

Degree Worksheet for the College of Arts and Sciences: 2023-2024

B.S. BIOLOGY with Concentration in Ecology & Conservation Biology (ECB)

COLLEGE of ARTS & SCIENCES Language Requirement

All students who major in the College of Arts & Sciences are required to demonstrate competence in a second language. For complete details: <https://www.gonzaga.edu/college-of-arts-sciences/about/information-for-students/language-requirement-information>

Credits Sem/Yr

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B.S. BIOLOGY- Concentration in Ecology & Conservation Biology (ECB) 63-67 CREDITS

LOWER DIVISION

Course	Course Title	Credits	Grade
BIOL 105 & 105L	Info Flow in Biological Systems + Lab**	3	
BIOL 106	Energy Flow in Biological Systems	3	
BIOL 205 & 205L	Physiology & Biodiversity & Lab	4	
BIOL 206 & 206L	Ecology & Lab	4	
BIOL 207 & 207L	Genetics & Lab	4	
CHEM 101 & 101L	General Chemistry & Lab	4	

46 Credits

Choose one of the following sets of courses + labs:	Credits	Grade
CHEM 230 & 230L Organic Chemistry I	5	
ENVS 202 & 202L Applied Environmental Chemistry	4	

Choose one of the following sets of courses + labs:	Credits	Grade
PHYS 111 & 111L General Physics I & Lab	5	
PHYS 121 & 121L Physics I & Lab	5	

Choose one of the following Math or Statistics courses:	Credits	Grade
MATH 148 Survey of Calculus	3	
MATH 157 Calculus-Analytical Geometry I	4	
MATH 221 Applied Statistics (MATH 148 is pre-requisite)	3	
BIOL 305 Biological Data Analysis	4	

UPPER DIVISION

BIOL 399 Advanced Topics	2	
BIOL 495 Senior Evaluation	0	
BIOL 499 Senior Colloquium	1	

Biology & Other Science Electives:

At least 12 credits of upper-division BIOL electives must be from this list. At least two courses must include labs. A significant research experience (BIOL 498) can substitute for one lab course. **16 Credits**

BIOL 303 & 303L Population Ecology + Lab	4	
BIOL 313 Animal Behavior	3	
BIOL 323 & 323L Conservation Biology + Lab	4	
BIOL 331 Parasitology	3	
BIOL 333 Community Ecology	3	
BIOL 340 & 340L Field Botany + Lab	4	
BIOL 344 & 344L GIS and Ecological Techniques + Lab	4	
BIOL 357 & 357L Principles of Wildlife Mgmt + Lab	4	
BIOL 359 & 359L Studies in Biodiversity + Lab	4	
BIOL 360 Plant Biology	3	
BIOL 367 & 367L Entomology + Lab	4	
BIOL 403 & 403L Marine Biology + Lab	4	
BIOL 420 Physiological Ecology	3	
BIOL 498 Approved Research	4	

Other Science Electives:

6-8 credits
A minimum of 6 credits from courses in BIOL (300-400 level), CHEM, CPSC, MATH, or PHYS that have not already been counted toward the concentration.

****BIOL 105/105L meets the Scientific Inquiry requirement of the University Core for Biology Majors & Minors.**

ALL courses should be chosen in consultation with a Biology faculty advisor.

UNIVERSITY CORE REQUIREMENTS: FUNDAMENTAL CORE COURSES

Year 1: Understanding & Creating

Writing	Credits	Sem/Yr
ENGL 101 Writing (fulfills 3 credits Writing Enriched)*	3	
Reasoning		
PHIL 101 Reasoning	3	
First Year Seminar		
Dept. 193	3	
Communication & Speech		
COMM 100 Communication & Speech	3	
Math		
MATH (must be above Math 100)	3	
Scientific Inquiry (2cr + 1cr lab) **		
BIOL or CHEM or PHYS 104/104L (taken year 1 or 2)	3	

Year 2: Being & Becoming

Christianity & Catholic Traditions	Credits	Sem/Yr
RELI (see approved list)**	3	
Philosophy of Human Nature		
PHIL 201 Philosophy of Human Nature	3	

Year 3: Caring & Doing

World/Comparative Religion	Credits	Sem/Yr
RELI (see approved list)** (fulfills 3cr Global Studies)*	3	
Ethics		
PHIL 301 Ethics or RELI 330 Principles-Christian Morality	3	

Year 4: Imagining the Possible

Core Integration Seminar	Credits	Sem/Yr
Dept. 432	3	

NOTE: some courses have pre-requisites, check the catalog carefully!

BROADENING COURSES - see approved list**

Social & Behavioral Science	Credits	Sem/Yr
	3	
Literature		
	3	
History		
	3	
Fine Arts & Design		
	3	

REQUIRED COURSE DESIGNATIONS - see approved list**

*Writing Enriched	Credits Sem/Yr
	9 total
Social Justice	Credits Sem/Yr
	3 total
*Global Studies	Credits Sem/Yr
	6 total

****for list of approved RELI, Broadening & Designated courses, see : <https://my.gonzaga.edu/academics/undergraduate-programs/general-degree-requirements-procedures/university-core>**

Credits from BIOL 497 Biology Internship, do not satisfy any requirements for the Biology Major or Minor.

*Students must earn C- grade or better in BIOL 105/105L & BIOL 106 to take BIOL 205, 206, or 207. Students must also get C- grade or better in BIOL 205/205L, 206/206L, 207/207L & BIOL 399 to take BIOL 499.

Upper division BIOL electives: minimum of 10 credits(BS), 6 credits(BA), or 4 credits(Minor) must be taken from Gonzaga faculty. Study abroad students take note.