

## CHECK LIST FOR THE B.S. DEGREE IN BIOLOGY EMPHASIS IN ECOLOGY

**Emphasis Adviser: Dr. Kathy Williams (PS 151)**

Ecology is the study of the interactions between organisms and factors in their environment. This emphasis includes a broad perspective of the biological sciences for careers in teaching, research, and public relations and administration in educational, governmental or private companies involved with environmental activity. Students intending to become teachers or researchers at an advanced level should plan on further study in graduate school.

### 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 ECOLOGY (Minimum of 36 upper division units)

#### Required courses (17 units):

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

**Elective courses (19 units):** At least 15 of the required 19 units of UD electives must be selected from the following list. The remaining 4 units can include Biology 350-599 (except Biology 452), and certain Chemistry courses between 410A-599. Electives must include one organismal course selected from Biol 350, 458, 460, 512, 515, 516A, 523, 524, 525, 526, 528, 530, 531, 535, 588.

Biol 508	Coevolution	3	_____	†Biol 541	Ecology of Fishes & Fisheries Biol	3	_____
Biol 509	Evolutionary Biology	3	_____	Biol 542	Chemical Ecology	3	_____
†Biol 512	Evol. Ecol. of Marine Mammals	3	_____	Biol 544	Terr. Ecosys. & Climate Change	3	_____
†Biol 516A	Marine Larval Ecology 1	4	_____	Biol 560	Animal Physiology <sup>2</sup>	3	_____
†Biol 516B	Marine Larval Ecology 2	4	_____	Biol 597A	Univariate Stat. Methods in Biol.	3	_____
Biol 517	Marine Ecology	4	_____	Biol 596	Biology of Fishes	4	_____
Biol 526	Terrestrial Arthropods	4	_____	Biol 596	Ecological Metagenomics	3	_____
†Biol 527	Animal Behavior	3	_____	Biol 596	Soil Biology	4	_____
†Biol 527L	Animal Behavior Lab	1	_____	Biol 596	Terrest Ecosys & Clim Chng Lab	2	_____
Biol 528	Microbial Ecology	3	_____	Biol 497/499	Special Study & Research (max. 3 u) <sup>1</sup>	1-3	_____
Biol 535	Plant Ecology	4	_____	Biol 490	Undergraduate Honors Research <sup>1</sup>	3	_____
†Biol 538	Environmental Policy & Regul.	3	_____				
†Biol 540	Conservation Ecology	3	_____	Other			_____
				Other			_____

† Not taught in AY 11-12.

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

<sup>2</sup> Offered during summer session only.

## **Department of Biology**

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

San Diego State University  
5500 Campanile Drive  
San Diego, CA 92182-4614

## **Undergraduate Advising Office**

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

Life Sciences North, Room 135  
Phone (619) 594-6442 Fax (619) 594-5676  
bioundergrad@sunstroke.sdsu.edu

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](http://www.assist.org)

Articulation of science courses not listed on [www.assist.org](http://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](http://www.chemistry.sdsu.edu/courses/CHEM200/200_Placement_exam.php)

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