

Mathematics

The B.S. in Mathematics prepares students for graduate study; teaching; service in science, government and industry; and supporting roles in the social, biological, and physical sciences. This program emphasizes mathematics and statistics and provides students with considerable flexibility in choosing electives outside the major. It is recommended that students seek the advice of faculty regarding career opportunities and choice of a suitable minor.

Program Requirements

In addition to the University's general requirements, students seeking the B.S. in Mathematics must meet the requirements listed below.

Students should consult with their academic advisor for courses which may satisfy both the general education requirements and prerequisites. A grade of "C-" or better is required for all Major courses.

General Education

In addition to the General Education requirements listed on this page, students must satisfy all additional University requirements, including the College-Level Communication and Computation, multicultural, and foreign language requirements. With appropriate planning and coordination with an academic advisor, students may satisfy some of the general University requirements through the General Education curriculum. For a complete listing of general degree requirements, refer to the [University Requirements](#) section of this catalog.

General Education Curriculum:

Communication

| | | |
|----------|----------------------------------|---|
| ENC 1101 | English Composition I (Core) | 3 |
| ENC 1102 | English Composition II (Breadth) | 3 |

Humanities

Choose one course from Group A (Core) and one additional course from either Group A or Group B (Breadth) 6

Group A (Core)

| | |
|----------|----------------------------|
| ARH 1000 | Art Appreciation |
| LIT 2000 | Introduction to Literature |
| MUL 2010 | Music Appreciation |
| PHI 2010 | Introduction to Philosophy |
| THE 2000 | Theatre Appreciation |

Group B (Breadth)

| | |
|-----------|--|
| AML 2010 | American Literature I |
| AML 2020 | American Literature II |
| ARH 2050 | Western Survey I: Prehistory to the Medieval Period |
| ARH 2051 | Western Survey II: Renaissance to Contemporary |
| ART 1015C | Exploring Artistic Vision |
| ART 2821 | The Self, Creativity, Your Career and Visual Culture |
| CRW 2001 | Introduction to Creative Writing |
| ENL 2010 | History of English Literature I |
| ENL 2020 | History of English Literature II |
| IDH 1040 | Honors Core: Humanities |
| LIT 2030 | Introduction to Poetry |

| | |
|----------|--------------------------------------|
| MUH 2930 | The Music Experience: Special Topics |
| PHI 2103 | Critical Thinking |
| PHI 2603 | Ethics in Contemporary Society |
| REL 1300 | World Religions |
| SPC 2608 | Public Speaking |
| THE 2300 | Survey of Dramatic Literature |

Mathematics

Choose one course from Group A (Core) and one Additional course from either Group A or Group B (Breadth) 6

Group A (Core)

| | |
|-----------|----------------------------------|
| MAC 1105 | College Algebra |
| MAC 1105C | College Algebra with Lab |
| MAC 2311 | Analytic Geometry and Calculus I |
| MGF 1130 | Mathematical Thinking |
| STA 2023 | Elements of Statistics |

Group B (Breadth)

| | |
|----------|-------------------------------------|
| MAC 1114 | Trigonometry |
| MAC 1140 | Precalculus Algebra |
| MAC 1147 | Precalculus with Trigonometry |
| MAC 2233 | Calculus with Business Applications |
| MAC 2312 | Analytic Geometry and Calculus II |
| MGF 1131 | Mathematics in Context |
| STA 2360 | Introduction to Data Science |

Natural Sciences

Choose one course from Group A (Core) and one additional course from either Group A or Group B (Breadth) 6

Group A (Core)

| | |
|-----------|---------------------------------------|
| AST 1002 | Descriptive Astronomy |
| BSC 1005 | General Biology for Non-Majors * |
| BSC 1085 | Anatomy and Physiology I * |
| BSC 2010 | Biology I |
| CHM 1020 | Concepts in Chemistry * |
| CHM 2045 | General Chemistry I * |
| ESC 2000 | Introduction to Earth Science * |
| EVR 2001 | Introduction to Environmental Science |
| GLY 2010 | Physical Geology |
| PHY 1020 | Conceptual Physics |
| PHY 2048 | Calculus-Based Physics I * ** |
| PHY 2048C | Calculus-Based Physics I Studio *** |
| PHY 2053 | Algebra-Based Physics I * ** |

Group B (Breadth)

| | |
|----------|---|
| ANT 2511 | Biological Anthropology * |
| AST 2037 | Life in the Universe |
| BOT 2010 | General Botany |
| BSC 1050 | Fundamentals of Ecology |
| BSC 1086 | Anatomy and Physiology II * |
| BSC 2011 | Biology II |
| BSC 2311 | Introduction to Oceanography and Marine Biology * |
| CGS 2020 | Introduction to Machine Learning |
| CHM 2046 | General Chemistry II * |
| CIS 2530 | Introduction to Cybersecurity |

| | |
|----------|---------------------------------|
| IDH 1043 | Honors Core: Natural Sciences |
| MCB 1000 | Fundamentals of Microbiology * |
| PHC 2082 | Informatics and Your Health |
| PHY 2049 | Calculus-Based Physics II *, ** |
| PHY 2054 | Algebra-Based Physics II *, ** |

* May be taken with or without lab.

** Algebra-Based Physics is usually recommended for non-science majors, while Calculus-Based Physics is recommended for science majors.

***Although students receive 5 semester hours credit for PHY 2048C, an additional 3 semester science course will be needed to meet General Education requirements.

Social Sciences

Choose one course from Group A (Core) and one additional course from either Group A or Group B (Breadth) 6

| | |
|-------------------|---|
| Group A (Core) | |
| AMH 2010 | United States to 1877 |
| AMH 2020 | United States Since 1877 |
| ANT 2000 | Introduction to Anthropology |
| ECO 2013 | Principles of Economics Macro |
| POS 2041 | American Politics |
| PSY 2012 | General Psychology |
| Group B (Breadth) | |
| ANT 2100 | Introduction to Archaeology |
| ANT 2400 | Current Cultural Issues |
| CCJ 2002 | Survey of Crime and Justice |
| COM 2023 | Death and Communication |
| CPO 2002 | Comparative Politics |
| DEP 2004 | Human Development Across the Lifespan |
| EUH 1000 | Western Perspectives I |
| EUH 1001 | Western Perspectives II |
| FIN 2104 | Personal Financial Planning |
| GEA 2000 | Nations and Regions of the World |
| GEB 1011 | Introduction to Business |
| HIS 2050 | Explore History: Special Topics |
| IDH 1041 | Honors Core: Social Sciences |
| INR 2002 | International Politics |
| MMC 2000 | Principles of Mass Communication |
| PLA 2013 | Survey of American Law |
| SOW 2192 | Understanding Relationships in the 21st Century |
| SPM 2010 | Sport in Global Society |
| SYG 2000 | Introduction to Sociology |
| SYG 2010 | Current Social Problems |

General Education Electives

Choose an additional course from two of the five areas of Communication, Mathematics, Social Sciences, Humanities, and Natural Sciences.

Multicultural Requirement

Multicultural Courses

An important component of a liberal education is the study of cultures other than one's own. As such, multiculturalism encompasses the appreciation of the values, expressions, and modes of organization of diverse cultural communities. To further such study, the University of West Florida requires all students pursuing a bachelor's degree to complete at least one course that explores one or more of the dimensions of another culture (language, religion, socio-economic structures, etc.). Students are exempt from this requirement if they have completed an A.A. degree, the general education program at a Florida public institution, or a baccalaureate degree.

The requirement is satisfied by the successful completion of a multicultural course designated on the following list. Several of the selections are General Education courses, and students may enroll in these to meet both the General Education and the multicultural requirements.

***Passed by UWF Faculty Senate on 11/08/2002*

This list is continually updated and students are encouraged to check with their advisors for alternative options.

| | | |
|----------|---|---|
| AML 2010 | American Literature I | 3 |
| AML 2020 | American Literature II | 3 |
| AML 3604 | African American Literature | 3 |
| AML 3624 | Black Women Writers | 3 |
| AML 4015 | Topics in Nineteenth-Century American Literature | 3 |
| AML 4640 | Topics in Native American Literature | 3 |
| ANT 1001 | Anthropology as a Profession | 1 |
| ANT 2000 | Introduction to Anthropology | 3 |
| ANT 2301 | Human Sexuality and Culture | 3 |
| ANT 3212 | Peoples and Cultures of the World | 3 |
| ANT 3312 | North American Indians | 3 |
| ANT 3363 | Japanese Culture | 3 |
| ANT 4006 | Anthropology of Human Rights | 3 |
| ANT 4025 | Ritual Use of Human Remains | 3 |
| ANT 4403 | Environmental Anthropology | 3 |
| ANT 4516 | Modern Human Physical Variation | 3 |
| ARH 1000 | Art Appreciation | 3 |
| ARH 2050 | Western Survey I: Prehistory to the Medieval Period | 3 |
| ARH 3201 | Art and Culture in The Global Middle Ages | 3 |
| ARH 2051 | Western Survey II: Renaissance to Contemporary | 3 |
| ARH 3590 | Non-Western Art | 3 |
| ARH 3607 | Native American Art | 3 |
| ARH 4412 | The Age of Revolution to Romanticism in Europe: 1750-1850 | 3 |
| ARH 4450 | Modern Art: 1850-1980 | 3 |
| ARH 4470 | Contemporary Art | 3 |
| ARH 4563 | Art of Japan | 3 |
| CCJ 3678 | Race, Gender, Ethnicity, and Crime | 3 |
| COM 3014 | Gender Communication | 3 |
| COM 3461 | Intercultural Communication | 3 |
| COM 4242 | Communication and Christianity | 3 |

| | | |
|----------|---|---|
| CPO 2002 | Comparative Politics | 3 |
| CRW 2001 | Introduction to Creative Writing | 3 |
| EDF 2085 | Teaching Diverse Populations | 3 |
| ENG 4013 | Introduction to Literary Theory | 3 |
| ENL 2020 | History of English Literature II | 3 |
| EUH 1000 | Western Perspectives I | 3 |
| EUH 1001 | Western Perspectives II | 3 |
| EUH 3334 | Emperors, Sultans, Dictators, and Democrats: The Balkans | 3 |
| EUH 3411 | Rome and the Mediterranean World | 3 |
| EUH 3576 | Soviet Union since 1917 | 3 |
| FOL 3501 | Global Cinema | 3 |
| GEA 2000 | Nations and Regions of the World | 3 |
| GEB 4361 | International Business | 3 |
| GEO 3421 | Cultural Geography | 3 |
| GEO 3471 | Geography of World Affairs | 3 |
| HSC 2622 | Introduction to Global Health Sciences | 3 |
| HIS 2050 | Explore History: Special Topics | 3 |
| HIS 4262 | Rise and Fall of the Portuguese Empire | 3 |
| IDH 1040 | Honors Core: Humanities | 3 |
| IDH 1041 | Honors Core: Social Sciences | 3 |
| INR 2002 | International Politics | 3 |
| LAH 4135 | Spanish Conquest of the Americas | 3 |
| LAH 4131 | 'Atlantic Indians': How Indigenous and African Peoples Shaped Europe & the Americas | 3 |
| LAH 4451 | Greater Mexico: Central America from Conquest to the 20th Century | 3 |
| LAH 4728 | Gender and Sexuality in Latin America from Colonization to Today | 3 |
| LIT 2000 | Introduction to Literature | 3 |
| LIT 2030 | Introduction to Poetry | 3 |
| LIT 4036 | Topics in Poetry and Poetics | 3 |
| LIT 4385 | Feminist Theory | 3 |
| MAN 4102 | Management of Diversity | 3 |
| MAR 4156 | Seminar in International Marketing | 3 |
| MMC 3743 | Communicating Fear: Horror Films and Popular Culture | 3 |
| MMC 3745 | Communicating Fear Abroad: International Horror Films & Popular Culture | 3 |
| MMC 4601 | Minorities and the Mass Media | 3 |
| MUH 2930 | The Music Experience: Special Topics | 3 |
| MUL 2010 | Music Appreciation | 3 |
| NUR 4615 | Patient Centered Population Health | 3 |
| NUR 4636 | Population-based Public Health Nursing | 3 |
| PHI 3790 | African Philosophy | 3 |
| PUR 3404 | International Public Relations | 3 |
| PSY 3860 | Positive Psychology | 3 |
| SOP 3730 | Psychology, Culture, and Society | 3 |
| SOW 4233 | Human Diversity and Social Justice | 3 |
| SPN 3400 | Advanced Stylistics | 3 |
| SPN 4520 | Latin American Culture and Civilization | 3 |

| | | |
|----------|--|---|
| SYO 4421 | Sociology of Health, Illness and Health Care | 3 |
| SYO 4530 | Inequality in America | 3 |

Civic Literacy Requirement

The 2017 Florida Legislature amended [Section 1007.25, Florida Statutes](#), to require students **initially entering a State University System (SUS) and/or Florida College System (FCS) institution in 2018-2019** and thereafter to demonstrate competency in civic literacy. The 2021 Legislature further amended Florida Statutes, requiring students to complete both a civic literacy course and an exam. As a result, there are three cohorts of students currently matriculating at Florida public institutions subject to varying requirements. As demonstrated in the table below, the exact civic literacy requirements are based on the academic term in which a student first enrolled in a Florida public institution.

| Students Included in Cohort | Civic Literacy Competency Requirement |
|---|--|
| Cohort 1: Students first entering the SUS or FCS prior to fall 2018 | None |
| Cohort 2: Students first entering the SUS or FCS in fall 2018 – summer A 2021 | Complete a course or exam (course options AMH 2020, POS 2041) |
| Cohort 3: Students first entering the SUS or FCS in summer B 2021 (on or after July 1, 2021) and thereafter | Complete both a course and exam (course options AMH 2020, POS 2041) |

Additionally, the 2021 Legislature made two additional exceptions: approving the use of accelerated mechanisms for meeting the course competency requirement and exempting high school students who pass the Florida Civic Literacy Exam in high school from the postsecondary exam requirement. These two changes are in effect for Cohort 3.

There are multiple ways to satisfy this requirement. Students should work with their academic advisor to determine which option is best for their degree requirements/degree plan.

Additional information can be found on our [Civic Literacy](#) website, SUS regulation [BOG 8.006](#) and Florida Statute [s.1007.25\(4,a-b\)](#).

Mathematics Pathway

Students are advised to complete the following courses to fulfill the mathematics pathway that aligns with the mathematics skills needed for success in their program and their career goals. Students should refer to their academic advisor for questions about the math pathway for their program. For information about this requirement, refer to the catalog page for [Mathematics Pathways](#). These courses may also fulfill requirements for General Education and Common Prerequisites.

Algebra through Calculus

| | | |
|----------|--|-----|
| MAC 1105 | College Algebra | 3-4 |
| | or MAC 1105C College Algebra with Lab | |
| | or MAC 1140 Precalculus Algebra | |
| | or MAC 1114 Trigonometry | |
| | or MAC 1147 Precalculus with Trigonometry | |
| | or MAC 2311 Analytic Geometry and Calculus I | |
| MAC 1140 | Precalculus Algebra | 3-4 |
| | or MAC 1114 Trigonometry | |

- or MAC 1147 Precalculus with Trigonometry
- or MAC 2311 Analytic Geometry and Calculus I
- or MAC 2312 Analytic Geometry and Calculus II

Students will be placed on a starting point based on their mathematics placement.

Common Prerequisites

State-mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program. See the [Common Prerequisite Manual](#) for course substitutions from Florida colleges and universities.

| | | |
|---|--|-----------|
| COP XXXX | Computer Language elective | 3 |
| MAC 2311 | Analytic Geometry and Calculus I ^{*, X} | 4 |
| MAC 2312 | Analytic Geometry and Calculus II ^{*, X} | 4 |
| MAC 2313 | Analytic Geometry and Calculus III ^{*, X} | 4 |
| MAP 2302 | Differential Equations | 3 |
| One lab-based science course (BSC, CHM, PHY, or GLY) ^X | | 4 |
| Total Hours | | 22 |

* Indicates common prerequisites which can be used to satisfy General Education requirements.

X Requires a grade of "C-" or better.

Lower Division Electives

Students must complete sufficient 1000/2000 level electives to complete at least 60 semester hours in the lower division. Current UWF students may use elective courses at any level (1000-4000) to meet this elective requirement. 1

Major

| | | |
|--|---|-----------|
| MAS 3105 | Linear Algebra ⁺ | 3 |
| STA 3162C | Applied Statistics ⁺ | 4 |
| MHF 3202 | Set Theory and Mathematical Logic ⁺ | 3 |
| MAD 4401 | Numerical Analysis ⁺ | 3 |
| STA 4321 | Introduction to Mathematical Statistics I ⁺ | 3 |
| MAA 4211 | Advanced Calculus I ⁺ | 3 |
| MAS 4301 | Abstract Algebra ⁺ | 3 |
| MAT 4500 | Undergraduate Proseminar in Mathematics/ Statistics ⁺ | 1 |
| 3000/4000 level advisor-approved mathematics or statistics electives | | 9 |
| Total Hours | | 32 |

+ Courses included in the major GPA.

Upper Division Electives

Students must complete sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or complete all departmental requirements at the 3000/4000 level, whichever is greater. 28

Total Hours 28

Admission to Mathematics Teaching

Students declaring a major in the Mathematics Teaching degree programs will automatically be placed in a pending status until they are

fully admitted to the program. While in the pending status, students may not take 3000/4000 level education coursework, but should work closely with their advisor to plan an appropriate course of study in preparation for application to the program.

To be admitted, students must meet the following requirements:

- A cumulative GPA of 2.50 in all previously attempted college work;
- A passing score on the General Knowledge Test of the Florida Teacher Certification Exam;
- Completion of EDG 2041 Exploring Inquiry Teaching or equivalent with a grade of "C-" or higher.

The admission process requires students to complete the Application for Admission to Teacher Education (which includes a self-rating on dispositions toward teaching) and complete the orientation requirement.

B.A. Mathematics Teaching

General Education

In addition to the General Education requirements listed on this page, students must satisfy all additional University requirements, including the College-Level Communication and Computation, multicultural, and foreign language requirements. With appropriate planning and coordination with an academic advisor, students may satisfy some of the general University requirements through the General Education curriculum. For a complete listing of general degree requirements, refer to the [University Requirements](#) section of this catalog.

General Education Curriculum:

Communication

| | | |
|----------|----------------------------------|---|
| ENC 1101 | English Composition I (Core) | 3 |
| ENC 1102 | English Composition II (Breadth) | 3 |

Humanities

Choose one course from Group A (Core) and one additional course from either Group A or Group B (Breadth) 6

Group A (Core)

| | |
|----------|----------------------------|
| ARH 1000 | Art Appreciation |
| LIT 2000 | Introduction to Literature |
| MUL 2010 | Music Appreciation |
| PHI 2010 | Introduction to Philosophy |
| THE 2000 | Theatre Appreciation |

Group B (Breadth)

| | |
|-----------|--|
| AML 2010 | American Literature I |
| AML 2020 | American Literature II |
| ARH 2050 | Western Survey I: Prehistory to the Medieval Period |
| ARH 2051 | Western Survey II: Renaissance to Contemporary |
| ART 1015C | Exploring Artistic Vision |
| ART 2821 | The Self, Creativity, Your Career and Visual Culture |
| CRW 2001 | Introduction to Creative Writing |
| ENL 2010 | History of English Literature I |
| ENL 2020 | History of English Literature II |
| IDH 1040 | Honors Core: Humanities |
| LIT 2030 | Introduction to Poetry |

| | |
|----------|--------------------------------------|
| MUH 2930 | The Music Experience: Special Topics |
| PHI 2103 | Critical Thinking |
| PHI 2603 | Ethics in Contemporary Society |
| REL 1300 | World Religions |
| SPC 2608 | Public Speaking |
| THE 2300 | Survey of Dramatic Literature |

Mathematics

Choose one course from Group A (Core) and one Additional course from either Group A or Group B (Breadth) 6

Group A (Core)

| | |
|-----------|----------------------------------|
| MAC 1105 | College Algebra |
| MAC 1105C | College Algebra with Lab |
| MAC 2311 | Analytic Geometry and Calculus I |
| MGF 1130 | Mathematical Thinking |
| STA 2023 | Elements of Statistics |

Group B (Breadth)

| | |
|----------|-------------------------------------|
| MAC 1114 | Trigonometry |
| MAC 1140 | Precalculus Algebra |
| MAC 1147 | Precalculus with Trigonometry |
| MAC 2233 | Calculus with Business Applications |
| MAC 2312 | Analytic Geometry and Calculus II |
| MGF 1131 | Mathematics in Context |
| STA 2360 | Introduction to Data Science |

Natural Sciences

Choose one course from Group A (Core) and one additional course from either Group A or Group B (Breadth) 6

Group A (Core)

| | |
|-----------|---------------------------------------|
| AST 1002 | Descriptive Astronomy |
| BSC 1005 | General Biology for Non-Majors * |
| BSC 1085 | Anatomy and Physiology I * |
| BSC 2010 | Biology I |
| CHM 1020 | Concepts in Chemistry * |
| CHM 2045 | General Chemistry I * |
| ESC 2000 | Introduction to Earth Science * |
| EVR 2001 | Introduction to Environmental Science |
| GLY 2010 | Physical Geology |
| PHY 1020 | Conceptual Physics |
| PHY 2048 | Calculus-Based Physics I *, ** |
| PHY 2048C | Calculus-Based Physics I Studio *** |
| PHY 2053 | Algebra-Based Physics I *, ** |

Group B (Breadth)

| | |
|----------|---|
| ANT 2511 | Biological Anthropology * |
| AST 2037 | Life in the Universe |
| BOT 2010 | General Botany |
| BSC 1050 | Fundamentals of Ecology |
| BSC 1086 | Anatomy and Physiology II * |
| BSC 2011 | Biology II |
| BSC 2311 | Introduction to Oceanography and Marine Biology * |
| CGS 2020 | Introduction to Machine Learning |
| CHM 2046 | General Chemistry II * |
| CIS 2530 | Introduction to Cybersecurity |

| | |
|----------|---------------------------------|
| IDH 1043 | Honors Core: Natural Sciences |
| MCB 1000 | Fundamentals of Microbiology * |
| PHC 2082 | Informatics and Your Health |
| PHY 2049 | Calculus-Based Physics II *, ** |
| PHY 2054 | Algebra-Based Physics II *, ** |

* May be taken with or without lab.

** Algebra-Based Physics is usually recommended for non-science majors, while Calculus-Based Physics is recommended for science majors.

***Although students receive 5 semester hours credit for PHY 2048C, an additional 3 semester science course will be needed to meet General Education requirements.

Social Sciences

Choose one course from Group A (Core) and one additional course from either Group A or Group B (Breadth) 6

Group A (Core)

| | |
|----------|-------------------------------|
| AMH 2010 | United States to 1877 |
| AMH 2020 | United States Since 1877 |
| ANT 2000 | Introduction to Anthropology |
| ECO 2013 | Principles of Economics Macro |
| POS 2041 | American Politics |
| PSY 2012 | General Psychology |

Group B (Breadth)

| | |
|----------|---|
| ANT 2100 | Introduction to Archaeology |
| ANT 2400 | Current Cultural Issues |
| CCJ 2002 | Survey of Crime and Justice |
| COM 2023 | Death and Communication |
| CPO 2002 | Comparative Politics |
| DEP 2004 | Human Development Across the Lifespan |
| EUH 1000 | Western Perspectives I |
| EUH 1001 | Western Perspectives II |
| FIN 2104 | Personal Financial Planning |
| GEA 2000 | Nations and Regions of the World |
| GEB 1011 | Introduction to Business |
| HIS 2050 | Explore History: Special Topics |
| IDH 1041 | Honors Core: Social Sciences |
| INR 2002 | International Politics |
| MMC 2000 | Principles of Mass Communication |
| PLA 2013 | Survey of American Law |
| SOW 2192 | Understanding Relationships in the 21st Century |
| SPM 2010 | Sport in Global Society |
| SYG 2000 | Introduction to Sociology |
| SYG 2010 | Current Social Problems |

General Education Electives

Choose an additional course from two of the five areas of Communication, Mathematics, Social Sciences, Humanities, and Natural Sciences.

Multicultural Requirement:

Multicultural Courses

An important component of a liberal education is the study of cultures other than one's own. As such, multiculturalism encompasses the appreciation of the values, expressions, and modes of organization of diverse cultural communities. To further such study, the University of West Florida requires all students pursuing a bachelor's degree to complete at least one course that explores one or more of the dimensions of another culture (language, religion, socio-economic structures, etc.). Students are exempt from this requirement if they have completed an A.A. degree, the general education program at a Florida public institution, or a baccalaureate degree.

The requirement is satisfied by the successful completion of a multicultural course designated on the following list. Several of the selections are General Education courses, and students may enroll in these to meet both the General Education and the multicultural requirements.

***Passed by UWF Faculty Senate on 11/08/2002*

This list is continually updated and students are encouraged to check with their advisors for alternative options.

| | | | | | |
|----------|---|---|----------|---|---|
| AML 2010 | American Literature I | 3 | CPO 2002 | Comparative Politics | 3 |
| AML 2020 | American Literature II | 3 | CRW 2001 | Introduction to Creative Writing | 3 |
| AML 3604 | African American Literature | 3 | EDF 2085 | Teaching Diverse Populations | 3 |
| AML 3624 | Black Women Writers | 3 | ENG 4013 | Introduction to Literary Theory | 3 |
| AML 4015 | Topics in Nineteenth-Century American Literature | 3 | ENL 2020 | History of English Literature II | 3 |
| AML 4640 | Topics in Native American Literature | 3 | EUH 1000 | Western Perspectives I | 3 |
| ANT 1001 | Anthropology as a Profession | 1 | EUH 1001 | Western Perspectives II | 3 |
| ANT 2000 | Introduction to Anthropology | 3 | EUH 3334 | Emperors, Sultans, Dictators, and Democrats: The Balkans | 3 |
| ANT 2301 | Human Sexuality and Culture | 3 | EUH 3411 | Rome and the Mediterranean World | 3 |
| ANT 3212 | Peoples and Cultures of the World | 3 | EUH 3576 | Soviet Union since 1917 | 3 |
| ANT 3312 | North American Indians | 3 | FOL 3501 | Global Cinema | 3 |
| ANT 3363 | Japanese Culture | 3 | GEA 2000 | Nations and Regions of the World | 3 |
| ANT 4006 | Anthropology of Human Rights | 3 | GEB 4361 | International Business | 3 |
| ANT 4025 | Ritual Use of Human Remains | 3 | GEO 3421 | Cultural Geography | 3 |
| ANT 4403 | Environmental Anthropology | 3 | GEO 3471 | Geography of World Affairs | 3 |
| ANT 4516 | Modern Human Physical Variation | 3 | HSC 2622 | Introduction to Global Health Sciences | 3 |
| ARH 1000 | Art Appreciation | 3 | HIS 2050 | Explore History: Special Topics | 3 |
| ARH 2050 | Western Survey I: Prehistory to the Medieval Period | 3 | HIS 4262 | Rise and Fall of the Portuguese Empire | 3 |
| ARH 3201 | Art and Culture in The Global Middle Ages | 3 | IDH 1040 | Honors Core: Humanities | 3 |
| ARH 2051 | Western Survey II: Renaissance to Contemporary | 3 | IDH 1041 | Honors Core: Social Sciences | 3 |
| ARH 3590 | Non-Western Art | 3 | INR 2002 | International Politics | 3 |
| ARH 3607 | Native American Art | 3 | LAH 4135 | Spanish Conquest of the Americas | 3 |
| ARH 4412 | The Age of Revolution to Romanticism in Europe: 1750-1850 | 3 | LAH 4131 | 'Atlantic Indians': How Indigenous and African Peoples Shaped Europe & the Americas | 3 |
| ARH 4450 | Modern Art: 1850-1980 | 3 | LAH 4451 | Greater Mexico: Central America from Conquest to the 20th Century | 3 |
| ARH 4470 | Contemporary Art | 3 | LAH 4728 | Gender and Sexuality in Latin America from Colonization to Today | 3 |
| ARH 4563 | Art of Japan | 3 | LIT 2000 | Introduction to Literature | 3 |
| CCJ 3678 | Race, Gender, Ethnicity, and Crime | 3 | LIT 2030 | Introduction to Poetry | 3 |
| COM 3014 | Gender Communication | 3 | LIT 4036 | Topics in Poetry and Poetics | 3 |
| COM 3461 | Intercultural Communication | 3 | LIT 4385 | Feminist Theory | 3 |
| COM 4242 | Communication and Christianity | 3 | MAN 4102 | Management of Diversity | 3 |
| | | | MAR 4156 | Seminar in International Marketing | 3 |
| | | | MMC 3743 | Communicating Fear: Horror Films and Popular Culture | 3 |
| | | | MMC 3745 | Communicating Fear Abroad: International Horror Films & Popular Culture | 3 |
| | | | MMC 4601 | Minorities and the Mass Media | 3 |
| | | | MUH 2930 | The Music Experience: Special Topics | 3 |
| | | | MUL 2010 | Music Appreciation | 3 |
| | | | NUR 4615 | Patient Centered Population Health | 3 |
| | | | NUR 4636 | Population-based Public Health Nursing | 3 |
| | | | PHI 3790 | African Philosophy | 3 |
| | | | PUR 3404 | International Public Relations | 3 |
| | | | PSY 3860 | Positive Psychology | 3 |
| | | | SOP 3730 | Psychology, Culture, and Society | 3 |
| | | | SOW 4233 | Human Diversity and Social Justice | 3 |
| | | | SPN 3400 | Advanced Stylistics | 3 |
| | | | SPN 4520 | Latin American Culture and Civilization | 3 |

| | | |
|----------|--|---|
| SYO 4421 | Sociology of Health, Illness and Health Care | 3 |
| SYO 4530 | Inequality in America | 3 |

| | | |
|-------------|-----------------------------------|--|
| or MAC 1147 | Precalculus with Trigonometry | |
| or MAC 2311 | Analytic Geometry and Calculus I | |
| or MAC 2312 | Analytic Geometry and Calculus II | |

Civic Literacy Requirement

The 2017 Florida Legislature amended [Section 1007.25, Florida Statutes](#), to require students **initially entering a State University System (SUS) and/or Florida College System (FCS) institution in 2018-2019** and thereafter to demonstrate competency in civic literacy. The 2021 Legislature further amended Florida Statutes, requiring students to complete both a civic literacy course and an exam. As a result, there are three cohorts of students currently matriculating at Florida public institutions subject to varying requirements. As demonstrated in the table below, the exact civic literacy requirements are based on the academic term in which a student first enrolled in a Florida public institution.

| Students Included in Cohort | Civic Literacy Competency Requirement |
|---|--|
| Cohort 1: Students first entering the SUS or FCS prior to fall 2018 | None |
| Cohort 2: Students first entering the SUS or FCS in fall 2018 – summer A 2021 | Complete a course or exam (course options AMH 2020, POS 2041) |
| Cohort 3: Students first entering the SUS or FCS in summer B 2021 (on or after July 1, 2021) and thereafter | Complete both a course and exam (course options AMH 2020, POS 2041) |

Additionally, the 2021 Legislature made two additional exceptions: approving the use of accelerated mechanisms for meeting the course competency requirement and exempting high school students who pass the Florida Civic Literacy Exam in high school from the postsecondary exam requirement. These two changes are in effect for Cohort 3.

There are multiple ways to satisfy this requirement. Students should work with their academic advisor to determine which option is best for their degree requirements/degree plan.

Additional information can be found on our [Civic Literacy](#) website, SUS regulation [BOG 8.006](#) and Florida Statute [s.1007.25\(4,a-b\)](#).

Mathematics Pathway

Students are advised to complete the following courses to fulfill the mathematics pathway that aligns with the mathematics skills needed for success in their program and their career goals. Students should refer to their academic advisor for questions about the math pathway for their program. For information about this requirement, refer to the catalog page for [Mathematics Pathways](#). These courses may also fulfill requirements for General Education and Common Prerequisites.

Algebra through Calculus

| | | |
|----------|--|-----|
| MAC 1105 | College Algebra | 3-4 |
| | or MAC 1105C College Algebra with Lab | |
| | or MAC 1140 Precalculus Algebra | |
| | or MAC 1114 Trigonometry | |
| | or MAC 1147 Precalculus with Trigonometry | |
| | or MAC 2311 Analytic Geometry and Calculus I | |
| MAC 1140 | Precalculus Algebra | 3-4 |
| | or MAC 1114 Trigonometry | |

Students will be placed on a starting point based on their mathematics placement.

Common Prerequisites

State-mandated common prerequisites must be completed prior to graduation, but are not required for admission to the program. See the [Common Prerequisite Manual](#) for course substitutions from Florida colleges and universities.

| | | |
|--|--------------------------------------|-----------|
| EDG 2041 | Exploring Inquiry Teaching | 3 |
| COP XXXX | Computer Language elective | 3 |
| MAC 2311 | Analytic Geometry and Calculus I * | 4 |
| MAC 2312 | Analytic Geometry and Calculus II * | 4 |
| MAC 2313 | Analytic Geometry and Calculus III * | 4 |
| MAP 2302 | Differential Equations | 3 |
| Lab based science course (BSC, CHM, PHY) | | 4 |
| Total Hours | | 25 |

* Indicates common prerequisites which can be used to satisfy General Education requirements.

Lower Division Electives

Students must complete sufficient 1000/2000 level electives to satisfy at least 60 semester hours (sh) in the lower division. Current UWF students may use elective courses at any level (1000-4000) to meet this elective requirement.

Major

| | | |
|--------------------|---|-----------|
| MAA 4211 | Advanced Calculus I * | 3 |
| MAD 4401 | Numerical Analysis * | 3 |
| MHF 3202 | Set Theory and Mathematical Logic * | 3 |
| MAS 3105 | Linear Algebra * | 3 |
| MAS 4301 | Abstract Algebra * | 3 |
| MAT 4500 | Undergraduate Proseminar in Mathematics/ Statistics * | 1 |
| STA 3162C | Applied Statistics * | 4 |
| STA 4321 | Introduction to Mathematical Statistics I * | 3 |
| Total Hours | | 23 |

+ Courses counted toward the Major GPA.

Upper Division Electives

Students must complete sufficient 3000/4000 level electives to meet UWF's requirement of 48 semester hours in the upper division or complete all departmental requirements at the 3000/4000 level, whichever is greater

Teaching Core

| | | |
|----------|--------------------------------------|---|
| EDF 3234 | Applied Foundations of Education | 3 |
| EDG 4323 | Methods of K-12 Literacy Instruction | 3 |
| EDG 4948 | Apprenticeship Teaching | 6 |

| | | |
|--------------------|---|-----------|
| ESE 4322 | Instruction, Management, and Assessment: Secondary Education | 3 |
| ESE 4940 | Secondary Practicum | 3 |
| MAE 4320 | Teaching Mathematics in Middle and Secondary Schools | 3 |
| TSL 4080 | ESOL Principles and Practices | 3 |
| Total Hours | | 24 |

| | | |
|--------------------|--------------------------------|-----------|
| CAP 4755 | Tools for Data Science | 3 |
| CAP 4774 | Databases for Data Science | 3 |
| STA 4121 | Statistics for Data Science I | 3 |
| STA 4231 | Statistics for Data Science II | 3 |
| Total Hours | | 12 |

Mathematics Minor

A Minor in Mathematics requires completion of the calculus sequence in addition to the completion of 15 semester hours approved by the Department of Mathematics and Statistics in courses beyond the level of MAC 2313 Analytic Geometry and Calculus III. The courses can be any 3000/4000-level MAA, MAD, MAP, MAS, or MHF course, and/or MAP 2302, and/or STA 4321. A grade of "C-" or better is required for each of these courses, including the calculus sequence. Mathematics majors may not earn this minor.

Statistics Minor

The minor in statistics requires completion of STA 2023 Elements of Statistics and MAC 2311 Analytic Geometry and Calculus I, in addition to the completion of 15 semester hours chosen from among the following courses:

| | | |
|---------------------------------|---|-----------|
| Complete 5 of the seven courses | | 15 |
| STA 3162C | Applied Statistics | |
| STA 4173 | Biostatistics | |
| STA 4321 | Introduction to Mathematical Statistics I | |
| STA 4051 | Nonparametric Statistics | |
| STA 4222 | Sampling Theory | |
| STA 4234 | Regression Analysis | |
| COP 4710 | Database Systems | |
| Total Hours | | 15 |

Data in the Workplace Certificate

Data in the Workplace is a certificate program that guides students through an exploration of data including data integration, ethical considerations, identification of a problem of interest, interpretation of results, and written and oral presentations of findings. This online program guides students through the applications of the fundamentals of statistics necessary for data description and analysis to enable data-driven decision-making in the context of the student's discipline.

| | | |
|--------------------|----------------|----------|
| STA 4012 | Data Awareness | 3 |
| STA 4091 | Data Fluency | 3 |
| PHI 4990 | Ethics in AI | 3 |
| Total Hours | | 9 |

Data Science Certificate

In the University of West Florida's fully online Undergraduate Data Science Certificate program, students will learn relevant programming languages, statistics, and the modeling and computational techniques needed for Data Science. The comprehensive curriculum helps to identify, formulate, and solve data problems by selecting and applying appropriate methods in various fields. Students will understand the broad impact of data on society and can raise critical questions about data, its interpretation, and visualization.