

College of Arts and Sciences 2024-2025 Degree Worksheet

B.S. PHYSICS with ASTROPHYSICS 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

B.S. PHYSICS: 63 CREDITS with Astrophysics Concentration

Physics Disciplinary Base Courses 49 Credits

Lower Level			Credits	Grade
Course	Course Title			
PHYS 121/121L	Scientific Physics I + Lab		5	
PHYS 122/122L	Scientific Physics II + Lab		5	
PHYS 180	Physics Skills Seminar		1	
PHYS 201	Mathematical Methods		3	
PHYS 222	Electronics		2	
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			Credits	Grade
PHYS 321	Classical Mechanics		3	
PHYS 322	Electricity & Magnetism		3	
PHYS 323	Statistical Mechanics		3	
PHYS 324	Quantum Mechanics		3	
PHYS 325	Computational Physics		2	
PHYS 441	Advanced Lab I		2	
PHYS 442	Advanced Lab II		2	

Astrophysics Concentration 14 Credits

PHYS 105	Astronomy		2	
CPSC 222	Introduction to Data Science		3	
PHYS 451	Fields, Oscillations, & Relativity		3	
PHYS 454	Nuclear & Particle Physics		3	
PHYS 455	Cosmology & Astrophysics		3	

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.

UNIVERSITY CORE REQUIREMENTS: FUNDAMENTAL CORE COURSES

Year 1: Understanding & Creating

	Credits	Sem/Yr
<i>Writing</i>		
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

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

Year 3: Caring & Doing

	Credits	Sem/Yr
<i>World/Comparative Religion</i>		
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

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

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

BROADENING COURSES - see approved list**

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

REQUIRED COURSE DESIGNATIONS - see approved list**

	Credits	Sem/Yr
*Writing Enriched	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>