

Degree Worksheet for the College of Arts and Sciences: 2020-2021
B.S. APPLIED MATHEMATICS - Economics Concentration

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COLLEGE of ARTS & SCIENCES

B.S. APPLIED MATHEMATICS: 61 CREDITS
Economics Concentration

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

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**

Social & Behavioral Science	Credits	Sem	Yr
	3		
Literature			
	3		
History			
	3		
Fine Arts & Design			
	3		

REQUIRED COURSE DESIGNATIONS - see approved list**

*Writing Enriched	Credits	Sem	Yr
	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>

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

16 Credits

MATH 301	Fundamentals of Mathematics	3	
MATH 339	Linear Algebra	3	
MATH 350	Elementary Numerical Analysis	3	
MATH 413	Real Analysis I	3	
MATH 422	Mathematical Statistics	3	
MATH 496*	Comprehensive-Applied Math	1	

* Majors usually take Fall semester of their final year.

ECONOMICS CONCENTRATION

27 Credits

		3 Credits	
MATH 421	Probability Theory	3	

One of the following two courses:

3 Credits

MATH 454	Partial Differential Equations	3	
MATH 462	Nonlinear Systems & Chaos	3	

Mathematics 300-400 Level Electives:

6 Credits

MATH		3	
MATH		3	

A minimum of 3 credits must be from the MATH electives list; cannot double-count with another requirement.

MATH 328	Operations Research		
MATH 341	Modern Geometry		
MATH 351	Combinatorics & Graph Theory		
MATH 360-363	Selected Topics		
MATH 414	Real Analysis II		
MATH 417	Complex Variables		
MATH 437	Abstract Algebra I		
MATH 438	Abstract Algebra II		
MATH 450-453	Selected Topics		
MATH 454	Partial Differential Equations		
MATH 457	Number Theory & Cryptography		
MATH 459	Topology		
MATH 462	Nonlinear Systems & Chaos		
MATH 498A/498B	Thesis I/II		

9 Credits

ECON 201	Microeconomics	3	
ECON 202	Macroeconomics	3	
ECON 303	Game Theory-Economic Applications	3	

One of the following two courses:

3 credits

ECON 301	Intermediate Microeconomics	3	
ECON 302	Intermediate Macroeconomics	3	

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Economics 300-400 Level Elective:

3 Credits

ECON

3

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- ECON 301 Intermediate Microeconomics
- ECON 311 Global Economic Issues
- ECON 320 Economics of Sports
- ECON 321 International Economics
- ECON 322/SOSJ 320 Work, Wages, and Inequality
- ECON 324 Economics of Environmental Protection
- ECON 325 Public Finance
- ECON 330 Antitrust Policy & Regulation
- ECON 333 Health Economics
- ECON 334 Behavioral Economics
- ECON 351 Managerial Economics
- ECON 352 Money & Banking
- ECON 404 Economic Integrated European Community
- ECON 451 Econometrics

(ECON 321 and 451 are the recommended elective choices)

Remember to check for pre-requisites when selecting electives.