

B.S. Integrative Biology

2023-24

DEPARTMENT PERSONNEL

Chair

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Modern medical, laboratory, and field science depends on thousands of highly trained laboratory technicians, technologists, scientists, and educators. Southwestern Adventist University's Bachelor of Science (B.S.) degree in Biology with an emphasis in Integrative Biology offers students a broad knowledge base to prepare you for a wide variety of careers in biology, health professions, and education. It is our most flexible Biology degree offering. Integrative Biology allows you to experience the full range of fields within Biology and includes research-based experiences and coursework. In addition, students in the Department of Biological Sciences are presented with rare leadership opportunities through the Biology Club, Pre-Health Professions Club, and the potential to work with professors as Laboratory Teaching Assistants and Tutors.

Job Outlook

Biotechnology Laboratory Technician, High School Science Teacher, Research Scientist, Public Health Officer, Health Educator, Science Writer, Occupational Therapist, SpeechLanguage Pathologist, Optometrist, Orthotist & Prosthetist. (Note that some of these careers require additional graduate training and may require additional pre-requisite coursework. Please consult with your academic advisor for career planning.)

Earnings

Biological Technicians, Median Pay: \$43,800; Job Outlook (next 10 years): 10% (faster than average). High School Teachers, Median Pay: \$59,170; Job Outlook (next 10 years): 8% (average). Medical Scientists, Median Pay: \$82,090; Job Outlook (next 10 years): 13% (faster than average). Occupational Therapists, Median Pay: \$83,200; Job Outlook (next 10 years): 24% (much faster than average).

Source: Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, on the Internet at <https://www.bls.gov/ooh/> (visited Feb. 12, 2019).



Biology B.S. Core Curriculum Required of all B.S. students

Item #	Title	Credits
BIOL 111	General Biology I	4
BIOL 112	General Biology II	4
BIOL 230	Ecology	4
BIOL 320	Genetics	4
BIOL 419	Philosophy of Science	3
	Sub-Total Credits	19

Choose one course from each of the following groups:

Choose two additional electives from any group for 6-8 credits.

Item #	Title	Credits
	Biomedical Electives	3-4
	Botany electives:	4
	Ecology electives:	4
	Research Techniques Electives:	3-4
	Zoology Electives:	3-4
	Sub-Total Credits	24-28

Required Cognates:

Item #	Title	Credits
CHEM 111	General Chemistry I	4
CHEM 112	General Chemistry II	4
	MATH 141 or 180	3-4
	Sub-Total Credits	11-12

Sample 4 Year Curriculum

General Education Requirements

To view general education requirements for this major please visit: <https://catalog.swau.edu/core-curriculum-for-a-bachelors-degree>

First Year First Semester

Item #	Title	Credits
BIOL 111	General Biology I	4
MATH 110	College Algebra	3
ENGL 121	Freshman Composition	3
UNIV 111	Wellness for Life	2
	Fine Arts General Education Requirement	3
	Sub-Total Credits	15

First Year Second Semester

Item #	Title	Credits
BIOL 112	General Biology II	4
	MATH 141 or 180	3-4
	Elective Course for 120	3
	Religion GE Requirement	3
	Communication GE Requirement	3
	Sub-Total Credits	16-17

Second Year First Semester

Item #	Title	Credits
BIOL 230	Ecology	4
CHEM 111	General Chemistry I	4
ENGL 220	Research Writing	3
	History GE Requirement	3
	Kinesiology GE Requirement	1
	Sub-Total Credits	15

Second Year Second Semester

Item #	Title	Credits
BIOL 320	Genetics	4
CHEM 112	General Chemistry II	4
	History GE Requirement	3
	Literature GE Requirement	3
	Religion GE Requirement	3
	Sub-Total Credits	17

Third Year First Semester

Item #	Title	Credits
BIOL 318	Microbiology & Immunology	4
BIOL 314	Systematic Botany	4
	Elective Course for 120	3
	Elective Course for 120	3
	Kinesiology GE Requirement	1
	Sub-Total Credits	15

Third Year Second Semester

Item #	Title	Credits
BIOL 325	Field Ecology	4
BIOL 328	Biostatistics	3
	Religion GE Requirement	3
	Social Science GE Curriculum Guide	3
	Elective Course for 120	3
	Sub-Total Credits	16

Fourth Year First Semester

Item #	Title	Credits
	Elective Course for 120	3
	Elective Course for 120	3
	Elective (Upper Division)	3
	Sub-Total Credits	9

Fourth Year Second Semester

Item #	Title	Credits
BIOL 419	Philosophy of Science	3
	Religion GE Requirement	3
	Elective Course for 120	3
	Sub-Total Credits	9