

BA IN BIOLOGICAL SCIENCE



SACRAMENTO STATE
Redefine the Possible

In Workflow

1. BIO Committee Chair (kneitel@csus.edu)
2. BIO Chair (kneitel@csus.edu)
3. NSM College Committee Chair (mikkel.jensen@csus.edu)
4. NSM Dean (datwyler@csus.edu)
5. Academic Services (catalog@csus.edu)
6. Senate Curriculum Subcommittee Chair (curriculum@csus.edu)
7. Council on the Preparation of School Personnel Chair (mae.chaplin@csus.edu)
8. Dean of Undergraduate (james.german@csus.edu; celena.showers@csus.edu; renee.leonard@csus.edu)
9. Dean of Graduate (cnewsome@skymail.csus.edu)
10. Catalog Editor (catalog@csus.edu)
11. Registrar's Office (w lindsey@csus.edu)

Approval Path

1. Tue, 22 Feb 2022 19:37:14 GMT
Jamie Kneitel (kneitel): Approved for BIO Committee Chair
2. Tue, 22 Feb 2022 19:48:17 GMT
Jamie Kneitel (kneitel): Approved for BIO Chair
3. Fri, 04 Mar 2022 01:28:32 GMT
Mikkel Jensen (mikkel.jensen): Approved for NSM College Committee Chair
4. Fri, 04 Mar 2022 16:55:52 GMT
Shannon Datwyler (datwyler): Approved for NSM Dean

History

1. Apr 27, 2018 by clmig-jwehrheim
2. Aug 13, 2018 by 212408496
3. Oct 2, 2018 by 212408496
4. Aug 5, 2019 by Shannon Datwyler (datwyler)
5. Apr 28, 2020 by Celena Showers (celena.showers)
6. Apr 20, 2021 by Celena Showers (celena.showers)

Date Submitted: Tue, 22 Feb 2022 18:52:21 GMT

Viewing: BA in Biological Science

Last approved: Tue, 20 Apr 2021 20:53:33 GMT

Last edit: Fri, 04 Mar 2022 01:28:19 GMT

Changes proposed by: Rob Crawford (215236945)

Academic Group: (College)

Natural Sciences & Mathematics

Academic Organization: (Department)

Biological Sciences

Catalog Year Effective:

2022-2023 Catalog

Individual(s) primarily responsible for drafting the proposed degree major program:

Name (First Last)	Email	Phone 999-999-9999
Rob Crawford	robert.crawford@csus.edu	916-278-6535

Type of Program Proposal:

Major

Program Change Type:

Non-Substantive

Title of the Program:

BA in Biological Science

Designation: (degree terminology)

Bachelor of Arts

Briefly describe the program proposal (new or change) and provide a justification:

The Department has voted to discontinue the pre-major.

Objectives of the degree program:

To prepare students for careers in teaching (single-subject), professional programs in healthcare fields, and other careers in the Biological Sciences that do not require intensive laboratory training.

University Learning Goals**Undergraduate Learning Goals:**

Competence in the disciplines
 Knowledge of human cultures and the physical and natural world
 Integrative learning
 Intellectual and practical skills

Will this program be required as part of a teaching credential program, a single subject, or multiple subject waiver program (e.g., Liberal Studies, Biology) or other school personnel preparation program (e.g., School of Nursing)?

Yes

For the Council for the Preparation of School Personnel (to be filled out with assistance of your department chair):**Does this program change impact your department's currently written Program Standards Document?**

No

Common Standards: In what way does this course or program change impact the currently written Common Standards document? Please include any suggested language changes.

None

Is this change in response to program or unit assessment activities?

No

Will this program introduce any new or changes to program assessments?

No

Do these changes impact the Smart Planner roadmap?

No

Catalog Description:

Units required for Major: 63-67

Total units required for BA: 120

Program Description

The Department of Biological Sciences offers both undergraduate and graduate degree programs. At the undergraduate level, students are able to earn a Bachelor of Arts degree, a Bachelor of Science degree, or a Minor in Biological Sciences.

As defined by policy <http://www.csus.edu/umannual/acadaff/fsm00010.htm>, a change in units constitutes a substantive change to the program. If your changes constitute a substantive change, please refer back to the "Program Change Type" field above to ensure that "Substantive" is selected.

Program Requirements: (If new courses are being created as part of a new program, it will be useful to propose courses first.)

Program Requirements

Code	Title	Units
Required Lower Division Courses (37-41 Units)		
BIO 1	Biodiversity, Evolution and Ecology ¹	5
BIO 2	Cells, Molecules and Genes	5
CHEM 1A	General Chemistry I ¹	5
CHEM 1B	General Chemistry II	5
Select one of the following:		3 - 6
CHEM 20	Organic Chemistry Lecture–Brief Course ²	
CHEM 24 & CHEM 124	Organic Chemistry Lecture I Organic Chemistry Lecture II	
Select one of the following:		3 - 4
MATH 26A	Calculus I for the Social and Life Sciences	
MATH 30	Calculus I	
PHYS 5A	General Physics: Mechanics, Heat, Sound	4
PHYS 5B	General Physics: Light, Electricity and Magnetism, Modern Physics	4
STAT 1	Introduction to Statistics ¹	3
Required Upper Division Courses (23 Units)		
BIO 100	Introduction to Scientific Analysis	3
BIO 121	Molecular Cell Biology	3
BIO 139	General Microbiology	4
BIO 160	General Ecology	3
BIO 184	General Genetics	4
BIO 188	Evolution	3
CHEM 161	General Biochemistry ³	3
Elective Courses (3 Units)		
Select one course from the following Structure and Function Electives:		3
BIO 104	Physiology of Human Reproduction	
BIO 122	Advanced Human Anatomy	
BIO 123	Neuroanatomy	
BIO 126	Comparative Vertebrate Morphology	
BIO 127	Developmental Biology	
BIO 128	Plant Anatomy and Physiology	
BIO 130	Histology	
BIO 131	Systemic Physiology	
BIO 132	Neurophysiology	
BIO 133	Cardiovascular, Respiratory and Renal Physiology	
BIO 135	Endocrinology	

Total Units **63-67**

¹ Course also satisfies General Education (GE)/Graduation Requirement.

² CHEM 24 and CHEM 124 may be taken in lieu of CHEM 20. (CHEM 124 is not counted toward the 24 upper division unit requirement in the major.)

³ CHEM 160A and CHEM 160B may be taken in lieu of CHEM 161. Only three units of the package may be counted toward the upper division major requirement.

Notes:

- Pre-Health Professional students should take the Chemistry and Math requirements as stated in the Pre-Health Professional Program section of this catalog.

General Education Requirements ¹

Code	Title	Units
Area A: Basic Subjects (9 Units)		
A1	Oral Communication	3
A2	Written Communication	3
A3	Critical Thinking	3
Area B: Physical Universe and Its Life Forms (3 Units)		
B1	Physical Science ²	0
B2	Life Forms ²	0
B3	Lab (Note: Lab experience to be taken with one of the following: B1, B2 or B5) ²	0
B4	Math Concepts ²	0
B5	Additional Course (Any B to reach 12 units) - Take upper-division course to complete Area & upper division requirements.	3
Area C: Arts and Humanities (12 Units)		
C1	Arts	3
C2	Humanities	3
C1/C2	Area C Course	3
C1/C2	Area C Course - Take upper-division course to complete Area & upper division requirements.	3
Area D: The Individual and Society (9 Units)		
Area D	Course	3
Area D	Course	3
Area D	Course - Take upper-division course to complete Area & upper division requirements.	3
Area E: Understanding Personal Development (3 Units)		
Area E	Course	3
Area F: Ethnic Studies (3 Units)		
Area F	Course	3
Total Units		39

¹ To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). For further information, please visit the General Education page (<http://catalog.csus.edu/colleges/academic-affairs/general-education/>).

Note: There is no way to list all possible overlaps so please consult with a professional advisor. The Academic Advising Center can be visited online (<http://www.csus.edu/acad/>), by phone (916) 278-1000, or email (advising@csus.edu).

² Required in Major; also satisfies GE.

Graduation Requirements ¹

Code	Title	Units
Graduation Requirements (required by CSU) (9 Units)		
American Institutions: U.S. History		3
American Institutions: U.S. Constitution & CA Government		3
Writing Intensive (WI)		3
Graduation Requirements (required by Sacramento State) (12 Units)		
English Composition II		3
Race and Ethnicity in American Society (RE)		3
Foreign Language Proficiency Requirement ²		6

¹ To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). For further information, please visit the General Education page (<http://catalog.csus.edu/colleges/academic-affairs/general-education/>).

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² If not satisfied before entering Sacramento State, it may be satisfied in General Education Area C2 (Humanities). "C- or better required." The alternative methods for satisfying the Foreign Language Proficiency Requirement are described here: <https://www.csus.edu/college/arts-letters/world-languages-literatures/foreign-language-requirement.html> (<https://www.csus.edu/college/arts-letters/world-languages-literatures/foreign-language-requirement.html>)

Fiscal Impact to Change an Existing Program

Indicate programmatic or fiscal impact which this change will have on other academic units' programs, and describe the consultation that has occurred with affected units:

None, this just eliminates the pre-major designation. All courses stay the same.

Provide a fiscal analysis of the proposed changes:

None.

How will the above changes be accommodated within the department/College existing fiscal resources?

None.

Will the proposed changes require additional resources?

No

What additional space, equipment, operating expenses, library, computer, or media resources, clerical/technical support, or other resources will be needed?

None.

Key: 285