

Marine Biology

The University of West Florida is one of only a few institutions in the United States which offers a Bachelor of Science in Marine Biology. The program is provided through the Department of Biology. The curriculum includes a series of seven core courses fundamental to all areas of biology. Elective courses emphasize theoretical and practical aspects of aquatic/marine biology. Wetlands and estuarine marshes of the main campus, as well as the nearby Santa Rosa Island campus and the Gulf of Mexico, provide living specimens for study and serve as laboratories supporting elective courses. Graduates may seek careers in marine biology, fisheries management, aquaculture, pollution biology, and marine toxicology, and find employment in local, state, and federal departments of environmental regulation and education, as well as the private sector. Graduates are also well prepared to pursue advanced degrees. Prospective students need to be aware that some biology lab courses involve the use of live animals; students may wish to seek details from course instructors before enrolling.

Program Requirements

In addition to general University requirements, students seeking the B.S. in Marine Biology must meet the requirements listed below.

A grade of "C" or better is required in each of the seven biology core courses.

Minimum grade of "C" or better is required in all courses in the program including Major-Related, Elective and Common Prerequisites.

Consult with your academic advisor for courses which may satisfy both the General Education requirements and common prerequisites.

General Education

In addition to the General Education requirements listed on this page, students must satisfy all additional University requirements, including the Gordon Rule, 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" (<http://catalog.uwf.edu/undergraduate/universityrequirements>) section of this catalog.

General Education Curriculum:

Communication

ENC 1101	English Composition I	3
ENC 1102	English Composition II	3

Mathematics

Choose one course from Group A and one Additional course from either Group A or Group B

Group A

MAC 1105	College Algebra
MAC 1105C	College Algebra with Lab
MAC 2311	Analytic Geometry and Calculus I
MGF 1106	Mathematics for Liberal Arts I
MGF 1107	Mathematics for Liberal Arts II
STA 2023	Elements of Statistics

Group B

MAC 1114	Trigonometry
MAC 1140	Precalculus Algebra
MAC 2233	Calculus with Business Applications
MAC 2312	Analytic Geometry and Calculus II

Social Sciences

Choose one course from Group A and one additional course from either Group A or Group B

Group A

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
SPM 2010	Sport in Global Society
SYG 2000	Introduction to Sociology

Group B

AMH 2010	United States to 1877
ANT 2400	Current Cultural Issues
ANT 2100	Introduction to Archaeology
CCJ 2002	Survey of Crime and Justice
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
IDH 1041	Honors Core 2
INR 2002	International Politics
MMC 2000	Principles of Mass Communication
PLA 2013	Survey of American Law
SOW 2192	Understanding Relationships in the 21st Century
SYG 2010	Current Social Problems

Humanities

Choose one course from Group A and one additional course from either Group A or Group B

Group A

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

Group B

AML 2010	American Literature I
AML 2020	American Literature II
AML 2072	Sex, Money, and Power in American Literature
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	Art and Visual Culture Today
CRW 2001	Introduction to Creative Writing
ENL 2010	History of English Literature I
ENL 2020	History of English Literature II
IDH 1040	Honors Core 1
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
THE 2300	Survey of Dramatic Literature
SPC 2608	Basic Communication Skills

Natural Sciences

Choose one course from Group A and one additional course from either Group A or Group B 6

Group A	
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
PHY 1020	Introduction to Concepts in Physics *
PHY 2048	Calculus-Based Physics I **
PHY 2048C	University Physics I - Studio
PHY 2053	Algebra-Based Physics I **
Group B	
ANT 2511	Biological Anthropology
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 2060	Excursions in Computing
CHM 1032	Fundamentals of General Chemistry *
CHM 2046	General Chemistry II *
CIS 2530	Introduction to Cybersecurity
GEO 1200	Physical Geography
GLY 2010	Physical Geology *
MCB 1000	Fundamentals of Microbiology *
PHY 2049	Calculus-Based Physics II **
PHY 2054	Algebra-Based Physics II *

* May be taken with or without lab.

** General Physics is non-calculus based and is usually recommended for non-science majors. University Physics is calculus based and is usually 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.

General Education Electives

Choose an additional course from two of the three areas of Humanities, Social Sciences and Natural Sciences

Marine Biology majors should satisfy the mathematics (6 sh) and natural science (7 sh) components of General Education with course work taken from the common prerequisites shown below.

Marine Biology majors should take ANT 2000 Introduction to Anthropology to satisfy the social science/behavioral perspectives component of General Education.

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.

*Faculty Senate 11/8/2002

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
ANT 2000	Introduction to Anthropology	3
ANT 3212	Peoples and Cultures of the World	3
ANT 3312	North American Indians	3
ANT 3363	Japanese Culture	3
ANT 3403	Cultural Ecology	3
ANT 4006	Anthropology of Human Rights	3
ARH 1000	Art Appreciation	3
ARH 2050	Western Survey I: Prehistory to the Medieval Period	3
ARH 2051	Western Survey II: Renaissance to Contemporary	3
ARH 3590	Non-Western Art	3
ARH 4302	Late Renaissance Art in Italy	3
ARH 4305	Early Italian Renaissance Art	3
ARH 4412	The Age of Revolution to Romanticism	3
ARH 4450	Modern Art: 1850-1980	3

ARH 4470	Contemporary Art	3
ARH 4653	Art and Archaeology of Mesoamerica	3
CCJ 3678	Race, Gender, Ethnicity, and Crime	3
COM 3014	Gender Communication	3
COM 3461	Intercultural Communication	3
CPO 2002	Comparative Politics	3
CPO 3055	Dictatorships	3
CPO 3103	Politics of Western Europe	3
CPO 3322	Cuba, Castro and the USA	3
CPO 3513	Politics of the Far East-Japan and China	3
CPO 4303	Politics of Spain, Portugal, and Latin America	3
CPO 4792	Geopolitics	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 3203	Modern Europe	3
EUH 3411	Rome and the Mediterranean World	3
EUH 3576	Soviet Union since 1917	3
EUH 4239	Age of Empires	3
FRE 4955	Supervised Foreign Language Field Experience Abroad	1-3
GEA 2000	Nations and Regions of the World	3
GEA 4405	Geography of Latin America	3
GEB 4361	International Business	3
GEO 3421	Cultural Geography	3
GEO 3471	Geography of World Affairs	3
HIS 4316	Women in the Atlantic World	3
IDH 1041	Honors Core 2	3
INR 2002	International Politics	3
JPN 3270	Supervised Language Experience Abroad	3
LIT 2000	Introduction to Literature	3
LIT 2030	Introduction to Poetry	3
LIT 3233	Postcolonial Literature	3
LIT 4385	Feminist Theory	3
MAN 4102	Management of Diversity	3
MAR 4156	Seminar in International Marketing	3
MMC 3601	Minorities and the Mass Media	3
MMC 4300	Global Communication	3
MUH 2930	The Music Experience: Special Topics	3
NUR 4615	Community and Public Health Nursing	3
PSY 3680	Positive Psychology	3
REL 3142	New Perspectives on the Religious Self	3
REL 4420	Contemporary Theology	3
REL 3310	Philosophies of the East	3
REL 4592	Development of Christian Thought	3
SOP 3730	Psychology, Culture, and Society	3
SOW 4233	Human Diversity and Social Justice	3
SOW 4941	Immersive Experiences in Social Work	3

SPN 3400	Advanced Stylistics	3
SPN 4500	Spanish Civilization	3
SPN 4520	Latin American Culture and Civilization	3
SPN 4955	Intensive Spanish Abroad	1-5
SYO 4530	Inequality in America	3

Civic Literacy Requirement

- Baccalaureate degree-seeking students initially entering a state university fall semester 2018 and thereafter must demonstrate competency in civic literacy through one of the following options prior to graduation:
 - Successfully passing either POSX041 American Government or AMHX020 Introductory Survey Since 1877. Each of the courses must include the following competencies:
 - Understanding of the basic principles and practices of American democracy and how they are applied in our republican form of government;
 - An understanding of the United States Constitution and its application;
 - Knowledge of the founding documents and how they have shaped the nature and functions of our institutions of self-government; and
 - An understanding of landmark Supreme Court cases, landmark legislation and landmark executive actions and their impact on law and society.
- Achieving the standard score on one of the following assessments:

Assessment	Standard Score
U.S. Citizenship and Immigration Services Naturalization Test	60
Advanced Placement Government and Politics: United States	3
Advanced Placement United States History	4
CLEP American Government	50

*BOG 8.006 (<http://www.flbog.edu/board/regulations/regulations.php>)

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 (<https://dlss.flvc.org/admin-tools/common-prerequisites-manuals>) for course substitutions from Florida colleges and universities.

Graduation requirements for the B.S. degree in Marine Biology include the successful completion of the following science/mathematics prerequisites:

- Biology I and Biology II
- General Chemistry I and II
- Organic Chemistry I and General Physics I
- Organic Chemistry II or General Physics II
- Calculus I and Statistics

Since it will be difficult to incorporate all prerequisites into the 60 sh Lower Division Curriculum, students are advised to complete the following common prerequisites.

BSC 2010+L	Biology I (+Lab)	4
BSC 2011+L	Biology II (+Lab)	4

CHM 2045+L	General Chemistry I (+Lab)	4
CHM 2046+L	General Chemistry II (+Lab) *	4
MAC 2311	Analytic Geometry and Calculus I *	4
STA 2023	Elements of Statistics *	3
CHM 2210+L	Organic Chemistry I (+Lab)	4
PHY 2053+L	Algebra-Based Physics I (+Lab) *	4
Choose one of the following:		8
Option 1		
CHM 2211+L	Organic Chemistry II (+Lab)	
Option 2		
PHY 2054+L	Algebra-Based Physics II (+Lab) *	
Total Hours		39

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

Minimum grade of "C" or better required in all courses in the program to include all Core, Specialization, Subcore, Major-Related and Common Prerequisites.

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.

Total Hours 0-6

Major

Marine Biology Core: 21

BSC 2844	Biology Skills
BCH 3033+L	Biochemistry I (+Lab)
MCB 3020+L	Microbiology (+Lab)
PCB 3063C	Genetics
PCB 4043+L	Ecology (+Lab)
PCB 4673	Principles of Evolution
PCB 4922	Biology Seminar

Specialization 19

OCE 3007	Concepts of Oceanography and Marine Biology
ZOO 4254C	Marine Invertebrate Zoology
ZOO 4304C	Marine Vertebrate Zoology
BOT 4404C	Aquatic Botany
PCB 4723+L	Comparative Animal Physiology (+Lab)

Marine Biology Sub-core

3000/4000 level Marine biology electives * 13

Choose from the following:

OCB 4201	Biology of Coral Reefs
PCB 3253+L	Developmental Biology (+Lab)
PCB 4048C	Coastal Marine Ecology
BSC 4303	Biogeography
PCB 4364+L	Marine Ecological Physiology (+Lab)
ZOO 4454	Elasmobranch Biology
PCB 4524+L	Molecular Biology (+Lab)
ZOO 4457	Ichthyology
ZOO 4485	Marine Mammalogy

ZOO 4513	Animal Behavior
Biology directed studies (3 hours maximum)	
Total Hours	53

* ZOO 3558 cannot be applied to elective credit.

Major-Related

STA 4173	Biostatistics	3
Students must take one of the following that was not completed as part of the Common Prerequisites in the lower division:*		4

CHM 2210+L	Organic Chemistry I (+Lab)
PHY 2053+L	Algebra-Based Physics I (+Lab)

Total Hours 7

* Students must take 8 sh that were not completed as part of the Common Prerequisites in the lower division

The upper-division courses (3000-4000 level) with the following prefixes will be used in calculating the major grade point average: BCH, BOT, BSC, PCB, MCB, ZOO, and HSC.