## College of Arts and Sciences 2024-2025 Degree Worksheet B.S. CHEMISTRY (ACS Approved)

3

3 total

Credits Sem/Yr

9 total

## 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: <a href="https://www.gonzaga.edu/college-of-arts-sciences/about/information-for-students/language-requirement-information">https://www.gonzaga.edu/college-of-arts-sciences/about/information-for-students/language-requirement-information</a>

students/language-requirement-information		2
	Credits	Sem/Yr (
		<u>  (</u>
UNIVERSITY CORE REQUIREMENT	S:	(
► FUNDAMENTAL CORE COURSES		
Year 1: Understanding & Creating		
Writing	Credits	Sem/Yr (
ENGL 101 Writing (fulfills 3 credits Writing Enriched)*	3	1
Reasoning		1
PHIL 101 Reasoning	3	<del> </del>
First Year Seminar		
Dept. 193	3	<del> </del>
Communication & Speech		<u></u>
COMM 100 Communication & Speech	3	<del> </del>
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	carefull	
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► BROADENING COURSES - see approved list**		10
Social & Behavioral Science	Credits	Sem/Yr (
	3	
Literature		
	3	
History		
•	3	

6 total
**for list of approved RELI, Broadening & Designated courses, see :
https://my.gonzaga.edu/academics/undergraduate-programs/general-degree-
requirements-procedures/university-core

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

Fine Arts & Design

\*Writing Enriched

Social Justice

\*Global Studies

## B.S. CHEMISTRY: 68-70 CREDITS (ACS Approved)

LOWER DIVISION	38 Cr	edits
Course Course Title	Credits	Grade
CHEM 101 General Chemistry I	3	
CHEM 101L General Chemistry I Lab	1	
CHEM 102 General Chemistry II	3	
CHEM 102L General Chemistry II	1	
CHEM 230 Organic Chemistry I	3	
CHEM 230L Organic Chemistry I Lab	1	
CHEM 231 Organic Chemistry II	3	
CHEM 231L Organic Chemistry II Lab	1	
CHEM 285 Intro to the Chemical Sciences	1	
MATH 157 Calculus-Analytic Geometry I	4	
MATH 258 Calculus-Analytic Geometry II	4	
PHYS 121 Scientific Physics I	4	
PHYS 1211L Scientific Physics I Lab	1	
PHYS 122 Scientific Physics II	4	
PHYS 122L Scientific Physics II Lab	1	
PHYS 201 Mathematical Methods	3	·

## UPPER DIVISION 30-32 Credits

CHEM 305 Inorganic Chemistry  CHEM 307 Biochemistry I  CHEM 307 Biochemistry I Lab  CHEM 310 Analytical Chemistry  CHEM 310 Analytical Chemistry  CHEM 310 Analytical Chemistry Lab  CHEM 356 Thermodynamics & Kinetics  CHEM 356 Thermodynamics & Kinetics Lab  CHEM 357 Quantum Chemistry  CHEM 357 Quantum Chemistry Lab  CHEM 385L Advanced Chemistry Lab  CHEM 389 Advanced Topic  2	Course	Course Title	25	Credits
CHEM 307L Biochemistry I Lab  CHEM 310 Analytical Chemistry  3 CHEM 310L Analytical Chemistry  CHEM 356 Thermodynamics & Kinetics  3 CHEM 356L Thermodynamics & Kinetics Lab  CHEM 357 Quantum Chemistry  3 CHEM 357L Quantum Chemistry Lab  CHEM 385L Advanced Chemistry Lab  CHEM 399 Advanced Topic  2	CHEM	305 Inorganic Chemistry	3	
CHEM 310 Analytical Chemistry3CHEM 310L Analytical Chemistry Lab2CHEM 356 Thermodynamics & Kinetics3CHEM 356L Thermodynamics & Kinetics Lab1CHEM 357 Quantum Chemistry3CHEM 357L Quantum Chemistry Lab1CHEM 385L Advanced Chemistry Lab2CHEM 399 Advanced Topic2	CHEM	307 Biochemistry I	3	
CHEM 310L Analytical Chemistry Lab2CHEM 356 Thermodynamics & Kinetics3CHEM 356L Thermodynamics & Kinetics Lab1CHEM 357 Quantum Chemistry3CHEM 357L Quantum Chemistry Lab1CHEM 385L Advanced Chemistry Lab2CHEM 399 Advanced Topic2	CHEM	307L Biochemistry I Lab	1	
CHEM 356 Thermodynamics & Kinetics3CHEM 356L Thermodynamics & Kinetics Lab1CHEM 357 Quantum Chemistry3CHEM 357L Quantum Chemistry Lab1CHEM 385L Advanced Chemistry Lab2CHEM 399 Advanced Topic2	CHEM	310 Analytical Chemistry	3	
CHEM 356L Thermodynamics & Kinetics Lab1CHEM 357 Quantum Chemistry3CHEM 357L Quantum Chemistry Lab1CHEM 385L Advanced Chemistry Lab2CHEM 399 Advanced Topic2	CHEM	310L Analytical Chemistry Lab	2	
CHEM 357 Quantum Chemistry3CHEM 357L Quantum Chemistry Lab1CHEM 385L Advanced Chemistry Lab2CHEM 399 Advanced Topic2	CHEM	356 Thermodynamics & Kinetics	3	
CHEM 357L Quantum Chemistry Lab1CHEM 385L Advanced Chemistry Lab2CHEM 399 Advanced Topic2	CHEM	356L Thermodynamics & Kinetics Lab	1	
CHEM 385L Advanced Chemistry Lab2CHEM 399 Advanced Topic2	CHEM	357 Quantum Chemistry	3	
CHEM 399 Advanced Topic 2	CHEM	357L Quantum Chemistry Lab	1	
<u> </u>	CHEM	385L Advanced Chemistry Lab	2	
	CHEM	399 Advanced Topic	2	
CHEM 485 Seminar 1	CHEM	485 Seminar	1	

One of the following options:	1-2	Credits
CHEM 488 Senior Literature Review	1	
OR		
CHEM 498A Thesis I	1	
CHEM 498B Thesis II	1	

CHEM 498A & 498B are required for ACS approved degree

One Co	urse from CHEM 405-480:	2 Credits
Course	Course Title	Credits Grade
CHEM		2

One Elective from the following:	2-3 Credits
Course Course Title	Credits Grade
CHEM 308 Biochemistry II	3
CHEM Special Topic from CHEM 405-	480 2
PHYS 300 or above approved Physics	s Topics 3