Program: Data Science  
Major: Data Science  
Degree: Bachelor of Science (B.S.)

Department: Mathematics & Statistics and Computer Science  
College: Mathematics and Science  
Major Code: 6190

University Core (Total Listed 42-44)

Specific courses within the University Core are listed on pages 95-96.
- Courses from the major may apply to the areas marked in the University Core.

Written and Oral Communication ................................................. 9
Quantitative Reasoning/Scientific Method .................................... 10-11
- Math ..................................................................... 3
Life Science ..................................................................... 4
Physical Science .................................................................. 3-4
Critical Inquiry and Aesthetic Analysis ......................................... 6
Aesthetic Analysis .................................................................. 3
Critical Inquiry ..................................................................... 3

Minimum Required Hours

Support Courses

Students majoring in the Data Science program are encouraged to complete the following courses in high school.
Advanced Placement High School Programming Course OR
CMSC 1513 Beginning Programming
*MATH 1533 Precalculus-Algebra OR
MATH 1513 College Algebra OR Placement Score AND
*MATH 1593 Plane Trigonometry OR Placement Score

*A grade of ‘C’ or better is required for either MATH 1513 or MATH 1533 and MATH 1593 to take MATH 2313.

Upon completion of the above courses, corresponding university core requirements will be satisfied. (These courses are required for this major regardless of previous degrees conferred.)

Data Science ........................................................................ 65

Required Courses ..................................................................... 47
CMSC 1613 Programming I
CMSC 1621 Programming I Laboratory
CMSC 2613 Programming II
CMSC 2621 Programming II Laboratory
CMSC 2123 Discrete Structures
CMSC 3613 Data Structures and Algorithms
CMSC 4003 Applications of Database Management Systems
MATH 2313 Calculus 1
MATH 2323 Calculus 2
MATH 2333 Calculus 3
MATH 3143 Linear Algebra
STAT 2113 Statistical Methods
STAT 3213 Fundamentals of Data Science
STAT 4413 Data Visualization and Exploration
STAT 4213 Applied Regression Analysis
STAT 4513 Statistical Consulting OR
STAT 4950 Internship in Statistics (3 hours)
STAT 4533 Data Mining & Stat Learning

American Historical and Political Analysis .............................. 6
American National Government ............................................ 3
American History ................................................................. 3
Cultural and Language Analysis ............................................. 3-4
Second Language ................................................................ 4
OR
Cultural Analysis .................................................................. 3

Social and Behavioral Analysis .................................................. 3

Life Skills ........................................................................... 5
Required Health Course ......................................................... 2
Elective Life Skills ................................................................ 3

Minimum Required Hours

Upper Division Electives ........................................................... 18
Computer Science or Software Engineering ............................. 6
Any combination of 3000-4000 level CMSC or SE courses
Statistics ............................................................................ 6
Any combination of 3000-4000 level STAT courses
Computer Science, Software Engineering, Mathematics, or
Statistics ............................................................................. 6
Any combination of 3000-4000 level courses from either
CMSC, SE, MATH, or STAT

Electives to bring total to ......................................................... 124

Minimum Grade Requirements

1. Average in (a) all college course work, and (b) course work at UCO .................................................. 2.50
2. A minimum grade of “C” must be earned in all courses in the major to count toward meeting degree requirements.

For other regulations pertaining to graduation, see pages 66-67 of the 2019-2020 catalog.