Biology
Bachelor of Science
2023-2024

Nature of Work: Biological scientists study living organisms, cells, or biological molecules. After obtaining an undergraduate degree, most biologists go on to study a specialized area within the life sciences. Biological specializations include marine biology, limnology, biochemistry, botany, microbiology, physiology, zoology, ecology, agricultural science, molecular biology, immunology, and neurobiology. Biologists may work in government or private jobs in biotechnology, teaching, park service (e.g., park naturalist), fish and wildlife (research or game management), university research programs, and professional programs in the medical field. Federal, state, and local governments employ approximately four in ten non-faculty scientists. Within any specialization, biological science presents diverse opportunities such as travel, flexible work schedules, varied responsibilities, professional recognition, and high job satisfaction.

Professional Training: Biologists are usually required to have a Ph.D. degree for postsecondary teaching, independent research, and advancement into administrative positions. A master's degree suffices for most jobs in applied research and for jobs in management, inspection, sales, and services. The bachelor's degree is adequate for some beginning or entry-level jobs and many with a bachelor's enter medical, dental, veterinary, or other health profession schools.

Job Outlook: According to the Bureau of Labor Statistics, employment of environmental scientists is expected to grow 5 percent from 2021 to 2031, about as fast as the average for all occupations, while employment for conservation, wildlife, and microbiology fields will increase at about the average rate. About 7,800 openings for environmental scientists and specialists are projected each year, on average, over the decade. (See www.bls.gov) Environmental scientists and specialists should have good job opportunities. In addition to growth, many job openings will be created by scientists who retire, advance to management positions, or change careers.
Candidates may improve their employment prospects by gaining hands-on experience through an internship.

Earnings: The Bureau of Labor Statistics reports that in May 2021, the median annual salary for environmental scientists and specialists was $76,530. (See www.bls.gov)

Note: Biology majors are expected to take two 5 credit biology elective courses from the Rosario Marine Station summer program.

Additional electives are required on the main campus to complete degree requirements.

If one is interested in secondary teaching, certification requirements must be worked into the schedule. Student teaching should be planned for the senior year. Students seeking teaching certification must see an adviser in the School of Education and Psychology.

Before graduation, all students must take an exit exam.

BIOLOGY DEPARTMENT

Rigby Hall
(509) 527-2602

Websites
Walla Walla University
University Bulletin

Biology Department

Faculty
Chair
David Lindsey

Advisors
CJ Brothers
David Cowles
David Lindsey
Jim Nestler
Kirt Onthank

Professional Organizations
American Institute of Biological Sciences

Science Jobs
www.aibs.org/careers/
www.sciencejobs.org
www.biologyjobs.com

Suggested Degree Path

TOTAL CREDITS REQUIRED: 192 cr. GENERAL STUDIES REQUIREMENTS: 64-69 cr. See the Undergraduate Bulletin for Details
The chart below details one suggested path a student may take to complete a bachelor's degree in Biology.
Cognates are listed in *italics*.

Freshman Year

Fall Courses	Hours
General Biology & Lab (BIOL 141 & 141L)	4
Math Option (MATH 121)	(4)
College Writing I (ENGL 121)	3
General Studies	5-9
Total	16

Winter Courses	Hours
General Biology & Lab (BIOL 142 & 142L)	4
Math Option (MATH 122)	4
College Writing II (ENGL 122)	3
General Studies	5
Total	16

Spring Courses	Hours
General Biology & Lab (BIOL 143 & 143L)	4
General Studies	8-12
Total	16

Sophomore Year

Fall Courses	Hours
Intro to Biological Research I (BIOL 216)	3
General Chemistry & Lab (CHEM 141 & 144)	4
General Physics & Lab (PHYS 211 & 214)	4
Research Writing (ENGL 223)	3
General Studies	2
Total	16

Winter Courses	Hours
Biostatistics (BIOL 250)	4
General Chemistry & Lab (CHEM 142 & 145)	4
General Physics & Lab (PHYS 212 & 215)	4
General Studies	4
Total	16

Spring Courses	Hours
General Ecology (BIOL 305)	4
General Chemistry & Lab (CHEM 143 & 146)	4
General Physics & Lab (PHYS 213 & 216)	4
General Studies	4
Total	16

Junior Year

Fall Courses	Hours
Cell Biology I (BIOL 381)	4
^ Organic Chemistry & Lab (CHEM 321 & 324)	5
Journal Club (BIOL 326)	(1)
Colloquium (BIOL 495)	0
General Studies	6-7
Total	16

Winter Courses	Hours
Cell Biology II (BIOL 382)	4
^ Organic Chemistry & Lab (CHEM 322 & 325)	5
Journal Club (BIOL 326)	(1)
Colloquium (BIOL 495)	0
General Studies	6-7
Total	16

Spring Courses	Hours
Journal Club (BIOL 326)	(1)
Colloquium (BIOL 495)	0
Biology Electives	4-8
General Studies	7-11
Total	16

Summer Quarter

Rosario Marine Station: Biology Electives

Senior Year

Fall Courses	Hours
Colloquium (BIOL 495)	0
Biology Electives	8
General Studies	8
Total	16

Winter Courses	Hours
Colloquium (BIOL 495)	0
~Philosophy of Origins & Speciation (BIOL 483)	3
Biology Electives	4-8
General Studies	5-9
Total	16

Spring Courses	Hours
Senior Seminar (BIOL 496)	2
Colloquium (BIOL 495)	0
Biology Electives	4-8
General Studies	6-10
Total	16

\+ Offered even years only - Offered odd years only

^ At least one additional chemistry course is strongly recommended.

~BIOL 483: once every 3 years it is taught in the Fall quarter.
*BIOL 495: 6 Colloquium Required

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