

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

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

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

Year 2: Being & Becoming

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

Year 3: Caring & Doing

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

Year 4: Imagining the Possible

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

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

► BROADENING COURSES - see approved list**

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

► REQUIRED COURSE DESIGNATIONS - see approved list**

*Writing Enriched	9 total	<input type="text"/>
Social Justice	3 total	<input type="text"/>
*Global Studies	6 total	<input type="text"/>

****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	<input type="text"/>
PHYS 122/122L	Scientific Physics II + Lab	5	<input type="text"/>
PHYS 180	Physics Skills Seminar	1	<input type="text"/>
PHYS 201	Mathematical Methods	3	<input type="text"/>
PHYS 222	Electronics	2	<input type="text"/>
PHYS 224	Modern Physics	3	<input type="text"/>
PHYS 280	Physics Pathways Seminar	1	<input type="text"/>
MATH 157	Calculus & Analytical Geometry I	4	<input type="text"/>
MATH 258	Calculus & Analytical Geometry II	4	<input type="text"/>
CPSC 121	Computer Science I	3	<input type="text"/>

Upper Level			
PHYS 321	Classical Mechanics	3	<input type="text"/>
PHYS 322	Electricity & Magnetism	3	<input type="text"/>
PHYS 323	Statistical Mechanics	3	<input type="text"/>
PHYS 324	Quantum Mechanics	3	<input type="text"/>
PHYS 325	Computational Physics	2	<input type="text"/>
PHYS 441	Advanced Lab I	2	<input type="text"/>
PHYS 442	Advanced Lab II	2	<input type="text"/>

Fundamental Physics Concentration 15 Credits

CPSC 222	Introduction to Data Science	3	<input type="text"/>
PHYS 424	Advanced Quantum Mechanics	3	<input type="text"/>
PHYS 451	Fields, Oscillations, & Relativity	3	<input type="text"/>

Two of the following courses: 6 Credits

PHYS 452	Optics	3	<input type="text"/>
PHYS 453	Solid State Physics	3	<input type="text"/>
PHYS 454	Nuclear & Particle Physics	3	<input type="text"/>
PHYS 455	Cosmology & Astrophysics	3	<input type="text"/>
PHYS 456	Biophysical Systems & Modeling	3	<input type="text"/>

Physics Majors are also encouraged to take:

Course	Course Title	Credits	Grade
MATH 259	Calculus/Analytical Geometry III	4	<input type="text"/>
MATH 260	Ordinary Differential Equations	3	<input type="text"/>
MATH 339	Linear Algebra	3	<input type="text"/>

and additional CPSC (Computer Science) courses.