

## 8-Semester Guaranteed Program

Rev. 12/8/2023

**2023-2024 Degree Map-Bachelor of Science in Computer Science**

This map is a term-by-term sample course schedule. The milestones listed to the right of each term are designed to keep you on course to graduate in four years. The Sample Schedule serves as a general guideline to help you build a full schedule each term. See course descriptions and prerequisites at <http://www.atu.edu/catalog/>

**Possible careers include:** Computer and Information Systems Manager, Computer Programmer, Computer Systems Analyst

#Prerequisite Courses: ENGL 0303 \_\_\_\_\_ MATH 0803 \_\_\_\_\_ MATH 1003 \_\_\_\_\_ MATH 0903 \_\_\_\_\_ MATH 1113 \_\_\_\_\_ MATH 1110 \_\_\_\_\_ MATH 1203 \_\_\_\_\_ MATH 1914 \_\_\_\_\_

Sample Schedule	Milestones/Notes		
Semester 1	Hrs.	Grade	Semester 1
ENGL 1013-Comp I (ACTS=ENGL 1013)	3	#	
CSEC 1003- Introduction to Cybersecurity	3		
COMS 1333- Web and Mobile Technologies	3		
TECH 1001-Orientation to the University	1		TECH 1013 may sub
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#	(Prereq: MATH ACT >26, or # in MATH 1203 or MATH 1914) Milestone
<b>Total hours</b>	<b>14</b>	<b>GPA</b>	

Semester 2	Hrs.	Grade	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#	
CSEC 1113- Introduction to Networking	3		
COMS 1013- Programming Foundations I	3	#	Prereq: MATH 1113 or higher
COMS 1011- Programming Foundations I Lab	1	#	PASS/FAIL - Coreq: COMS 1013
MATH 2924- Calculus II (ACTS= MATH 2505)	4		(# for some upper-div courses in math minor) Milestone
<b>Total hours</b>	<b>14</b>	<b>GPA</b>	

Semester 3	Hrs.	Grade	Semester 3
COMS 2203- Programming Foundations II	3	#	Milestone - Prereq: # COMS 1013 & # MATH 1113 or higher
MATH 2703-Discrete Mathematics	3		Milestone - Prereq: # MATH 1113 or higher
COMS 2703- Computer Hardware & Architecture	3		
COMM 2173- Business and Professional Speaking	3		COMM 2003 Public Speaking may sub
Social Sciences	3		
<b>Total hours</b>	<b>15</b>	<b>GPA</b>	

Semester 4	Hrs.	Grade	Semester 4
COMS 2213- Data Structures	3		Milestone - Prereq: MATH 2703 and # in COMS 2203
COMS 2223- Computer Organization and Prog.	3		Prereq: COMS 2203 & MATH 2703
COMS 2163- Scripting Languages	3		Prereq: COMS 1333 & 3-hr programming course
Science with Lab	4		
ENGL 2053-Technical Writing (ACTS=ENGL 2023)	3		Prereq: ENGL 1023
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	<b>COMS ADVISOR ASSIGNED</b>

The Arkansas Course Transfer System (ACTS) is designed to assist in planning the academic progress of students. This system contains information about the transferability of courses within Arkansas public colleges and universities. The Arkansas Course Transfer System can be accessed by searching keyword "ACTS" at <https://adhe.edu/>

**Shaded classes indicate classes toward AAS-Information Technology**

# indicates a "C" or higher is required

Fine Arts and Humanities	U.S. History & Government
ART 2123 Experiencing Art (ACTS=ARTA1003)	HIST 1903 Survey of American History
MUS 2003 Introduction to Music (ACTS=MUSC1003)	HIST 2003 U.S. History to 1877 (ACTS=HIST2113)
TH 2273 Introduction to Theatre (ACTS=DRAM 1003)	HIST 2013 U.S. History since 1877 (ACTS=HIST2123)
ENGL/JOUR 2173 Introduction to Film	POLS 2003 American Government (ACTS=PLSC2003)
ENGL 2003 Introduction to World Literature (ACTS=ENGL2113)	
ENGL 2013 Intro. to American Literature (ACTS=ENGL2653)	<b>Science with Lab</b>
PHIL 2003 Introduction to Philosophy (ACTS=PHIL1103)	BIOL 1014- Intro. to Biological Science (ACTS= BIOL1004)
PHIL 2053 Introduction to Critical Thinking (ACTS=PHIL 1003)	BIOL/PHSC 1004- Principles of Environmental Science
1013 from SPAN, FR, GER, JPN, CHIN, or LAT	GEOL 1014- Physical Geology (ACTS= GEOL 1114)
1023 from SPAN, FR, GER, JPN, CHIN, or LAT	
LEAD 2003 Ethics in Leadership	

Sample Schedule	Milestones/Notes		
Semester 5	Hrs.	Grade	Semester 5
Fine Arts & Humanities	3		
COMS 3703- Advanced Operating Systems	3		Fall Only Prereq: COMS 2213 & COMS 2223
COMS 3213- Algorithm Design & Analysis	3		Fall Only - Prereq: COMS 2213
COMS 3233- Programming in Python	3		Prereq: COMS 2203
Approved Elective (3000-4000)	3		
<b>Total hours</b>	<b>15</b>	<b>GPA</b>	

Semester 6	Hrs.	Grade	Semester 6
Science with Lab	4		
COMS 3053- Ethical Issues in Technology	3		Prereq: Junior standing in COMS
COMS 3233- Data Design and Implementation	3		Prereq: COMS 2203
COMS 3313- Software Engineering	3		Spring Only - Prereq: COMS 3213
Approved Elective (3000-4000)	3		
<b>Total hours</b>	<b>16</b>	<b>GPA</b>	<b>APPLY FOR GRADUATION</b>

Semester 7	Hrs.	Grade	Semester 7
US History/Government	3		
Fine Arts & Humanities	3		
STAT 3153- Applied Statistics	3		Prereq: MATH 2924
COMS 4913- Capstone I	3		
COMS 4103- Organization of Programming Languages	3		Fall Only - Prereq: COMS 2213 & 2223
<b>Total hours</b>	<b>15</b>	<b>GPA</b>	

Semester 8	Hrs.	Grade	Semester 8
Social Sciences	3		<b>Graduation Requirements:</b> Min. hours 3000-4000 level courses: 40 No more than 4 PE activity hours Min. hours required:120 2.00+ GPA
MATH 4003- Linear Algebra I	3		
COMS 4413- Parallel and Distributed Computing	3		
COMS 4923- Capstone II	3		
Approved Elective (3000-4000)	3		
<b>Total Hours</b>	<b>15</b>	<b>GPA</b>	

Approved 3000-4000 Electives: 9 hours

Students should consider the following: AAS-Information Technology, CP-Computer Programing, minor in mathematics. See catalog for details.

Social Sciences
HIST 1503 World History to 1500 (ACTS=HIST1113)
HIST 1513 World History since 1500 (ACTS=HIST1123)
HIST 2003 U.S. History to 1877 (ACTS=HIST2113)
HIST 2013 U.S. History since 1877 (ACTS=HIST2123)
HIST 1903 Survey of American History
POLS 2003 American Government (ACTS=PLSC2003)
ECON 2003 Principles of Macroeconomics (ACTS=ECON2103)
ECON 1013 Principles of Microeconomics (ACTS=ECON2203)
SOC 1003 Introductory Sociology (ACTS=SOCI1013)
PSY 2003 General Psychology (ACTS=PSYC1103)
ANTH 1213 Intro. to Anthropology (ACTS=ANTH1013)
ANTH 2003 Cultural Anthropology (ACTS=ANTH2013)
GEOG 2013 Regional Geography of the World (ACTS=GEOG2103)
AMST 2003 American Studies
FIN 2013 Personal Finance
LEAD 1003 Introduction to Leadership
<b>Communication Courses</b>
COMM 1003 Intro to Speech Comm
COMM 2003 Public Speaking
COMM 2173 Business and Professional Speaking

University Honors students should consult Course Catalog for appropriate Fine Arts/Humanities, US History/Government and Social Science options for University Honors Curriculum.