College of Arts and Sciences 2024-2025 Degree Worksheet

B.S. PHYSICS with FUNDAMENTAL PHYSICS 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

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		
	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: 64 CREDITS
with Fundamental Physics Concentration

Physics Disciplinary Base Courses — 49 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	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

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	

Fundamental Physics Concentration — 15 Credits

CPSC	222	Introduction to Data Science	3	
PHYS	424	Advanced Quantum Mechanics	3	
PHYS	451	Fields, Oscillations, & Relativity	3	

Two of the following courses: — ***6 Credits***

PHYS	452	Optics	3	
PHYS	453	Solid State Physics	3	
PHYS	454	Nuclear & Particle Physics	3	
PHYS	455	Cosmology & Astrophysics	3	
PHYS	456	Biophysical Systems & Modeling	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.*