

Chemistry

Recommended Graduation Plan (Fall 2024)

The recommended graduation plan is designed to provide a blueprint for students to complete their degrees on time. Students must meet with their Academic Advisor to develop a more individualized plan to complete their degree.

NOTE: This recommended graduation plan is applicable to students admitted into the major during the 2024-2025 academic year.

CRWT Placement
CRWT 101 to CRWT 102
CRWT 101S to CRWT 102S

Math Placement
MATH 021/022 to MATH 024 to MATH 110-121

NOTE: CRWT and MATH courses are determined by placement testing and should be taken following the sequence above.

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	
General Education Requirement: MATH 110-Precalculus	4		General Education Requirement	4	
Gen Ed: CRWT 102-Critical Reading & Writing II WI	4		General Education Requirement	4	
Gen Ed: CHEM 116 & CHEM 116L-General Chemistry I Lecture & Lab	4+1		General Education Requirement	4	
			TAS Pathways Module 1: (PATH-TS1) Career Assessment/ Advising	Degree Rqmt.	
Total:	17		Total:	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 116L-Physics I with Calculus Lecture & Lab	4+1		PHYS 117 & PHYS 117L-Physics II with Calculus Lecture & Lab	4+1	
MATH 121-Calculus I	4		MATH 122-Calculus II	4	
General Education Requirement	4		TAS Pathways Module 3: (PATH-TS3) Interview Preparation	Degree Rqmt.	
TAS Pathways Module 2: (PATH-TS2) Resume/CV Writing	Degree Rqmt.				
Total:	18		Total:	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	

MATH 225-Multivariable Calculus	4		CHEM 427 & CHEM 427L-Instrumental Analysis Lecture & Lab WI	4+1.5	
General Education Requirement	4		CHEM Elective OR CHEM 425-Biochemistry**	4	
General Education Requirement	4		Free Elective (minor, certificate, or second major requirement)	0-4	
Total:	17		Total:	13.5-17.5	

Fourth Year					
Fall Semester	HRS	✓	Spring Semester	HRS	✓
CHEM 350L-Physical Chemistry I Lab WI	1.5		CHEM 352L-Physical Chemistry II Lab WI	1	
CHEM 352-Physical Chemistry II Lecture	4		CHEM 451 & CHEM 451L-Advanced Inorganic Chemistry Lecture & Lab C	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				
Total:	12.5-17.5		Total:	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

General Education courses can be done in any order with the exception of INTD 101, CRWT and MATH. Those three general education courses will need to be done first. First Year Seminar is taken in the first semester. Failure to complete CRWT and MATH will result in a hold when the student hits 64 credits. The following general education courses can be done in any order. For more info on these courses, please visit the [General Education program requirements website in the College Catalog](#):

- Social Science Inquiry (SOSC 110) [+W]
- Scientific Reasoning
- Historical Perspectives [+W]
- Studies in the Arts & Humanities (CRWT 102 is a prerequisite to this course) [+W]
- Global Awareness [+W]
- Distribution Category (Systems, Sustainability, & Society **OR** Culture & Creativity **OR** Values and Ethics) (**Must be outside of TAS**)
- Distribution Category

+W: Students transferring in with 48 or more credits are waived from these general education requirements.

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