

**College of Arts and Sciences 2025-2026 Degree Worksheet**  
**B.S. APPLIED MATHEMATICS with Environmental Science 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

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**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	<input type="text"/>
<i>Reasoning</i>		
PHIL 101 Reasoning	3	<input type="text"/>
<i>First Year Seminar</i>		
Dept. 193	3	<input type="text"/>
<i>Communication &amp; Speech</i>		
COMM 100 Communication & Speech	3	<input type="text"/>
<i>Math</i>		
MATH (must be above Math 100)	3	<input type="text"/>
<i>Scientific Inquiry (2cr + 1cr lab)</i>		
BIOL or CHEM or PHYS 104/104L (taken year 1 or 2)	3	<input type="text"/>

**Year 2: Being & Becoming**

	Credits	Sem/Yr
<i>Christianity &amp; Catholic Traditions</i>		
RELI (see approved list)**	3	<input type="text"/>
<i>Philosophy of Human Nature</i>		
PHIL 201 Philosophy of Human Nature	3	<input type="text"/>

**Year 3: Caring & Doing**

	Credits	Sem/Yr
<i>World/Comparative Religion</i>		
RELI (see approved list)** (fulfills 3cr Global Studies)*	3	<input type="text"/>
<i>Ethics</i>		
PHIL 301 Ethics or RELI 330 Principles-Christian Morality	3	<input type="text"/>

**Year 4: Imagining the Possible**

	Credits	Sem/Yr
<i>Core Integration Seminar</i>		
Dept. 432	3	<input type="text"/>

**NOTE: some courses have pre-requisites, check the catalog carefully!**

► **BROADENING COURSES - see approved list\*\***

	Credits	Sem/Yr
Social & Behavioral Science	3	<input type="text"/>
Literature	3	<input type="text"/>
History	3	<input type="text"/>
Fine Arts & Design	3	<input type="text"/>

► **REQUIRED COURSE DESIGNATIONS - see approved list\*\***

	Credits	Sem/Yr
*Writing Enriched	9 total	<input type="text"/>
Social Justice	3 total	<input type="text"/>
*Global Studies	6 total	<input type="text"/>

\*\*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 Environmental Science Concentration**

**APPLIED MATHEMATICS**

**34 Credits**

**LOWER DIVISION**

**18 Credits**

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**

**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

**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.

**ENVIRONMENTAL SCIENCE CONCENTRATION**

**33 Credits**

ENVS 101	Introduction to Environmental Studies	3
ENVS 103/103L	Environmental Biology+Lab <sup>(1)</sup>	4
ENVS 320	Economics of Environmental Protection <sup>(3)</sup>	3
ENVS 384	Intro to GIS in Biology <sup>(4)</sup>	3

**Select one of the following two course options:**

**4 Credits**

CHEM 101/101L	General Chemistry+Lab	4
BIOL 105/105L	Info Flow-Biological Systems+Lab	4

**Select one of the following two course options:**

**4 Credits**

ENVS 110/110L	Intro to Earth Systems+Lab	4
ENVS 202/202L	Chemistry & the Environment+Lab <sup>(2)</sup>	4

**Select two of the following five courses:**

**6 Credits**

MATH 425	Applied Statistical Models	3
MATH 426	Experimental Design	3
MATH 440	Foundations of Applied Math	3
MATH 454	Partial Differential Equations	3
MATH 462	Nonlinear Systems and Chaos	3

**Select one 300-400 level Math elective:**

**3 Credits**

MATH		3
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**Select one 400-level Math elective:**

**3 Credits**

MATH		3
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Cannot double-count with another requirement.

<sup>(1)</sup> Alternative: BIOL 206/206L (cross-listed, pre-requisite BIOL 105/106).

<sup>(2)</sup> Pre-requisite CHEM 101/101L.

<sup>(3)</sup> Alternative: ECON 324 (cross-listed, pre-requisite ECON 200 or 201).

<sup>(4)</sup> Alternative: BIOL 344 (cross-listed, pre-requisite BIOL 106/206).

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.