

UNDERGRADUATE STUDIES:

B.S. Preparation for the SSTC in Biology

Visit the Biology Undergraduate Advising Center in LSN 102

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Emphasis Advisor: Dr. Kathy S. Williams

Preparation for the Major Coursework

This program prepares students who aim to obtain the Single Subject Credential Program in Biology. Completion of these courses and the other SDSU degree requirements will earn a BS in Biology and you will have demonstrated subject matter competency, in lieu of taking the CSET exams that are required to enter any CA Single Subject Credential Program. The CSET waiver requires that the following courses be taken at SDSU within the last 7 yr, with grades of C or higher.

Four Year Degree

To finish your degree in four years, all 9 sets of premajor courses listed below will need to be finished by the end of your 4th semester, or the 5th at the latest

Impaction

Biology is impacted. After admission to SDSU, students are initially placed into the Biology premajor. Premajors must meet department specific criteria in order to be admitted into the major. Admission to Biology Major requires the following:

- Completion of all the Preparation for the Major courses *and* a combined GPA of 2.8 or higher in these courses (*excluding Phys 180A, 180B, 182A, and 182B*).
- A minimum of C or better in every course (Recommended A's and B's).
- Courses in the Preparation for the Major cannot be taken Cr/NC.

After completing these requirements, you will be admitted to the Major automatically. *If* you are not admitted automatically meet with the Undergraduate Biology Advisor as soon as possible.

Students who do not meet one or more requirements should meet with the Undergraduate Biology Advisor each semester to determine an appropriate course of action.

NOTE: Not all upper division Biology courses are offered every semester. Check the current class schedule for complete course listings.

PREPARATION FOR THE MAJOR* (37 units of lower division courses; as for all Biol. majors)

Biol 203 Princ. of Cell Molec. Biology	3	
Biol 203L Princ. of Cell Molec. Biology Lab	1	
Biol 204 Princ. of Organismal Biology	3	
Biol 204L Princ. of Organismal Biology Lab	1	
Biol 215 Biostatistics	3	
Chem 200 General Chemistry	5	
Chem 201 General Chemistry	5	

Chem 232 Organic Chemistry	3	
Chem 232L Organic Chemistry Lab	1	
Math 124 Calculus of Life Sciences	4	
Phys 180A Fundamentals of Physics	3	
Phys 182A Physical Measurements	1	
Phys 180B Fundamentals of Physics	3	
Phys 182B Physical Measurements	1	

*No transfer courses will substitute for courses required for the CSET waiver without prior departmental approval.

¹New course, satisfied by TE 462 in Spr 2020 with Biol. adviser approval; may count as a Biology non-lab elective with prior Biol. adviser approval.

²These three UD courses do not satisfy major or GE requirements, but may count towards B.S. degree as free electives.

UPPER DIVISION MAJOR (36 units)

Cumulative 2.0 GPA required in all upper division coursework applied to the major.*

Required Core coursework* (20 units)

Biol 351 Genetics	3	Biol 366 Cell and Molecular Biology	3
Biol 352 Evolution	3	Biol 366L Biochemistry, Cell and Molecular Lab	2
Biol 354 Ecology and the Environment	3	TE 331 Integrating Sci & Pedagogy ¹	3
Chem 365 Fundamentals of Biochemistry	3	-----	

Elective coursework (16 units minimum)

Required: A minimum of two elective courses must be biology laboratory courses, at least one of which must be an organismal level course selected from the list below.

Organismal Lab Elective Requirement– select one organismal lab course from below	3-4
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Biol 350	General Microbiology (4)	Biol 525	Mammalogy (3)
Biol 512	Evol. & Ecol. of Marine Mammals (3)	Biol 526	Terrestrial Arthropod Biology (4)
Biol 514	Biology of the Algae (4)	Biol 528	Microbial Ecology (3)
Biol 515	Marine Invertebrate Biology (4)	Biol 530	Plant Systematics (4)
Biol 516A	Marine Larval Ecology Research Pt1 (4)	Biol 531	Taxonomy of California Plants (4)
Biol 523	Herpetology (3)	Biol 535	Plant Ecology (4)
Biol 524	Ornithology (4)		

Custom Electives (12-13 units)

- Upper division Biology courses numbered 350-599 may be applied to the major.
- One additional elective course must be a biology laboratory course numbered 350-599.
- Upper division Chemistry courses (except Chem 300, 308, 497, 499, 560) may be applied to the major.
- It is recommended that Biol 497 or 499 be taken as electives for the major.

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Additional Courses for Single Subject Biology Teaching Credential preparation

1. Two GE explorations courses are **required** for this CSET waiver, ASTR 310 (Part A Natural Sciences) and PHIL 332 (Part C Humanities). We also **recommend** (but do not require) Linguistics 420 for GE explorations, Part B Social and Behavioral Sciences

2. Additional REQUIREMENTS for SSTC coursework alternative to the CSET exams

PHIL 332 Environ Ethics - Required GE Part C (Fall/Sp)	3
ASTR 310 Astrobiology - Required GE Part A (Spring)	3
GEOL 412 Earth Sci - Required elective ² (Spring)	4

3. Prerequisites for the SDSU Teacher Credential postbac program. Not required for Biology Major or CSET Waiver

TE 280 Health Ed for Teachers (Fall/Sp)	1
ED 451 Intro to Multicultural Education ² (Fall/Sp)	3
SPED 450 Classroom Adaptations for Special Populations ² (Fall/Sp)	3

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