

Organic Chemistry III

CHEM 243 Summer 2014

Designed as a continuation of CHEM 241 and CHEM 242, CHEM 243 covers structure, nomenclature, preparation, reactivity and reaction mechanisms for important classes of chemicals with applications in pharmaceutical and polymer industries: aromatic compounds; ketones and aldehydes; amines; carboxylic acids; and carboxylic acid derivatives (acyl halides, anhydrides, esters, amides, and nitriles). CHEM 243 also provides fundamentals of bioorganic chemistry for the rational study of biochemistry, molecular biology, and medicinal chemistry.

Objectives:

At the end of the course, students should be able to:

- draw chemical structures;
- use correctly the corresponding systematic (IUPAC) nomenclature;
- write chemical equations for organic reactions;
- write reaction mechanisms;
- solve synthetic schemes;
- exemplify pharmaceutical, medical, and industrial applications of certain organic compounds.

Course prerequisites:

CHEM 241 and CHEM 242

Lecturer:

Dr. **Monica Ilies**, Chemistry Department

Office: Disque 224

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Lecture: Mon, Wed, Fri: 4:00-4:50 PM; Disque 108

Office hours: e-mail for appointment

Course Website: [Drexel LEARN, CHEM 243-SU 13-14](#)

You can access the course website directly through <http://learn.dcollege.net>.

Note: Most of our communication will be via e-mail and via the course website.

Please check regularly the course website and your Drexel email account.

Required Textbook:

L.G. Wade, Jr., *Organic Chemistry*, Pearson, 8th Ed.

Recommended Manual:

L.G. Wade and J. Simek, *Solutions Manual*, Pearson, 8th Ed.

Note: Older editions of the textbook can also be used, but the page numbers, section numbers, and problem numbers may be different.

1. Grading structure:

Activity	% Grade	Additional Information
Quizzes	20	See section 3
Exams	35	See section 4
Final Exam	25	See section 5
Participation grade	10	See section 6
Online Homework	10	See section 7
Total	100	

Grading policy:

Students who meet all the requirements will earn an **A+** if they score **97-100**; **A** if **93-96**; **A-** if **90-92**; **B+** if **87-89**; **B** if **83-86**; **B-** if **80-82**; **C+** if **77-79**; **C** if **73-76**; **C-** if **70-72**; **D+** if **66-69**; **D** if **60-65**. There is no **D-** in this course. Please feel free to contact me for any question about an exam grade.

Exams and quizzes are based on lecture material and the assigned problems. **The material coverage and practice quizzes/exams will be posted on the course website. Detailed review sheets will also be posted for each quiz or exam to help focus your study.**

2. Lectures:

Lectures will be given on topics and sections of the text listed in the course schedule (see p. 5) and will be interactive. **To prepare for lecture, you will need to read the listed subchapters before coming to class. You are responsible for reading all material in these sections whether covered in lecture or not.** Some of the lecture material will be posted on the course website, while some things will be discussed only in class. Therefore, **constant attendance to lectures is highly recommended.** The course schedule is provided as a guide and will be revised if dictated by prevailing circumstances (e.g., pedagogical purposes; the level of students' knowledge, etc.).

Active cell phones and the use of random-access devices (e.g., MP3 players, Palm Pilots, iPods) are NOT ALLOWED during lectures. You are welcome to bring your coffee or snacks, though.

3. Quizzes: non-cumulative

Two, 15 min quizzes will be given **during lecture time** as indicated on the course schedule (see p. 5). Each quiz consists of **5 questions** and is worth **100 points**. **The average of the two quizzes will represent 20% of your final grade. There is no make-up for quizzes.**

4. In-term Exams: non-cumulative

Two, 50 min exams will be given **during lecture time** as indicated in the course schedule (see p. 5). Each exam will consist of **15-20 questions** and is worth **100 points**. **The average of the two midterm exams will represent 35% of your final grade.**

After the commencement of the exam, no student will be allowed to leave the testing room without handing in the exam. Students arriving more than 20 minutes late to the exam will not be permitted to take the exam. All students are responsible for bringing to the exam their own operational writing instruments - **no sharing will be allowed. No other materials will be allowed.**

It generally takes 2-5 school days for grades to be reported back to students.

Active cell phones and the use of random-access devices (e.g., MP3 players, Palm Pilots, iPods) are NOT ALLOWED in the exam rooms.

There will be an opportunity during the last week of classes to make up **only one missed exam**. **The make-up exam will be cumulative and will be taken at the same time by all students who are eligible to take it.** To be eligible to take the make-up exam, a student must **e-mail me with a reasonable explanation for missing the initial exam**. Eligible students will be notified by email regarding the date, time, and location of the exam. **The make-up exam can only be used to replace a missed exam, NOT to improve a grade on an exam that was taken.** There will be **no opportunity to retake the make-up exam**, regardless of the reason for missing it.

5. Final Exam: cumulative

The final exam will be a **2 hrs exam** held during the final exams week. The date, location and start time will be set by the University, announced in class, and posted to the course website. *Final Exam Week is Tue, Sept. 2 – Sat, Sept. 6. Students should expect to be at Drexel the entire week. The final exam will NOT be rescheduled to accommodate travel plans.* The final exam will consist of **30-35 questions**, is worth **100 points**, and will represent **25% of the final grade**. **All rules mentioned in Section 4 apply to the final exam, too.**

THERE IS NO MAKE UP FOR THE FINAL EXAM. STUDENTS MUST BE PRESENT FOR THE FINAL TO PASS THE COURSE. A student who (1) does NOT score at least 45% on the final exam AND (2) also has a failing grade on one midterm exams will NOT pass the course, regardless of the rest of his/her performance in the course.

Note: Questions on quizzes and exams will be a mixture of multiple-choice and short response questions.

To answer these questions, you will need to be able to draw chemical structures, to use systematic nomenclature, to solve synthetic schemes, to write chemical equations, and to write or apply reaction mechanisms.

6. Clicker Grade:

The “clicker grade” is worth **100 points** and will be **10% of your final grade**. Each student will be assigned a personal response device (“clicker”) to use this term. **Full credit will be given for responses to at least 75% of the questions asked during the course of the term.** Additionally, students who constantly participate in class discussions may receive extra credit for their final grade.

7. Online Homework: MasteringChemistry

The online homework is offered complimentary by Pearson. **You will receive an e-mail with instructions for how to register during the first week of classes. Homework will be activated as the term progresses.** The final online homework grade is worth **100 points** and will be **10% of your final grade**.

8. Academic Honesty and/or Cheating:

Students are held to the highest expectations and standards regarding honesty in all aspects of the course, including taking exams. Cases of cheating will be reported to the College of Arts and Sciences and to the University. **Students caught cheating will receive a failing (F) grade.** For more information, see material in “Academic Dishonesty” under the “Academic Policies” tab at the following link:

http://drexel.edu/studentaffairs/community_standards/studentHandbook/

GENERAL INFORMATION

How Will You Learn Chemistry in This Course?

The exact time of study needed to be successful in this course depends on your previous background and personal style of study. The assignments provided should prepare the “average” student to get the “average” grade. Higher grades require more practice.

Starting week 2, there is free tutoring (**no appointment necessary**) available for additional help in **Stratton 106. Tutoring hours will be announced during the first week of the term.**

Disability Services:

Students with disabilities should see material under the “Health and Disability Services” tab at the following link: http://drexel.edu/studentaffairs/community_standards/studentHandbook/

Students with disabilities who wish to request special accommodations at Drexel University need to present a current accommodation verification letter (“AVL”) before accommodations can be made. AVL's are issued by the Office of Disability Services (“ODS”); <http://www.drexel.edu/ODS/index.html>. Once submitted, the AVL letter is valid for all exams, including the final exam. **Any student requesting special testing accommodations must contact me at least seven (7) days prior to the exam. Accommodations will NOT be made if the AVL is first provided on the day of the exam.**

Course Schedule

Week	Component	Monday	Tuesday	Wednesday	Thursday	Friday
1	Date	6/23/2014		6/25/2014		6/27/2014
	Chapters	Basic notions review (Hybridization)		Basic notions review (Mechanisms & Nomenclature)		Basic notions review (Aromatic compounds) (16.1-16.2; 16.9; 16.13)
2	Date	6/30/2014		7/2/2014		7/4/2014
	Chapters	17.1-17.2		17.3-17.6		17.5-17.6
3	Date	7/7/2014		7/9/2014		7/11/2014
	Chapters	17.7-17.9		17.10		17.11-17.12
	Quiz			Quiz 1		
4	Date	7/14/2014		7/16/2014		7/18/2014
	Chapters	17.14-17.15		17.16		17.16; 18.1-18.3
5	Date	7/21/2014		7/23/2014		7/25/2014
	Chapters	18.4; 18.7-18.10		EXAM 1		18.11; 18.14; 18.12
6	Date	7/28/2014		7/30/2014		8/1/2014
	Chapters	18.15-18.18		18.19-18.20; 19.1		19.2-19.7
7	Date	8/4/2014		8/6/2014		8/8/2014
	Chapters	19.9-19.12		19.10 (pyridine reactions)		19.13-19.14
	Quiz			Quiz 2		
8	Date	8/11/2014		8/13/2014		8/15/2014
	Chapters	19.16-19.20		20.1-20.5		20.8-20.9; 21.7
9	Date	8/18/2014		8/20/2014		8/22/2014
	Chapters	20.9-20.14; 21.1-21.2		EXAM 2		21.3; 21.5; 21.8
10	Date	8/25/2014		8/27/2014		8/29/2014
	Chapters	21.6; 21.9-21.14		22.1-22.3		Review
11	Date	9/1/2014		9/3/2014		9/5/2014
		NO CLASS		Final Exams Week (9/2-9/6)		