

Degree Guide for the College of Arts and Sciences: 2017-2018

B.S. BIOCHEMISTRY (non-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 see:

<http://www.gonzaga.edu/Academics/Colleges-and-Schools/College-of-Arts-and-Sciences/Majors-Programs/language-requirement>

Credits Sem/Yr

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	
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 Principals-Christian Morality	3

Year 4: Imagining the Possible

Core Integration Seminar	Credits Sem/Yr
492	3

NOTE: some courses have pre-requisites, check the catalogue 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 :

<http://www.gonzaga.edu/Academics/Undergraduate/General-Degree-Requirements-and-Procedures/University-Core/Default.asp>

B.S. BIOCHEMISTRY (non-ACS):

69 CREDITS

MAJOR LOWER DIVISION

46 Credits

Course	Course Title	Credits	Grade
CHEM	101 General Chemistry	3	
CHEM	101L General Chemistry Lab	1	
CHEM	205 Inorganic Chemistry	3	
CHEM	230 Organic Chemistry I	4	
CHEM	230L Organic Chemistry I Lab	1	
CHEM	231 Organic Chemistry II	3	
CHEM	231L Organic Chemistry II Lab	1	
CHEM	245 Biochemistry	3	
CHEM	245L Biochemistry Lab	1	
CHEM	270 Career Development I	1	
BIOL	105 Information Flow in Biological Systems	3	
BIOL	105L Information Flow in Biological Systems Lab	1	
BIOL	106 Energy Flow in Biological Systems	3	
BIOL	207 Genetics	3	
BIOL	207L Genetics Lab	1	
MATH	157 Calculus-Analytic Geometry I	4	
MATH	258 Calculus-Analytic Geometry II	4	
PHYS	103 Scientific Physics I*	3*	
PHYS	204 Scientific Physics II*	3*	

***NOTE: required number of credits for these courses for the major differ from actual course credits.**

MAJOR UPPER DIVISION

23 Credits

Course	Course Title	Credits	Grade
CHEM	310 Analytical Chemistry	3	
CHEM	310L Analytical Chemistry Lab	2	
CHEM	355 Physical Chemistry	3	
CHEM	355L Physical & Inorganic Chemistry Lab	1	
CHEM	370 Career Development II	1	
CHEM	399 Advanced Topic	2	
CHEM	485 Seminar	1	
CHEM	498A Thesis I	1	
CHEM	498B Thesis II	1	
BIOL	456 Molecular Biology	3	
BIOL	456L Molecular Biology Lab	1	

Special Topics in Chemistry or Biochemistry

CHEM 405-435 (Block 1)

Course	Course Title	Credits	Grade
CHEM		2	

Special Topics in Chemistry or Biochemistry

CHEM 455-480 (Block 2)

Course	Course Title	Credits	Grade
CHEM		2	

College of Arts and Sciences: 2017-2018

B.S. BIOCHEMISTRY (non-ACS Approved) - SAMPLE YEARLY PROGRESSION

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(69 Credits required for Major)

Freshman

FALL

Course	Course Title	Credits	Grade
CHEM	101 General Chemistry	3	
CHEM	101L General Chemistry Lab	1	
BIOL	105 Info Flow in Biological Systems	3	
BIOL	105L Info Flow in Biological Systems Lab	1	
MATH	157 Calculus-Analytic Geometry I	4	
	CORE ⁽¹⁾	3	

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SPRING

Course	Course Title	Credits	Grade
CHEM	230 Organic Chemistry I	4	
CHEM	230L Organic Chemistry I Lab	1	
BIOL	106 Energy Flow in Biological Systems	3	
MATH	258 Calculus-Analytic Geometry II	4	
	CORE ⁽¹⁾	3	
	CORE ⁽¹⁾	3	

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Sophomore

FALL

Course	Course Title	Credits	Grade
CHEM	205 Inorganic Chemistry	3	
CHEM	231 Organic Chemistry II	3	
CHEM	231L Organic Chemistry II Lab	1	
PHYS	103 Scientific Physics I	4	
	CORE ⁽²⁾	3	
	CORE ⁽²⁾	3	

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SPRING

Course	Course Title	Credits	Grade
CHEM	245 Biochemistry	3	
CHEM	245L Biochemistry Lab	1	
CHEM	270 Career Development I	1	
CHEM	310 Analytical Chemistry	3	
CHEM	310L Analytical Chemistry Lab	2	
	CORE ⁽²⁾	3	
	CORE ⁽²⁾	3	

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Junior

FALL

Course	Course Title	Credits	Grade
PHYS	204 Scientific Physics II	4	
CHEM	355 Physical Chemistry	3	
CHEM	355L Physical & Inorganic Chemistry Lab	1	
	CORE ⁽³⁾	3	
	CORE ⁽³⁾	3	
	CORE ⁽³⁾	3	

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SPRING

Course	Course Title	Credits	Grade
BIOL	207 Genetics	3	
BIOL	207L Genetics Lab	1	
CHEM	xxx ⁽⁵⁾ Advanced Topic/Special Topic	2	
CHEM	370 Career Development II	1	
	CORE ⁽³⁾	3	
	CORE ⁽³⁾	3	
	CORE ⁽³⁾	3	

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Senior

FALL

Course	Course Title	Credits	Grade
BIOL	456 Molecular Biology	3	
BIOL	456L Molecular Biology Lab	1	
CHEM	xxx ⁽⁵⁾ Advanced Topic/Special Topic	2	
CHEM	485 Seminar	1	
CHEM	498A Thesis I	1	
	CORE ⁽⁴⁾	3	
	CORE ⁽⁴⁾	3	

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SPRING

Course	Course Title	Credits	Grade
CHEM	xxx ⁽⁵⁾ Advanced Topic/Special Topic	2	
CHEM	498B ⁽⁶⁾ Thesis II	1	
	CORE ⁽⁴⁾	3	
	CORE ⁽⁴⁾	3	
	CORE ⁽⁴⁾	3	
	CORE ⁽⁴⁾	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 492*) 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, as well as 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.