

Chemistry 243 Organic Chemistry I

Fall 2024 Course Syllabus

NJIT Academic Integrity Code: All Students should be aware that the Department of Chemistry & Environmental Science (CES) takes the University Code on Academic Integrity at NJIT very seriously and enforces it strictly. This means that there must not be any forms of plagiarism, i.e., copying of homework, class projects, or lab assignments, or any form of cheating in quizzes and exams. Under the University Code on Academic Integrity, students are obligated to report any such activities to the Instructor.

COURSE INFORMATION

Course Description: This is part I of a two semester course in Organic Chemistry for chemistry or non chemistry majors. Outcomes of the course are given below

Number of Credits: 3

Prerequisites: Undergraduate level chemistry 126, minimum grade C.

Course-Section and Instructors

Course-Section	Instructor
Chem 243 - 001	Dr. Tamara Gund
Chem 243 -102	

Office Hours for All Chemistry & Environmental Science Instructors: Monday 2-3 pm, Thursday 2-3 pm

EMAIL: gund@njit.edu

PHONE: 973-596-3669

Required Textbook:

Title	Organic Chemistry
Author	Wade
Edition	9th
Publisher	Pierson
ISBN #	

University-wide Withdrawal Date: The last day to withdraw with a W is Monday, April 5, 2021. It will be strictly enforced.

POLICIES

All CES students must familiarize themselves with, and adhere to, all official university-wide student policies. CES takes these policies very seriously and enforces them strictly.

Grading Policy: The final grade in this course will be determined as follows:

Quizzes	100 points
Exam I	100points
Exam II	100 points
Exam III	100 points
Final Exam	100 points

Your final letter grade in this course will be based on the following tentative curve:

A	87%	C	60
B+	82	D	50
B	75	F	Below 50
C+	68		

Attendance Policy: Attendance at classes will be recorded and is **mandatory**. Each class is a learning experience that cannot be replicated through simply “getting the notes.”

Homework Policy: Homework is an expectation of the course. It is difficult to well if you don’t do the homework.

Makeup Exam Policy: There will normally be **NO MAKE-UP QUIZZES OR EXAMS** during the semester. In the event that a student has a legitimate reason for missing a quiz or exam, the student should contact the Dean of Students office and present written verifiable proof of the reason for missing the exam, e.g., a doctor’s note, police report, court notice, etc. clearly stating the date AND time of the mitigating problem. The student must also notify the CES Department Office/Instructor that the exam will be missed so that appropriate steps can be taken to make up the grade. A makeup if granted should be taken during specified makeup days.

Cellular Phones: All cellular phones and other electronic devices must be switched off during all class times. Such devices must be stowed in bags during exams or quizzes.

ADDITIONAL RESOURCES

Chemistry Tutoring Center: Located in the Central King Building, Lower Level, Rm. G12. Hours of operation are Monday - Friday 10:00 am - 6:00 pm. For further information please click [here](#).

Accommodation of Disabilities: Office of Accessibility Resources and Services (**formerly known as Disability Support Services**) offers long term and temporary accommodations for undergraduate, graduate and visiting students at NJIT.

If you are in need of accommodations due to a disability please contact Chantonette Lyles, Associate Director at the Office of Accessibility Resources and Services at **973-596-5417** or via email at lyles@njit.edu. The office is located in Fenster Hall Room 260. A Letter of Accommodation Eligibility from the Office of Accessibility Resources Services office authorizing your accommodations will be required.

For further information regarding self-identification, the submission of medical documentation and additional support services provided please visit the Accessibility Resources and Services (OARS) website at:

- <http://www5.njit.edu/studentsuccess/disability-support-services/>

Important Dates (See: [Spring 2021 Academic Calendar, Registrar](#))

Date	Day	Event
September 3, 2024	T	First Day of Classes
September 9, 2024	M	Last Day to Add/Drop Classes for full credit
September 10, 2024	T	Grades Posted for Course Withdrawal
November 11, 2024	M	Last Day to withdraw
November 27, 2024	F	Friday Classes Meet
November 28-December 1	R - Su	Thanksgiving Recess-No Classes
December 11	W	Last Day of Classes
December 12, 13	R,F	Reading Days
December 15 - 21	Su - Sa	Final Exam Period
December 23	M	Final Grades Due

Materials To Be Covered and Exam Schedule

Chapter 1: Structure and Bonding

Chapter 2: Acids and Bases: Functional Groups

Chapter 3: Structure and Stereochemistry of Alkanes

Exam 1: September 23, 2024

Chapter 4: The Study of Chemical Reactions

Chapter 5: Stereochemistry

Chapter 6: Alkyl Halide, Nucleophilic Substitution

Exam 2: October 21, 2024

Chapter 7: Structure and Synthesis of Alkenes: Elimination

Chapter 8: Reactions of Alkenes

Chapter 12: Infrared Spectroscopy and Mass spectrometry (If time permits)

Exam 3: November 25, 2024

Chapter 13: NMR Spectroscopy

Final Exam: TBA

Chapter 9: Alkynes In Chem 244

Chapter 10: Structure and Synthesis of Alcohols : In Chem 244 :

Chapter 11: Reactions of Alcohols : In Chem 244

The final exam will be cumulative. Before each Exam there will be a Quiz which covers one or two chapters. Take the Quizzes seriously as they add up to one Exam grade. There may be a fourth quiz depending on time. If there is a fourth quiz one quiz will be dropped.

Problems in the body of the chapter are assigned and selected problems at the end of the chapter. These will be collected. To do well in the course it is important to do these problems. The grade will be determined from a total of 400 points.. 100 points will be dropped from the total of 500 points.. Either the quizzes (100 points) or the lowest of the three exams will be dropped. Makeup exams are not encouraged and will be given if you have an excuse from the dean of students or a doctor's note. If you must miss an exam contact me before the exam or immediately after. Makeups will be given at specified times. The final exam will not be dropped

Attendance is required and will be taken into consideration when grades are computed.

Outcomes

Upon completing organic chemistry I, the student should have an understanding in the following areas:

1. Lewis structures, condensed structures and structural formulas of organic compounds
2. Understand the geometry resulting from atomic orbital hybridization
3. Know how electronegativity and resonance causes charge distribution on molecules
4. Understand how intermolecular forces affect the boiling points and melting points
5. Interpret 3D representations of molecular structures
6. Know reaction intermediates and their relative stabilities
7. Understand how kinetics, thermodynamics and statistical mechanics describe chemical reactions
8. Draw the structures of the products given specific reactants
9. Write the mechanisms of reactions
10. Understand how physical conditions influence rate and path of reactions
11. Know SN1, SN2, E1 and E2 reactions, their stereo and regional-selectivity
12. Know the nomenclature of alkane, alkene, alkyne and alcohols
13. Understand oxidation and reduction in organic chemistry
14. Know organometallic reagents for alcohol synthesis

15. Learn Spectroscopy: IR, Mass Spectroscopy, NMR

Academic misconduct: The NJIT Honor Code will be upheld. Any student that participates in any form of academic dishonesty or cheating will receive a zero for the exam. If a person is caught a second time, a final grade of "F" will be given for the course. Any violations will be brought to the immediate attention of the Dean of Students, who may impose further penalties