

College of Arts and Sciences 2025-2026 Degree Worksheet
B.S. APPLIED MATHEMATICS with STATISTICS CONCENTRATION

Page 1 of 2

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: 65-66 CREDITS
with STATISTICS CONCENTRATION

APPLIED MATHEMATICS 34 Credits

LOWER DIVISION

Course	Course Title	Credits
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

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

Select one of the following two courses: 3 Credits

MATH 335	Applied Linear Algebra	3
MATH 339	Linear Algebra	3

Select 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.

STATISTICS CONCENTRATION 31-32 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

Select 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 of the following three sets of courses: 7-8 Credits

Biology Set:

BIOL 105/105L	Info Flow-Biological System + Lab	4
BIOL 106	Energy Flow-Biological Systems	3

Chemistry Set:

CHEM 101/101L	General Chemistry + Lab	4
CHEM 205	Inorganic Chemistry	3

Physics Set:

PHYS 121	Physics I (pre-req MATH 157)	4
PHYS 122	Physics II (pre-req MATH 258)	4

CONTINUED ON Page 2

College of Arts and Sciences 2025-2026 Degree Worksheet
B.S. APPLIED MATHEMATICS with STATISTICS CONCENTRATION

Page 2 of 2

CONTINUED FROM Page 1

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 electives:
Cannot double-count with a requirement used elsewhere

- MATH 422 Mathematical Statistics
- MATH 423 Stochastic Processes
- MATH 426 Experimental Design
- ECON 355 Regression Analysis
- ECON 451 Econometrics
- ECON 452 Time Series Analysis
- CPSC 322 Data Science Algorithms
- CPSC 324 Big Data Analytics
- PHYS 323 Statistical Mechanics
- PSYC 450 Advanced Statistics for Psychology

*Or any course with significant probability or statistics content with the **prior** approval of the Math Department Chair. **All of these courses have pre-requisites, and may require courses outside of the concentration to be taken.***

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

Select two 400-level Math electives:	6 Credits
MATH	3
MATH	3

Cannot double-count with another requirement

MATH Electives:
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.

Check the catalog for pre-requisites when selecting electives