

# College of Arts and Sciences 2025-2026 Degree Worksheet

## B.S. BIOCHEMISTRY (ACS Approved)

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### 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 &amp; Speech</i>		
COMM 100 Communication & Speech	3	
<i>Math</i>		
MATH (must be above Math 100)	3	
<i>Scientific Inquiry (2 cr + 1 cr lab)</i>		
BIOL or CHEM or PHYS 104/104L (taken year 1 or 2)	3	

#### Year 2: Being & Becoming

	Credits	Sem/Yr
<i>Christianity &amp; 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 3 cr 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. BIOCHEMISTRY: ACS Approved

**71-73 CREDITS**

#### LOWER DIVISION

**42 Credits**

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 Lab 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	
BIOL 105	Info Flow in Biological Systems	3	
BIOL 105L	Info Flow in Biological Systems Lab	1	
BIOL 106	Energy Flow in Biological Systems	3	
MATH 157	Calculus-Analytic Geometry I	4	
MATH 258	Calculus-Analytic Geometry II	4	
PHYS 121	Physics I	4	
PHYS 121L	Physics I Lab	1	
PHYS 122	Physics II	4	
PHYS 122L	Physics II Lab	1	

#### UPPER DIVISION

**29-31 Credits**

Course	Course Title	Credits	Grade
CHEM 305	Inorganic Chemistry	3	
CHEM 307	Biochemistry I	3	
CHEM 307L	Biochemistry I Lab	1	
CHEM 308	Biochemistry II	3	
CHEM 310	Analytical Chemistry	3	
CHEM 310L	Analytical Chemistry Lab	1	
CHEM 345L	Advanced Biochemistry Lab	3	
CHEM 356	Thermodynamics & Kinetics	3	
CHEM 356L	Thermodynamics & Kinetics Lab	1	
CHEM 399	Advanced Topic	2	
CHEM 485	Seminar	1	

#### One of the following options:

CHEM 488	Senior Literature Review	1	
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#### OR

CHEM 498A	Thesis I	1	
CHEM 498B	Thesis II	1	

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

#### One Course in CHEM 405-480

Course	Course Title	Credits	Grade
CHEM		2	

#### One Elective Course from the following:

Course	Course Title	Credits	Grade
CHEM	CHEM course 405-480	2	
BIOL	300-400 level approved Biology topic	3	
PHYS	300-400 level approved Physics topic	3	

**College of Arts and Sciences: 2025-2026**  
**B.S. BIOCHEMISTRY (ACS Approved option) - SAMPLE Yearly Progression**

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**71-73 Credits required for Major**

**Freshman**

<i>FALL</i>				<i>SPRING</i>			
Course	Course Title	Credit:	Grade	Course	Course Title	Credits	Grade
CHEM	101 General Chemistry I	3		CHEM	102 General Chemistry II	3	
CHEM	101L General Chemistry I Lab	1		CHEM	102L General Chemistry II Lab	1	
MATH	157 Calculus-Analytic Geometry I	4		MATH	258 Calculus-Analytic Geometry II	4	
BIOL	105 Info Flow in Biological Syst	3		BIOL	106 Energy Flow in Biological Systems	3	
BIOL	105L Info Flow in Biological Syst Lab	1			<i>CORE</i>	3	
	<i>CORE</i>	3			<i>CORE</i>	3	
<b>15</b>				<b>17</b>			

**Sophomore**

<i>FALL</i>				<i>SPRING</i>			
Course	Course Title	Credit:	Grade	Course	Course Title	Credits	Grade
CHEM	230 Organic Chemistry I	3		CHEM	231 Organic Chemistry II	3	
CHEM	230L Organic Chemistry I Lab	1		CHEM	231L Organic Chemistry II Lab	1	
CHEM	285 Introduction to the Chemical Sciences	1		CHEM	307 Biochemistry I	3	
PHYS	121 Physics I	4		CHEM	307L Biochemistry I Lab	1	
PHYS	121L Physics I Lab	1			<i>CORE</i>	3	
	<i>CORE</i>	3			<i>CORE</i>	3	
	<i>CORE</i>	3			<i>CORE</i>	3	
<b>16</b>				<b>17</b>			

**Junior**

<i>FALL</i>				<i>SPRING</i>			
Course	Course Title	Credit:	Grade	Course	Course Title	Credits	Grade
CHEM	310 Analytical Chemistry	3		CHEM	345L Advanced Biochemistry Lab	3	
CHEM	310L Analytical Chemistry Lab	1		CHEM	305 Inorganic Chemistry	3	
PHYS	122 Physics II	4		CHEM	399 Advanced Topic <sup>(1)</sup>	2	
PHYS	122L Physics II Lab	1			<i>CORE</i>	3	
CHEM	308 Biochemistry II	3			<i>CORE</i>	3	
	<i>CORE</i>	3		<b>14</b>			
<b>15</b>							

**Senior**

<i>FALL</i>				<i>SPRING</i>			
Course	Course Title	Credit:	Grade	Course	Course Title	Credits	Grade
CHEM	356 Thermodynamics & Kinetics	3		CHEM	4xx Special Topic (405-480) <sup>(1)</sup>	2	
CHEM	356L Thermodynamics & Kinetics Lab	1		CHEM	498B Thesis II <sup>(2)</sup>	1	
CHEM	4xx Special Topic (405-480) <sup>(1)</sup>	2			<i>CORE</i>	3	
CHEM	485 Seminar	1			<i>CORE</i>	3	
CHEM	498A Thesis I <sup>(2)</sup>	1			<i>CORE</i>	3	
	<i>CORE</i>	3			<i>CORE</i>	3	
	<i>CORE</i>	3		<b>15</b>			
<b>14</b>							

**NOTES:**

1. Students must complete one Advanced Topic (CHEM 399), one Special Topics course (CHEM 405-480) and one other approved upper-division elective (e.g. CHEM 405-480, or approved BIOL 3xx/4xx or PHYS 3xx/4xx) and these may be taken in any order during the 3rd & 4th years if pre-requisites are met.
2. Students can take Senior Literature Review (CHEM 488) instead of CHEM 498A/B for a non-ACS approved B.S. degree. Thesis students must find a senior thesis or literature review faculty advisor by the end of spring junior year and are required to present their thesis work at the spring Departmental poster session to earn the ACS-approved degree.