

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

Career preparation is part of the mission of Southeast. In fact, more than 90% of Southeast students participate in internships, clinical opportunities, student teaching, research assistantships, and study abroad. Professional career counselors are available for all students. The Office of Career Services in Academic Hall 057 can provide students with professional career counseling, resume critiques, practice interviews, job search strategies, career events, networking opportunities, 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.

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
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Bachelor of Science (BS)

This is a guide based on the 2016-2017 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:**

- ___ BI163 Evolution & Ecology (4)
- ___ BI173 Cell & Organismal Biology (4)
- ___ **BI283 Genetics (4)**
- ___ BI389 Career Development in Biology (1)
- ___ **CH185/085/005 General Chemistry (5)**

Choose one math course:

- ___ **MA134 College Algebra (3)**
- ___ MA137 Precalculus (5)
- ___ MA139 Applied Calculus (3)
- ___ MA140 Analytical Geometry & Calculus I (5)

Choose one additional math course:

- ___ MAxxx Additional math (MA133 or higher) (3)

Experiential Learning Requirement: 2 hours

- ___ BI 471-473 Internships in Biology (2)
- ___ BI 551-553 Biology Field Studies (2)
- ___ BI 589-591 Biological Research (2)
- ___ BI 570 Development of Instructional Materials (1)

Marine Biology Option Required Courses:

- ___ BI332 General Ecology (3)
- ___ BI348 Marine Biology (3)
- ___ BI434 Marine Evolutionary Ecology (3)
- ___ ZO310 Animal Biology (4)
- ___ ZO430 Invertebrate Zoology (4)

Biology Electives*: 6-8 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.

Non-Biology Requirements:

- ___ 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

	Fall Semester		Spring Semester		
	Course #	Hrs	Course #	Hrs	
FIRST YEAR	UI100	3	BI173	4	
	BI163	4	CH186	3	
	CH185	5	CH187	2	
	MA134/137/139/140	3-5	EN100	3	
			Additional Math	3	
	Total	15-17	Total	15	
Milestone: maintain 2.0 cumulative GPA					
SECOND YEAR	BI283	4	BI348	3	
	CH341	4	ZO310	4	
	CH342	1	PH106	3	
	Literary Expression	3	Behavioral Expression	3	
	Oral Expression	3	Written Expression	3	
	Total	15	Total	16	
	Milestone: maintain 2.0 cumulative GPA				
THIRD YEAR	BI332	3	BI434	3	
	BI389	1	BI/BO/ZO elective	3	
	GO320	3	Political Systems	3	
	Develop of a Major Civ	3	Electives	6	
	Economic Systems	3			
	IU/UI3xx	3			
Total	16	Total	15		
Milestone: maintain 2.0 cumulative GPA					
SUMMER TERM				Biology Elective from marine station	3-6
FOURTH YEAR	Experiential Learning Crs	2	ZO430	4	
	Artistic Expression	3	UI4xx	3	
	Social Systems	3	Electives	7	
	IU/UI3xx	3			
	Electives	3			
	Total	14	Total	14	
Milestone: maintain 2.0 cumulative GPA					

A "Milestone" signifies a significant stage for a student in the completion of a degree.

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 senior level.

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.

Revised
4/13/2016

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