CHEMISTRY 121: COURSE SYLLABUS

Summer 2026

Important dates, times, and locations:

Lectures	M, T, W, *&* Th	9:30–11:20 a.m.	Sapp 114
Lab section	M, W	1:00-3:50 p.m.	Sapp 3rd floor
Midterm 1	Monday, July 27	10:30-11:30 a.m.	Sapp 114
Midterm 2	Tues., August 4	10:30-11:30 a.m.	Sapp 114
Final exam	Thursday, August 13	9:30-11:30 p.m.	Sapp 114

Instructor: Megan Brennan brennanm@stanford.edu office: Sapp 316

TAs:

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Textbook:	Klein	*Organic Chemistry,* 4th Ed.
Preferred:	lab notebook	any carbon copy notebook
Recommended:	Klein	*Organic Chemistry as a 2nd Language: 2nd semester 4th ed.*

Grading:	Midterm Exams (2)	40% (20% each)
	Final Exam	35%
	Quizzes	10%
	Problem Sets	5%
	Lab Section	10%

Lab Section: There will be 8 lab section meetings on Monday and Wednesdays at 12:30-3:20pm on the third floor of Sapp. Lab section grades are based on a quiz, pre-lab preparation, attendance, and participation. This material will be covered on problem sets and exams. In order to receive full credit for lab section you must read the handout, write a pre-lab report, attend, participate, complete the bi-weekly quiz and turn in your notebook pages with your assigned TA – ***attendance is required to pass the course.***

Exams: There will be two midterm exams and a final exam. ***There are no make up exams.***

Problem Sets: Problem sets reinforce and expand on material covered in lecture, lab, and in the reading**.** Answer keys will be posted to Coursework so you can check your answers. *The lowest problem set will be dropped.*

Quizzes Quizzes will be given each Tuesday, Wednesday and Thursday with the exception of exam days. These daily quizzes will provide feedback and reinforcement of material on a daily basis. *The lowest quiz grade will be dropped.*

Web Info: The Chem 121 page on Canvas is your primary source for up-to-the-minute information.

Students with Disabilities: Students who may need academic accommodation due to disability must initiate the request with the Student Disability Resource Center (SDRC) located within the Office of Accessible Education (OAE). *Students should contact the SDRC as soon as possible since timely notice is needed to coordinate accommodations.* The OAE is located at 563 Salvatierra Walk (phone: 723-1066).

CHEMISTRY 121 COURSE CALENDAR

Week	Date	Topic	Reading*	Lab Section	Due
1	M 7/20	Introduction, functional groups Alcohols/amines, acidity/basicity Amine synthesis	**K:** 12.1-12.3; 22.1-22.3; 22.5 **OCSL2:** 9.1-9.2; 2.1-2.6	Safety Infrared Spectroscopy	--
	Tu 7/21	Aldehydes/ketones: structure & preparation; reactivity with strong nucleophiles (H^- and R^-)	**K:** 12.4; 12.6; 12.13; 19.1–19.4; 19.9; 23.1–23.2 **OCSL2**: 6.1-6.3; 6.7	--	PS 1 Due Quiz 1
	W 7/22	Aldehydes/ketones: Wittig reaction and reactivity with weak nucleophiles	**K:** 19.5, 19.7, 19.8; 19.12 **OCSL2:** 6.4	Reduction	PS 2 Due Quiz 2
	Th 7/23	Acetals as Protecting Groups & Carbohydrate structure	**K**: 24.1-24.7	--	PS 3 Due Quiz 3
2	M 7/27	**Midterm 1** DNA/RNA Structure	**K:** 24.9-24.10 **OCSL2:** 6.6	Carbohydrate acetal	PS 4 Due
	T 7/28	Imine preparation and reactivity; enamines	**K**: 19.6, 22.6; **OCSL2**: 6.6, p. 171	--	--
	W 7/29	Enols & enolates Aldol reaction	**K**: 21.1-21.3 **OCSL2:** 8.1-4, 8.6;8.7	Aldol	PS 5 Due Quiz 4
	Th 7/30	Carboxylic acids: structure, preparation	**K**: 20.1–20.6	--	PS 6 Due Quiz 5
3	M 8/3	Ester formation Reactions of esters	**K:** 20.10, 20.11 **OCSL2**: 7.1-2; 7.5	Grignard	PS 7 Due Quiz 6
	T 8/4	**Midterm 2** Reactions of Ester Enolates	**K**: 21.4 **; OCSL2**: 8.8	--	PS 8 Due
	W 8/5	β-Dicarbonyl derivatives	**K:** 21.4 **OCSL2:** 8.9	Fragrant Esters	PS 9 Due
	Th 8/6	Acid chlorides & anhydrides	**K:** 20.8-20.9; **OCSL2:** 7.3-7.4	--	Quiz 7
4	M 8/10	Amide structure & preparation	**K:** 20.12 **OCSL2**: 7.6	Multistep synthesis	PS 10 Due Quiz 8
	T 8/11	Amide reactivity	**K**: 25.1-8	--	PS 11 Due Quiz 9
	W 8/12	Amino acids & polypeptides/proteins Review		Polymers: Nylon and Polyesters	PS 12 Due Quiz 10
	Th 8/13	**Final Exam**	--	--	

K: Klein's Organic Chemistry 3rd edition text **OCSL2**: Organic Chemistry as a 2nd language; second semester topics. This calendar schedule is subject to change as needed.