

CHECK LIST FOR THE B.S. DEGREE IN BIOLOGY EMPHASIS IN MARINE BIOLOGY

Emphasis Adviser: Dr. Brian Hentschel (PS-147)

The Emphasis in Marine Biology provides education and training for students planning to enter marine professions with a B.S. or advanced degree. At the bachelor level, students will be qualified for research technician positions in university and government laboratories and positions involving marine biological research and resource development and management. Marine biologists are employed by both the private sector (e.g., environmental studies, seafood industries) and public agencies (e.g., U.S. Nat. Marine Fish. Service, U.S. Fish & Wildlife Service, state fish and game depts, water quality agencies, local planning and management agencies). Marine biologists with graduate degrees normally have a wider range of employment opportunities, including college and university faculty positions. Advanced research positions with government and private institutions normally require a graduate degree as well.

PREPARATION FOR THE MAJOR (39 units of lower division courses)

Biol 203	Principles of Cell & Molecular Biol.	3	_____	Chem 232	Organic Chemistry	3	_____
Biol 203L	Princ. of Cell & Molecular Biol. Lab	1	_____	Chem 232L	Organic Chemistry Lab	1	_____
Biol 204	Principles of Organismal Biology	3	_____	Math 121	Calculus for the Life Sciences I	3	_____
Biol 204L	Principles of Organismal Biology Lab	1	_____	Math 122	Calculus for the Life Sciences II	3	_____
Biol 215	Biostatistics	3	_____	Phys 180A	Fundamentals of Physics	3	_____
Chem 200	General Chemistry	5	_____	Phys 182A	Physical Measurements	1	_____
Chem 201	General Chemistry	5	_____	Phys 180B	Fundamentals of Physics	3	_____
				Phys 182B	Physical Measurements	1	_____

Biology is an **impacted major**. Students who wish to declare a Biology major are initially placed into the Biology **premajor**. Premajors must meet department-specific criteria in order to be admitted to the major. (Note that admission to SDSU is a separate process from admission to the major, and is reviewed by a separate administrative unit.)

For this catalog year, admission to the Biology major requires:

- completion of the Preparation for the Major courses
- a GPA of 2.7 or higher in Preparation courses
- a minimum grade of C in each Preparation course
- an overall GPA of at least 2.6
- satisfaction of the lower-division writing competency requirement
- no coursework for the premajor or the major may be graded Cr/NC

Students who have completed these requirements must meet with the Biology undergraduate advisors to be admitted to the major.

Students who do not meet one or more minimum grade or minimum GPA requirements should meet with the Biology undergraduate advisors to determine the appropriate course of action.

EMPHASIS IN MARINE BIOLOGY (Minimum of 36 upper division units)

Required courses (15 units):

Biol 352	Genetics and Evolution	3	_____	Biol 366	Biochem., Cell & Mol. Biol. II	4	_____
Biol 354	Ecology and the Environment	3	_____	Biol 366L	Biochem., Cell & M. Biol. Lab. I	2	_____
Chem 365	Biochem., Cell & Mol. Biol. I	3	_____				

Elective courses (21 units): At least 15 units of the required 21 units of upper division electives must be selected from the following courses. Two or more of these electives must be laboratory courses, one of which must be an organismal biology course selected from Biology 512, 514, 515, 516A.

†Biol 512	Evol. & Ecol. of Marine Mammals	3	_____	†Biol 541	Ecol of Fishes and Fisheries Biol	3	_____
Biol 514	Biology of the Algae	4	_____	Biol 542	Chemical Ecology	3	_____
Biol 515	Marine Invertebrate Zoology	4	_____	Biol 596	Biology of Fishes	4	_____
†Biol 516A	Marine Larval Ecology Part 1	4	_____				
†Biol 516B	Marine Larval Ecology Part 2	4	_____	Biol 497/499	Special Study/Research (max. 3 u) ¹	1-3	_____
Biol 517	Marine Ecology	4	_____	Biol 490	Undergraduate Honors Research ¹	3	_____

The remaining 6 units can be selected from:

1. Any biology courses numbered 350 and above (except Biology 452)
2. Certain Chemistry courses between 410A-599.
3. Up to 3 units selected from Economics 454, Geography 504, Geological Sciences 540 and 545.

Other _____ Other _____

† Not taught in AY 11-12.

¹ Prior approval of the Biology adviser (in LS-135) is needed and papers must be filed with the Office of Advising & Evaluations.

Department of Biology

<http://www.bio.sdsu.edu/>

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Undergraduate Advising Office

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Dr. Andrew J. Bohonak, Vice Chair of Biology, and
Director of Undergraduate Advising and Curriculum

Mr. Eddie Lopez, M.S., Associate Director of Advising

Ms. Arlene Castillo, M.S., Administrative Coordinator

Degree opportunities

The Department of Biology offers the following degrees:

B.S. in Biology, with optional emphases in Bioengineering, Cellular & Molecular Biol., Ecology, Evolution & Systematics, Marine Biology, or Zoology	B.A. in Biology
B.S. in Microbiology, with an optional emphasis in Clinical Laboratory Science or Public Health Microbiology	B.A. in Microbiology
Minor in Biology, with optional emphases in five areas	Biotechnology Certificate

Coursework to demonstrate subject matter competency for the
Single Subject Teaching Credential in Biology/Life Sciences

For the most current information, see the bioadvising web page

<http://www.sci.sdsu.edu/bioadvise/>

- Answers to 25 Frequently Asked Questions
- Calendar of important dates
- Checklists of courses required for each of our degrees
- Course offerings we are planning for the entire academic year
- Information on new 496 and 596 "Special Topics" courses
- Course syllabi

Additional information

Explanation of graduation requirements: <http://arweb.sdsu.edu/es/advising/9gradreqs.html>

Preprofessional Health Advising Office (GMCS-323): <http://www.sci.sdsu.edu/preprof/>

Articulation of transferable courses from CA community colleges: www.assist.org

Articulation of science courses not listed on www.assist.org: meet with Biology advisors

Career Services (register with them by your sophomore year): SSE 1200, <http://career.sdsu.edu/>

Chemistry 200 placement exam: http://www.chemistry.sdsu.edu/courses/CHEM200/200_Placement_exam.php

Prospective students: <http://www.sdsu.edu/prospective.html>