

**2023-2024 Degree Map-Bachelor of Science in Applied Statistics: Data Science option**

 This map is a term-by-term sample course schedule. 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: Data Scientist, Data Analyst, Business Analyst, Quantitative Analyst, Statistical Analyst, Statistical Programmer, Statistician, Operation research analyst**

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

**Sample Schedule**

Semester 1	Hrs.	Grade	Milestones/Notes	Semester 1
ENGL 1013- Comp I (ACTS=ENGL 1013)	3	#		
U.S. History & Government	3			
MATH 1001- Orientation to Mathematics	1			
MATH 2914- Calculus I (ACTS= MATH 2405)	4	#	# C or > required for Gen Ed.	
BUAD 2003- Business Information Systems	3			
Total hours	14	GPA		

Semester 2	Hrs.	Grade	Milestones/Notes	Semester 2
ENGL 1023- Comp II (ACTS= ENGL 1023)	3	#		
Fine Arts & Humanities	3			
BDA 2003- Business Problem Solving	3			
MATH 2924- Calculus II (ACTS= MATH2505)	4	#		
STAT 2163- Intro to Statistical Methods	3			
Total hours	16	GPA		

Semester 3	Hrs.	Grade	Milestones/Notes	Semester 3
Social Science	3			
MATH 2703- Discrete Mathematics	3			
MATH 2934- Calculus III (ACTS= MATH 2603)	4			
STAT 2304- Programming Language for Data Science	4			
Total hours	14	GPA		

**SEE Catalog**

Semester 4	Hrs.	Grade	Milestones/Notes	Semester 4
BDA 3053- Business Data Analysis	3			
COMS 1013- Programming Foundations I	3	#		
COMS 1011- Programming Foundations I Lab	1		Pass/Fail	
STAT 3153- Applied Statistics	3			
STAT 3113- Regression Analysis	3			
*MATH/STAT Elective (See Note 1)	3			
Total hours	16	GPA	<b>MATH 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/>
**Note 1:** Select courses from: STAT 3183, MATH 4123, STAT 4393 or MATH/STAT course at 3000-4000 approved by advisor.

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	PHSC 1013/1021- Physical Sci/Lab (ACTS= PHSC 1004)

**Sample Schedule**

Semester 5	Hrs.	Grade	Milestones/Notes	Semester 5
Fine Arts & Humanities	3			
Science with lab	4			
COMS 2203- Programming II	3			
MATH 4003- Linear Algebra I	3			
STAT 4163- Mathematical Statistics	3			
Total hours	16	GPA		

Semester 6	Hrs.	Grade	Milestones/Notes	Semester 6
COMM 2173- Business & Professional Speaking	3			
Science with lab	4			
COMS 2213- Data Structures	3			
STAT 4153- Experimental Design and Analysis	3			
MATH/STAT Elective (3000-4000) SEE Catalog	3			
Total hours	16	GPA	<b>SEE Catalog &amp; Note 1 APPLY FOR GRADUATION</b>	

Semester 7	Hrs.	Grade	Milestones/Notes	Semester 7
Social Science	3			
STAT 4113- Categorical Data Analysis	3			
COMS Elective (3000-4000) (See Note 2)	3			<b>SEE Catalog</b>
General Elective	3			
STAT 4383- Machine Learning	3			
Total hours	15	GPA		

Semester 8	Hrs.	Grade	Milestones/Notes	Semester 8
MATH 4971- Mathematics Senior Seminar	1			
COMS Elective (3000-4000) (See Note 2)	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 No more than 12 hours of "D" grades
MATH/STAT Elective (3000-4000) SEE catalog	3			
MATH/STAT Elective (3000-4000) SEE catalog	3			
General Elective	3			
Total Hours	13	GPA		

General Electives: 6 hours (1000-4000 level)

# indicates a "C" or better is required

**Note 2:** Select courses from: COMS 3233, COMS 3243, COMS 4353 or COMS course at 3000-4000 approved by advisor.

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 2013 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