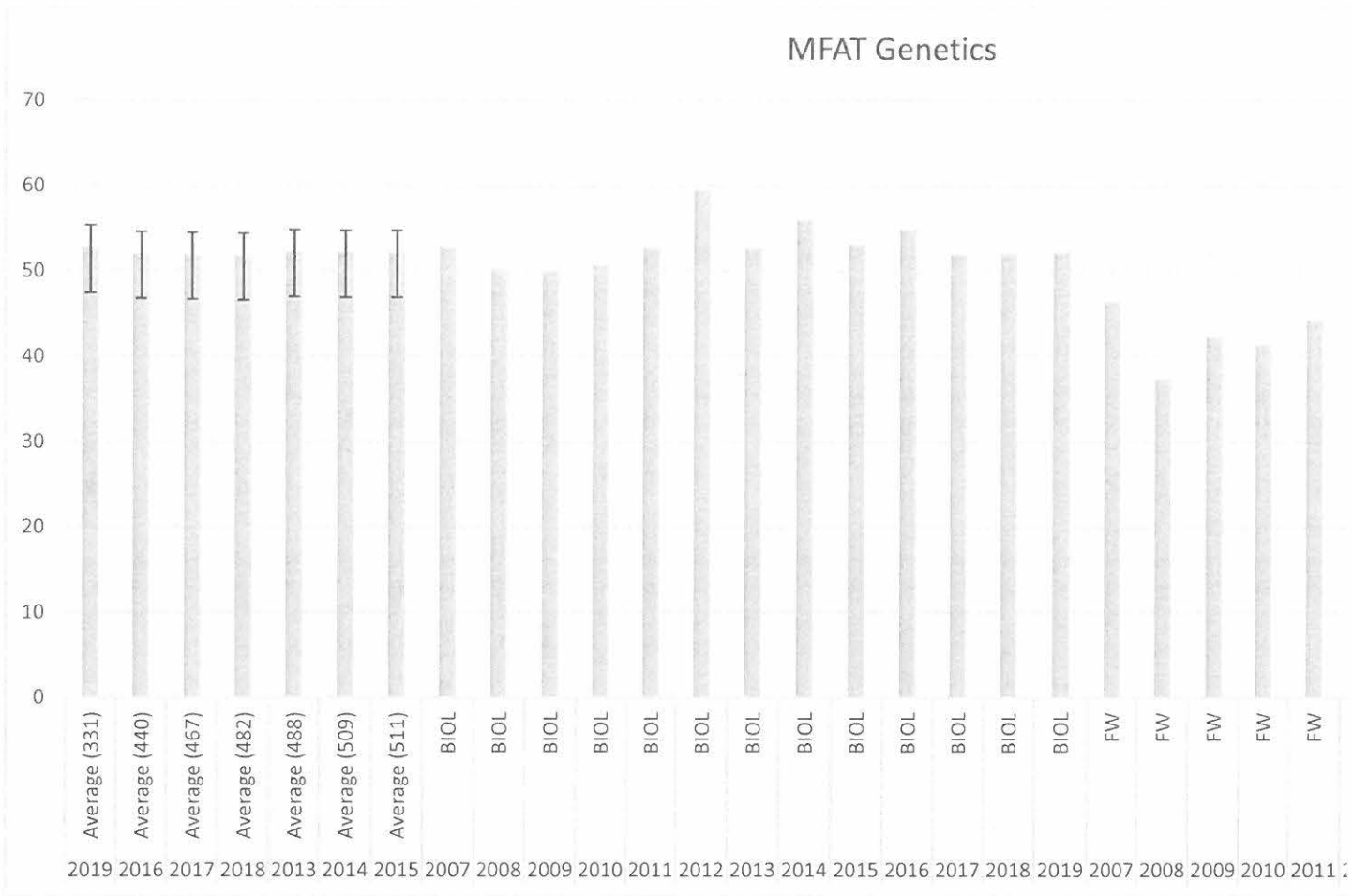
	Deficient	Needs Improvement	Satisfactory	Mastery
MFAT Scores of Cell, molecular, and organismal and ecology)	Scores greater than 10% below the national average	Scores greater than 10% but less than 5% below the national average	Scores at the national average $\pm 5\%$	Score over 5% above national average



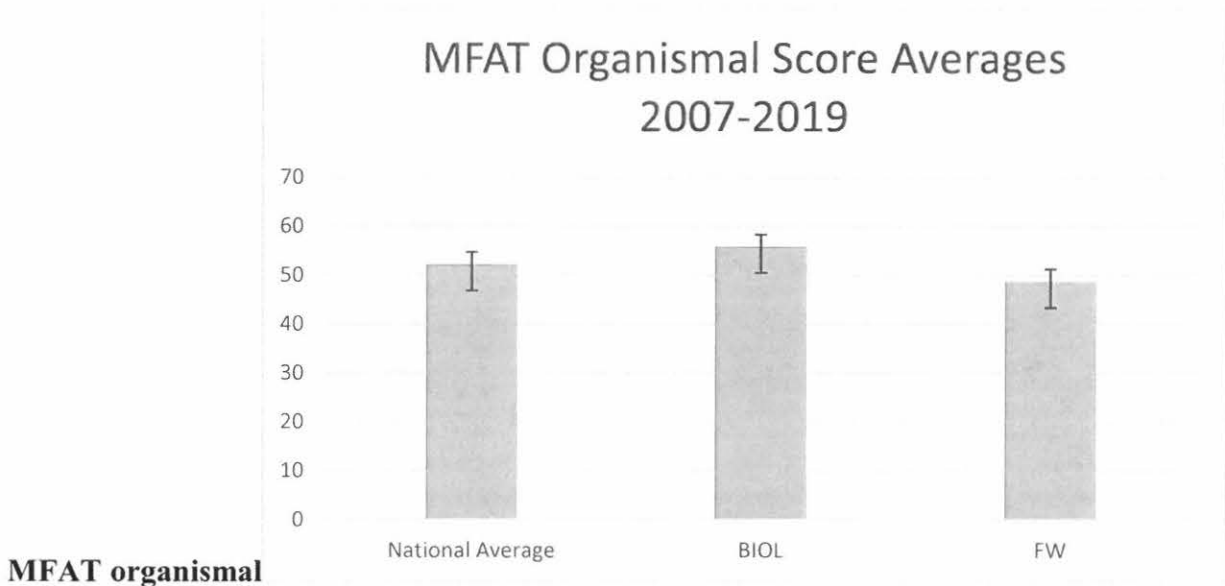
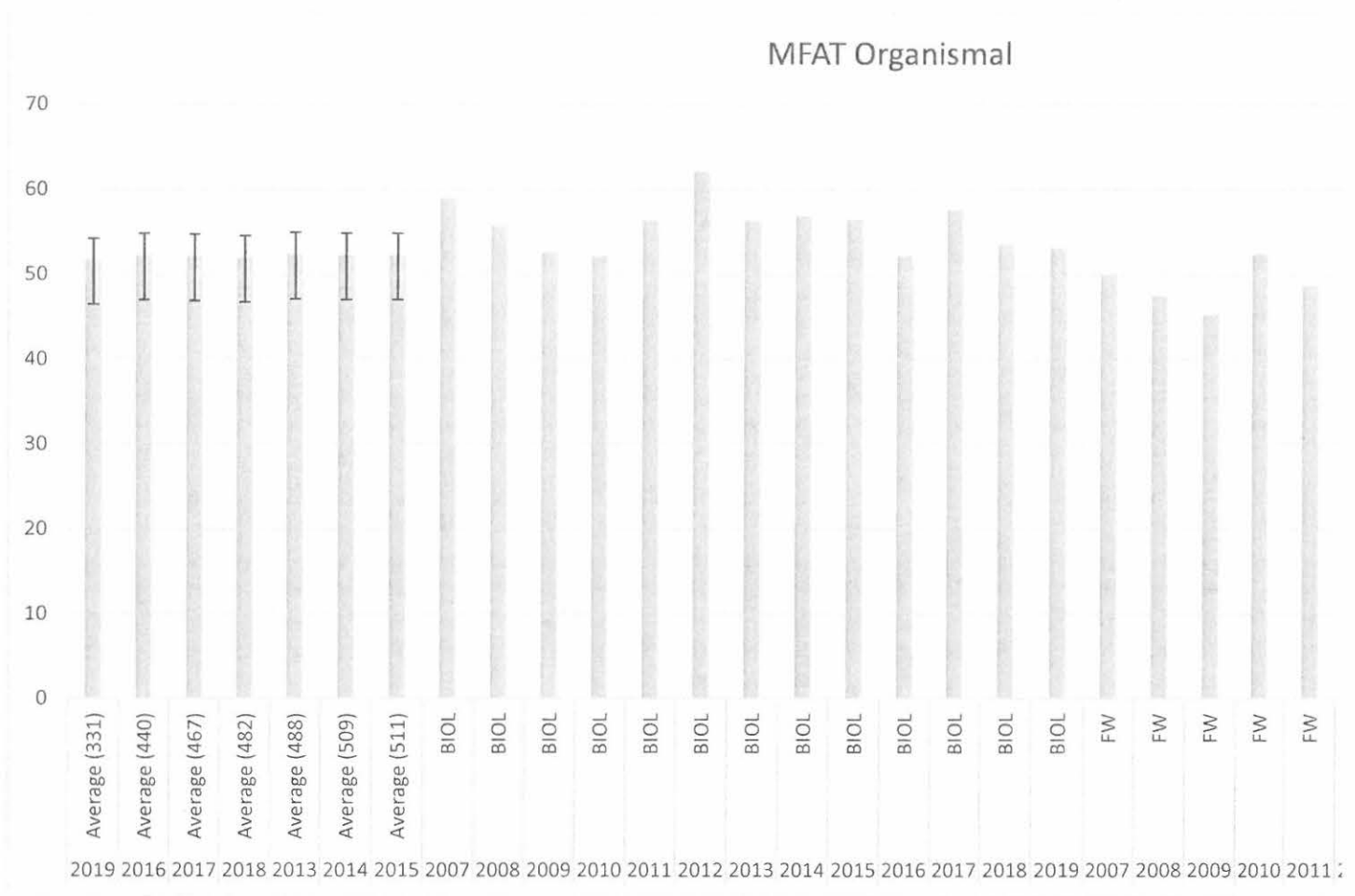
MFAT total



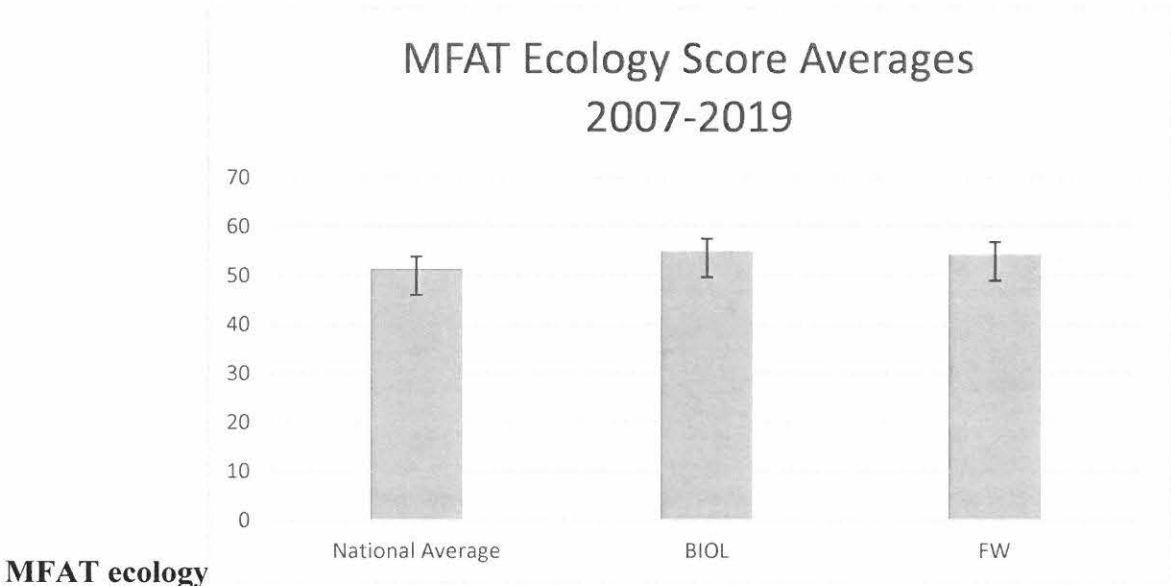
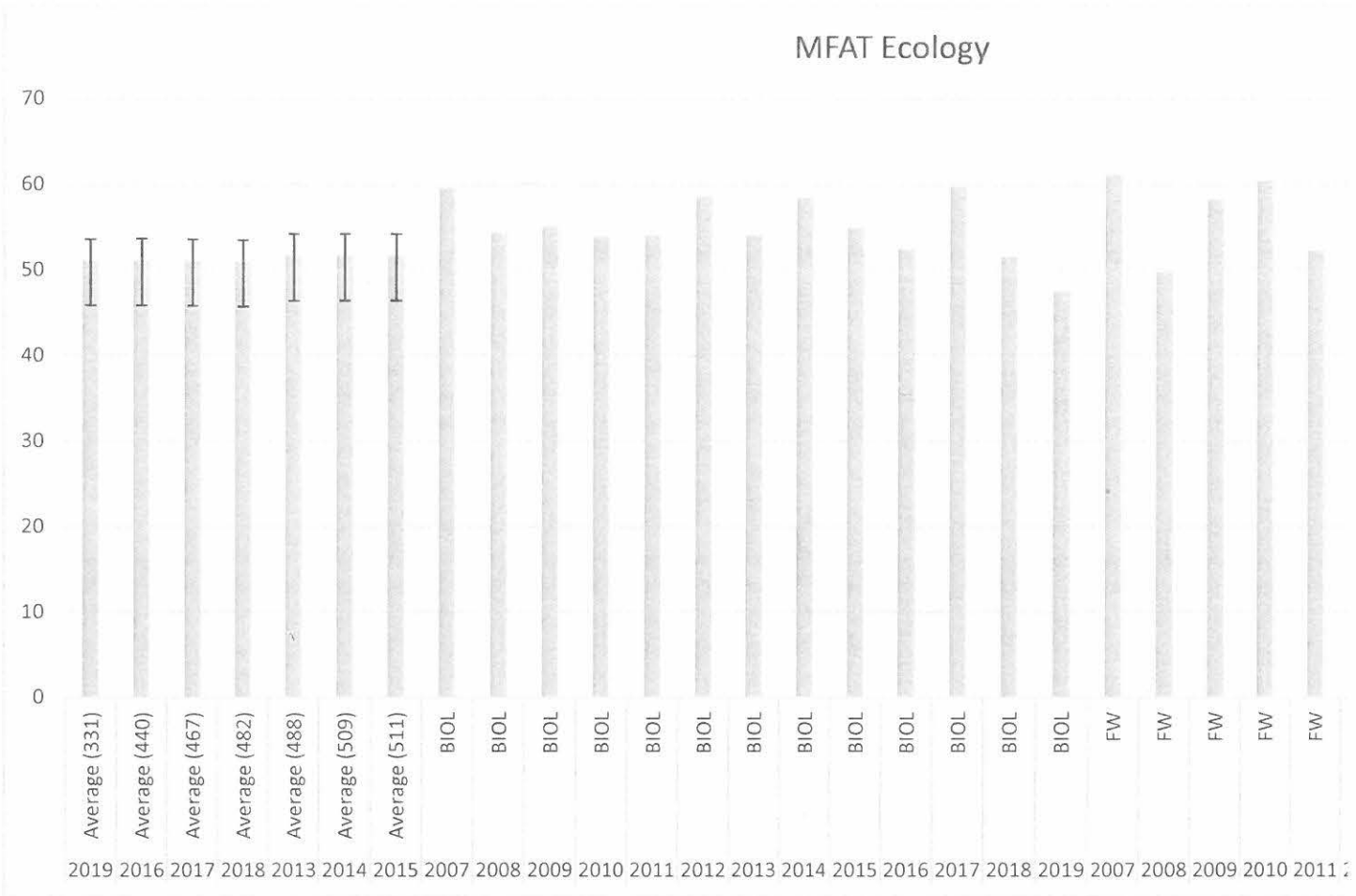
MFAT cell



MFAT genetics



MFAT organismal



MFAT ecology

4. Students will demonstrate common lab procedures, operate lab and field equipment, perform sterile techniques, and conduct online data analyses.

Lab procedures are introduced in Principles of Biology (BIOL 1114). The lab procedures we currently assess include Microscopy, DNA Isolation, Lab Safety, and Dissection. In 2018 and 2019, assessment of this learning outcome was reported for BIOL 1114, 2134, 3034, and 3054. Very high levels of proficiency in Principles (1114) and Microbiology (3054) but not Botany (2134) indicates instructors should clarify the use of the rubrics before conclusions are reached.

Microscopy

Introduced in Principles	92% Proficient
Reinforced in Botany	2018 92% Developing 8% emerging
2019	98% Developing 2% emerging
Mastery in Microbiology	100% Proficient

Genetics submitted results on DNA Isolation and Lab Safety indicating 90% proficiency.

Action items for 2020? The results show our students are learning laboratory procedures in our program.

Ty Yamashita commented, “The molecular genetic’s lab book scores should assess this outcome. Furthermore, bioinformatics is focused on online data analyses and can assess this outcome as well. Undergraduate research posters and presentations are another avenue for assessment of this outcome with this rubric.”

Suggested action items for 2020: (from Cindy and Donna) We need to go back to the drawing board on the microscopy assessment, because we did not establish one assessment tool nor one uniform scoring system across the courses that gave a microscopy quiz. As a result, the assessment data collected so far is hard, if not impossible to analyze.

We suggest the following student outcomes for microscopy:

- 1. Students will demonstrate the ability to setup and return the microscope to default settings;**
- 2. Using proper technique, students will demonstrate the ability to focus on a specified microscopic object. (note: emphasize focusing technique, not identification of the microscopic object)**

We could streamline the current rubrics (see appendix) so that one quiz/rubric is used in all courses, or each instructor could use their own quiz or rubric. Either way the **assessment scores** need to be **reported as emerging, intermediate, or proficient for each of the two student outcomes.**

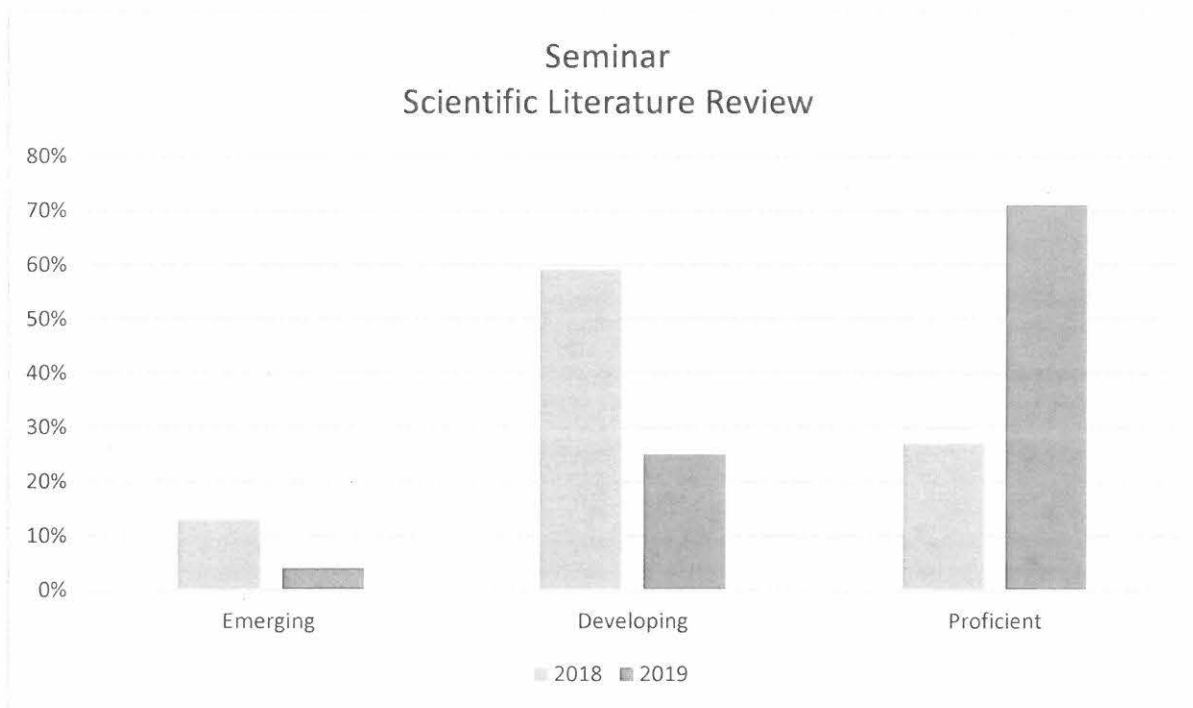
The same process of clearly stating the desired student outcomes for each technique, and developing a scoring rubric that assigns emerging, intermediate, and proficient scores to each outcome needs to be developed for the other techniques under LO4. e.g. Lab safety, and dissection.

Doug Barron commented regarding field techniques in Ecology (Biol 3114), “We do little direct training on techniques. The only thing we introduce is how to sample plants (e.g. DBH – which should be reinforcement from botany), macroinvertebrates (kick net sampling), and animal behaviors (e.g. scan sampling, focal animal sampling). I therefore think it will primarily be used for introduction. I do not currently assess the Learning Outcome in Ecology, but am open to doing so if desired.

5. Students will find, analyze, and critique current scientific literature and present their evaluation in written and oral formats.

Scientific literature and presentations is a keystone concept in biology. The concept is introduced in Zoology (BIOL 2124) and reinforced in Genetics (BIOL 3034). Mastery level of this concept is expected in Biology Seminar. In 2018 and 2019, assessment of this learning outcome was reported for 3034 and Biology Seminar.

Proficiency in this criteria shows a healthy progression from 2018 to 2019 in Biology Seminar. Genetics shows high level of proficiency. Rubric used in Seminar had 13 criteria. Is the current level of proficiency satisfactory? Action items for 2020? Are all 13 criteria necessary? What is best method for calculating composite score? What level of proficient or emerging is satisfactory? If you teach courses that are mapped for this outcome, consider how we can improve this learning outcome.



Doug Barron is planning to assess this learning outcome this semester for Environmental Seminar (ENVS 3111). Students in class this semester are choosing, presenting, and discussing scientific articles.

Ty Yamashita commented, “The seminar students conduct topic or paper reviews in their presentations and this rubric appears to work well in that course.”

Discussions Requirements

1. Two people/ discussion. Discussion leaders will read the chapters and lead the discussion.
2. Discussion leaders should summarize important points and lead the group discussion. What were the objectives of the Chapters? Anything controversial? What did you not understand? Did you like the reading? What were the important take home messages?

3. Other participants will turn in one page summary (at least 400 words) of the articles and three discussion questions they would like to ask. These questions should be worded to generate discussion. The summaries should reflect what you **thought** about the articles. Were they interesting? How does it fit in with what you have learned in biology courses? Does the topic have relevance to social issues? How did the topics extend/reinforce what you know about scientific methods & knowledge?

How to read a scientific paper assignment

For this assignment, conduct a web search on the terms “How to read a scientific paper, science writing, or reading primary literature.” Find an article or outline that you think gives good ideas and methods to obtain the most from data driven science article. After reading it, write a critique of how it helped with your reading skills & also point out what you already knew & what shortcomings it had. With the information from your article, obtain a data driven science article (see your instructor) and critique it as thoroughly as you can. Turn in a copy of the source you read to gain the information for your critique, your critique of your source, and your critique of the science article. You will be graded on how thorough your critiques are and how well you were able to understand the details of the articles. Do not use more than three quotes in your paper. We will discuss your critiques on the due date.

Conducting a follow up experiment assignment

For this assignment, you will read a data driven science article and propose how you would extend or conduct a follow up experiment. You will have to create an outline of your proposed experiment with introduction, hypotheses, specific aims, materials and methods, potential results & your discussion/interpretation of the potential results. We will discuss your proposed experiment on the assignment’s due date.

Biology 4991 Extending published research: Writing a research proposal guidelines

Your proposal to extend/review a published research article should follow these guidelines

1. Your proposal should be written in narrative form, organized as a NIH application with the following sections:

A. Abstract/Summary

B. Research Plan

1. Specific aims

2. Significance

3. Innovation

4. Approach

5. Summary

***You should include figures and tables from previous work or other’s research and those that show how you would present your data.

C. Assurances

1. Human subjects

2. Vertebrate animals

In this section you should describe how you plan to follow guidelines for human subjects and vertebrate animals. See the NIH human subjects guideline pdf & the NIH website for animal care: <https://oacu.oir.nih.gov/animal-research-advisory-committee-guidelines>

D. Resources

What resources or specific lab/clinical equipment will you need to purchase to make your research successful? What parameters will you fix or specify on the equipment in your experiments? Will you need to collaborate with another investigator for equipment/techniques outside your expertise?

***Review the NIH grant writing tips (Getting an NIH grant pdf) for explanations of the research proposal and how to create a competitive one.

2. Also review the rubrics for evaluation of the research proposals. Pay attention to the amount of detail required. You have to describe the project and experiments such that a reviewer (instructor) can understand what you are going to do and if you have fully considered how you would do it and what you think the expected outcomes and pitfalls will be.
3. The fundamental principles of writing a successful grant proposal (Chung & Shavuver 2008) is a good summary of how to put a proposal together.
4. You should proofread, proofread, & proofread for grammar & organization.
5. Ask questions if you are having bumps and trouble spots!

Conclusion

The conclusion of this study is incomplete. As program director I compiled the data and presented it here. Now we need to consider these results and determine what level is satisfactory and where we need to focus on improvement both in student learning but also in the assessment procedures and rubrics.

Concerning classes that I teach, I am planning on increasing the number of lab reports in Zoology (BIOL 2124) and the quality of feedback given to students especially concerning hypotheses, conclusions, limitations, and significance of laboratory experiments and reports. I hope this will improve the proficiency of students on writing scientific reports (learning outcome 1) and by inspection of some of the most challenging aspects and focusing on these should improve student proficiency. Patterns within the 14 criteria indicate that the most challenging aspects of scientific reports for our students include the following:

- Hypotheses are clearly stated, testable and consider plausible alternative explanations.
- Conclusion is clearly and logically drawn from data provided. A logical chain of reasoning from hypothesis to data to conclusions is clearly and persuasively explained. Conflicting data, if present, are adequately addressed.
- Limitations of the data and/or experimental design and corresponding implications discussed.
- Paper gives a clear indication of the significance of the research and its future directions.

Students in Principles of Zoology (2124) labs during 2020 will complete four full lab reports. Previously they completed two or three full lab reports with additional worksheets designed to help them analyze experimental results. They will also include more class discussion concerning hypotheses and conclusions. I'm considering ways to include a peer review element to help students with report writing skills.

Is there any element of this analysis that could be improved? I am including the data file as well so you can take a deeper dive than the summary results presented here. I removed all identifying information from the data tables. If the format in these tables is not clear and you need additional information, I'm happy to help.

Now we need all the faculty in the department to examine these results and consider how the courses they teach relate to these learning outcomes. Consider the results and how they relate to the courses you teach. If you develop plans and articulate them to me, I can include them in our final report. Please communicate these ideas and plans to me so I can include them in the final report and plan for 2020. Also, don't forget that you can include discussions of teaching modifications informed by departmental assessment in your annual teaching portfolios due this month. So include these discussions in your portfolios and send them to me to include in this report. Thanks for your continued efforts to help our students succeed and your input in this process.

Dr. Eric Lovely, Professor of Biology and Director of the Biology Program

Ty Yamashita commented, "The primary shortcoming of the rubrics we included is the courses may not fully engage with all aspects and nuances of the rubrics. However, these criteria do provide a good overview of the student's knowledge base and analytical skills as they complete the curriculum."

Appendix Curriculum Mapping of Biology Learning Outcomes for Biology Program

1. Construct reports which analyze data using scientific models to justify their conclusions.
2. Students should be able to evaluate the interactions between human and biological systems, and to articulate and convey societal relevance to the general public.
3. Students will be able to describe characteristics and diversity of life.
4. Students will demonstrate common lab procedures, operate lab and field equipment, perform sterile techniques, and conduct online data analyses.
5. Students should find, analyze, and critique current scientific literature and present their evaluation in written and oral formats.

Course	LO1 (Lab Report)	LO2 (Science/Society)	LO3 (Characteristics and Diversity)	LO4 (Techniques)	LO5 (Scientific Literature)
Core Requirements					
BIOL 1011		I			
BIOL 1114	I	I	I	I	
BIOL 2124	R		R	I (Dissection)	I/R
BIOL 2134	R	R	R	R (Microscopy)	I/R
BIOL 2014			R	R (Dissection/ Microscopy)	
BIOL 3034	R	M (Molecular)	M	R	R
BIOL 4891					M
Cell Elective					
BIOL 3054			M (Cells)	M (Microscopy)	
BIOL 4023					
BIOL 4033			M (Cells)	R	R
BIOL 4074	M	M	M	M	M
Physiology Elective					
BIOL 3074	R	R	M	R	R
BIOL 3124					
BIOL 3174	R	R	M	R	R
BIOL 4014					
Ecology Course					
BIOL 3114	M	M (Ecological)	M (Organismal)	I (Field Techniques)	M
BIOL 4094	M	M (Ecological)	M (Organismal)	M (Field Techniques)	M

I=Introduce R=Reinforce M=Mastery

Appendix Rubric for Learning Outcome #1

Criteria	Emerging	Developing	Intermediate
Introduction: Context			
<p>Demonstrates a clear understanding of the big picture; Why is this question important/interesting in the field of biology?</p>	<ul style="list-style-type: none"> • The importance of the question is not addressed. • How the question relates within the broader context of biology is not addressed. 	<ul style="list-style-type: none"> • The writer provides a generic or vague rationale for the importance of the question. • The writer provides vague or generic references to the broader context of biology. 	<ul style="list-style-type: none"> • The writer provides one explanation of why others would find the topic interesting. • The writer provides some relevant context for the research question(s).
Introduction: Accuracy and relevancy			
<p>Content knowledge is accurate, relevant and provides appropriate background for reader including defining critical terms</p>	<ul style="list-style-type: none"> • Background information is missing or contains major inaccuracies. • Background information is accurate, but irrelevant or too disjointed to make relevance clear • Primary literature references are absent or irrelevant. May contain website or secondary references <p>websites or review papers are not primary</p>	<ul style="list-style-type: none"> • Background omits information or contains inaccuracies which detract from the major point of the paper. • Background information is overly narrow or overly general (only partially relevant). • Primary literature references, if present, are inadequately explained. 	<ul style="list-style-type: none"> • Background information may contain minor omissions or inaccuracies that do not detract from the major point of the paper. • Background information has the appropriate level of specificity to provide relevant context. • Primary literature references are relevant and adequately explained but few.

Criteria	Emerging	Developing	Intermediate	Proficient
Hypotheses: Testable and consider alternatives				
Hypotheses are clearly stated, testable and consider plausible alternative explanations	<ul style="list-style-type: none"> No hypothesis is indicated. The hypothesis is stated but too vague or confused for its value to be determined A clearly stated, but not testable hypothesis is provided. A clearly stated and testable, but trivial hypothesis is provided 	<ul style="list-style-type: none"> A single relevant, testable hypothesis is clearly stated The hypothesis may be compared with a "null" alternative which is usually just the absence of the expected result. 	<ul style="list-style-type: none"> Multiple relevant, testable hypotheses are clearly stated. Hypotheses address more than one major potential mechanism, explanation or factors for the topic. 	<ul style="list-style-type: none"> A comprehensive suite of testable hypotheses are clearly stated which, when tested, will distinguish among multiple major factors or potential explanations for the phenomena at hand
Hypothesis: Scientific merit				
Hypotheses have scientific merit	<ul style="list-style-type: none"> Hypotheses are trivial, obvious, incorrect or completely off topic 	<ul style="list-style-type: none"> Hypotheses are plausible and appropriate though likely or clearly taken <u>directly</u> from course material. 	<ul style="list-style-type: none"> Hypotheses indicate a level of understanding beyond the material directly provided to the student in the lab manual or coursework. 	<ul style="list-style-type: none"> Hypotheses are novel, insightful, or actually have the potential to contribute useful new knowledge to the field

Criteria	Emerging	Developing	Intermediate	Proficient
Methods: Controls and Replication				
<p>Appropriate controls (including appropriate replication) are present and explained.</p> <p><u>If the student designed the experiment</u></p>	<ul style="list-style-type: none"> • Controls and/or replication are nonexistent, • Controls and/or replication may have been present, but just not described or • Controls and/or replication were described but were inappropriate. 	<ul style="list-style-type: none"> • Controls consider one major relevant factor • Replication is modest (weak statistical power). 	<ul style="list-style-type: none"> • Controls take <u>most</u> relevant factors into account • Controls include positive and negative controls if appropriate • Replication is appropriate (average sample size with reasonable statistical power). 	<ul style="list-style-type: none"> • Controls consider all relevant factors • Controls have become methods of differentiating between multiple hypotheses. • Replication is robust (sample size is larger than average for the type of study).
<p><u>If the instructor designed the experiment</u></p>	<ul style="list-style-type: none"> • Student fails to mention controls and/or replication or mentions them, but the description or explanation is incomprehensible 	<ul style="list-style-type: none"> • Student explanations of controls and/or replication are vague, inaccurate or indicate only a rudimentary sense of the need for controls and or replication 	<ul style="list-style-type: none"> • Student evidences a reasonable sense of why controls/ replication matter to this experiment • Explanations are mostly accurate. 	<ul style="list-style-type: none"> • Explanations of why these controls matter to this experiment are thorough, clear and tied into sections on assumptions and limitations
Methods: Experimental design				
<p>Experimental design is likely to produce salient and fruitful results (tests the hypotheses posed.)</p> <p><u>Methods are:</u></p>	<ul style="list-style-type: none"> • inappropriate • poorly explained / indecipherable 	<ul style="list-style-type: none"> • appropriate • clearly explained • drawn directly from coursework • not modified where appropriate 	<ul style="list-style-type: none"> • appropriate • clearly explained • modified from coursework in appropriate places • or drawn directly from a novel source (outside the course) 	<ul style="list-style-type: none"> • appropriate • clearly explained • a synthesis of multiple previous approaches or an entirely new approach

Criteria	Emerging	Developing	Intermediate	Proficient
Results: Data selection				
Data are comprehensive, accurate and relevant	Data are too incomplete or haphazard to provide a reasonable basis for testing the hypothesis	<ul style="list-style-type: none"> At least one relevant dataset per hypothesis is provided but some necessary data are missing or inaccurate Reader can satisfactorily evaluate some but not all of writer's conclusions. 	<ul style="list-style-type: none"> Data are relevant, accurate and complete with any gaps being minor. Reader can fully evaluate whether the hypotheses were supported or rejected with the data provided. 	<ul style="list-style-type: none"> Data are relevant, accurate and comprehensive. Reader can fully evaluate validity of writer's conclusions and assumptions. Data may be synthesized or manipulated in a novel way to provide additional insight.
Results: Data presentation				
<p>Data are summarized in a logical format. Table or graph types are appropriate. Data are properly labeled including units. Graph axes are appropriately labeled and scaled and captions are informative and complete.</p> <p><u>Presentation of data:</u></p>	<ul style="list-style-type: none"> No graph and/or table is included Labels or units are missing which prevent the reader from being able to derive any useful information from the graph or table. Presentation of data is in an inappropriate format or graph type Captions are confusing or indecipherable. No summary of data is given 	<ul style="list-style-type: none"> contains some errors in or omissions of labels, scales, units etc., but the reader is able to derive some relevant meaning from each figure. is technically correct but inappropriate format prevents the reader from deriving meaning or using it. Captions are missing or inadequate Poor summary of data Data description is inaccurate, missing description of trends Hypothesis, methods and/or conclusions are included in summary 	<ul style="list-style-type: none"> contains only minor mistakes that do not interfere with the reader's understanding and the figure's meaning is clear without the reader referring to the text. Graph types or table formats are appropriate for data type. includes captions that are at least somewhat useful. Data summary is accurate but missing descriptions of any trends in the data 	<ul style="list-style-type: none"> contains no mistakes uses a format or graph type which highlights relationships between the data points or other relevant aspects of the data. may be elegant, novel, or otherwise allow unusual insight into data has informative, concise and complete captions. Data summary is accurate and complete. Trends in data are accurately described

Criteria	Emerging	Developing	Intermediate	Proficient
Results: Statistical analysis				
Statistical analysis is appropriate for hypotheses tested and appears correctly performed and interpreted with relevant values reported and explained.	<ul style="list-style-type: none"> No statistical analysis is performed. Statistics are provided but are inappropriate, inaccurate or incorrectly performed or interpreted so as to provide no value to the reader. 	<ul style="list-style-type: none"> Appropriate, accurate descriptive statistics only are provided. Inferential statistics are provided but either incorrectly performed or interpreted or an inappropriate test was used. Appropriate, correct inferential statistics are provided, but lack sufficient explanation. 	<ul style="list-style-type: none"> Appropriate inferential (comparative) statistical analysis is properly performed and reasonably well explained. Explanation of significant value may be limited or rote (e.g. use of $p < 0.05$ only) 	<ul style="list-style-type: none"> Statistical analysis is appropriate, correct and clearly explained includes a description of what constitutes a significant value and why that value was chosen as the threshold (may choose values beyond $p < 0.05$).
Discussion: Conclusions based on data selected				
Conclusion is clearly and logically drawn from data provided. A logical chain of reasoning from hypothesis to data to conclusions is clearly and persuasively explained. Conflicting data, if present, are adequately addressed	<ul style="list-style-type: none"> No conclusion given Conclusions have little or no basis in data provided. Connections between hypothesis, data and conclusion are non-existent, limited, vague or otherwise insufficient to allow reasonable evaluation of their merit. Conflicting data are not addressed. 	<ul style="list-style-type: none"> Conclusions have some direct basis in the data, but may contain some gaps in logic or data or are overly broad. Connections between hypothesis, data and conclusions are present but weak. Conflicting or missing data are poorly addressed. 	<ul style="list-style-type: none"> Conclusions are clearly and logically drawn from and bounded by the data provided with no gaps in logic. A reasonable and clear chain of logic from hypothesis to data to conclusions is made. Conclusions attempt to discuss or explain conflicting or missing data. 	<ul style="list-style-type: none"> Conclusions are completely justified by data. Connections between hypothesis, data, and conclusions are comprehensive and persuasive. Conclusions address and logically refute or explain conflicting data Synthesis of data in conclusion may generate new insights.

Criteria	Emerging	Developing	Intermediate	Proficient
Discussion: Alternative explanations				
<p>Alternative explanations are considered and clearly eliminated by data in a persuasive discussion.</p> <p>Alternative explanations:</p>	<ul style="list-style-type: none"> are not provided are trivial or irrelevant are mentioned but not discussed or eliminated. 	<ul style="list-style-type: none"> are provided in the discussion only may include some trivial or irrelevant alternatives. Discussion addresses some but not all of the alternatives in a reasonable way. 	<ul style="list-style-type: none"> Some alternative explanations are tested as hypotheses; those not tested are reasonably evaluated in the discussion. Discussion of alternatives is reasonably complete, uses data where possible and results in at least some alternatives being persuasively dismissed. 	<ul style="list-style-type: none"> have become a suite of interrelated hypotheses that are explicitly tested with data. Discussion and analysis of alternatives is based on data, complete and persuasive with a single clearly supported explanation remaining by the end of the discussion.
Discussion: Limitations of design				
<p>Limitations of the data and/or experimental design and corresponding implications discussed.</p>	<ul style="list-style-type: none"> are not discussed. 	<ul style="list-style-type: none"> are discussed in a trivial way (e.g. "human error" is the major limitation invoked). 	<ul style="list-style-type: none"> are relevant, but not addressed in a comprehensive way Conclusions fail to address or overstep the bounds indicated by the limitations. 	<ul style="list-style-type: none"> are presented as factors modifying the author's conclusions. Conclusions take these limitations into account.
Discussion: Significance of research				
<p>Paper gives a clear indication of the significance of the research and its future directions.</p> <p>Future directions and significance of this research:</p>	<ul style="list-style-type: none"> are not addressed. 	<ul style="list-style-type: none"> are vague, implausible (not possible with current technologies or methodologies), trivial or off topic 	<ul style="list-style-type: none"> are useful, but indicate incomplete knowledge of the field (suggest research that has already been done or is improbable with current methodologies) suggest a fruitful line of research, but lack detail to indicate motivations for or implications of the future research 	<ul style="list-style-type: none"> are salient, plausible and insightful suggest work that would fill knowledge gaps and move the field forward.

Criteria	Emergent	Developing	Intermediate	Proficient
References and use of Primary Literature				
<p>Relevant and reasonably complete discussion of how this research project relates to others' work in the field (scientific context provided).</p> <p>Primary literature is defined as:</p> <ul style="list-style-type: none"> - peer reviewed - reports original data - authors are the people who collected the data. - published by a non-commercial publisher. 	<ul style="list-style-type: none"> • References are absent, inappropriate or incorrect. • Primary literature references are not included. 	<ul style="list-style-type: none"> • Primary literature references are limited (only one or two primary references in the whole paper) • References to the textbook, lab manual, or websites given. • Citations are at least partially correctly formatted. <p>Note that proper format includes a one-to-one correspondence between in-text and end of text references (no references at end that are not in text and vice versa) as well as any citation style currently in use by a relevant biology journal.</p>	<ul style="list-style-type: none"> • References are more extensive (at least one citation for each major concept) • Literature cited is predominantly (> 90%) primary literature • Primary literature references are used primarily to provide background information and context for conclusions 	<ul style="list-style-type: none"> • Primary literature references indicate • an extensive literature search was performed. • Primary literature references frame the question in the introduction by indicating the gaps in current knowledge of the field. • Primary literature references are used in the discussion to make the connections between the writer's work and other research in the field clear • Primary literature references are properly and accurately cited

Appendix Rubric for Learning Outcome #2

SCORING DIMENSION	EMERGING	DEVELOPING	PROFICIENT	ADVANCED
<p>ARTICULATING A SCIENCE-RELATED ISSUE <i>What is the evidence that the student can articulate a clear risk/benefit analysis and explain its context?</i></p> <p><input type="checkbox"/> <i>Significant evidence of these indicators are not present in the work sample</i></p>	<ul style="list-style-type: none"> The scientific or technological or social significance of the issue is missing, vague, or unclear Social context is limited and/or contains biases Relates issue to personal experience, but does not situate the issue within any other context 	<ul style="list-style-type: none"> The scientific or technological or social significance of the issue is clear, but lends itself to readily available answers Social context is described in a general manner Relates issue to personal experience and makes references to another context 	<ul style="list-style-type: none"> The scientific or technological or social significance of the issue is thoughtful and lends itself to a challenging research project Social context is described in clear and objective manner Relates issue to personal experience and situates issue in a cultural, historical, and/or global context 	<ul style="list-style-type: none"> The scientific or technological or social significance of the issue is thought-provoking and lends itself to a challenging and interesting research project Social context is described in clear, objective and comprehensive manner Situates the issue within their genres: cultural, historical context, global context, and personal experience and elaborates on the significance of the issue in these contexts
	<ul style="list-style-type: none"> Scientific content is limited and/or contains inaccuracies 	<ul style="list-style-type: none"> Scientific content is limited but accurate 	<ul style="list-style-type: none"> Scientific content is clear, accurate, detailed, and relevant. 	<ul style="list-style-type: none"> Scientific content is clear, detailed, accurate, relevant, well organized and conveys depth and breadth of the topic
<p>CONDUCTING THE RESEARCH <i>What is the evidence that the student can gather information and analyze its credibility?</i></p> <p><input type="checkbox"/> <i>Significant evidence of these indicators are not present in the work sample</i></p>	<ul style="list-style-type: none"> Information is gathered from a few sources but some sources may not be appropriate/relevant The credibility and reliability of the sources are not discussed Some of the information cited may be irrelevant to the issue Discussion of questions, counter-arguments, or alternative claims are unclear or absent 	<ul style="list-style-type: none"> Information is gathered from multiple relevant sources. The credibility and reliability of some of the sources are discussed Most of the information is relevant to the issue Briefly alludes to questions, counter-arguments, or alternative claims 	<ul style="list-style-type: none"> Sufficient information for understanding the issue is gathered from a combination of primary and secondary sources The credibility and reliability of some of the sources are analyzed and discussed All of the information cited is relevant and essential to understand the issue Acknowledges questions, counter-arguments, or alternative claims where appropriate 	<ul style="list-style-type: none"> Extensive information is gathered from primary sources that support all major aspects of analysis, but may include secondary sources. The credibility and reliability of these sources are fully analyzed and discussed All of the information cited is relevant and provides different perspectives to fully explore the issue Acknowledges and responds to questions, counter-arguments, or alternative claims

SCORING DIMENSION	EMERGING	DEVELOPING	PROFICIENT	ADVANCED
<p>CONDUCTING THE RISK-BENEFIT ANALYSIS? <i>What is the evidence that the student can make determinations about relative risks and benefits?</i></p> <p><input type="checkbox"/></p> <p><i>Significant evidence of these indicators are not present in the work sample</i></p>	<ul style="list-style-type: none"> • Define the conflict but have not articulated the benefits or risks. • Position is not clearly stated. 	<ul style="list-style-type: none"> • Either benefits or risks are not clearly stated and/or supported by details • States a clear position with regards to the issue but the decision is not well-supported. 	<ul style="list-style-type: none"> • Benefits are clearly stated and supported by details • Risks are clearly stated and supported by details • States a clear position with regards to the issue supported by sufficient, accurate and relevant details 	<ul style="list-style-type: none"> • The validity and limitations of the risk/benefit analysis are clearly articulated and well-supported by arguments.
<p>DEVELOPING AND SUPPORTING A THESIS <i>What is the evidence that the student can develop a thesis and support it with evidence?</i></p> <p><input type="checkbox"/></p> <p><i>Significant evidence of these indicators are not present in the work sample</i></p>	<ul style="list-style-type: none"> • Thesis is weak and lacks arguable position • Limited use of data and/or examples • Conclusions are not logical or are unclear. • No discussion of limitations of the conclusions • Not clear how the student's thinking about the issue was informed by the project 	<ul style="list-style-type: none"> • Thesis presents a general position • Data and/or examples are used to illustrate one point of view • Conclusions are logical and describe the thesis. • Limited discussion of the validity and/or limitations of the conclusions • Student's thinking about the issue is clearly discussed 	<ul style="list-style-type: none"> • Thesis is clear and includes a statement of position • Data and/or examples are used to illustrate varying points of view • Conclusions are logical, describe the thesis; and convey ideas supported by evidence • Validity and limitations of the conclusions are evaluated • Reflection on the issue shows evidence of how the student's thinking evolved 	<ul style="list-style-type: none"> • Thesis is well developed and includes a definitive statement of position supported logically • Data and/or examples are used to illustrate different points of view and justify the thesis • Conclusions are logical and insightful, describe the thesis, and convey ideas with compelling evidence • Validity and limitations of the conclusion are evaluated and other explanations are considered • Reflection on the issue indicates how student's thinking evolve and strengthens student's argument

SCORING DIMENSION	EMERGING	DEVELOPING	PROFICIENT	ADVANCED
<p data-bbox="218 232 470 396">COMMUNICATION <i>What is the evidence that the student can clearly communicate ideas to others?</i></p> <p data-bbox="218 516 512 644"><input type="checkbox"/> <i>Significant evidence of these indicators are not present in the work sample</i></p>	<ul data-bbox="539 196 907 532" style="list-style-type: none"> • Product is somewhat disorganized. • Reveals low awareness of the subject and inability to connect to audience • The product does not follow conventions of scientific writing • Visuals representations do not assist in understanding the issue 	<ul data-bbox="932 196 1302 565" style="list-style-type: none"> • Product is organized but makes generalizations without specific details • Provides a general sense of confidence about the subject but shows an inability to connect to audience • The product partially follows the conventions of scientific writing • Visual representations provide an example of the issue 	<ul data-bbox="1325 196 1692 500" style="list-style-type: none"> • Product is organized and supported by sufficient detail • Conveys a sense of authority on the subject and is suitable to the audience • The product generally follows the conventions of scientific writing • Visual representations assist in understanding the issue 	<ul data-bbox="1717 196 2064 500" style="list-style-type: none"> • Product is organized, clear, and supported by relevant evidence • Demonstrates a thorough command of the subject and is engaging for audience • The product follows all specific conventions of scientific writing • Visual representations greatly enhance understanding of the issue

Appendix Rubric for Learning Outcome #3

L.O. #3: Diversity and Characteristics of Life.					Related Course
	Deficient	Needs Improvement	Satisfactory	Mastery	
MFAT Scores of Cell, molecular, and organismal and ecology)	Scores greater than 10% below the national average	Scores greater than 10% but less than 5% below the national average	Scores at the national average $\pm 5\%$	Score over 5% above national average	
Domains	Student did not meet the criteria for the next higher category.	Students can list the three domains but cannot give any rationale for the development of this taxon or are unable to list the three domains.	Student is able to list the three domains and give justification for the domain system but had one or more errors .	Student is able to list and describe the three domains and give the justification for the development of the domain system.	BIOL1114
Characteristic of life	Students omitted 3 or more characteristics listed in "mastery" or did not give accurate examples for all of those listed	Student omitted 2 of the characteristics listed in "mastery" or did not give accurate examples for all of those listed	Student omitted one of the characteristics listed in "mastery" or had errors in their descriptions for those listed	Students are able to communicate that the characteristics of life include; organization, cell composition, metabolism, reproduction, diversity, evolution, stimuli response, and homeostasis and is able to describe variation within each character.	BIOL1114
Kingdom Diversity	Student did not meet the criteria for the next higher category.	Student can interpret evolutionary relationships between major groups in a clade or is able to list and describe the fundamental characteristics (including cell type, metabolism, organization, and motility) for the organisms in at least four kingdoms	Student can interpret evolutionary relationships between major groups in a clade and is able to list and describe the fundamental characteristics (including cell type, metabolism, organization, and motility) for the organisms in at least four kingdoms	Student can interpret evolutionary relationships between major groups in a clade and is able to list and describe the fundamental characteristics (including cell type, metabolism, organization, and motility) for the organisms in the six kingdoms	BIOL1114 Archaea Bacteria BIOL2124 Bacteria Protista Fungi Plantae BIOL2134 Protista Animalia BIO13054 Bacteria
Making Connections (How mechanisms, pathways, organelles, organs, and organ are involved in each the characteristics of life.)	Students are unable to meet the criteria of the next higher category	Student is only able to communicate what specific mechanism, pathways, organs, or organ systems are directly linked to each characteristic of life.	Student is able to communicate how a mechanism, pathway, organ or organ system contributes to or performs in more than three of the characteristics of life	Student is able communicate how a mechanism, pathway, organ, or organ system, contributes to or performs in the accomplishment of each the characteristic of life.	BIOL1114 BIOL3074 BIOL3174 Others?
Defining life	Student did not meet the criteria for the next higher category	Student could only list two example but all information was correct or listed 3 examples but had multiple errors in their explanation.	Student is able to list three examples but gave inaccurate information in one explanation.	Student is able to list and explain at least three examples as to why it may be difficult to differentiate between living and nonliving.	BIOL1114 Others?

Appendix Rubric for Learning Outcome #4

Specific dissection student learning outcomes:

- a. Students will demonstrate basic dissection technique by correctly identifying assigned anatomic structures, and by demonstrating good quality of dissection.
- b. Students will demonstrate an understanding of the safety concerns involved in preserved specimen dissection. Evidence of this understanding might include: a. providing evidence of preparation for dissection, b. safe use of dissection instruments, c. following instructions for clean-up and tissue disposal.

***These are the grading rubrics used for the microscopy skills assessment for BIOL 1114, and BIOL 3054**

Microscopy techniques Rubric Principles BIOL 1114	Emerging (0-3)	Intermediate (4)	Proficient (5)
Set-up/dismantle	Student demonstrates limited knowledge of set-up/dismantle technique	Minor issues (1) with setting up and putting away scope	Student demonstrates proper technique setting up and putting scope away including carrying, resetting low power objective, stage position, cleaning lens as needed, dust cover.
Clear focus on named structure	Student is unable to identify cellular structures; e.g. focuses on non-cellular artifacts	Student incorrectly identifies named structure; but pointer is in focus and within a cell.	Student correctly focuses on a specified cellular structure (e.g. chloroplast, nucleus, or other)
Uses lenses , light intensity, mechanical stage, to find and focus	Student demonstrates inability (or limited ability) to methodically find, view and resolve microscopic structures	Student demonstrates good technique, but achieves less than ideal resolution	Students correctly uses scanning and other lenses, appropriate light intensity (iris diaphragm), mechanical stage, to maximize resolution of named structure

Microscopy techniques Rubric Microbiology BIOL 3054	Emerging (0)	Intermediate (0.5)	Proficient (1)
Default settings (set-up)	Student does not check default settings	Student partially checks default settings	Student checks and adjusts microscope default settings correctly to begin scanning specimen
Focal reference	Student is unable or does not know how to achieve focal reference	Student partially achieves focal reference with scanning lens	Student correctly achieves focal reference on scanning lens
Clear image on all 4 lenses	Student uses 1 or 2 lenses correctly, but does not achieve clear focus on other lenses	Student correctly uses some, but not all lenses to bring specimen into clear focus	Students correctly uses all 4 lenses, to bring specimen into clear focus
Adjusts light intensity correctly	Student does not use, or does not know how to use light intensity to maximize image resolution	Student does not adjust light intensity when changing objective lenses; and some resolution is lost	Student adjusts light intensity using iris diaphragm when increasing magnification so that maximum resolution is achieved
Resets default settings (puts away)	Student does not reset default settings without prompting	Student partially resets microscope	Student correctly returns scope to default settings

Appendix Rubric for Learning Outcome #5

RUBRIC FOR ASSESSMENT OF 4891 SEMINAR PRESENTATION

Criteria		Performance assessment score (total available = 80pt)			
		2	3	4	5
Study Overview	Background and literature review	Omitted	Review was insufficient Only minimal background given.	Review was adequate providing the basic knowledge to interpret the manuscript	Review covered the background material and reduced complex terms for clear understanding
	Significance of the study	Not stated	Significance poorly explained	Significance was well explained	Significance of the study relative to the wider field of biology or human condition was clearly explained
	Data Presentation	No data presented	Data presentation was poorly organized	Data were organized and appropriately displayed	Data were well organized for easy analysis and interpretation by the audience. Key elements were highlighted
Study Analysis and Critique	Experimental design	Not explained	Design poorly explained	Methodology was explained and generally clear and understandable	Methodology covered all significant points. Student demonstrated a deep understanding and insight about the experimental design
	Analysis and interpretation of data	No critical analysis of data	Inappropriate treatment or poor analysis of the data	Appropriate critical analysis of the data shown	Thorough analysis and interpretation of the data including statistical methods where appropriate.
	Discussion	No discussion of the implications of the study Student just presented the authors comments/discussion	Minimal or poor discussion of the study. Presenter did not show a grasp of the manuscript	The discussion revealed that the presenter understood the success and limitations of the study	Discussion revealed a deep reflective insight into the study and its relationship to the wider biological field
Study Conclusion	Final Conclusion	None stated Student presented the authors conclusion only	Conclusion not clearly related to the study. Student mainly presented author's conclusion, with minimal further addition	Student presented independent conclusion, related to the problem and supported by the data	Student presented independent conclusion, based on the data analysis and clearly related study to others in the field
Adequate source material	Each performance assessment is worth 3x i.e., 6, 9, 12, and 15pts respectively	Student presented a primary research manuscript in biology, but article not full length or very limited in scope. Paper older than 10 years	Student presented a primary research manuscript in biology. Paper older than 7 years.	Student presented a refereed research article in the biological field of choice. Included additional review articles beyond those in the article.	Student presented a complex recent refereed research article in the biological field of choice. Included additional review articles and/or data from additional refereed primary research articles with critical assessment of the added articles.

Preparedness	Organization and clarity	Non-sequential and confusing Poor explanation of technical terms/acronyms	Technical terms and acronyms adequately defined and mostly used appropriately	Logical flow and left no major unanswered pertinent questions related to the study. Technical terms mostly used correctly.	Presenter explained the material in a clear logical manner. Complex subject was reduced to easily understandable terms suitable for the target audience
	Demonstration of understanding the material	The speaker was unable to answer study-directed questions	Answers demonstrated only a basic understanding of the study	Answers revealed a clear grounding in the issues pertinent to the study	Answers to subsequent questions showed exceptional insight, beyond knowledge gleaned from the central paper
	Construction of powerpoints	Slides difficult to read: Poor choice of background. Writing too small. Too much writing per slide. Figures unclear Extensive cutting and pasting of text from the paper.	Slides generally fine Poor choice of background Several slides had too much writing/too small. Some figures unclear.	Slides generally fine Good background/writing contrast Some slides unclear	Well laid out: appropriate amount writing per slide, figures/graphics clear. Visually pleasing. Break/summary slides added in appropriate place
Presentation	Personal Style: Eye Contact	The presenter seemed oblivious to the audience. Or read extensively from script or slides	The speaker occasionally made eye contact with the audience Often read from script or slides	The presenter connected with the audience. Made good eye contact. Used notes/slides, only in more difficult sections of talk	Presenter engaged the audience. Made good eye contact Rarely, if ever read from notes/slides. The presenter added extra interest through humor drama
	Personal Style: Speaking Delivery	Major difficulty in communicating: difficult to hear and/or understand	Speaks with some nervousness, communicates with some difficulty or lack of ease	Smooth speaking style, few umms or ahhs, but generally at ease.	Smooth, spontaneous speaking style, easy to understand, interesting to listen to.
	Time management	Talk lasted 10 minutes or less.	Presentation was hurried or delivery too slow. Talk lasted less than 15 minutes or more than 18 minutes.	Adequate time spent on the presentation delivery as a whole, but some areas required more time. Talk lasted 18 minutes	Overall presentation well balanced. Delivery pace perfect.
Extra credit for (up to 5pt)	Effective use of additional audio, visual or other aids	They were confusing	They added little or nothing to the overall understanding. Did not contribute information that the presenter could not have easily presented themselves	They complemented the presentation and enhanced overall understanding	They were extraordinarily well designed with extra aids or sources added to help information delivery

Note: for purpose of HLC/ program assessment: categories “2” and “3” should merge to produce “emerging” cat. 4 would be “intermediate” and cat 5 would be “proficient”. The “yellow” blocked boxes should be categorized as “intermediate”. The “green” rows are not counted toward program assessment