

College of Arts and Sciences 2024-2025 Degree Worksheet

B.S. APPLIED MATHEMATICS with Chemistry 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	
<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>

B.S. APPLIED MATHEMATICS: 67 CREDITS with Chemistry Concentration

APPLIED MATHEMATICS 34 Credits

LOWER DIVISION

Course	Course Title								
MATH 157	Calculus & Analytic Geometry I	4							
MATH 258	Calculus & Analytic Geometry II	4							
MATH 259	Calculus & Analytic Geometry III	4							
MATH 260	Ordinary Differential Equations	3							
CPSC 121	Computer Science I	3							

UPPER DIVISION

MATH 301	Fundamentals of Mathematics	3							
MATH 350	Numerical Methods	3							
MATH 413	Real Analysis I	3							
MATH 496	Comprehensive-Applied Math	1							

One of the following two courses:

MATH 335	Applied Linear Algebra	3		
MATH 339	Linear Algebra	3		

One of the following two courses:

MATH 321	Statistics for Experimentalists	3		
MATH 422	Mathematical Statistics	3		

If MATH 422 is chosen, then one MATH 400 level elective may be replaced by a MATH 300 level elective.

CHEMISTRY CONCENTRATION

33 Credits

CHEM 101/101L	General Chemistry+Lab	4							
CHEM 205	Inorganic Chemistry	3							
CHEM 230/230L	Organic Chemistry I+Lab	5							
CHEM 310/310L	Analytic Chemistry+Lab	5							
CHEM 355	Physical Chemistry	3							
PHYS 121	Physics I	4							

One of the following three courses:

MATH 440	Foundations of Applied Math	3		
MATH 454	Partial Differential Equations	3		
MATH 462	Nonlinear Systems & Chaos	3		

Select two 400-level Math electives:

MATH	3		
MATH	3		

Cannot double count with another requirement.

Cannot use MATH 335, 339, 432, or 499 as MATH electives.

A maximum of three (3) total credits from the following may be counted toward Math electives: MATH 365 (may be taken for credit only once), MATH 390, MATH 490, MATH 497.