

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

Dept: **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

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**

**Minimum
 Required Hours**

Support Courses

Support Courses.....0-9

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.)

Major Requirements

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

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.