

Fall 2018

CHEM 243 - Organic Chemistry I

Yuanwei Zhang

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Chemistry: *Fall 2018 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 course offers students the opportunity to learn the nature of carbon in organic compounds. It presents general principles of organic chemistry related to nomenclature, structure, stereochemistry, uses and synthesis.

Number of Credits: 3

Prerequisites: General Chemistry

Course-Section and Instructors

| Course-Section | Instructor |
|----------------|---------------|
| CHEM 243 - 003 | Yuanwei Zhang |
| CHEM 243 - HM1 | Yuanwei Zhang |

Office Hours for All Chemistry & Environmental Science Instructors: [Fall 2018 Office Hours and Emails](#)

Required Textbook:

| | |
|------------------|-------------------------|
| Title | Organic Chemistry |
| Author | L. G. Wade Jr. |
| Edition | 9 th edition |
| Publisher | Prentice Hall |
| ISBN # | 032197137X |

University-wide Withdrawal Date: The last day to withdraw with a W is Monday, November 12, 2018. It will be strictly enforced.

Learning Outcomes: Students will gain an understanding of: a. the hybridization and geometry of atoms and the three-dimensional structure of organic molecules. b. the reactivity and stability of an organic molecule based on structure. c. an understanding of nucleophiles, electrophiles, electronegativity, and resonance. d. the prediction of mechanism for organic reactions. e. how to use the understanding of organic mechanisms to predict the outcome of reactions. f. how to design synthesis of organic molecules.

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 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 not be collected. You have answers to these problems. To do well in the course it is important to do these problems. You must bring a photo ID to the exam and take the exam in the room assigned to you by the course coordinator. Failure to take the exam in the assigned room will result in a loss of a full grade from your exam score. The final grade in this course will be determined as follows: 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 (The final exam cannot be dropped). Makeup exams are not encouraged. If you must miss an exam contact the coordinator before the exam or immediately after. Makeup should be taken within the first week of the exam and before exams are given back. You must have a valid excuse and a doctor note.

| | |
|------------------|-----|
| Quizzes | 100 |
| Midterm Exam I | 100 |
| Midterm Exam II | 100 |
| Midterm Exam III | 100 |
| Final Exam | 100 |

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

| | | | |
|----|-----------|---|-----------|
| A | 90 - 100 | C | 70 - 74.9 |
| B+ | 85 - 89.9 | D | 60 - 70 |
| B | 80 - 84.9 | F | < 60 |
| C+ | 75 - 79.9 | | |

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. Problems in the body of the chapter are assigned and selected problems at the end of the chapter. These will not be collected. To do well in the course it is important to do these problems.

Exams: There will be three midterm exams held in class during the semester and one comprehensive final exam. The following exam periods are tentative and therefore possibly subject to change:

| | |
|-------------------|------------------------|
| Midterm Exam I | September 26 |
| Midterm Exam II | October 22 |
| Midterm Exam III | November 14 |
| Final Exam Period | December 15 - 21, 2018 |

The final exam will test your knowledge of all the course material taught in the entire course.

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.

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: [Fall 2018 Academic Calendar, Registrar](#))

| Date | Day | Event |
|------------------------|--------|--|
| September 4, 2018 | T | First Day of Classes |
| September 10, 2018 | M | Last Day to Add/Drop Classes |
| November 12, 2018 | M | Last Day to Withdraw |
| November 20, 2018 | T | Thursday Classes Meet |
| November 21, 2018 | W | Friday Classes Meet |
| November 22 - 25, 2018 | R - Su | Thanksgiving Break - University Closed |
| December 12, 2018 | W | Last Day of Classes |
| December 14, 2018 | F | Reading Day |
| December 15 - 21, 2018 | F - R | Final Exam Period |

Course Outline

| Lecture | Chapter | Topic |
|---------|---------|---|
| 1-2 | 1 | Introduction and Review |
| 3-4 | 2 | Structure and Properties of Organic Molecules |
| 5-6 | 3 | Structure and Stereochemistry of Alkanes |

| | | |
|-------|----|---|
| 7-8 | 4 | The Study of Chemical Reactions |
| 9-10 | 5 | Stereochemistry |
| 11-12 | 6 | Alkyl Halide, Nucleophilic Substitution and Elimination |
| 13-14 | 7 | Structure and Synthesis of Alkenes |
| 15-16 | 8 | Reactions of Alkenes |
| 17-18 | 9 | Alkynes |
| 19-20 | 10 | Structure and Synthesis of Alcohols |
| 21-22 | 11 | Reactions of Alcohols |
| 23-24 | 12 | Infrared Spectroscopy and Mass Spectrometry |

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*Updated by - 2018
Department of Chemistry & Environmental Sciences
Course Syllabus, Fall 2018*
