Degree Worksheet for the College of Arts and Sciences: 2022-2023
B.S. APPLIED MATHEMATICS
with CHEMISTRY and STASTISTICS DOUBLE 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: 76 CREDITS
with CHEMISTRY & STATISTICS DOUBLE 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
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 & STATISTICS   42 Credits
DOUBLE CONCENTRATION

		3 Credits
MATH 421 Probability Theory	3	

Select one of the following two courses:		*3 Credits*
MATH 425 Applied Statistical Models	3	
MATH 426 Experimental Design	3	

		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 one 300-400 level Math elective:		*3 Credits*
MATH	3	

Cannot double-count with another requirement.

Select two Statistics electives:		*6 Credits*
MATH	3	
	3	

Cannot double-count with a course used elsewhere.
At least one course must be MATH.

Statistics Elective options: *MATH 422, 423, 426, PHYS 450, ECON 355, 451, 452, CPSC 322, 323, 324* **These courses have pre-requisites that may be outside the concentration.**

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.