Degree Worksheet for the College of Arts and Sciences: 2022-2023
B.S. APPLIED MATHEMATICS with Biochemistry 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
Writing		
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

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

Year 3: Caring & Doing

	Credits	Sem/Yr
World/Comparative Religion		
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

	Credits	Sem/Yr
Core Integration Seminar		
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 Biochemistry Concentration

APPLIED MATHEMATICS — 34 Credits

LOWER DIVISION — *18 Credits*

Course	Course Title	Credits	Grade
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 — *10 Credits*

Course	Course Title	Credits	Grade
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: — *3 Credits*

Course	Course Title	Credits	Grade
MATH 335	Applied Linear Algebra	3	
MATH 339	Linear Algebra	3	

One of the following two courses: — *3 Credits*

Course	Course Title	Credits	Grade
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.

BIOCHEMISTRY CONCENTRATION — 33 Credits

21 Credits

Course	Course Title	Credits	Grade
CHEM 101/101L	General Chemistry/Lab	4	
CHEM 230/230L	Organic Chemistry I/Lab	5	
CHEM 231/231L	Organic Chemistry II/Lab	4	
CHEM 245/245L	Biochemistry/Lab	4	
CHEM 399	Advanced Topics	2	
CHEM 407	Special Topics in Biochemistry	2	

One of the following three courses: — *3 Credits*

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

Applied Math Electives:

Select one 300-400 level Math elective: — *3 Credits*

Course		Credits	Grade
MATH		3	

Select two 400-level Math electives: — *6 Credits*

Course		Credits	Grade
MATH		3	
MATH		3	

Cannot double-count with a required course.

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.