

Program Progression Guide

Disclaimer: The [2021-2022 Purdue West Lafayette catalog](#) is considered the source for academic and programmatic requirements for students entering programs during the Fall 2021, Spring 2022, and Summer 2022 semesters. The Program Progression Guide assists students in the development of an individualized 8-semester plan. Students are encouraged to use this guide, MyPurduePlan* (online degree auditing tool) and the Student Educational Planner (SEP) as they work with their academic advisor towards the completion of their degree requirements.

Notification: Each student is ultimately responsible for knowing, monitoring and completing all degree requirements.

An undergraduate degree in the College of Science requires completion of the following degree requirements.

University Degree Requirements		
Minimum 2.0 Cumulative GPA	Minimum 120 Credits that fulfill degree requirements	32 Residency Credits (30000 and above) at a Purdue University campus
University Core Curriculum**		
<ul style="list-style-type: none"> Human Cultures: Behavioral/Social Science Human Cultures: Humanities Information Literacy Oral Communication <p>University Core Curriculum Course Listing</p>	<ul style="list-style-type: none"> Quantitative Reasoning Science Science, Technology & Society Selective Written Communication 	
Required Major Program Courses		
Departmental specific requirements. 2.0 average GPA in CHEM classes required to graduate. Minimum 2.0 cumulative GPA		
College of Science Core Curriculum		
<ul style="list-style-type: none"> Freshman Composition – 3 credits Technical Writing and Presentation - 3 credits Teaming & Collaboration (NC) General Education - 9 credits 	<ul style="list-style-type: none"> Foreign Language & Culture – 9 credits Great Issues - 3 credits Laboratory Science - 8 credits Multidisciplinary - 3 credits 	<ul style="list-style-type: none"> Mathematics - 6-10 credits Statistics - 3 credits Computing - 3 credits
Degree Electives		
Any Purdue or transfer course approved to meet degree requirements in accordance with individual departmental policies. Consult the No Count course list for courses, which may not be used to meet any College of Science degree requirement.		

* This audit is not your academic transcript and it is not official notification of completion of degree or certificate requirements.

** University Core Curriculum Outcomes may be met through completion of the College of Science Core curriculum. Students should consult with their academic advisors and MyPurdue Plan for course selections.

2021-22 Biochemistry (Chemistry-ACS) Degree Progression Guide

The Chemistry Department has **suggested** the following degree progression guide for the Biochemistry (Chemistry-ACS) Degree. Students will work with their academic advisors to determine their best path to degree completion. Course pre-requisites are specific to this degree plan.

Credit	Fall 1st Year	Prerequisite	Credit	Spring 1st Year	Prerequisite
4-5	CHM 12500 (<i>fall only</i>) or 11500		4-5	CHM 12600 (<i>spring only</i>) or 11600	CHM 12500
4-5	MA 16100*or 16500	ALEKS 85	4-5	MA 16200 or 16600	MA 16100
1	CHM 19400		3-4	Science Core Option	
3-4	Science Core Option		3	Science Core Option	
12-15			14-17		

Credit	Fall 2nd Year	Prerequisite	Credit	Spring 2nd Year	Prerequisite
3	CHM 26505 <i>fall only</i>	CHM 12600	3	CHM 26605 <i>spring only</i>	CHM 26505
2	CHM 26500 <i>fall only</i>	CHM 12600	2	CHM 26600 <i>spring only</i>	CHM 26500
4	MA 26100	MA 16200	4	PHYS 27200	PHYS 17200 & MA 16200
4	PHYS 17200	MA 16100	3	Science Core Option	
1	CHM 29400		3	Science Core Option	
0-3	Science Core Option		0-3	Science Core Option	
14-17			15-18		

Credit	Fall 3rd Year	Prerequisite	Credit	Spring 3rd Year	Prerequisite
3	BIOL 23100 <i>fall only</i>	CHM 26505	3	BIOL 24100 (<i>spring only</i>) or AGRY 32000	BIOL 231/232
2	BIOL 23200 <i>fall only</i>	co-req BIOL 23100	2	BIOL 24200 (<i>spring only</i>) or AGRY 32100	co-req AGRY 32000
3	CHM 43300 <i>fall only</i>	CHM 26505	3	CHM 43800 <i>spring only</i>	CHM 53300
2	CHM 49900		2	CHM 49900	
			1	CHM 33901	
3-4	Science Core Option		4	CHM 24100 <i>spring only</i>	CHM 12600
3	Science Core Option		1	CHM 49400	
16-17			16		

Credit	Fall 4th Year	Prerequisite	Credit	Spring 4th Year	Prerequisite
3	CHM 37300 <i>fall only</i>	PHYS 27200 & MA26100	3	CHM 37400 <i>spring only</i>	CHM 37300
1	CHM 37301 <i>fall only</i>		1	CHM 37401 <i>spring only</i>	CHM 37301
4	CHM 32100 <i>fall only</i>	CHM 12600	3	CHM 34200 <i>spring only</i>	CHM 37300
3	Science Core Option		3	Science Core Option	
3	Science Core Option		3	Science Core Option	Jr/Sr class
2	CHM 49900		0-3	Free Elective	
16			13-16		

Science Core Curriculum Options

(one course needed for each requirement unless otherwise noted)

Options recommended for first- and second-year students	Options recommended for third- and fourth-year students
Freshman Composition ^{UC} General Education ^{UC} (3 courses needed) Foreign Language and Culture ^{UC} (3 courses needed) Multidisciplinary Experience ^{UC}	Technical Writing and Presentation ^{UC} (COM 217 recommended) Statistics (STAT 30100 or 35000) Computing (CS 17700 or CS 15900) Great Issues

^{UC} Select courses may also satisfy a University Core Curriculum requirement; see the University Core Requirement [course list](#) for approved courses.

2021-2022 Biochemistry (ACS) Major Courses

Course Number	Course Description	Credits
CHM 12500	Introduction to Chemistry I or CHM11500 (4 cr)	5
CHM 12600	Introduction to Chemistry II or CHM 11600 (4 cr)	5
CHM 26505	Organic Chemistry (<i>fall only</i>)	3
CHM 26500	Organic Chemistry Lab or CHM 26700 (Honors Lab) (<i>fall only</i>)	2
CHM 26605	Organic Chemistry (<i>spring only</i>)	3
CHM 26600	Organic Chemistry Lab or CHM26800 (Honors Lab) (<i>spring only</i>)	2
CHM 32100	Analytical Chemistry I or CHM32300 (Honors) (<i>fall only</i>)	4
CHM 24100	Introduction to Inorganic Chemistry (<i>spring only</i>)	4
CHM 34200	Inorganic Chemistry (<i>spring only</i>)	3
CHM 37300	Physical Chemistry (<i>fall only</i>)	3
CHM 37400	Physical Chemistry (<i>spring only</i>)	3
CHM37301	Physical Chemistry Lab (<i>fall only</i>)	1
CHM37401	Physical Chemistry Lab (<i>spring only</i>)	1
BIOL 23100	Cell Structure and Function (<i>summer and fall only</i>)	3
BIOL 23200	Lab Biology III: Cell Function (<i>fall only</i>)	2
BIOL 24100	Genetics and Molecular Biology (<i>spring only</i>) or AGRY 32000	3
BIOL 24200	Lab Biology IV: Genetics and Molecular Biology (<i>spring only</i>) or AGRY 32100 (co-req AGRY 32000)(1 cr)	2
CHM 33901	Biochemistry Lab	1
CHM 43300	Intro to Biochemistry (<i>fall only</i>)	3
CHM 43800	Molecular Biotechnology (<i>spring only</i>)	3
CHM 49900	Undergraduate research related to Biochemistry	5
CHM19400	Freshman Chemistry Seminar (1 cr)	1
CHM 29400	Sophomore Chemistry Seminar (<i>fall only</i>)	1
CHM49400	Junior/Senior Seminar	1
MA 16100	Plane Analytical Geometry Calculus or MA16500 (4 cr)	5
MA 16200	Plane Analytical Geometry Calculus II or MA16600 (4 cr)	5
MA 26100	Multivariate Calculus	5
PHYS 17200	Modern Mechanics	4
PHYS 27200	Electricity and Magnetism	4

DIFFERENCES BETWEEN CHEMISTRY MAJORS 2021-2022

REQUIRED CHEMISTRY, MATH, AND BIOLOGY COURSES

Major	Chemistry (CHEM)	Chemistry (ACS) (CHMA)	Biochemistry (ACS) (BICH)
Math Courses	MA16100, 16200, 26100	MA 16100, 16200, 26100, MA 26200 (Linear/Differential Equations)	MA16100, 16200, 26100
General, Organic, and Physical Chemistry Courses	CHM 12500, 12600 (General Chemistry) CHM 26505/26500, CHM 26605/26600 (Organic Chemistry with lab 2x/wk) CHM 37300/37301, CHM 37400/37401 (Physical Chemistry With Lab)		
Analytical Courses	CHM 32100	CHM 32100 and CHM 42400	CHM 32100
Inorganic Courses	CHM 24100 and CHM 34200	CHM 24100, CHM 34200, and CHM 34201 (1 cr lab)	CHM 24100 and CHM 34200
Additional CHM Courses	n/a	CHM elective (class or research) CHM 51300 (Chemical Literature, 1 cr) CHM 43300 (Biochemistry)	CHM 49900 (5 cr. research), CHM 43300 , CHM 33901 (biochem lab) and CHM 43800 (Biotechnology)
Biology Courses	n/a	n/a	BIOL 23100 and BIOL 23200 (Cell Biology with lab), BIOL 24100 and BIOL 24200 (Genetics with lab)
Seminar Courses	CHM 19400, 29400, 49400		