

## Chemistry

### Recommended Four-Year Plan (Fall 2022)

The recommended four-year plan is designed to provide a blueprint for students to complete their degrees within four years. Students must meet with their Major Advisor to develop a more individualized plan to complete their degree. This plan assumes that no developmental courses are required. If developmental courses are needed, students may have additional requirements to fulfill which are not listed in the plan and may extend degree completion.

**NOTE:** This recommended Four-Year Plan is applicable to students admitted into the major during the 2022-2023 academic year.

First Year					
Fall Semester	HRS	✓	Spring Semester	HRS	✓
Gen Ed: INTD 101-First Year Seminar	4		CHEM 117 & CHEM 117L-General Chemistry II Lecture & Lab	4+1	
Gen Ed: Historical Perspectives or MATH 110-Precalculus	4		Gen Ed: MATH 121-Calculus I	4	
Gen Ed: CRWT 102-Critical Reading & Writing II <b>WI</b>	4		Gen Ed: AIID 201-Studies in the Arts & Humanities <b>WI</b>	4	
Gen Ed: CHEM 116 & CHEM 116L-General Chemistry I Lecture & Lab	4+1		Gen Ed: SOSC 110-Social Science Inquiry	4	
			TAS Pathways Module 1: (PATH-TS1) Career Assessment/ Advising	<b>Degree Rqmt.</b>	
<b>Total:</b>	17		<b>Total:</b>	17	

Second Year					
Fall Semester	HRS	✓	Spring Semester	HRS	✓
CHEM 211 & CHEM 211L-Organic Chemistry I Lecture & Lab	4+1		CHEM 213 & CHEM 213L-Organic Chemistry II Lecture & Lab	4+1	
PHYS 116 & PHYS 118L-Physics I with Calculus Lecture & Lab	4+1		PHYS 117 & PHYS 119L-Physics II with Calculus Lecture & Lab	4+1	
MATH 122-Calculus II	4		MATH 225-Multivariable Calculus	4	
Gen Ed: Global Awareness	4		TAS Pathways Module 3: (PATH-TS3) Interview Preparation	<b>Degree Rqmt.</b>	
TAS Pathways Module 2: (PATH-TS2) Resume/CV Writing	<b>Degree Rqmt.</b>				
<b>Total:</b>	18		<b>Total:</b>	14	

Third Year					
Fall Semester	HRS	✓	Spring Semester	HRS	✓
CHEM 324 & CHEM 324L-Quantitative Analysis Lecture & Lab	4+1		CHEM 350-Physical Chemistry I Lecture	4	
Gen Ed: Culture & Creativity, Systems Sustainability & Society, Values & Ethics	4		CHEM 427 & CHEM 427L-Instrumental Analysis Lecture & Lab <b>WI</b>	4+1.5	
CHEM Elective	4		CHEM Elective OR CHEM 425-Biochemistry**	4	
Gen Ed: Historical Perspectives (if necessary) or Elective	4		Gen Ed: Culture & Creativity, Systems Sustainability & Society, Values & Ethics <b>(Must be outside of TAS)</b>	4	
<b>Total:</b>	17		<b>Total:</b>	17.5	

Fourth Year					
Fall Semester	HRS	✓	Spring Semester	HRS	✓
CHEM 350L-Physical Chemistry I Lab <b>WI</b>	1.5		CHEM 352L-Physical Chemistry II Lab <b>WI</b>	1	
CHEM 352-Physical Chemistry II Lecture	4		CHEM 451 & CHEM 451L-Advanced Inorganic Chemistry Lecture & Lab <b>C</b>	4+1	
Elective OR CHEM 430-Experimental Biochemistry **	4 or 2		CHEM Elective	4	
CHEM Elective	4		Elective OR TAS-Research Honors **	4 or 1	
Elective OR TAS-Research Honors **	4 or 1				
<b>Total:</b>	12.5-17.5		<b>Total:</b>	11 - 14	

**Total Credits Required:** 128 credits (may vary based on electives for ACS approved degree) Students must review their audit on a regular basis to make sure they are on track to earning all credits necessary for graduation.

**GPA Required:** overall GPA 2.0 and major GPA 2.0

**C:** The Advanced Inorganic Laboratory (CHEM 451L) **capstone course** is designed to draw from and build on content and skills learned during a student's progression through the major. The course includes both a lecture and laboratory component, with a significant writing component. In undertaking this course, students will demonstrate: a thorough understanding of the relevant chemistry material, an ability to apply problem-solving strategies, expertise in laboratory procedures and instrumentation, written communication skills.

\*\* Biochemistry (CHEM 425) must be taken to be certified by the American Chemical Society. One year of research must be taken as an elective or CHEM 430 should be taken to achieve the required lab hours.

**WI:** Writing Intensive - 3 required in the major