

# MATHEMATICS, BACHELOR OF ARTS (\*PENDING CHE APPROVAL)

| Code  | Title   | Hours |
|---|---|-------|
| General Education Courses                             |   |       |
| <b>I. Communication</b>                               |   |       |
| English:  |   |       |
| Select two of the following:                          |   |       |
| ENGL U101   | Composition I   | 3     |
| ENGL U102   | Composition II  | 3     |
| Speech:   |   |       |
| SPCH U201   | Foundations in Oral Communication   | 3     |
| <b>II. Mathematics, Logic, &amp; Natural Sciences</b> |   |       |
| Mathematics: <sup>1</sup>                             |   |       |
| MATH U141   | Calculus I  | 4     |
| MATH U142   | Calculus II   | 4     |
| Natural Science (w/lab):                              |   |       |
| ASTR U111 & U111L                                     | Descriptive Astronomy and Descriptive Astronomy Laboratory                                    | 4     |
| BIOL U101 & U101L                                     | Introductory Biology I and Introductory Biology I Lab   | 4     |
| BIOL U102 & U102L                                     | Introductory Biology II and Introductory Biology II Lab                                       | 4     |
| BIOL U110 & U110L                                     | General Biology and General Biology Lab   | 4     |
| BIOL U220 & U220L                                     | Botany and Society and Botany and Society Laboratory  | 4     |
| BIOL U244 & U244L                                     | Human Anatomy and Physiology II and Human Anatomy and Physiology II Lab                       | 4     |
| CHEM U106 & U106L                                     | Chemistry and Society and Chemistry and Society Lab   | 4     |
| CHEM U109 & U109L                                     | Chemistry of Living Things and Chemistry of Living Things Lab                                 | 4     |
| CHEM U111 & U111L                                     | General Chemistry and General Chemistry Lab   | 4     |
| CHEM U112 & U112L                                     | General Chemistry and Qualitative Analysis and General Chemistry and Qualitative Analysis Lab | 4     |
| GEOL U101 & U101L                                     | Physical Geology and Physical Geology Lab   | 4     |
| GEOL U102 & U102L                                     | Historical Geology and Historical Geology Lab   | 4     |
| GEOL U103 & U103L                                     | Environmental Geology and Environmental Geology Lab   | 4     |
| PHYS U101 & U101L                                     | Introduction to Physical Science and Introduction to Physical Science Laboratory              | 4     |
| PHYS U201 & U201L                                     | General Physics I and General Physics I Lab   | 4     |
| PHYS U202 & U202L                                     | General Physics II and General Physics II Lab   | 4     |
| Math, Logic, and/or Natural Science:                  |   | 3-4   |
| Select any Natural Science course listed above or:    |   |       |

|   |  |                                  |
|---|--|----------------------------------|
| BIOL U206   | Genetics and Society                             | 3                                |
| BIOL U240   | Human Biology and Society                        | 3                                |
| BIOL U260   | Emerging Infectious Diseases                     | 3                                |
| BIOL U270   | Environmental Science                            | 3                                |
| <b>III. Information Technology</b>  |  |                                  |
| Information Technology: <sup>1</sup>  |  |                                  |
| CSCI U138   | Introduction to Computer Technology              | 3                                |
| or CSCI U150  |  | Introduction to Computer Science |
| <b>IV. Fine Arts, Humanities, &amp; History</b>   |  |                                  |
| Choose one course from each of the following sections, with three disciplines represented.  |  |                                  |
| Fine Arts:  |  |                                  |
| Select one of the following:  |  |                                  |
| AFAM U204   | African American Culture                         | 3                                |
| ARTH U101   | Introduction to Art                              | 3                                |
| ARTH U105   | History of Western Art: Prehistory - Middle Ages | 3                                |
| ARTH U105   | History of Western Art: Prehistory - Middle Ages | 3                                |
| ARTH U106   | History of Western Art: Renaissance - Modern     | 3                                |
| MUSC U110   | Introduction to Music                            | 3                                |
| MUSC U140   | History of American Popular Music                | 3                                |
| THEA U161   | Introduction to Theatre Art                      | 3                                |
| THEA U170   | Fundamentals in Acting                           | 3                                |
| History:  |  |                                  |
| Select one of the following:  |  |                                  |
| HIST U101   | Introduction to World History I                  | 3                                |
| HIST U102   | Introduction to World History II                 | 3                                |
| HIST U105   | History of the United States to 1877             | 3                                |
| HIST U106   | History of the United States from 1865           | 3                                |
| <b>V. Foreign Language &amp; Culture</b>  |  |                                  |
| Foreign Language:   |  |                                  |
| Select one of the following: <sup>2</sup>   |  |                                  |
| ASLG U101   | American Sign Language I                         | 3                                |
| FREN U101   | Introductory French I                            | 3                                |
| GERM U101   | Introductory German I                            | 3                                |
| SPAN U101   | Introductory Spanish I                           | 3                                |
| <b>VI. Social &amp; Behavioral Sciences</b>   |  |                                  |
| Social and Behavioral Science:  |  |                                  |
| Select one of the following:  |  |                                  |
| AFAM U201   | Introduction to African American Studies         | 3                                |
| ANTH U102   | Understanding Other Cultures                     | 3                                |
| ECON U221   | Principles of Macroeconomics                     | 3                                |
| ECON U222   | Principles of Microeconomics                     | 3                                |
| GEOG U103   | Introduction to Geography                        | 3                                |
| POLI U101   | American National Government                     | 3                                |
| PSYC U101   | Introduction to Psychology                       | 3                                |
| SOCY U101   | Introduction to Sociology                        | 3                                |
| SPCH U210   | Interpersonal Communication                      | 3                                |
| WGST U101   | Introduction to Women's & Gender Studies         | 3                                |
| <b>VII. General Education Electives</b>   |  |                                  |
| General Education Electives:  |  |                                  |
| Select any approved general education course or courses ( <a href="https://academic-catalog.uscupstate.edu/academic-programs/general-education-courses/">https://academic-catalog.uscupstate.edu/academic-programs/general-education-courses/</a> ) |  |                                  |

**Major Requirements**<sup>1</sup>

Select one of the following concentrations:

*Mathematics Concentration*

|           |                                   |   |
|-----------|-----------------------------------|---|
| MATH U315 | Statistical Methods I             | 3 |
| MATH U340 | Mathematical Structures and Proof | 3 |
| MATH U344 | Linear Algebra I                  | 3 |
| MATH U346 | Modern Algebra I                  | 3 |
| MATH U354 | Real Analysis I                   | 3 |
| MATH U599 | Seminar in Mathematics            | 3 |

Additional requirements only for B.S. degree, mathematics concentration

I. Select two of the following:

|           |                      |   |
|-----------|----------------------|---|
| MATH U544 | Linear Algebra II    | 3 |
| MATH U546 | Modern Algebra II    | 3 |
| MATH U552 | Complex Variables    | 3 |
| MATH U554 | Real Analysis II     | 3 |
| MATH U560 | Numerical Analysis I | 3 |

II. Select one 300-level or higher and two 400-level or higher mathematics, statistics or approved computer science courses:<sup>3</sup>

MATH/STAT/CSCI

MATH/STAT/CSCI

MATH/STAT

*Statistics Concentration*

|           |                                    |   |
|-----------|------------------------------------|---|
| MATH U315 | Statistical Methods I              | 3 |
| MATH U344 | Linear Algebra I                   | 3 |
| STAT U301 | Statistical Computing              | 3 |
| STAT U410 | Introduction to Probability Theory | 3 |
| STAT U516 | Statistical Methods II             | 3 |
| STAT U599 | Seminar in Statistics              | 3 |

Additional requirements only for B.S. degree, statistics concentration

I. MATH U340

II. STAT U413

or STAT U512

III. Select three approved 300-level or higher courses from math, statistics, or computer science:

MATH/STAT/CSCI

MATH/STAT/CSCI

MATH/STAT/CSCI

**Supporting Courses**<sup>1</sup>Select supporting courses option to align with concentration 12  
(Mathematics or Statistics)*Mathematics Concentration*

|              |                                   |   |
|--------------|-----------------------------------|---|
| MATH U241    | Calculus III                      | 4 |
| MATH U245    | Elementary Differential Equations | 3 |
| MATH U174    | Elements of Discrete Mathematics  | 3 |
| or CSCI U200 | Computer Science I                |   |
| CSCI U300    | Computer Science II <sup>4</sup>  | 3 |

*Statistics Concentration*

Select four approved 200-level or higher courses from MATH/STAT/CSCI/BADM/BIOL/CHEM/ECON/PSYC/SOCY

Upper-Level Electives, Minor, and Other Electives 26

Upper-Level Electives or Minor<sup>1,5</sup>

Select 12-21 credits

*Electives*

Select 7-16 credits

**Total Hours** 120<sup>1</sup> A minimum grade of C is required in each course indicated.<sup>2</sup> Students must complete all courses in this category even if they have earned an Associate's degree.<sup>3</sup> The minimum acceptable level of competency is completion of the 101 level of a language. Students who place into the 102 or higher level of a language satisfy the language requirement but will have additional hours in general education electives, if hours are required by their degree program.<sup>4</sup> At most two CSCI courses permitted here.<sup>5</sup> Upper Level Electives include 200 level or higher MATH/STAT/CSCI/Natural and Physical Sciences courses and any course accepted by the University as meeting the requirements of a cognate. Upper Level Electives must be approved by the student's advisor in advance.