

Bachelor of Science (BS)**Marine Biology Option**

This option is designed for the student who is preparing to do graduate work in this area or seek full-time employment in this field. Employment may be found with national and state conservation and resource management agencies, park services, environmental consulting agencies, and zoological parks, among others. This option includes course work to be taken at the Gulf Coast Research Laboratory (GCRL) or another comparable institution.

The time spent at a marine station affords students the opportunity to gain hands on experience or advanced education/training in the marine environment.

Marine Biology students will...

- Meet one-on-one, with their advisor, Dr. Michael Taylor or Dr. Timothy Judd, each semester to assess their progress in the program and toward their post-graduation goals.
- Take a core of courses that will prepare them for any area of biology.
- Take rigorous coursework in marine biology, marine ecology, invertebrate zoology and animal biology, which will prepare them for advanced study or employment.
- Select additional option courses in plant biology or microbiology, aquatic ecology, management of wildlife populations, ichthyology, conservation biology and more.
- Take at least one course at a marine laboratory such as the Gulf Coast Research Laboratory.
- Be required to complete 80 hours of experiential learning, usually in field studies or internships.
- Complete additional course work in oceanography, physics, organic chemistry and calculus in order to qualify them for employment.
- Attend classes in the newly renovated Magill Hall furnished with state-of-the-art equipment.
- Have access to the Miller Reserve Wetlands Restoration project, the Kelso Wildlife Sanctuary and the Reis Biological Research Station.

Career Planning

A St. Louis Outreach Office, located in Chesterfield, Mo., provides career exploration assistance, resume critiques, interview tips, job search strategies and more.

Demonstrated Career Proficiency is a Requirement of all Southeast Students

CL001/CL002	First Semester	Complete the FOCUS2 assessment and develop a Career Action Plan.
CL003	Junior Year	Students gain information about career planning and job searching resources.
CL004	Senior Year	Students demonstrate advanced proficiency by identifying a position in their field, developing a cover letter, and tailoring a resume for the position. Materials are critiqued to ensure preparedness for a successful job search.

Career Services, located in Academic Hall 057, provides professional career advising to guide students in their career development.

Recent Internship Placement

- Missouri Department of Conservation
- St. Louis Children's Museum
- St. Louis Zoo
- Sea World
- Great White Shark
- Coastal Marine Education Research Academy

Graduate School Matriculation/Employment

- Southeast Missouri State University
- University of Southern Mississippi
- University of Puerto Rico
- Miami Seaquarium

Employment Opportunities

- Aquarium Technician
- Biological Oceanographer
- Conservation Agent
- Field Technician
- Laboratory Assistant
- Marine Biologist
- Marine Fisheries Biologist
- Marine Mammal Trainer
- Park Service Naturalist

Electives offered in this Major

- Marine Microbiology
- Marine Phycology
- Marine Aquaculture
- Marine Mammals
- Coastal Vegetation
- Marine Fisheries Management
- Marine Ichthyology

Admission Requirements

A college preparatory sequence that includes three years of science (including biology, chemistry and physics) and mathematics through advanced algebra is encouraged.

To learn more
Office of Admissions
(573) 651-2590
admissions@semo.edu
www.semo.edu

To explore the College
of Science, Technology, and
Agriculture online, visit
www.semo.edu/costa

For advising
College of Science, Technology, and Agriculture
Advising Center (573) 651-5930
costaadvising@semo.edu
www.semo.edu/costa/advising/index.htm

Bachelor of Science (BS)

This is a guide based on the 2014-2015 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use DegreeWorks to monitor their individual progress.

CURRICULUM CHECKLIST**Required Courses – 45-46 Hours Required**

- ___ BI151 Biological Reasoning (3)
- ___ BI153 Intro to Organismal Biology (4)
- ___ BI154 Genetics and Cell Biology (4)
- ___ BI332 General Ecology (3)
- ___ BI348 Marine Biology (3)
- ___ BI434 Marine Evolutionary Ecology (3)
- ___ BI489 Analysis of Biological Issues (2)
- ___ CH185/085/005 General Chemistry (5)
- ___ MA134 College Algebra (3)
- ___ MAxx Additional Math (3)
- ___ ZO200 Animal Biology (3)
- ___ ZO430 Invertebrate Zoology (4)

Experiential Learning Requirement: 2 hours

- ___ BI471-473 Internships in Biology (2)
OR
- ___ BI551-553 Biology Field Studies (2)
OR
- ___ BI589-591 Biological Research (2)

Choose one of the following:

- ___ BI200 Microbiology (3)
- ___ BO200 Plant Biology (4)

Electives*: 5-6 Hours

- ___ BI/BO/BT/ZOxxx 300 level or above

* A minimum of 3 hours must be taken from the Gulf Coast Research Laboratory or comparable institution or the equivalents listed below:

- ___ BI540/541 Marine Microbiology (5)
- ___ BI573-578 Special Topics (1-6)
- ___ BI593-598 Special Problems (1-6)
- ___ BO500/505 Marine Phycology (4)
- ___ BO561/562 Salt Marsh Plant Ecology (4)
- ___ BO563/564 Coastal Vegetation (3)
- ___ ZO510/511 Comparative Histology of Marine Organisms (6)
- ___ ZO540/541 Parasites/Marine Mammals (6)
- ___ ZO552/553 Marine Fisheries Management (4)
- ___ ZO554/555 Marine Aquaculture (6)
- ___ ZO559/560 Marine Mammals (5)
- ___ ZO563/566 Fauna & Faunistic Ecology of Tidal Marshes (5)
- ___ ZO564/574 Marine Ichthyology (6)
- ___ ZO565/567 Early Life History of Marine Fishes (4)

Non-Biology Requirements: 16 Hours

- ___ CH186 Foundations of Inorganic Chemistry (3)
- ___ CH187 Inorganic Chemistry & Qualitative Analysis Lab (2)
- ___ CH 341 Foundations of Organic Chemistry (4)
- ___ CH342 Organic Chemistry Lab I (1)
- ___ GO320 Oceanography (3)
- ___ PH106 Physical Concepts (3)

University Studies Requirements (not already listed above):

UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Behavioral Systems, Development of a Major Civilization, Economic Systems, Social Systems, Political Systems, two IU/UI3XXs, and one UI4xx.

SAMPLE FOUR-YEAR PLAN**Biology: Marine Biology Option**

Requirements for the 2014-2015 Undergraduate Bulletin

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	BI153	4
	EN100	3	CH185/085/005	5
	BI151	3	Written Expression	3
	MA134	3	Additional Math course	3
	Artistic Expression	3		
Total	15		Total	15
SECOND YEAR	BI154	4	BI332	3
	CH186	3	BI200 or BO200	3-4
	CH187	2	CH341	4
	Literary Expression	3	CH342	1
	Oral Expression	3	Behavioral Expression	3
Total	15		Total	14-15
THIRD YEAR	GO320	3	BI348	3
	ZO200	3	BI/BO/ZO elective	3
	Elective	3	PH106	3
	Develop of a Major Civ	3	Political Systems	3
	Economic Systems	3	Elective	3
Total	15		Total	15
THIRD SUMMER			Biology Elective from marine station	3-6
FOURTH YEAR	Experiential Learning Crs	2	BI434	3
	Social Systems	3	BI489	2
	IU/UI3XX	3	ZO430	4
	IU/UI3XX	3	UI4XX	3
	Elective	3	Elective	2
	Total	14		Total

Degree requirements for all students: a minimum of 120 credit hours, completion of University Studies program, career proficiencies (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the freshman and senior levels.

A minimum 2.00GPA in the major and overall are required to graduate with a BS degree.

Refer to the Undergraduate Bulletin or DegreeWorks for additional graduation requirements (i.e. minimum GPA and coursework) for your program of study.