Degree Worksheet for the College of Arts and Sciences: 2022-2023 B.S. BIOCHEMISTRY (ACS Approved option) Page 1 of 2

COLLEGE of ARTS & SCIENCES Language Requirement			B.S.	-72 CRE	72 CREDITS	
All students who major in the College of Arts & Sciences are required to			LOWE	46 C	46 Credits	
demonstrate competence in a second language. For complete details:			Course	Course Title	Credits	Grade
https://www.gonzaga.edu/college-of-arts-sciences/about/inform	nation-for-	2	CHEM	101 General Chemistry	3	
students/language-requirement-information				101L General Chemistry Lab	1	
	Credits	Sem/Yr		205 Inorganic Chemistry	3	
			CHEM	230 Organic Chemistry I	4	
				230L Organic Chemistry I Lab	1	
			CHEM	231 Organic Chemistry II	3	
UNIVERSITY CORE REQUIREMEN	ITS:		CHEM	231L Organic Chemistry II Lab	1	
FUNDAMENTAL CORE COURSES			CHEM	245 Biochemistry	3	
Year 1: Understanding & Creating			CHEM	245L Biochemistry Lab	1	
Writing	Credits	Sem/Yr		270 Career Development I	1	
ENGL 101 Writing (fulfills 3 credits Writing Enriched)*	3		BIOL	105 Info Flow in Biological Systems	3	
Reasoning			BIOL	105L Info Flow in Biological Systems Lab		
PHIL 101 Reasoning	3		BIOL	106 Energy Flow in Biological Systems	3	
First Year Seminar			MATH	157 Calculus-Analytic Geometry I	4	
Dept. 193	3			258 Calculus-Analytic Geometry II	4	
Communication & Speech			PHYS	103 Scientific Physics I	4	
COMM 100 Communication & Speech	3		PHYS	103L Scientific Physics I Lab	1	
Math			PHYS	204 Scientific Physics II	4	
MATH (must be above Math 100)	3		PHYS	204L Scientific Physics II Lab	1	
Scientific Inquiry (2cr + 1cr lab)	5				<u>⊥</u>	
BIOL or CHEM or PHYS 104/104L (taken year 1 or 2)	3			R DIVISION	25-26 C	radita
Year 2: Being & Becoming			Course	Course Title		Grade
Christianity & Catholic Traditions	Cradite	Sem/Yr		310 Analytical Chemistry	3	
RELI (see approved list)**	3			310L Analytical Chemistry Lab	2	
Philosophy of Human Nature	5			345L Advanced Biochemistry Lab	3	
	2					
PHIL 201 Philosophy of Human Nature	3			355 Physical Chemistry	3	
Year 3: Caring & Doing	C	C		355L Physical & Inorganic Chemistry Lak		
World/Comparative Religion		Sem/Yr		370 Career Development II	1	
RELI (see approved list)** (fulfills 3cr Global Studies)	* 3			399 Advanced Topic	2	
Ethics			CHEM	485 Seminar	1	
PHIL 301 Ethics or RELI 330 Principles-Christian Morali	ty 3					
Year 4: Imagining the Possible				f the following options:		
Core Integration Seminar		Sem/Yr	-	488 Senior Literature Review	1	
Dept. 432	3		OR			
NOTE: some courses have pre-requisites, check the catalog	g careful	ly!		498A Thesis I	1	
			CHEM	498B Thesis II	1	
BROADENING COURSES - see approved list**				CHEM 498A & 498B are required for ACS ap	proved degr	ree
Social & Behavioral Science		Sem/Yr				
	3		One C	ourse in CHEM 405-435 (Block 1)		
Literature			Course	Course Title	Credits	Grade
	3		CHEM		2	
History						
	3		One C	ourse in CHEM 455-480 (Block 2)		
Fine Arts & Design			Course	Course Title		Grade
	3		CHEM		2	
	al 1:-+**		.		/[]	
REQUIRED COURSE DESIGNATIONS - see approved list**				ourses in CHEM 405-435 & 455-480	-	-
*Writing Enriched		Sem/Yr	Course	Course Title		Grade
	9 total		CHEM		2	
Social Justice	2 4 - 4 - 1		CHEM		2	
*Clabal Studias	3 total					
*Global Studies	6 + - + - +					
** for list of approved DELL Providening & Designated as	6 total					
**for list of approved RELI, Broadening & Designated country https://my.gonzaga.edu/academics/undergraduate-programs/ge						
		<u>JICE-</u>				
requirements-procedures/university-core			I			

College of Arts and Sciences: 2022-2023

B.S. BIOCHEMISTRY (ACS Approved option) - <u>SAMPLE</u> Yearly Progression

		Pa	ge 2 o	f 2			
		70-72 Cre	dits re	equired	for Major		
		Fre	eshma	an			
FALL				SPRIN	G		
Course	Course Title		Grade		Course Title		Grade
CHEM	101 General Chemistry	3			230 Organic Chemistry I	4	
CHEM	101L General Chemistry Lab	1			230L Organic Chemistry I Lab	1	
BIOL	105 Info Flow in Biological Systems	3		BIOL	106 Energy Flow in Biological Systems	3	
BIOL	105L Info Flow in Biological Systems Lab	1		MATH	258 Calculus-Analytic Geometry II	4	
MATH	157 Calculus-Analytic Geometry I	4			CORE ⁽¹⁾	3	
	CORE ⁽¹⁾	3			CORE ⁽¹⁾	3	
		15				18	
		Sop	phomo				
FALL				SPRIN			
Course	Course Title		Grade	Course	Course Title		s Grade
CHEM	205 Inorganic Chemistry	3		-	245 Biochemistry	3	
CHEM	231 Organic Chemistry II	3			245L Biochemistry Lab	1	
CHEM	231L Organic Chemistry II Lab	1			270 Career Development I	1	
PHYS	103 Scientific Physics I	4			310 Analytical Chemistry	3	
PHYS	103 Scientific Physics I Lab	1		CHEM	310L Analytical Chemistry Lab	2	
	CORE ⁽²⁾	3			CORE ⁽²⁾	3	
	CORE ⁽²⁾	3			CORE ⁽²⁾	3	
		18				16	
			lunior			16	
FALL				SPRIN			
Course	Course Title	Credit	unior	SPRIN Course	Course Title	Credits	Grade
Course CHEM	355 Physical Chemistry	Credit 3		SPRIN ^{Course} CHEM	Course Title 345 Advanced Biochemistry Lab	Credits 3	s Grade
Course CHEM CHEM	355 Physical Chemistry 355L Physical & Inorganic Chemistry Lab	Credit 3 1		SPRIN Course CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II	Credits 3 1	Grade
Course CHEM CHEM PHYS	355 Physical Chemistry355L Physical & Inorganic Chemistry Lab204 Scientific Physics II	Credit 3 1 4		SPRIN Course CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic	Credits 3 1 2	Grade
Course CHEM CHEM	355 Physical Chemistry355L Physical & Inorganic Chemistry Lab204 Scientific Physics II204L Scientific Physics II Lab	Credit 3 1 4 1		SPRIN Course CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾	Credits 3 1 2 3	s Grade
Course CHEM CHEM PHYS	355 Physical Chemistry 355L Physical & Inorganic Chemistry Lab 204 Scientific Physics II 204L Scientific Physics II Lab CORE ⁽³⁾	Credit 3 1 4 1 3		SPRIN Course CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾ CORE ⁽³⁾	Credits 3 1 2 3 3 3	Grade
Course CHEM CHEM PHYS	355 Physical Chemistry355L Physical & Inorganic Chemistry Lab204 Scientific Physics II204L Scientific Physics II Lab	Credit 3 1 4 1 3 3 3		SPRIN Course CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾	Credits 3 1 2 3 3 3 3	Grade
Course CHEM CHEM PHYS	355 Physical Chemistry 355L Physical & Inorganic Chemistry Lab 204 Scientific Physics II 204L Scientific Physics II Lab CORE ⁽³⁾	Credit 3 1 4 1 3 3 3 15	Grade	SPRIN Course CHEM CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾ CORE ⁽³⁾	Credits 3 1 2 3 3 3	Grade
Course CHEM CHEM PHYS PHYS	355 Physical Chemistry 355L Physical & Inorganic Chemistry Lab 204 Scientific Physics II 204L Scientific Physics II Lab CORE ⁽³⁾	Credit 3 1 4 1 3 3 3 15		SPRIN Course CHEM CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾ CORE ⁽³⁾ CORE ⁽³⁾	Credits 3 1 2 3 3 3 3	Grade
Course CHEM CHEM PHYS PHYS FALL	355 Physical Chemistry 355L Physical & Inorganic Chemistry Lab 204 Scientific Physics II 204L Scientific Physics II Lab CORE ⁽³⁾ CORE ⁽³⁾	Credit 3 1 4 1 3 3 3 15	Senior	SPRIN Course CHEM CHEM CHEM SPRIN	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾ CORE ⁽³⁾ CORE ⁽³⁾ G	Credits 3 1 2 3 3 3 3 15	
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Course CHEM PHYS PHYS FALL Course CHEM CHEM	355 Physical Chemistry 355L Physical & Inorganic Chemistry Lab 204 Scientific Physics II 204L Scientific Physics II Lab CORE ⁽³⁾ CORE ⁽³⁾ CORE ⁽³⁾ 485 Seminar	Credit 3 1 4 1 3 3 3 15 5 Credit 1 1	Senior	SPRIN Course CHEM CHEM CHEM SPRIN Course CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾ CORE ⁽³⁾ COR	Credits 3 1 2 3 3 3 3 15 Credits 1 2	
Course CHEM PHYS PHYS FALL Course CHEM CHEM	355 Physical Chemistry 355L Physical & Inorganic Chemistry Lab 204 Scientific Physics II 204L Scientific Physics II Lab CORE ⁽³⁾ CORE ⁽³⁾ CORE ⁽³⁾ 498A Thesis I xxx ⁽⁵⁾ Advanced Topic/Special Topic	Credit 3 1 4 1 3 3 3 15 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Senior	SPRIN Course CHEM CHEM CHEM SPRIN Course CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾ CORE ⁽³⁾ COR	Credits 3 1 2 3 3 3 3 3 3 5 15 Credits 1 2 2 2	
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Course CHEM PHYS PHYS FALL Course CHEM CHEM	355 Physical Chemistry 355 Physical & Inorganic Chemistry Lab 204 Scientific Physics II 204L Scientific Physics II Lab CORE ⁽³⁾ CORE ⁽³⁾ CORE ⁽³⁾ 485 Seminar 498A Thesis I xxx ⁽⁵⁾ Advanced Topic/Special Topic xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽⁴⁾	Credit 3 1 4 1 3 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Senior	SPRIN Course CHEM CHEM CHEM SPRIN Course CHEM CHEM	Course Title 345 Advanced Biochemistry Lab 370 Career Development II xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽³⁾ CORE ⁽³⁾ CORE ⁽³⁾ G Course Title 498B ⁽⁶⁾ Thesis II xxx ⁽⁵⁾ Advanced Topic/Special Topic xxx ⁽⁵⁾ Advanced Topic/Special Topic CORE ⁽⁴⁾ CORE ⁽⁴⁾	Credits 3 1 2 3 3 3 3 3 5 Credits 1 2 2 2 3 3 3 3	
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NOTES:

1. Students must take the First Year Seminar (*DEPT* 193) in their first year, and they are encouraged to take COMM 100, PHIL 101, and ENGL 101 in their first year.

2. Students are encouraged to complete the 2nd year Core courses in their second year.

- 3. Students are encouraged to complete the 3rd year Core courses in their third year.
- 4. Students are encouraged to complete the Core Integration Seminar (DEPT 432) in their fourth year.
- 5. Students must complete one Advanced Topic (CHEM 399) course, one Special Topic-Block 1 (CHEM 405-435) course, and one Special Topic-Block 2 (CHEM 455-480) course, and two more Special Topic Courses from either Block 1 or Block 2.
- 6. Students are required to present their thesis work at the departmental poster session.