

Program: **Mathematics**  
 Major: **Mathematics - Statistics**  
 Degree: **Bachelor of Science (B.S.)**

Dept: **Mathematics and Statistics**  
 College: **Mathematics and Science**  
 Major Code: **6162**

**University Core (Total Listed 42-44)**

For a full list of courses see [University Core](#).

• 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

- Sd 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**

**Prerequisite Courses**

**Prerequisite Courses** ..... 0-6

- \*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 general education requirements will be satisfied. (These courses are required for this major regardless of previous degrees conferred.)

**Major Requirements**

**Mathematics - Statistics**..... 54

**Mathematics** ..... 27

- MATH 2313 Calculus 1
- MATH 2323 Calculus 2
- MATH 2333 Calculus 3
- MATH 2343 Calculus 4
- MATH 2753 Technology for Professional Math and Statistics
- MATH 3103 Differential Equations
- MATH 3113 Foundations of Advanced Math
- MATH 3143 Linear Algebra
- MATH 3183 Introduction to Modern Algebra **OR**
- MATH 4143 Introduction to Analysis 1

**Statistics** ..... 27

- Required Courses ..... 18
- STAT 2113 Statistical Methods
  - STAT 4103 Applied Experimental Design
  - STAT 4113 Mathematical Statistics 1
  - STAT 4123 Mathematical Statistics 2
  - STAT 4213 Applied Regression Analysis
  - STAT 4513 Statistical Consulting

Electives ..... 9

Selected from the following:

- STAT 3213 Fundamentals of Data Science
- STAT 4253 Computer Applications in Statistics

- STAT 4313 Nonparametric Statistics
- STAT 4533 Data Mining and Statistical Learning
- STAT 4413 Data Visualization and Exploration

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

**Minimum Grade Requirements**

- 1 **Average in (a) all college course work, (b) course work at UCO, and (c) major courses** ..... 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 [Academic Degree Requirements](#).

Accelerated BS/PSM  
 UCO’s P.S.M. (Professional Science Master’s) in Computational Science has partnered with the B.S. in Statistics so that approved students may take up to nine credit hours of 5000-level MATH or STAT courses during their senior year of the B.S. program. These courses will count toward both the B.S. and P.S.M. degrees. A formal application to the P.S.M. Computational Science program and an approval from the Department of Mathematics and Statistics are required. Requirements are located in the UCO Graduate Catalog under Computational Science - Computational Mathematics, P.S.M.

Up to nine credit hours of the following courses can be used to satisfy both the B.S. Statistics and the P.S.M. Computational Science - Computational Mathematics :

- MATH 5113 Operations Research I
- MATH 5263 Numerical Linear Algebra
- MATH 5373 Applied Numerical Analysis
- STAT 5263 Computer Applications in Statistics
- STAT 5213 Applied Regression Analysis