HUMAN BIOLOGICAL SCIENCES, BA

Natural Sciences, Mathematics, and Engineering (nsme) (https://catalog.csub.edu/general-information/csub-information/school-natural-sciences-mathematics-engineering/)

Department of Biology (https://catalog.csub.edu/general-information/csub-information/school-natural-sciences-mathematics-engineering/department-biology/)

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www.csub.edu/Biology (http://www.csub.edu/Biology/)

Program Maps for Natural Sciences, Mathematics, and Engineering (https://programmap.csub.edu/academics/interest-clusters/4e942a6e-b8e4-4b60-a1ae-334235acc581/)

The Department of Biology offers the Bachelor of Science in Biology with or without a concentration in Biotechnology, the Bachelor of Arts in Human Biological Sciences, and the Master of Science in Biology. Throughout its curriculum the Department emphasizes evolution and the relationship between organisms and the environment. Classes include extensive field and laboratory investigations allowing students to observe and measure biological systems. Students are encouraged to select elective courses best suited to their interests. See Biology Tracks below. A detailed description of student learning goals and objectives can be found at http://www.csub.edu/biology/.

The Bachelor of Arts Degree in Human Biological Sciences curriculum includes a specific set of courses designed to provide students with a foundation in Biology in Human/Health related fields. This degree is not intended for pre-medical or pre-professional students.

Program Requirements

Students seeking a Bachelor of Arts degree with a major in Human Biological Sciences must complete the following:

Code	Title	Units
General Education Requirements		
Subject Area 1A: English Composition		3
Subject Area 1B: Critical Thinking		3
Subject Area 1C: Oral Communication		3
Subject Area 2: Mathematical Concepts & Quantitative Reasoning [3]		0
Subject Area 3A: Arts		3
Subject Area 3B: Humanities		3
Upper Division 3 Arts or Humanities: (3UD)		3
Subject Area 4: Social and Behavioral Sciences		3
Upper Division 4 Social and Behavioral Sciences: (4UD)		3
Subject Area 5A: Physical Science [3]		0
Subject Area 5B: Biological Sciences [3]		0
Subject Area 5C: Laboratory [3]		0
Upper Division 5 Science: (5UD) [3]		0
Subject Area 6: Ethnic Studies		3
General Education Subtotal		27
Campus Requirements		
First-Year Seminar (FYS)		2
American Institutions: Government		3
American Institutions: History		3
Junior Year Diversity & Reflection (JYDR)		3
Graduation Writing Assessment Requirement (GWAR)		3
Capstone [4]		0
Campus Requirement Subtotal		*14*
Major Requirements		
Biology courses [1]		
Core Requirements		
Lower division		
BIOL 2010	Introductory Biology - Cells [2]	4
BIOL 2210	Human Anatomy	4
BIOL 2220	Human Physiology	4
BIOL 2230	Microbiology	4
BIOL 2240	Principles of Nutrition	2
Upper division		
BIOL 3010	General Genetics	3
BIOL 3020	General Physiology	3
BIOL 3210	Human Ecology	3
BIOL 3220	Human Pathophysiology	4
BIOL 3430	Parasitology	3
BIOL 3440	Virology	3
BIOL 3530	Immunology	3
BIOL 3540	Hematology	3
BIOL 4200	Medical Microbiology	4
BIOL 4928	Senior Seminar	2
Cognates [1]		
NURS 2190	Lifespan Development	3
or BIOL 2600	Current Health Problems	
CHEM 1000	Foundations of Chemistry	3
CHEM 1001	Foundations of Chemistry Laboratory	2
CHEM 2300	Foundations of Organic Chemistry	3
MATH 1050	Precalculus I (or equivalent)	4
Select one of the following: [6]		3
MATH 2200	Introduction to Statistical Concepts and Methods	
MATH 1209	Statistics in the Modern World	
KINE 2018	Introduction to Statistics for Health Sciences	
PSYC 2018	Introduction to Statistical Methods in Psychological Research	
SOC 2208	Introduction to Statistics in the Social Sciences	
Major Subtotal [7]		67
Additional Units Needed Towards Graduation [5,9]		**12**
Total Units		**120**

1 *A minimum GPA for these units is 2.0*

2 **Note:** A grade of C- or better in BIOL 2010 Introductory Biology - Cells is required to advance into upper division Biology courses.

3 A modification to the standard GE program has been approved that allows the possibility of satisfying some GE requirements through the major.

- BIOL 2010 Introductory Biology - Cells or BIOL 2110 Introductory Biology - Animals satisfies Subject Area 5B,
- MATH 1050 Precalculus I or higher satisfies Subject Area 2, and
- CHEM 1000 Foundations of Chemistry satisfies Subject Area 5A.
- Students are waived from the Upper Division area of their program.

[4] Some major requirements may be used to satisfy Campus Requirements
- The Capstone requirement is met by completing BIOL 4928 Senior Seminar

[5] Human Biological Sciences majors are encouraged to consider taking additional upper-division biology courses or additional upper-division scientific cognate courses to fulfill their university-wide additional unit requirement. Depending on student career objectives, faculty advisors may be able to recommend courses that would be appropriate, and students are encouraged to speak with their faculty advisor about course options.

[6] The unit range is 3-4 in the area.

[7] The unit range is 67-68 in the area.

[8] Additional Units can range between 12-13 depending on course selection to meet the 120 overall requirement.

[9] American Institution - Government (American & Constitutional Ideals) satisfies one course of the two required in Subject Area 4.