PURDUE UNIVERSITY

Chemistry (ACS)

College of Science

2022-2023

Program Progression Guide

Disclaimer: The 2022-2023 Purdue West Lafayette catalog is considered the source for academic and programmatic requirements for students entering programs during the Fall 2022, Spring 2022, and Summer 202 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.

<table>
<tr><th colspan="3">University Degree Requirements</th></tr>
<tr><td>Minimum 2.0 Cumulative GPA</td><td>Minimum 120 Credits that fulfill degree requirements</td><td>32 Residency Credits (30000 and above) at a Purdue University campus</td></tr>
<tr><th colspan="3">University Core Curriculum**</th></tr>
<tr><td colspan="2">Human Cultures: Behavioral/Social Science
Human Cultures: Humanities
Information Literacy
Oral Communication
University Core Curriculum
Course Listing</td><td>Quantitative Reasoning
Science
Science, Technology & Society Selective
Written Communication</td></tr>
<tr><th colspan="3">Required Major Program Courses</th></tr>
<tr><td colspan="3">Departmental specific requirements. 2.0 average GPA in CHEM classes required to graduate.
Minimum 2.0 cumulative GPA</td></tr>
<tr><th colspan="3">College of Science Core Curriculum</th></tr>
<tr><td>Freshman Composition – 3 credits
Technical Writing and Presentation - 3 credits
Teaming & Collaboration (NC)
General Education - 9 credits</td><td>Foreign Language & Culture – 9 credits
Great Issues - 3 credits
Laboratory Science - 8 credits
Multidisciplinary - 3 credits</td><td>Mathematics - 6-10 credits
Statistics - 3 credits
Computing - 3 credits</td></tr>
<tr><th colspan="3">Degree Electives</th></tr>
<tr><td colspan="3">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.</td></tr>
</table>

* 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.

2022-23 Chemistry (ACS) Degree Progression Guide

The Chemistry Department has **suggested** the following degree progression guide for the 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 *(fall only)* or CHM 11500		4-5	CHM 12600 *(spring only)* or CHM 11600	CHM 12500
4-5	MA 16100 or 16500	ALEKS 85	4-5	MA 16200 or 16600	MA 16100
1	CHM 19400		4	PHYS 17200	MA16100
3-4	Science Core Option		3-4	Science Core Option	
0-3	Free Elective				
12-18			**15-18**		

Credit	Fall 2nd Year	Prerequisite	Credit	Spring 2nd Year	Prerequisite
3	CHM 26505 *fall only*	CHM 12600	3	CHM 26605 *spring only*	CHM 26505
2	CHM 26500 *fall only*	CHM 12600	2	CHM 26600 *spring only*	CHM 26500
4	MA 26100	MA 16200	4	CHM 24100 *spring only*	CHM 12600
4	PHYS 27200	PHYS 17200 & MA 16200	4	MA 26200	MA 26100
1	CHM 29400 *fall only*		3-4	Science Core Option	
0-3	Free Elective				
14-17			**16-17**		

Credit	Fall 3rd Year	Prerequisite	Credit	Spring 3rd Year	Prerequisite
3	CHM 37300 *fall only*	PHYS 27200 & MA26100	3	CHM 37400 *spring only*	CHM 37300
1	CHM 37301 *fall only*		1	CHM 37401 *spring only*	CHM 37301
4	CHM 32100 *fall only*	CHM 12600	1	CHM 51300	.
3-4	Science Core Option		3	Science Core Option	
3	Science Core Option		3	Science Core Option	
3	Science Core Option		3-4	Science Core Option	
17-18			**14-15**		

Credit	Fall 4th Year	Prerequisite	Credit	Spring 4th Year	Prerequisite
3	CHM 43300 *fall only*	CHM 26505	3	CHM 34200 *spring only*	CHM 37300
3	CHM Elective		1	CHM 34201 *spring only*	Co-req CHM 34200
1	CHM 49400		4	CHM 42400 *fall only*	CHM 32100
3	Science Core Option		3	Science Core Option	
3	Science Core Option		3-6	Free Elective*	
0-3	Free Elective*				
13-16			**14-17**		

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]	Technical Writing and Presentation[UC] (COM 217 recommended)
General Education[UC] (3 courses needed)	Statistics (STAT 30100 or 35000)
Foreign Language and Culture[UC] (3 courses needed)	Computing (CS 17700 or CS 15900)
Multidisciplinary Experience[UC]	Great Issues

[UC] Select courses may also satisfy a University Core Curriculum requirement; see the University Core Requirement course list for approved courses.

2022-2023 Chemistry (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 116 (4 cr)	5
CHM 26505	Organic Chemistry *(fall only)*	3
CHM 26500	Organic Chemistry Lab or CHM 26700 (Honors Lab) *(fall only)*	2
CHM 26605	Organic Chemistry *(spring only)*	3
CHM 26600	Organic Chemistry Lab or CHM26800 (Honors Lab) *(spring only)*	2
CHM 32100	Analytical Chemistry I or CHM32300 (Honors) *(fall only)*	4
CHM 24100	Introduction to Inorganic Chemistry *(spring only)*	4
CHM 34200	Inorganic Chemistry *(spring only)*	3
CHM 34201	Inorganic Chemistry Lab *(spring only)*	1
CHM 37300	Physical Chemistry *(fall only)*	3
CHM 37400	Physical Chemistry *(spring only)*	3
CHM37301	Physical Chemistry Lab *(fall only)*	1
CHM37401	Physical Chemistry Lab *(spring only)*	1
CHM 42400	Analytical Chemistry II *(spring only)*	4
CHM 51300	Chemical Literature	1
CHM 43300	Intro to Biochemistry	3
CHM Elective	CHM46200 or CHM499 or CHM56000 or CHM57900 or CHM58100 or CHM53800	3
CHM19400	Freshman Chemistry Seminar (1 cr)	1
CHM 29400	Sophomore Chemistry Seminar *(fall only)*	1
CHM49400	Junior/Senior Seminar	1
MA 16100	Plane Analytical Geometry Calculus I or MA16500 (4 cr)	5
MA 16200	Plane Analytical Geometry Calculus II or MA16600 (4 cr)	5
MA 26100	Multivariate Calculus	5
MA 26200	Linear Algebra and Differential Equations (students may also take these as separate classes, MA 26500 & 26600)	4
PHYS 17200	Modern Mechanics	4
PHYS 27200	Electricity and Magnetism	4

DIFFERENCES BETWEEN CHEMISTRY MAJORS 2022-2023

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** **(Instrumental Analysis)**	CHM 32100
Inorganic Courses	CHM 24100 and CHM 34200	CHM 24100, CHM 34200, and **CHM 34201** **(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** **(Biochemistry),** **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		