

BIOLOGY (B.S.)

Student Learning Outcomes

1. Students will demonstrate knowledge of discipline- specific content related to macro- principles describing the 3 domains of biology and the molecular nature of life.
2. Students will use critical thinking by demonstrating the ability to recognize the components of a problem, formulate a strategy to solve the problem, apply comprehensive scientific knowledge to execute a solution and then evaluate the effectiveness of the solution.
3. Students will demonstrate communication skills reflective of professional standards consistent biology-related associations (i.e. FASEB).
4. Students will demonstrate discipline- specific core laboratory and calculation- based skills related to the characterization and classification of life forms, their components and habitats and in the molecular analysis of living species.
5. Students will demonstrate readiness for post-baccalaureate entry into a workforce or acceptance into graduate or professional programs in Biology and/or health professions.
6. Students will demonstrate global perspective in their understanding of how biological factors affect economics, health, technology and the environment.

Recommended

- A Global Learning (GL) experience (<http://catalog.walsh.edu/undergraduate/academic-services/#globallearning>)

Required

- General Education Requirements (<http://catalog.walsh.edu/undergraduate/general-education-curriculum/>)
- Internship

Code	Title	Hours
Biology		
BIO 101	FD: T1:Principles of Biology I	3
BIO 101L	Principles of Biology I: Lab	1
BIO 102	Principles of Biology II	3
BIO 102L	Principles of Biology II: Lab	1
BIO 103	Intro Research Immersion	1
BIO 390	Biology Internship	1-3
BIO 436	Senior Capstone Experience	2

Biology Electives

BIO Upper-Division Electives (11 hrs. at 300-level or higher).
Only two credits max of BIO 411/412 can be used toward electives.¹

Chemistry

CHEM 101	FD:T1:Princ of Chemistry I	3
CHEM 101L	Principles of Chemistry I: Lab	1
CHEM 102	Principles of Chemistry II	3
CHEM 102L	Principles of Chemistry II:Lab	1
CHEM 201/201L	Organic Chemistry I	4
or CHEM 221	Essentials of Organic Chemistry	

Physics

PHYS 201	Physics with Calculus I	3
PHYS 201L	Physics with Calculus I: Lab	1

Mathematics

Select one of the following:		5-6
MATH 155 & MATH 156	Elementary Functions I and Elementary Functions II	
MATH 207	Calculus I	
MATH 221	Statistics	

Total Hours 53-56

- ¹ If BIO 209 & BIO 210 are taken, one may count as an upper division elective.

All courses required in the major must be completed with a "C-" or better in order to satisfy the major. If a student places into MATH 156, then they only need to complete MATH 156 to fulfill the math requirement. If a student places into MATH 207, then they have completed the Math requirement for this major. If MATH 221 is required, it must still be taken. Incoming students need to place into MATH 104 in order to enroll in BIO 101 and MATH 155 to enroll in CHEM 101.

Recommended for some graduate programs: PHYS 102 & 102L.

During BIO 103 Introductory Research Immersion, students will work with a biology faculty member to design an individualized plan for their biology electives. This plan must be signed off by both student and biology faculty member. Changes to the plan must be approved by the student's biology content advisor.