

Chemistry 231 Course Syllabus

Instructor:	Dr. Terry Fernando
Office:	0757 Gilman
Office Hours:	Please email me and we'll figure out a time that works for you.
email for Instructor	terry@iastate.edu

Chem 231 and 231L are co-requisite courses, i.e., students in Chem 231 are required to take Chem 231L at the same time or to have already received credit in 231L and visa versa. Co-requisite course requirements are strictly enforced: Students who do not meet the co-requisite should drop the course or **they will receive an F in the course.** Students who drop or audit Chem 231 will be required to drop 231L and vice versa. To add or change lab sections during the first week of class, use AccessPlus. After the first week, contact your advisor.

Course Goal: Students will gain a basic working knowledge of how organic chemistry works at the molecular level and how it is relevant in everyday life.

Course Materials

This course is enrolled in the Iowa State University Immediate Access Program.

What is Immediate Access?

Immediate Access is a collaborative affordability initiative between the ISU Book Store, faculty, and publishers. Students that are enrolled in an Immediate Access course will receive access to all required digital course materials the first day of class and at a reduced cost compared to the national average.

What is the title and price of the required content for this course?

This information is posted in your student booklist through Access Plus, or it can be accessed by going to the [ISU Bookstore website](#) and searching by the course for which you are enrolled.

How is Immediate Access billed?

You will be automatically charged on your u-bill for this digital content. The billing description on your u-bill will show the department and course number, followed by "IMMED ACCESS" and the last 4 digits of the billing ISBN. The following is an example of the billing description for a student enrolled in PSYCH 101: **"PSYCH 101 IMMED ACCESS 2187"**

What if I drop the course?

Students who drop the course within the first 10 days of class will receive a refund on their u-bill (5 days for courses 8 weeks or shorter). **You do not have to notify the bookstore if you drop the course.** This is an automated process.

Can I opt out of Immediate Access?

Students may choose to opt out of the program. Opting out does not mean you are dropping the course. It simply means you are choosing not to receive the digital content from the bookstore and you must find another way to acquire it in order to complete required homework assignments. Students have within the first 10 days of class to opt out and receive a refund to their u-bill (5 days for courses 8 weeks or shorter). Instructions on how to opt out will be emailed shortly before classes start.

How do I access the required digital content?

There is a tool on the navigation menu of your Canvas course called **Immediate Access Course Materials**. You will receive an email shortly before classes start that will instruct you on how to access the required digital course materials. You may not be able to access the digital content until the first day of class.

For further questions about Immediate Access please email immediateaccess@iastate.edu.

This course will use the Top Hat response system in class and requires the purchase of a license to participate. Visit the [Top Hat learning tool guide](#) to view the terms of service, privacy policy, accessibility statement, and instructions for joining the Top Hat course and engaging with the Top Hat course.

Assessments

(15%) Writing Assignments (3)

- How organic chemistry has already impacted my life
- Sustainability I: Alcohols
- Sustainability II: Dyes (textile, cosmetics, or food industry)

(25 %) WileyPlus Homework (1 for each chapter, no homework for chap 16)

- Purpose is to review organic chemistry fundamentals necessary for relating organic chemistry to sustainability issues (e.g. what is an alkane?)
- Number of problems varies per chapter
- Unlimited number of attempts, untimed
- Hints enabled
- Incorrect answers revealed
- Correct answers are not revealed
- Due one day before corresponding online exam deadline.
- No drops and no deadline extensions except for extreme cases.

(25 %) Online Mini-Exams (3 or 4, does not cover Chap 16)

- Questions are taken randomly from homework questions
- Number of questions TBD
- Timed
- Unlimited attempts
- Hints are not enabled
- Incorrect answers revealed
- Correct answers are not revealed
- Due one week after last topic on exam is covered in class
- No drops and no deadline extensions except for extreme cases.

(35 %) Classwork

- (15 %) TopHat (TH) questions (used to generate discussion as well as to review for HW)
 - Participation points only
 - Occur during every class
 - Ten TH questions dropped for situations such as illness, excused absences (ISU sponsored events), family emergencies, and similar serious reasons for absences.
- (20 %) In-class activities (number of activities TBD)
 - Submitted online by midnight the day of activity
 - Receives one of three grades
 - Made an effort (100%)
 - Turned something in but clearly did not make much effort (60%)
 - Missing, blank, or complete nonsense (0%)
 - Two drops for situations such as illness, excused absences (ISU sponsored events), family emergencies, and similar serious reasons for absences.
 - No deadline extensions except for extreme cases.

Grading

Grading scale for final grades: A \geq 93%, A- \geq 90%, B+ \geq 87%, B \geq 83%, B- \geq 80%, C+ \geq 77%, C \geq 73%, C- \geq 70%, D+ \geq 67%, D \geq 63%, and D- \geq 60%, and F < 60%.

Grades are rounded up at the end of the semester. (e.g. 92.5% => 93%)

Academic Misconduct

Academic Misconduct in any form is in violation of ISU *Student Disciplinary Regulations* and will not be tolerated. This includes, but is not limited to: **COPYING AND PASTING FROM ANYTHING WHICH YOU DID NOT AUTHOR, OR SUBMITTING WORK IDENTICAL OR NEARLY IDENTICAL TO ANOTHER STUDENT'S**. Depending on the act, a student will receive an F grade on all submissions associated with the experiment, could receive an F grade for the course, and could be suspended or expelled from the University. See the Conduct Code at <http://www.dso.iastate.edu/ja> for more details and a full explanation of the ISU Academic Misconduct policies. In any case, the student will be reported to the Dean of the Students Office.

Accessibility and Mental Health Support

Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to work directly with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes before accommodations will be identified. After eligibility is established, SAS staff will create and issue a Notification Letter for each course listing approved reasonable accommodations. This document will be made available to the student and instructor either electronically every semester. Students and instructors are encouraged to review contents of the Notification Letters as early in the semester as possible to identify a specific, timely plan to deliver/receive the indicated accommodations. Reasonable accommodations are not retroactive in nature and are not intended to be an unfair advantage. Additional information or assistance is available online at www.sas.dso.iastate.edu, by contacting SAS staff by email at accessibility@iastate.edu, or by calling 515-294-7220. Student Accessibility Services is a unit in the Dean of Students Office located at 1076 Student Services Building.

Student Counseling Services (SCS) provides confidential prevention, intervention, information, and referral services to Iowa State students. Assistance is available for students coping with relationship problems, low self-esteem, stress, loneliness, depression, cultural differences, sexual assault recovery, childhood abuse, trauma, eating disorders, substance abuse, career/major concerns, academic motivations, and other concerns. Students can initiate services at SCS during the walk-in hours (see SCS website) or during business hours if crisis counseling is needed. Check out their website for additional information: <https://counseling.iastate.edu/>.

Freedom of Speech

Iowa State University supports and upholds the First Amendment protection of [freedom of speech](#) and the principle of [academic freedom](#) in order to foster a learning environment where open inquiry and the vigorous debate of a diversity of ideas are encouraged. Students will not be penalized for the content or viewpoints of their speech as long as student expression in a class context is germane to the subject matter of the class and conveyed in an appropriate manner.

Topics Covered

Chap 1 Covalent Bonding and Shapes of Molecules

Chap 2 Acids and Bases

Chap 3 Alkanes

chap 4 Alkenes

Chap 5 Alkene Reactions and Chirality

Chap 7 Haloalkanes

Chap 8 Alcohols

Chap 12 Aldehydes and Ketones

Chap 13 Carboxylic acids

Chap 10 Conjugation and Aromatics, Absorption Spectroscopy

Chap 16 Polymers