

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

B.S. PHYSICS with MEDICAL 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 style="width: 20px;" type="text"/>
<i>Reasoning</i>		
PHIL 101 Reasoning	3	<input style="width: 20px;" type="text"/>
<i>First Year Seminar</i>		
Dept. 193	3	<input style="width: 20px;" type="text"/>
<i>Communication & Speech</i>		
COMM 100 Communication & Speech	3	<input style="width: 20px;" type="text"/>
<i>Math</i>		
MATH (must be above Math 100)	3	<input style="width: 20px;" type="text"/>
<i>Scientific Inquiry (2cr + 1cr lab)</i>		
BIOL or CHEM or PHYS 104/104L (taken year 1 or 2)	3	<input style="width: 20px;" type="text"/>

Year 2: Being & Becoming

		Credits Sem/Yr
<i>Christianity & Catholic Traditions</i>		
RELI (see approved list)**	3	<input style="width: 20px;" type="text"/>
<i>Philosophy of Human Nature</i>		
PHIL 201 Philosophy of Human Nature	3	<input style="width: 20px;" type="text"/>

Year 3: Caring & Doing

		Credits Sem/Yr
<i>World/Comparative Religion</i>		
RELI (see approved list)** (fulfills 3cr Global Studies)*	3	<input style="width: 20px;" type="text"/>
<i>Ethics</i>		
PHIL 301 Ethics or RELI 330 Principles-Christian Morality	3	<input style="width: 20px;" type="text"/>

Year 4: Imagining the Possible

		Credits Sem/Yr
<i>Core Integration Seminar</i>		
Dept. 432	3	<input style="width: 20px;" 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 style="width: 20px;" type="text"/>
Literature	3	<input style="width: 20px;" type="text"/>
History	3	<input style="width: 20px;" type="text"/>
Fine Arts & Design	3	<input style="width: 20px;" type="text"/>

► REQUIRED COURSE DESIGNATIONS - see approved list**

*Writing Enriched	9 total	<input style="width: 20px;" type="text"/>
Social Justice	3 total	<input style="width: 20px;" type="text"/>
*Global Studies	6 total	<input style="width: 20px;" 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: 66 CREDITS with Medical Physics Concentration

Physics Disciplinary Base Courses 49 Credits

Lower Level

	Course	Course Title		Credits	Grade
	PHYS 121/121L	Scientific Physics I + Lab		5	<input style="width: 20px;" type="text"/>
	PHYS 122/122L	Scientific Physics II + Lab		5	<input style="width: 20px;" type="text"/>
	PHYS 180	Physics Skills Seminar		1	<input style="width: 20px;" type="text"/>
	PHYS 201	Mathematical Methods		3	<input style="width: 20px;" type="text"/>
	PHYS 222	Electronics		2	<input style="width: 20px;" type="text"/>
	PHYS 224	Modern Physics		3	<input style="width: 20px;" type="text"/>
	PHYS 280	Physics Pathways Seminar		1	<input style="width: 20px;" type="text"/>
	MATH 157	Calculus & Analytical Geometry I		4	<input style="width: 20px;" type="text"/>
	MATH 258	Calculus & Analytical Geometry II		4	<input style="width: 20px;" type="text"/>
	CPSC 121	Computer Science I		3	<input style="width: 20px;" type="text"/>

Upper Level

	PHYS 321	Classical Mechanics		3	<input style="width: 20px;" type="text"/>
	PHYS 322	Electricity & Magnetism		3	<input style="width: 20px;" type="text"/>
	PHYS 323	Statistical Mechanics		3	<input style="width: 20px;" type="text"/>
	PHYS 324	Quantum Mechanics		3	<input style="width: 20px;" type="text"/>
	PHYS 325	Computational Physics		2	<input style="width: 20px;" type="text"/>
	PHYS 441	Advanced Lab I		2	<input style="width: 20px;" type="text"/>
	PHYS 442	Advanced Lab II		2	<input style="width: 20px;" type="text"/>

Medical Physics Concentration 17 Credits

	CHEM 101/101L	General Chemistry + Lab		4	<input style="width: 20px;" type="text"/>
	BIOL 105/105L	Info Flow in Biological Systems+Lab		4	<input style="width: 20px;" type="text"/>
	HPHY 241/241L	Human Anatomy-Physiology+Lab		3	<input style="width: 20px;" type="text"/>
	PHYS 454	Nuclear & Particle Physics		3	<input style="width: 20px;" type="text"/>
	PHYS 456	Biophysical Systems & Modeling		3	<input style="width: 20px;" type="text"/>

Recommended, but not required:

	Course	Course Title		Credits	Grade
	BIOL 106	Energy Flow in Biological Systems		3	<input style="width: 20px;" type="text"/>
	HPHY 242/242L	Human Anatomy-Physiology II+Lab		4	<input style="width: 20px;" type="text"/>

Physics Majors are also encouraged to take:

	Course	Course Title		Credits	Grade
	MATH 259	Calculus/Analytical Geometry III		4	<input style="width: 20px;" type="text"/>
	MATH 260	Ordinary Differential Equations		3	<input style="width: 20px;" type="text"/>
	MATH 339	Linear Algebra		3	<input style="width: 20px;" type="text"/>

and additional CPSC (Computer Science) courses.