

Environmental Science

This interdisciplinary program offers a B.S. degree in Environmental Science. Students learn to analyze physical and socioeconomic environments and to reach decisions concerning environmental use and protection. The major allows students to obtain an interdisciplinary background suitable for environmental monitoring and planning. Graduates are prepared for entry- and middle-level positions in governmental agencies in such areas as regional planning and resource management; for positions in industry and the private sector; or to pursue graduate degrees in urban/regional planning, resource management, coastal studies, Geographic Information Systems (GIS), and the geosciences.

Two specializations are available under this B.S. program:
Environmental Management and Natural Science.

Contact the department for information concerning the Certificate in Geographic Information Science (GIS).

Program Requirements

In addition to the university's general requirements, students seeking the B.S. in Environmental Science must meet the requirements listed below.

Students must consult with their academic advisors for courses that may satisfy both the General Education requirements and common prerequisites.

A grade of "C-" or better is required in all common prerequisites. No grade below a "C-" in a major course may be applied toward graduation.

Environmental Management Specialization

General Education

ADDENDUM - 06/12/2025

In addition to the [General Education](#) requirements, students must satisfy all additional State of Florida requirements, including the [College-Level Communication and Computation](#), [Civic Literacy](#), 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 [State University Requirements](#) and [Degree Requirements](#) sections of this catalog.

General Education Curriculum:

Communication

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

Communication Elective Options:

CRW 2001	Introduction to Creative Writing
MMC 2000	Principles of Mass Communication
SPC 2608	Public Speaking

Humanities

Choose one course from the Humanities Core and one additional course from either the Humanities Core or the Humanities Breadth. 6

Humanities Core Options:

ARH 1000	Art Appreciation
HUM 2020	Introduction to Humanities
HUM 2020H	Honors Introduction to Humanities
LIT 2000	Introduction to Literature
MUL 2010	Music Appreciation
PHI 2010	Introduction to Philosophy
THE 2000	Theatre Appreciation

Humanities Breadth Options:

AML 2010	American Literature I
AML 2020	American Literature II
AMS 2010	Civil Discourse and the American Political Order
ARH 2050	Western Survey I: Prehistory to the Medieval Period
ARH 2051	Western Survey II: Renaissance to Contemporary
ART 1015C	Exploring Artistic Vision
ENL 2010	History of English Literature I
ENL 2020	History of English Literature II
LIT 2030	Introduction to Poetry
MUH 2004	The Music Experience - Concerts
PHI 2103	Critical Thinking
PHI 2603	Ethics in Contemporary Society
REL 1300	World Religions
THE 2300	Survey of Dramatic Literature

Mathematics

Choose one course from the Mathematics Core and one additional course from either the Mathematics Core or the Mathematics Breadth. 6

Mathematics Core Options:

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

Mathematics Breadth Options:

MAC 1114	Trigonometry	3
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 the Natural Sciences Core and one additional course from either the Natural Sciences Core or the Natural Sciences Breadth. 6

Natural Sciences Core Options:

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
EVR 2001H	Honors 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 *, **
Natural Sciences Breadth Options:	
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 *
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 the Social Sciences Core and one additional course from either the Social Sciences Core or the Social Sciences Breadth.

Social Sciences Core Options:

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

Social Sciences Breadth Options:

ANT 2100	Introduction to Archaeology
CCJ 2002	Survey of Crime and Justice
CIS 2530	Introduction to Cybersecurity
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 Finance
GEA 2000	Nations and Regions of the World
GEB 1011	Introduction to Business
HIS 2050	Explore History
HSC 2100	Personal, Family and Community Health
INR 2002	International Politics
PLA 2013	Survey of American Law
PLA 2013H	Honors Survey of American Law
SPM 2010	Sport in Global Society
SYG 2000	Introduction to Sociology

General Education Electives

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

Environmental Management specialization Environmental Science majors should take the following to satisfy perspectives of General Education:

Social Science/Behavioral Perspectives (one of the following): 3

ANT 2000	Introduction to Anthropology
PSY 2012	General Psychology

Social Science/Socio-political Perspectives (one of the following): 3

GEA 2000	Nations and Regions of the World
ECO 2013	Principles of Economics Macro
INR 2002	International Politics
POS 2041	American Politics

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 by passing an assessment or taking AMH 2020 United States Since 1877 or POS 2041 American Politics.

The 2021 Legislature further amended Florida Statutes, requiring students to complete both a civic literacy course and an exam. In 2024, the Board of Governors made an additional revision, recognizing two new courses meeting the Civic Literacy requirement, AMH 2010 United States to 1877 and AMS 2010 Civil Discourse and the American Political Order. As a result, there are four cohorts of students currently matriculating at Florida public institutions that are 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 initially entering the SUS or FCS before fall 2018	None

Cohort 2: Students initially entering the SUS or FCS in Academic Year 2018 through Academic Year 2020	Complete a course or Assessment.
Cohort 3: Students initially entering the SUS or FCS in Academic Year 2021 through Academic Year 2023	Course and Assessment.
Cohort 4: Students initially entering the SUS or FCS in fall 2024 and thereafter	Course and Assessment.

Additionally, for Cohorts 3 and 4, approved accelerated mechanisms may meet the course and/or assessment requirement, and students who pass the Florida Civic Literacy Exam (FCLE) in high school are exempt from the postsecondary exam requirement.

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.

Statistical Reasoning

STA 2023	Elements of Statistics	3
STA 2360	Introduction to Data Science	3

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.

BSC 1005 & 1005L	General Biology for Non-Majors and General Biology Laboratory for Non-Majors *	4
BOT 2010 & 2010L	General Botany and General Botany Lab *	4
CHM 2045 & 2045L	General Chemistry I and General Chemistry I Laboratory *	4
CHM 2046 & 2046L	General Chemistry II and General Chemistry II Laboratory *	4
MAC 1140	Precalculus Algebra *	3
STA 2023	Elements of Statistics *	3
Choose one of the following:		4
GLY 2010 & 2010L	Physical Geology and Physical Geology Laboratory *	

ESC 2000 & 2000L	Introduction to Earth Science and Introduction to Earth Science Laboratory *	
Total Hours		26

* 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. 0-10

Environmental Core

Cornerstone		
EVR 2920	Foundations in Environmental Science	1
GEO 3210 & 3210L	Geomorphology and Geomorphology Lab *	4
Techniques and Skills		
GEO 4280 & 4280L	Basic Hydrology and Basic Hydrology Lab *	4
GEO 4250 & 4250L	Weather and Climate and Weather and Climate Lab *	4
GEO 4260 & 4260L	Geography of Soils and Geography of Soils Laboratory *	4
EVR 3894 or ENC 3455	Environmental Writing * Writing for Science, Technology, Engineering and Math Majors	3
GIS 4043 & 4043L	Geographic Information Systems and GIS Laboratory *	4
GEO 4004	Environmental Science, Politics and Policy *	3
Capstone		
Choose one:		3
EVR 4941	Internship in Environmental Sciences	
EVR 4970	Research in Earth and Environmental Sciences	
EVR 4039	Community Engagement through Environmental Science	
GEO 4332	Senior Seminar *	1
Total Hours		31

Major

Environmental Studies Core		31
Environmental Management Content		
Choose 12 hours		12
GEO 3372	Conservation of Natural Resources *	
EVR 4035	Environmental Law *	
EVR 4412	Environmental Aspects of Urban Growth *	
EVR 4870	Urban Planning *	
GEO 4005	Environmental Management & Planning *	
GEO 4357	Environment and Economy *	
Environmental Management Skills		
Choose 12 hours		12

GIS 4035 & 4035L	Photo Interpretation and Remote Sensing and Photo Interpretation and Remote Sensing Lab ⁺	
GIS 4301	GIS for Environmental Analysis ⁺	
GIS 4071	Methods and Techniques in Environmental Resource Management and Planning ⁺	
EVR 4823	Environmental Impact Assessment ⁺	
GEO 4164	Geostatistics ⁺	
STA 4173	Biostatistics ⁺	
	or STA 4121 Statistics for Data Science I	
Any upper-level course with prefixes of EVR, EVS, GEO, GIS, or GLY. Up to six (6) hours may be taken in courses outside the program with prefixes of ANT, BOT, COM, ECP, HFT, INR, MAN, PCB, etc. See advisor for list of approved courses. ⁺		17
Total Hours		72

⁺ Courses included in the major GPA.

Accelerated Bachelor's (B.S.) Environmental Management/Master's (M.S.) in Environmental Science (ABM-EVR)

Minimum Requirements for Admission

In addition to the University's general admission requirements as described in the Undergraduate Admissions section of the catalog, students seeking the ABM-EVR must meet the following additional requirements at the time of application:

- Undergraduate overall GPA of 3.25 or better.
- Undergraduate program (major) GPA of 3.5 or better.
- Completion of all Bachelor of Science in Environmental Science Environmental Cornerstone course requirements - EVR 2920 Foundations in Environmental Science, GEO 3210 Geomorphology, and GEO 3210L Geomorphology Lab.
- A grade of "B" (3.0) or higher in each Bachelor of Science in Environmental Science Environmental Core course.
- Two letters of recommendation.

Process

A prospective student who meets the minimum requirements for admission to the ABM-EVR program must schedule a meeting with their undergraduate faculty advisor and graduate coordinator to discuss and develop a degree plan for the student's ABM-EVR program. The student must then submit an ABM-EVR program application and two letters of recommendation to the graduate advisor.

Eligibility and Restrictions

Students must have completed 75 undergraduate credit hours, including credits earned from advanced placement, prior to applying to the ABM-EVR program. Transfer students must have completed a minimum of two semesters and at least 24 credit hours at the University of West Florida prior to application to the ABM-EVR program.

For admission into the ABM-EVR program in the summer semester, application materials must be submitted by March 15. For admission into the ABM-EVR program in the fall semester, application materials

must be submitted by June 15. For admission into the ABM-EVR program in the spring semester, application materials must be submitted by October 15.

Admission into the ABM-EVR program does not guarantee admission into the Master's in Environmental Science program upon completion of the Bachelor's in Environmental Science. Students must submit an Express Admission application for the Master's in Environmental Science program. Students who are a part of the ABM-EVR program cannot be provisionally or conditionally admitted into the Master's in Environmental Science program.

Program Requirements

Upon admission into the Master's in Environmental Science program, the 12 graduate credit hours completed as an undergraduate student will count for 12 credit hours of coursework for the master's program. Students in the ABM-EVR program must earn a grade of "B" (3.0/4.0) or better in each of the graduate-level courses that are being applied to both degrees. Courses completed with a grade of "B-" or below cannot be applied to the master's degree.

Students accepted into the master's program must complete all requirements within 18 months of completing the bachelor's degree in the non-thesis track (24 months if in the thesis track). If the requirements are not completed within 18 months (24 months for the thesis track); the student is no longer eligible to apply the graduate credit hours toward both degrees (i.e., the student can only apply the graduate credit hours either toward completion of the bachelor's or toward a future master's degree) and is automatically terminated from the ABM-EVR program.

If a student in the ABM-EVR program completes the bachelor's degree requirements with an overall GPA of less than 3.25/4.0, the student is no longer eligible to apply the graduate credit hours to both degrees (i.e., the student can only apply the credit hours towards completion of the bachelor's degree or toward a future master's degree) and is automatically terminated from the ABM-EVR program.

A student who becomes ineligible to continue participating in or withdraws from the Accelerated ABM-EVR program cannot apply any graduate credit hours toward both degrees.

Students who are enrolled in the ABM-EVR program are eligible for graduate assistantship positions only after completing the bachelor's degree.

Undergraduate Degree Program

General Education

ADDENDUM - 06/12/2025

In addition to the [General Education](#) requirements, students must satisfy all additional State of Florida requirements, including the [College-Level Communication and Computation](#), [Civic Literacy](#), 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 [State University Requirements](#) and [Degree Requirements](#) sections of this catalog.

General Education Curriculum: Communication

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

Communication Elective Options:

CRW 2001	Introduction to Creative Writing
MMC 2000	Principles of Mass Communication
SPC 2608	Public Speaking

Humanities

Choose one course from the Humanities Core and one additional course from either the Humanities Core or the Humanities Breadth. 6

Humanities Core Options:

ARH 1000	Art Appreciation
HUM 2020	Introduction to Humanities
HUM 2020H	Honors Introduction to Humanities
LIT 2000	Introduction to Literature
MUL 2010	Music Appreciation
PHI 2010	Introduction to Philosophy
THE 2000	Theatre Appreciation

Humanities Breadth Options:

AML 2010	American Literature I
AML 2020	American Literature II
AMS 2010	Civil Discourse and the American Political Order
ARH 2050	Western Survey I: Prehistory to the Medieval Period
ARH 2051	Western Survey II: Renaissance to Contemporary
ART 1015C	Exploring Artistic Vision
ENL 2010	History of English Literature I
ENL 2020	History of English Literature II
LIT 2030	Introduction to Poetry
MUH 2004	The Music Experience - Concerts
PHI 2103	Critical Thinking
PHI 2603	Ethics in Contemporary Society
REL 1300	World Religions
THE 2300	Survey of Dramatic Literature

Mathematics

Choose one course from the Mathematics Core and one additional course from either the Mathematics Core or the Mathematics Breadth. 6

Mathematics Core Options:

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

Mathematics Breadth Options:

MAC 1114	Trigonometry	3
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 the Natural Sciences Core and one additional course from either the Natural Sciences Core or the Natural Sciences Breadth. 6

Natural Sciences Core Options:

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
EVR 2001H	Honors 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 *, **

Natural Sciences Breadth Options:

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 *
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 the Social Sciences Core and one additional course from either the Social Sciences Core or the Social Sciences Breadth. 6

Social Sciences Core Options:

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 1212	General Psychology
Social Sciences Breadth Options:	
ANT 2100	Introduction to Archaeology
CCJ 2002	Survey of Crime and Justice
CIS 2530	Introduction to Cybersecurity
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 Finance
GEA 2000	Nations and Regions of the World
GEB 1011	Introduction to Business
HIS 2050	Explore History
HSC 2100	Personal, Family and Community Health
INR 2002	International Politics
PLA 2013	Survey of American Law
PLA 2013H	Honors Survey of American Law
SPM 2010	Sport in Global Society
SYG 2000	Introduction to Sociology

General Education Electives

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

Environmental Management specialization Environmental Science majors should take the following to satisfy perspectives of General Education:

Social Science/Behavioral Perspectives (one of the following):	3
ANT 2000	Introduction to Anthropology
PSY 1212	General Psychology
Social Science/Socio-Political Perspectives (one of the following):	3
GEA 2000	Nations and Regions of the World
ECO 2013	Principles of Economics Macro
INR 2002	International Politics
POS 2041	American Politics

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 by passing an assessment or taking AMH 2020 United States Since 1877 or POS 2041 American Politics.

The 2021 Legislature further amended Florida Statutes, requiring students to complete both a civic literacy course and an exam. In 2024, the Board of Governors made an additional revision, recognizing two new courses meeting the Civic Literacy requirement, AMH 2010 United States to 1877 and AMS 2010 Civil Discourse and the American Political Order. As a result, there are four cohorts of students currently matriculating at Florida public institutions that are 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 initially entering the SUS or FCS before fall 2018	None
Cohort 2: Students initially entering the SUS or FCS in Academic Year 2018 through Academic Year 2020	Complete a course or Assessment.
Cohort 3: Students initially entering the SUS or FCS in Academic Year 2021 through Academic Year 2023	Course and Assessment.
Cohort 4: Students initially entering the SUS or FCS in fall 2024 and thereafter	Course and Assessment.

Additionally, for Cohorts 3 and 4, approved accelerated mechanisms may meet the course and/or assessment requirement, and students who pass the Florida Civic Literacy Exam (FCLE) in high school are exempt from the postsecondary exam requirement.

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.

Statistical Reasoning	
STA 2023	Elements of Statistics 3
STA 2360	Introduction to Data Science 3

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.

BSC 1005 & 1005L	General Biology for Non-Majors and General Biology Laboratory for Non-Majors *	4
BOT 2010 & 2010L	General Botany and General Botany Lab *	4
CHM 2045 & 2045L	General Chemistry I and General Chemistry I Laboratory *	4
CHM 2046 & 2046L	General Chemistry II and General Chemistry II Laboratory *	4

MAC 1140	Precalculus Algebra *	3
STA 2023	Elements of Statistics *	3
Choose one of the following:		4
GLY 2010 & 2010L	Physical Geology and Physical Geology Laboratory *	
ESC 2000 & 2000L	Introduction to Earth Science and Introduction to Earth Science Laboratory *	
Total Hours		26

* 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 credit hours in the lower division. Current UWF students may use elective courses at any level (1000-4000) to meet this elective requirement.

Environmental Core

Cornerstone

EVR 2920	Foundations in Environmental Science	1
GEO 3210 & 3210L	Geomorphology and Geomorphology Lab +	4
Techniques and Skills		
GEO 4280 & 4280L	Basic Hydrology and Basic Hydrology Lab +	4
GEO 4250 & 4250L	Weather and Climate and Weather and Climate Lab +	4
GEO 4260 & 4260L	Geography of Soils and Geography of Soils Laboratory +	4
EVR 3894 or ENC 3455	Environmental Writing + Writing for Science, Technology, Engineering and Math Majors	3
GIS 4043 & 4043L	Geographic Information Systems and GIS Laboratory +	4
GEO 4004	Environmental Science, Politics and Policy +	3
Capstone		
Choose one:		3
EVR 4941	Internship in Environmental Sciences	
EVR 4970	Research in Earth and Environmental Sciences	
EVR 4039	Community Engagement through Environmental Science	
GEO 4332	Senior Seminar +	1

Total Hours **31**

Major +

Environmental Studies Core	31
Environmental Management Content	
Choose 12 hours	12
GEO 3372	Conservation of Natural Resources
EVR 4035	Environmental Law
EVR 4412	Environmental Aspects of Urban Growth
EVR 4870	Urban Planning

GEO 4005	Environmental Management & Planning	
GEO 4357	Environment and Economy	
Environmental Management Skills		
Choose 12 hours		12
GIS 4035 & 4035L	Photo Interpretation and Remote Sensing and Photo Interpretation and Remote Sensing Lab	
GIS 4048	Applications in Geographic Information Systems	
GIS 4301	GIS for Environmental Analysis	
GIS 4071	Methods and Techniques in Environmental Resource Management and Planning	
EVR 4823	Environmental Impact Assessment	
GEO 4164	Geostatistics	
STA 4173	Biostatistics	
or STA 412' Statistics for Data Science I		
Any upper-level course with prefixes of EVR, EVS, GEO, GIS, or GLY. Up to six (6) hours may be taken in courses outside the program with prefixes of ANT, BOT, COM, ECP, HFT, INR, MAN, and PCB. See advisor for list of approved courses. +		17
Total Hours		72

Graduate Level Electives

Up to 12 credit hours of advisor-approved 5000-level courses with EVS, EVR, GEA, GEO, or GIS prefix are allowed to substitute for the requirements listed above.

+ Courses included in the major GPA.

Natural Science Specialization

General Education

ADDENDUM - 06/12/2025

In addition to the [General Education](#) requirements, students must satisfy all additional State of Florida requirements, including the [College-Level Communication and Computation](#), [Civic Literacy](#), 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 [State University Requirements](#) and [Degree Requirements](#) sections of this catalog.

General Education Curriculum:

Communication

ENC 1101	English Composition I (Core)	3
ENC 1102	English Composition II (Breadth)	3
Communication Elective Options:		
CRW 2001	Introduction to Creative Writing	
MMC 2000	Principles of Mass Communication	
SPC 2608	Public Speaking	

Humanities

Choose one course from the Humanities Core and one additional course from either the Humanities Core or the Humanities Breadth. 6

Humanities Core Options:

ARH 1000	Art Appreciation
HUM 2020	Introduction to Humanities
HUM 2020H	Honors Introduction to Humanities
LIT 2000	Introduction to Literature
MUL 2010	Music Appreciation
PHI 2010	Introduction to Philosophy
THE 2000	Theatre Appreciation

Humanities Breadth Options:

AML 2010	American Literature I
AML 2020	American Literature II
AMS 2010	Civil Discourse and the American Political Order
ARH 2050	Western Survey I: Prehistory to the Medieval Period
ARH 2051	Western Survey II: Renaissance to Contemporary
ART 1015C	Exploring Artistic Vision
ENL 2010	History of English Literature I
ENL 2020	History of English Literature II
LIT 2030	Introduction to Poetry
MUH 2004	The Music Experience - Concerts
PHI 2103	Critical Thinking
PHI 2603	Ethics in Contemporary Society
REL 1300	World Religions
THE 2300	Survey of Dramatic Literature

Mathematics

Choose one course from the Mathematics Core and one additional course from either the Mathematics Core or the Mathematics Breadth. 6

Mathematics Core Options:

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

Mathematics Breadth Options:

MAC 1114	Trigonometry	3
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 the Natural Sciences Core and one additional course from either the Natural Sciences Core or the Natural Sciences Breadth. 6

Natural Sciences Core Options:

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
EVR 2001H	Honors 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 *, **

Natural Sciences Breadth Options:

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 *
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 the Social Sciences Core and one additional course from either the Social Sciences Core or the Social Sciences Breadth. 6

Social Sciences Core Options:

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

Social Sciences Breadth Options:

ANT 2100	Introduction to Archaeology
CCJ 2002	Survey of Crime and Justice

CIS 2530	Introduction to Cybersecurity
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 Finance
GEA 2000	Nations and Regions of the World
GEB 1011	Introduction to Business
HIS 2050	Explore History
HSC 2100	Personal, Family and Community Health
INR 2002	International Politics
PLA 2013	Survey of American Law
PLA 2013H	Honors Survey of American Law
SPM 2010	Sport in Global Society
SYG 2000	Introduction to Sociology

General Education Electives

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

Natural Science specialization Environmental Science majors should take the following to satisfy perspectives of General Education:

Social Science/Behavioral Perspectives (one of the following): 3

ANT 2000	Introduction to Anthropology
PSY 2012	General Psychology

Social Science/Socio-political Perspectives (one of the following): 3

GEA 2000	Nations and Regions of the World
ECO 2013	Principles of Economics Macro
INR 2002	International Politics
POS 2041	American Politics

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 by passing an assessment or taking AMH 2020 United States Since 1877 or POS 2041 American Politics.

The 2021 Legislature further amended Florida Statutes, requiring students to complete both a civic literacy course and an exam. In 2024, the Board of Governors made an additional revision, recognizing two new courses meeting the Civic Literacy requirement, AMH 2010 United States to 1877 and AMS 2010 Civil Discourse and the American Political Order. As a result, there are four cohorts of students currently matriculating at Florida public institutions that are 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 initially entering the SUS or FCS before fall 2018	None
Cohort 2: Students initially entering the SUS or FCS in Academic Year 2018 through Academic Year 2020	Complete a course or Assessment.
Cohort 3: Students initially entering the SUS or FCS in Academic Year 2021 through Academic Year 2023	Course and Assessment.
Cohort 4: Students initially entering the SUS or FCS in fall 2024 and thereafter	Course and Assessment.

Additionally, for Cohorts 3 and 4, approved accelerated mechanisms may meet the course and/or assessment requirement, and students who pass the Florida Civic Literacy Exam (FCLE) in high school are exempt from the postsecondary exam requirement.

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.

Statistical Reasoning

STA 2023	Elements of Statistics	3
STA 2360	Introduction to Data Science	3

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.

BOT 2010 & 2010L	General Botany and General Botany Lab *	4
CHM 2045 & 2045L	General Chemistry I and General Chemistry I Laboratory *	4
CHM 2046 & 2046L	General Chemistry II and General Chemistry II Laboratory *	4
ESC 2000 & 2000L	Introduction to Earth Science and Introduction to Earth Science Laboratory *	4
or GLY 2010 & 2010L	Physical Geology and Physical Geology Laboratory *	
MAC 2311	Analytic Geometry and Calculus I *	4
PHY 2048 & 2048L	Calculus-Based Physics I and Calculus-Based Physics I Lab *	4

or PHY 2053L Algebra-Based Physics I Lab and Algebra-Based Physics I & PHY 2053		
STA 2023	Elements of Statistics *	3
Total Hours		27

* 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 (1000-4999) to meet this elective requirement.

Total Hours **0-10**

Environmental Studies Core

Cornerstone

EVR 2920	Foundations in Environmental Science +	1
GEO 3210 & 3210L	Geomorphology and Geomorphology Lab +	4

Techniques and Skills

GEO 4280 & 4280L	Basic Hydrology and Basic Hydrology Lab +	4
GEO 4250 & 4250L	Weather and Climate and Weather and Climate Lab +	4
GEO 4260 & 4260L	Geography of Soils and Geography of Soils Laboratory +	4

EVR 3894 or ENC 3455	Environmental Writing + Writing for Science, Technology, Engineering and Math Majors	3
-------------------------	--	---

GIS 4043 & 4043L	Geographic Information Systems and GIS Laboratory +	4
---------------------	--	---

GEO 4004	Environmental Science, Politics and Policy +	3
----------	--	---

Capstone

Choose one:		3
-------------	--	---

EVR 4941	Internship in Environmental Sciences	
EVR 4970	Research in Earth and Environmental Sciences	

EVR 4039	Community Engagement through Environmental Science	
----------	---	--

GEO 4332	Senior Seminar +	1
----------	------------------	---

Total Hours **31**

Major

Environmental Studies Core 31

Natural Science Content

Choose 15 hours 15

GEO 4221 & 4221L	Coastal Morphology and Processes and Coastal Morphology and Processes Laboratory +	
---------------------	--	--

GEO 4251	Advanced Climatology and Climate Change +	
----------	--	--

EVR 4023	Coastal and Marine Environments +	
----------	-----------------------------------	--

GLY 4240	Geochemistry +	
----------	----------------	--

GLY 4244	Biogeochemistry +	
PCB 4601	Plant Ecology +	

Natural Science Skills

Choose 9 hours 9

GEO 4164	Geostatistics +	
STA 4173	Biostatistics +	

or STA 4121 Statistics for Data Science I

GIS 4071	Methods and Techniques in Environmental Resource Management and Planning +	
----------	---	--

CHM 3120 & 3120L	Analytical Chemistry and Analytical Chemistry Lab	
---------------------	--	--

GIS 4035 & 4035L	Photo Interpretation and Remote Sensing and Photo Interpretation and Remote Sensing Lab +	
---------------------	---	--

GIS 4301	GIS for Environmental Analysis +	
----------	----------------------------------	--

Any upper-level course with prefixes of EVR, EVS, GEO, GIS, or GLY. Up to six (6) hours may be taking in courses outside the program with prefixes of ANT, BOT, BSC, COM, MAN, PCB, ZOO, etc. See advisor for list of approved courses.

Total Hours **66**

+ Courses included in the major GPA.

Accelerated Bachelor's (B.S.) in Natural Science/Master's (M.S.) in Environmental Science (ABM-EVR)

Minimum Requirements for Admission

In addition to the University's general admission requirements as described in the Undergraduate Admissions section of the catalog, students seeking the ABM-EVR must meet the following additional requirements at the time of application:

- Undergraduate Overall GPA of 3.25 or better
- Undergraduate Program (Major) GPA of 3.5 or better
- Completion of all Bachelor of Science in Environmental Science Environmental Cornerstone course requirements: EVR 2920 Foundations in Environmental Science and GEO 3210 Geomorphology+GEO 3210L Geomorphology Lab
- A grade of "B" (3.0) or higher in each Bachelor of Science in Environmental Science Environmental Core course
- Two letters of recommendation

Process

A prospective student who meets the minimum requirements for admission to the ABM-EVR program must schedule a meeting with their undergraduate faculty advisor and graduate coordinator to discuss and develop a degree plan for the student's ABM-EVR program. The student must then submit an ABM-EVR program application and two letters of recommendation to the graduate advisor.

Eligibility and Restrictions

Students must have completed 75 undergraduate credit hours, including credits earned from advanced placement, prior to applying to the ABM-EVR program. Transfer students must have completed a minimum of two semesters and at least 24 credit hours at the

University of West Florida prior to application to the ABM-EVR program.

For admission into the ABM-EVR program in the summer semester, application materials must be submitted by March 15. For admission into the ABM-EVR program in the fall semester, application materials must be submitted by June 15. For admission into the ABM-EVR program in the spring semester, application materials must be submitted by October 15.

Admission into the ABM-EVR program does not guarantee admission into the Master's in Environmental Science program upon completion of the Bachelor's in Environmental Science. Students must submit an Express Admission application for the Master's in Environmental Science program. Students who are a part of the ABM-EVR program cannot be provisionally or conditionally admitted into the Master's in Environmental Science program.

Program Requirements

Upon admission into the Master's in Environmental Science program, the 12 graduate credit hours completed as an undergraduate student will count for 12 semester hours of coursework for the master's program. Students in the ABM-EVR program must earn a grade of "B" (3.0/4.0) or better in each of the graduate-level courses that are being applied to both degrees. Courses completed with a grade of "B-" or below cannot be applied to the master's degree.

Students accepted into the master's program must complete all requirements within 18 months of completing the bachelor's degree in the non-thesis track (24 months if in the thesis track). If the requirements are not completed within 18 months (24 months for the thesis track); the student is no longer eligible to apply the graduate credit hours toward both degrees (i.e., the student can only apply the graduate credit hours either toward completion of the bachelor's or toward a future master's degree) and is automatically terminated from the ABM-EVR program.

If a student in the ABM-EVR program completes the bachelor's degree requirements with an overall GPA of less than 3.25/4.0, the student is no longer eligible to apply the graduate credit hours to both degrees (i.e., the student can only apply the credit hours towards completion of the bachelor's degree or toward a future master's degree) and is automatically terminated from the ABM-EVR program.

A student who becomes ineligible to continue participating in or withdraws from the Accelerated ABM-EVR program cannot apply any graduate credit hours toward both degrees.

Students who are enrolled in the ABM-EVR program are eligible for graduate assistantship positions only after completing the bachelor's degree.

Natural Science Specialization

General Education

ADDENDUM - 06/12/2025

In addition to the [General Education](#) requirements, students must satisfy all additional State of Florida requirements, including the [College-Level Communication and Computation](#), [Civic Literacy](#), 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 [State University Requirements](#) and [Degree Requirements](#) sections of this catalog.

General Education Curriculum:

Communication

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

Communication Elective Options:

CRW 2001	Introduction to Creative Writing
MMC 2000	Principles of Mass Communication
SPC 2608	Public Speaking

Humanities

Choose one course from the Humanities Core and one additional course from either the Humanities Core or the Humanities Breadth. 6

Humanities Core Options:

ARH 1000	Art Appreciation
HUM 2020	Introduction to Humanities
HUM 2020H	Honors Introduction to Humanities
LIT 2000	Introduction to Literature
MUL 2010	Music Appreciation
PHI 2010	Introduction to Philosophy
THE 2000	Theatre Appreciation

Humanities Breadth Options:

AML 2010	American Literature I
AML 2020	American Literature II
AMS 2010	Civil Discourse and the American Political Order
ARH 2050	Western Survey I: Prehistory to the Medieval Period
ARH 2051	Western Survey II: Renaissance to Contemporary
ART 1015C	Exploring Artistic Vision
ENL 2010	History of English Literature I
ENL 2020	History of English Literature II
LIT 2030	Introduction to Poetry
MUH 2004	The Music Experience - Concerts
PHI 2103	Critical Thinking
PHI 2603	Ethics in Contemporary Society
REL 1300	World Religions
THE 2300	Survey of Dramatic Literature

Mathematics

Choose one course from the Mathematics Core and one additional course from either the Mathematics Core or the Mathematics Breadth. 6

Mathematics Core Options:

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

Mathematics Breadth Options:

MAC 1114	Trigonometry	3
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 the Natural Sciences Core and one additional course from either the Natural Sciences Core or the Natural Sciences Breadth. 6

Natural Sciences Core Options:

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
EVR 2001H	Honors 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 *, **

Natural Sciences Breadth Options:

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 *
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 the Social Sciences Core and one additional course from either the Social Sciences Core or the Social Sciences Breadth. 6

Social Sciences Core Options:

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
Social Sciences Breadth Options:	
ANT 2100	Introduction to Archaeology
CCJ 2002	Survey of Crime and Justice
CIS 2530	Introduction to Cybersecurity
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 Finance
GEA 2000	Nations and Regions of the World
GEB 1011	Introduction to Business
HIS 2050	Explore History
HSC 2100	Personal, Family and Community Health
INR 2002	International Politics
PLA 2013	Survey of American Law
PLA 2013H	Honors Survey of American Law
SPM 2010	Sport in Global Society
SYG 2000	Introduction to Sociology

General Education Electives

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

Natural Science specialization Environmental Science majors should take the following to satisfy perspectives of General Education:

Social Science/Behavioral Perspectives (one of the following):	3
ANT 2000	Introduction to Anthropology
PSY 2012	General Psychology

Social Science/Socio-Political Perspectives (one of the following):	3
GEA 2000	Nations and Regions of the World
ECO 2013	Principles of Economics Macro
INR 2002	International Politics
POS 2041	American Politics

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 by passing an assessment or taking AMH 2020 United States Since 1877 or POS 2041 American Politics.

The 2021 Legislature further amended Florida Statutes, requiring students to complete both a civic literacy course and an exam. In 2024, the Board of Governors made an additional revision, recognizing two new courses meeting the Civic Literacy requirement, AMH 2010 United States to 1877 and AMS 2010 Civil Discourse and the American Political Order. As a result, there are four cohorts of students currently

matriculating at Florida public institutions that are 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 initially entering the SUS or FCS before fall 2018	None
Cohort 2: Students initially entering the SUS or FCS in Academic Year 2018 through Academic Year 2020	Complete a course or Assessment.
Cohort 3: Students initially entering the SUS or FCS in Academic Year 2021 through Academic Year 2023	Course and Assessment.
Cohort 4: Students initially entering the SUS or FCS in fall 2024 and thereafter	Course and Assessment.

Additionally, for Cohorts 3 and 4, approved accelerated mechanisms may meet the course and/or assessment requirement, and students who pass the Florida Civic Literacy Exam (FCLE) in high school are exempt from the postsecondary exam requirement.

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.

Statistical Reasoning

STA 2023	Elements of Statistics	3
STA 2360	Introduction to Data Science	3

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.

BOT 2010 & 2010L	General Botany and General Botany Lab *	4
CHM 2045 & 2045L	General Chemistry I and General Chemistry I Laboratory *	4
CHM 2046 & 2046L	General Chemistry II and General Chemistry II Laboratory *	4

ESC 2000 & 2000L	Introduction to Earth Science and Introduction to Earth Science Laboratory *	4
or GLY 2010 & 2010L	Physical Geology and Physical Geology Laboratory	
MAC 2311	Analytic Geometry and Calculus I *	4
PHY 2048 & 2048L	Calculus-Based Physics I and Calculus-Based Physics I Lab *	4
or PHY 2053L & PHY 2053	Algebra-Based Physics I Lab and Algebra-Based Physics I	
STA 2023	Elements of Statistics *	3
Total Hours		27

* 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.

Environmental Studies Core

Cornerstone		
EVR 2920	Foundations in Environmental Science *	1
GEO 3210 & 3210L	Geomorphology and Geomorphology Lab *	4
Techniques and Skills		
GEO 4280 & 4280L	Basic Hydrology and Basic Hydrology Lab	4
GEO 4250 & 4250L	Weather and Climate and Weather and Climate Lab *	4
GEO 4260 & 4260L	Geography of Soils and Geography of Soils Laboratory *	4
EVR 3894	Environmental Writing *	3
or ENC 3455	Writing for Science, Technology, Engineering and Math Majors	
GIS 4043 & 4043L	Geographic Information Systems and GIS Laboratory *	4
GEO 4004	Environmental Science, Politics and Policy *	3
Capstone		
Choose one:		3
EVR 4941	Internship in Environmental Sciences	
EVR 4970	Research in Earth and Environmental Sciences	
EVR 4039	Community Engagement through Environmental Science	
GEO 4332	Senior Seminar *	1
Total Hours		31

Major

Environmental Studies Core	31
Natural Science Content	
Choose 15 hours:	15

GEO 4221 & 4221L	Coastal Morphology and Processes and Coastal Morphology and Processes Laboratory ⁺	
GEO 4251	Advanced Climatology and Climate Change ⁺	
EVR 4023	Coastal and Marine Environments ⁺	
GLY 4240	Geochemistry ⁺	
GLY 4244	Biogeochemistry ⁺	
PCB 4601	Plant Ecology ⁺	
Natural Science Skills		
Choose 9 hours:		9
GEO 4164	Geostatistics	
STA 4173	Biostatistics ⁺	
	or STA 4121 Statistics for Data Science I	
GIS 4071	Methods and Techniques in Environmental Resource Management and Planning ⁺	
CHM 3120 & 3120L	Analytical Chemistry and Analytical Chemistry Lab	
GIS 4035 & 4035L	Photo Interpretation and Remote Sensing and Photo Interpretation and Remote Sensing Lab ⁺	
GIS 4301	GIS for Environmental Analysis ⁺	
Any upper-level course with prefixes of EVR, EVS, GEO, GIS, or GLY. Up to six (6) hours may be taken in courses outside the program with prefixes of ANT, BOT, BSC, COM, MAN, PCB, and ZOO. See advisor for list of approved courses. ⁺		11
Total Hours		66

Graduate Level Electives

Up to 12 credit hours of advisor-approved 5000-level courses with an EVS, EVR, GEA, GEO, or GIS prefix are allowed to substitute for the requirements listed above. 1-12

⁺ Courses included in the major GPA.

Earth and Environmental Science Teaching

Program Requirements

In addition to the university's general requirements, students seeking the B.A. in Earth and Environmental Science Teaching must meet the requirements listed below.

Students must consult with their academic advisors for courses that may satisfy both the General Education requirements and common prerequisites.

Students entering UWF or declaring a major in the Earth and Environmental Science Teaching degree program 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.

General Education Requirements

ADDENDUM - 06/12/2025

In addition to the [General Education](#) requirements, students must satisfy all additional State of Florida requirements, including the [College-Level Communication and Computation](#), [Civic Literacy](#), 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 [State University Requirements](#) and [Degree Requirements](#) sections of this catalog.

General Education Curriculum:

Communication

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

Communication Elective Options:

CRW 2001	Introduction to Creative Writing
MMC 2000	Principles of Mass Communication
SPC 2608	Public Speaking

Humanities

Choose one course from the Humanities Core and one additional course from either the Humanities Core or the Humanities Breadth. 6

Humanities Core Options:

ARH 1000	Art Appreciation
HUM 2020	Introduction to Humanities
HUM 2020H	Honors Introduction to Humanities
LIT 2000	Introduction to Literature
MUL 2010	Music Appreciation
PHI 2010	Introduction to Philosophy
THE 2000	Theatre Appreciation

Humanities Breadth Options:

AML 2010	American Literature I
AML 2020	American Literature II
AMS 2010	Civil Discourse and the American Political Order
ARH 2050	Western Survey I: Prehistory to the Medieval Period
ARH 2051	Western Survey II: Renaissance to Contemporary
ART 1015C	Exploring Artistic Vision
ENL 2010	History of English Literature I
ENL 2020	History of English Literature II
LIT 2030	Introduction to Poetry

MUH 2004	The Music Experience - Concerts
PHI 2103	Critical Thinking
PHI 2603	Ethics in Contemporary Society
REL 1300	World Religions
THE 2300	Survey of Dramatic Literature

Mathematics

Choose one course from the Mathematics Core and one additional course from either the Mathematics Core or the Mathematics Breadth. 6

Mathematics Core Options:

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

Mathematics Breadth Options:

MAC 1114	Trigonometry	3
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 the Natural Sciences Core and one additional course from either the Natural Sciences Core or the Natural Sciences Breadth. 6

Natural Sciences Core Options:

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
EVR 2001H	Honors 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 * **

Natural Sciences Breadth Options:

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 *
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 the Social Sciences Core and one additional course from either the Social Sciences Core or the Social Sciences Breadth. 6

Social Sciences Core Options:

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

Social Sciences Breadth Options:

ANT 2100	Introduction to Archaeology
CCJ 2002	Survey of Crime and Justice
CIS 2530	Introduction to Cybersecurity
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 Finance
GEA 2000	Nations and Regions of the World
GEB 1011	Introduction to Business
HIS 2050	Explore History
HSC 2100	Personal, Family and Community Health
INR 2002	International Politics
PLA 2013	Survey of American Law
PLA 2013H	Honors Survey of American Law
SPM 2010	Sport in Global Society
SYG 2000	Introduction to Sociology

General Education Electives

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

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 by passing an assessment or taking AMH 2020 United States Since 1877 or POS 2041 American Politics.

The 2021 Legislature further amended Florida Statutes, requiring students to complete both a civic literacy course and an exam. In 2024, the Board of Governors made an additional revision, recognizing two new courses meeting the Civic Literacy requirement, AMH 2010 United States to 1877 and AMS 2010 Civil Discourse and the American Political Order. As a result, there are four cohorts of students currently matriculating at Florida public institutions that are 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 initially entering the SUS or FCS before fall 2018	None
Cohort 2: Students initially entering the SUS or FCS in Academic Year 2018 through Academic Year 2020	Complete a course or Assessment.
Cohort 3: Students initially entering the SUS or FCS in Academic Year 2021 through Academic Year 2023	Course and Assessment.
Cohort 4: Students initially entering the SUS or FCS in fall 2024 and thereafter	Course and Assessment.

Additionally, for Cohorts 3 and 4, approved accelerated mechanisms may meet the course and/or assessment requirement, and students who pass the Florida Civic Literacy Exam (FCLE) in high school are exempt from the postsecondary exam requirement.

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.

Statistical Reasoning

STA 2023	Elements of Statistics	3
STA 2360	Introduction to Data Science	3

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.

BSC 1005 & 1005L	General Biology for Non-Majors and General Biology Laboratory for Non-Majors *	4
BOT 2010 & 2010L	General Botany and General Botany Lab *	4
CHM 2045 & 2045L	General Chemistry I and General Chemistry I Laboratory *	4
CHM 2046 & 2046L	General Chemistry II and General Chemistry II Laboratory *	4
EDG 2041	Exploring Inquiry Teaching	3
MAC 1147	Precalculus with Trigonometry *	4
STA 2023	Elements of Statistics *	3
Choose one of the following		4
GLY 2010 & 2010L	Physical Geology and Physical Geology Laboratory *	
ESC 2000 & 2000L	Introduction to Earth Science and Introduction to Earth Science Laboratory *	
Total Hours		30

* 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 in the lower division. Current UWF students may use elective courses at any level (1000-4000) to meet this elective requirement.

Environmental Science Core

EVR 2920	Foundations in Environmental Science	1
GEO 3210	Geomorphology *	3
GEO 3372	Conservation of Natural Resources *	3
EVR 3894	Environmental Writing	3
or ENC 3455	Writing for Science, Technology, Engineering and Math Majors	
EVR 4023	Coastal and Marine Environments *	3
GIS 4043 & 4043L	Geographic Information Systems and GIS Laboratory *	4
GEO 4250 & 4250L	Weather and Climate and Weather and Climate Lab *	4
GEO 4260 & 4260L	Geography of Soils and Geography of Soils Laboratory *	4
GEO 4280 & 4280L	Basic Hydrology and Basic Hydrology Lab *	4
GEO 4357	Environment and Economy *	3
GEO 4332	Senior Seminar *	1
AST 1002	Descriptive Astronomy	3
Total Hours		36

Teaching Core

EDF 3234	Applied Foundations of Education *	3
EDG 4323	Methods of K-12 Literacy Instruction *	3

TSL 4080	ESOL Principles and Practices ⁺	3
ESE 4322	Instruction, Management, and Assessment: Secondary Education ⁺	3
SCE 4320	Teaching Science in Middle and Secondary Schools ⁺	3
ESE 4940	Clinical Practicum for Secondary Education ⁺	3
EDG 4948	Apprenticeship Teaching ⁺	6
Total Hours		24

+ Courses included in the major GPA.

Environmental Science Minor

The minor in Environmental Science is offered as a micro-version of the B.S. in Environmental Science degree. The required courses represent a cross-section of the departmental offerings.

An Environmental Science Minor consists of 19-20 semester hours (sh); of the 12-13 upper-level hours, at least 9 of which must be taken at UWF. Directed studies may not be used. Environmental Science majors may not earn this minor.

EVR 2001	Introduction to Environmental Science	3
GEO 3372	Conservation of Natural Resources	3
Choose one:		4
GLY 2010 & 2010L	Physical Geology and Physical Geology Laboratory	
ESC 2000 & 2000L	Introduction to Earth Science and Introduction to Earth Science Laboratory	
Choose one:		3-4
GEO 4260 & 4260L	Geography of Soils and Geography of Soils Laboratory	
GEO 4280 & 4280L	Basic Hydrology and Basic Hydrology Lab	
Choose one:		3
EVR 4035	Environmental Law	
EVR 4823	Environmental Impact Assessment	
EVR 4870	Urban Planning	
Any 3000/4000-level EVR, EVS, GEO, GIS, or GLY course		3
Total Hours		19-20

Environmental Sustainability Minor

The minor in Environmental Science is offered as a micro-version of the B.S. in Environmental Science degree. The required courses represent a cross-section of the departmental offerings.

An Environmental Science Minor consists of 15 semester hours (sh); of the 12 upper-level hours, at least 9 of which must be taken at UWF. Directed studies may not be used. Environmental Science majors may not earn this minor.

EVR 2001	Introduction to Environmental Science	3
Choose 4 from the following list of courses:		12
EVR 4035	Environmental Law	
GEO 3372	Conservation of Natural Resources	
GEO 4004	Environmental Science, Politics and Policy	
GEO 4005	Environmental Management & Planning	

EVR 4039	Community Engagement through Environmental Science	
EVR 4412	Environmental Aspects of Urban Growth	
EVR 4823	Environmental Impact Assessment	
EVR 4870	Urban Planning	
Total Hours		15

Geographic Information Science Minor

Geographic Information Science is a computerized system that allows users to work with, interrelate, and analyze virtually all forms of spatial data for decision making. The program represents the latest technologies that are revolutionizing many disciplines, including geography, environmental sciences, archaeology, business, defense and intelligence, and public health/safety in the information age. Required courses have been carefully combined to reflect the real-world requirements needed for careers in the geospatial sciences.

GIS 4035 & 4035L	Photo Interpretation and Remote Sensing and Photo Interpretation and Remote Sensing Lab	4
GIS 4043 & 4043L	Geographic Information Systems and GIS Laboratory	4
GIS 4048	Applications in Geographic Information Systems	3
GIS 4102	GIS Programming	3
GIS 4930	Special Topics in Geographic Information Science	3
Plus choose one from the following two:		3
GIS 4905	Directed Study	
GIS 4944	GIS Internship	
Total Hours		20

Geographic Information Science Certificate

Department: Earth and Environmental Sciences

Veterans Affairs (VA) Certified? Yes

Semester Hours: 24

This GIS Certificate Program offered through UWF Online is designed to teach students, from novices to working professionals, both the highly in-demand technical skill of using industry-standard geospatial software as well as a strong conceptual foundation in Geographic Information Science. Geographic Information Systems is a computerized system that allows users to work with, interrelate, and analyze virtually all forms of spatial data for decision-making. The program provides a solid background in the fundamentals of geography and geospatial science that extends beyond the software. Students can expect to learn the latest geospatial technologies that are revolutionizing many disciplines, including geography, urban planning, environmental sciences, archaeology, business, defense and intelligence, information technology services, and public health/safety. The required courses and GIS internship have been carefully combined to reflect the real-world requirements needed for careers in the geospatial sciences. Students who successfully complete the 24-credit program with a 3.0 overall GPA will be awarded a certificate in Geographic Information Science. Students completing this program can expect to be marketable as GIS Technicians, GIS Analysts, and GIS Managers within various industries.

Offered completely online, our undergraduate GIS Certificate program is designed for non-degree-seeking working professionals seeking part-time education from a distance.

Undergraduate-level courses can be applied to the GIS foundational requirement for the [MS in Geographic Information Science Administration](#) program.

Prerequisites - Special Technology/Hardware/Skills Requirements for GIS:

- In order to participate in our online GIS courses, students must have access to their own laptop or personal computer, speakers, microphone or headset, and consistent broadband internet access (high-speed). A mouse is highly recommended for those using a laptop. Students can expect to use UWF Gmail email for course communications and the UWF Canvas eLearning platform to access courses that require a compatible web browser.
- Access to required software is provided through Argo Apps for GIS virtual machines. A GIS User training and quiz are required for access via [MyUWF](#) > SCOOP.
- Consistent access to the internet is required to participate in online courses. A high-speed internet connection is required for an optimal experience while using Argo Apps.
- Optionally, students may install ArcGIS Pro software locally which is used in all GIS certificate courses. Students' computers should [meet the minimal hardware requirements for Esri ArcGIS Pro software](#) (see the most current version of the software). Please note: ArcGIS Pro runs natively on Windows OS. Mac users can use ArcGIS Pro on Argo Apps or run ArcGIS Pro via Bootcamp.
- Previous knowledge or experience in GIS is not required but it's important to possess both [Minimal Technology Skills and Requirements](#) and [Basic Computer Skills for GIS](#). This is a very technical program and we will not have time to teach basic skills.
- Certain aspects of GIS software require students to have sight and hand-eye coordination (certain abilities) to practice GIS and use the software (any GIS software). If you have a disability that impacts full participation in a course please contact Student Accessibility Resources at 850-474-2387 or by email, at sar@uwf.edu for additional support.
- All materials and communication will be conducted in the English language. A guide for GIS students on how to [Get Help Faster](#) is provided as part of the GIS User Training to demonstrate good communication in our online courses. Instructors may request a specific communication protocol for their courses which will be provided on the course syllabus or course site. Adhering to basic computer ethics and professionalism is expected.

class from a regionally accredited U.S. university. Email gisonline@uwf.edu an unofficial transcript and relevant course syllabi for consideration.

- Agree to possess the prerequisite skills, hardware, access, and abilities for GIS.
- International non-degree-seeking applicants must meet the English proficiency requirement established by the University.

Course Requirements

A grade of "C-" or better is required for all program courses. A minimum 3.0 GPA is required to be awarded a GIS Certificate.

Required Courses:

GIS 4043 & 4043L	Geographic Information Systems and GIS Laboratory	4
GIS 4006 & 4006L	Computer Cartography and Computer Cartography Lab	4
GIS 4035 & 4035L	Photo Interpretation and Remote Sensing and Photo Interpretation and Remote Sensing Lab	4
GIS 4102	GIS Programming	3
GIS 4048	Applications in Geographic Information Systems	3
GIS 4930	Special Topics in Geographic Information Science	3
Choose from the following:		3
GIS 4905	Directed Study	
GIS 4944	GIS Internship	
Total Hours		24

Admission Requirements

- Undergraduate Non-Degree Seeking Application.
- *Current UWF undergraduate students interested in completing the GIS certificate are not required to complete the non-degree-seeking application but will need to contact the GIS academic advisor to review their degree audit and initiate the declaration of the certificate process.*
- Submit a letter of intent demonstrating motivation and writing abilities to gisonline@uwf.edu. Discuss your interest in the field of GIS, why you chose to apply, and how your career goals match with the UWF online GIS Certificate.
- Students may transfer one class (3 or 4 credits) into the undergraduate GIS Certificate program providing the transfer criteria are met. The class must be an upper-level undergraduate