

College of Arts and Sciences 2024-2025 Degree Worksheet

B.S. BIOLOGY with Concentration in Microbiology, Molecular, and Cellular Biology (MMCB)

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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UNIVERSITY CORE REQUIREMENTS:

► FUNDAMENTAL CORE COURSES

Year 1: Understanding & Creating

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

Year 2: Being & Becoming

		Credits Sem/Yr
Christianity & Catholic Traditions		
RELI (see approved list)**	3	<input type="checkbox"/>
Philosophy of Human Nature		
PHIL 201 Philosophy of Human Nature	3	<input type="checkbox"/>

Year 3: Caring & Doing

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

Year 4: Imagining the Possible

		Credits Sem/Yr
Core Integration Seminar		
Dept. 432	3	<input type="checkbox"/>

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

► BROADENING COURSES - see approved list**

		Credits Sem/Yr
Social & Behavioral Science		
	3	<input type="checkbox"/>
Literature		
	3	<input type="checkbox"/>
History		
	3	<input type="checkbox"/>
Fine Arts & Design		
	3	<input type="checkbox"/>

► REQUIRED COURSE DESIGNATIONS - see approved list**

		Credits Sem/Yr
*Writing Enriched		
	9 total	<input type="checkbox"/>
Social Justice		
	3 total	<input type="checkbox"/>
*Global Studies		
	6 total	<input type="checkbox"/>

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

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

B.S. BIOLOGY-Microbiology, Molecular, 66-67 CREDITS & Cellular Biology Concentration (MMCB)

LOWER DIVISION

48-49 Credits

	Course Title		Credits	Grade
BIOL	111 Biology Pathways		1	<input type="checkbox"/>
BIOL	105/105L Info Flow in Biological Systems + Lab**		4	<input type="checkbox"/>
BIOL	106 Energy Flow in Biological Systems		3	<input type="checkbox"/>
BIOL	205/205L Physiology & Biodiversity + Lab		4	<input type="checkbox"/>
BIOL	206/206L Ecology + Lab		4	<input type="checkbox"/>
BIOL	207/207L Genetics + Lab		4	<input type="checkbox"/>
CHEM	101/101L General Chemistry I + Lab		4	<input type="checkbox"/>
CHEM	102/102L General Chemistry II + Lab		4	<input type="checkbox"/>
CHEM	230/230L Organic Chemistry I + Lab		4	<input type="checkbox"/>
CHEM	231/231L Organic Chemistry II + Lab		4	<input type="checkbox"/>
CHEM	307/307L Biochemistry I + Lab		4	<input type="checkbox"/>

Choose one of the following sets of courses + labs: 5 credits

PHYS 111/111L General Physics I + Lab	5	<input type="checkbox"/>
PHYS 121/121L Physics I + Lab	5	<input type="checkbox"/>

Choose one of the following Math or Statistics courses: 3-4 credits

MATH 148 Survey of Calculus	3	<input type="checkbox"/>
MATH 157 Calculus-Analytical Geometry I	3	<input type="checkbox"/>
MATH 221 Applied Statistics	3	<input type="checkbox"/>
BIOL 305 Biological Data Analysis	4	<input type="checkbox"/>

UPPER DIVISION

18 Credits

BIOL 399 Advanced Topics	2	<input type="checkbox"/>
BIOL 495 Senior Evaluation	0	<input type="checkbox"/>
BIOL 499 Senior Colloquium	1	<input type="checkbox"/>

Biology Upper Division Electives:

15 Credits

Group A: Choose one from the following courses + labs: 4 credits

BIOL 351/351L Cell Biology + Lab	4	<input type="checkbox"/>
BIOL 370/370L Microbiology + Lab	4	<input type="checkbox"/>
BIOL 456/456L Molecular Biology + Lab	4	<input type="checkbox"/>

Group B: Choose one from the following: 3-4 credits

BIOL 335 Advanced Genetics	3	<input type="checkbox"/>
BIOL 337 Developmental Biology	3	<input type="checkbox"/>
BIOL 351/351L Cell Biology + Lab	4	<input type="checkbox"/>
BIOL 380 Group B approved Study Abroad	0-6	<input type="checkbox"/>
BIOL 451/451L Comparative Endocrinology + Lab	4	<input type="checkbox"/>
BIOL 456/456L Molecular Biology + Lab	4	<input type="checkbox"/>
BIOL 498 Group B Approved Research	4	<input type="checkbox"/>

Group C: Choose one from the following: 3-4 credits

BIOL 331 Parasitology	3	<input type="checkbox"/>
BIOL 370/370L Microbiology + Lab	4	<input type="checkbox"/>
BIOL 374 Immunology	3	<input type="checkbox"/>
BIOL 375 Virology	3	<input type="checkbox"/>
BIOL 380 Group C approved Study Abroad	4	<input type="checkbox"/>
BIOL 498 Group C Approved Research	4	<input type="checkbox"/>

Choose at least three credits from the following to complete the required 15 credits of Biology Upper Division electives:

3-5 credits

BIOL 301-498, incl. listed above, not used		<input type="checkbox"/>
CHEM 300 and higher		<input type="checkbox"/>
CPSC 121 and higher		<input type="checkbox"/>
MATH 148 and higher, if not used above		<input type="checkbox"/>
PHYS 112 and higher		<input type="checkbox"/>

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

*Students must earn C- grade or better in BIOL 105/105L & BIOL 106 to take BIOL 205, 206, or 207. Students must get C- grade or better in BIOL 205/205L, 206/206L, 207/207L & BIOL 399 to take BIOL 499. Credits from BIOL 497 Biology Internship, do not satisfy any requirements for the Biology Major or Minor. Upper division BIOL electives: minimum of 10 credits(BS), 6 credits(BA), 4 credits(Minor) must be taken from GU faculty. Study abroad students take note.