

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

B.S. PHYSICS with BIOPHYSICS CONCENTRATION

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

UNIVERSITY CORE REQUIREMENTS:

► FUNDAMENTAL CORE COURSES

Year 1: Understanding & Creating

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

Year 2: Being & Becoming

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

Year 3: Caring & Doing

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

Year 4: Imagining the Possible

<i>Core Integration Seminar</i>	Credits Sem/Yr
Dept. 432	3

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

► BROADENING COURSES - see approved list**

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

► REQUIRED COURSE DESIGNATIONS - see approved list**

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

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

B.S. PHYSICS: 74-76 CREDITS with Biophysics Concentration

Physics Interdisciplinary Base Courses 32 Credits

Lower Level

Course	Course Title	Credits	Grade
PHYS 121/121L	Scientific Physics I + Lab	5	
PHYS 122/122L	Scientific Physics II + Lab	5	
PHYS 180	Physics Skills Seminar	1	
PHYS 224	Modern Physics	3	
PHYS 280	Physics Pathways Seminar	1	
MATH 157	Calculus & Analytical Geometry I	4	
MATH 258	Calculus & Analytical Geometry II	4	
CPSC 121	Computer Science I	3	

Upper Level

PHYS 325	Computational Physics	2	
PHYS 441	Advanced Lab I	2	
PHYS 442	Advanced Lab II	2	

Biophysics Concentration

42-44 Credits

BIOL 105/105L	Info Flow in Biol Systems + Lab	4	
BIOL 106	Energy Flow in Biol Systems	3	
CHEM 101/101L	General Chemistry + Lab	4	
CHEM 230/230L	Organic Chemistry I + Lab	5	
CHEM 231/231L	Organic Chemistry II + Lab	4	
CHEM 245/245L	Biochemistry + Lab	4	
PHYS 201	Mathematical Methods	3	
PHYS 323	Statistical Mechanics	3	
PHYS 324	Quantum Mechanics	3	
PHYS 456	Biophysical Systems & Modeling	3	

Choose one of the following 2 options:

Option 1:

PHYS 321	Classical Mechanics	3	
PHYS 322	Electricity & Magnetism	3	

Option 2:

BIOL 207/207L	Genetics + Lab	4	
BIOL 456/456L	Molecular Biology + Lab	4	

Physics Majors are also encouraged to take:

Course	Course Title	Credits	Grade
MATH 259	Calculus/Analytical Geometry III	4	
MATH 260	Ordinary Differential Equations	3	
MATH 339	Linear Algebra	3	

and additional CPSC (Computer Science) courses.

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