

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

Dept: **Mathematics and Statistics**  
 College: **Mathematics and Science**  
 Major Code: **6140**

**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

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**

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

Required courses:  
 \*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**

**Actuarial Science**..... 66

**Mathematics Core**..... 18

Required courses:  
 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 3143 Linear Algebra

**Actuarial Core**..... 12

Required courses:  
 # MATH 3133 Theory of Interest 1  
 # MATH 4133 Theory of Interest 2  
 # MATH 4223 Mathematics of Life Contingencies 1  
 # MATH 4233 Mathematics of Life Contingencies 2

**Statistics Core**..... 15

Required courses:  
 STAT 2113 Statistical Methods  
 # STAT 4113 Mathematical Statistics 1  
 \*# STAT 4123 Mathematical Statistics 2  
 # STAT 4213 Applied Regression Analysis  
 # STAT 4533 Data Mining & Statistical Learning

**Finance and Insurance Electives** ..... 15

Select from the following:  
 \* ACCT 2113 Accounting I

**Minimum  
Required Hours**

\* ECON 2103 Principles of Microeconomics  
 \* ECON 2203 Principles of Macroeconomics  
 FIN 3523 Foundations of Insurance and Risk Management  
 FIN 3553 Property and Liability Insurance for the Firm  
 FIN 3563 Fundamentals of Business Finance  
 FIN 3613 Life and Health Insurance  
 \* FIN 4253 Intermediate Business Finance  
 FIN 4213 Investments

**Area of Application** ..... 6

Select from the following:  
 MATH 3103 Differential Equations  
 MATH 4113 Operations Research 1  
 MATH 4123 Operations Research 2  
 MATH 4263 Numerical Linear Algebra  
 MATH 4363 Applied Numerical Analysis  
 MATH 4950 Internship (3 hours)  
 STAT 4103 Applied Experimental Design  
 STAT 4313 Nonparametric Statistics

\* These courses are accredited by the Society of Actuaries to earn Validation by Educational Experience (VEE) credits.

# These courses will help prepare students for the professional examinations administered by the Society of Actuaries. See the Director of Actuarial Studies in MCS 108 for more details.

**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](#).