Degree Worksheet for the College of Arts and Sciences: 2022-2023
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

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***

	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 ***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 ***13 Credits***

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**

MATH 335	Applied Linear Algebra	3	
MATH 339	Linear Algebra	3	

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

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**

  24 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 103	Scientific Physics I	4	

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

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: **6 Credits**

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.