

COURSE INFORMATION (SECTION 02)

Lectures: Monday & Wednesday 10:00 - 11:20 am; Smith Hall 220; [Maps&Directions](#)

Office Hours: Wednesday 2:00 -3:00 pm or by appointment galoppin@newark.rutgers.edu; Life science center 1, 3rd floor office suite 301F.

Modality: This course is delivered in person, all material is available via Canvas

Recitations for Section 02: Professor Fina Liotta, fliotta@rutgers.edu Tuesday 1:00 PM - 2:20 PM ACK-123. Recitations will be used to discuss homework problems and review lecture material.

Disclaimer: These lecture materials are protected by copyright laws. The copyright ownership of the lecture materials vests in either the Professor teaching the course, or to Rutgers University to the extent applicable. The copyright owner of the lecture materials grants you a non-exclusive and limited license only to use them for your own personal use during the course. Sharing them with others (including other students), reproducing, distributing, or posting any copyright protected part of the lecture materials elsewhere-including but not limited to any internet site-will be treated as a copyright violation and an offense against the honesty provisions of the Code of Student Conduct.

Description & Learning Objectives: Fundamental principles of organic chemistry focusing on structure, properties and reactivity of a selected group of functional groups. Emphasis will be on molecular structure of organic molecules, stereochemistry, structure and reactivity, reaction mechanisms and an introduction to spectroscopic characterization of organic compounds.

After completion of this course students should:

- Understand the structure and bonding of organic molecules
- Be familiar with structure and properties of major classes of functional groups in organic chemistry
- Be able to rationalize reactivity trends of selected functional groups
- Be familiar with selected reaction classes in organic chemistry
- Understand conformational structures, identify lower energy conformers
- Understand principles of stereochemistry, identify configuration of chiral centers
- Understand the nomenclature of selected aromatic compounds
- Recognize and assign stereochemical designations of organic compounds
- Be able to predict reactivity of functional groups
- Predict products from reactions of alkenes, alkynes, alkyl halides, dienes, alcohols and ethers based on a mechanistic understanding of these reactions and apply these reactions in multi-step syntheses and in the context of real examples of organic molecules
- Be able to interpret IR spectra of organic compounds and characterize the functional groups present in the molecules (given spectrum identify compound and viceversa predict spectrum of a compound)

INSTRUCTOR SECTION 02 INFORMATION

Instructor: Professor Elena Galoppini
Office: Life Science Center I, LSC 301d in the 3rd floor office suite
Email: galoppin@newark.rutgers.edu
Office Hours: Wednesday 2:00 -3:00 pm
Life Science Center I, 3rd floor office suite reading room
There will be Saturday 9 am review sessions (zoom) approximately every other weekend;
these will be announced in class
Recitations: Dr. Fina Liotta: fliotta@rutgers.edu

Please note: lectures cannot be recorded

IMPORTANT DATES SPRING 2022

[Academic Calendar \(NCAS is school 21\)](#)

Event	2022–2023
Fall Semester Begins	Tuesday, September 6
Changes in Designation of Class Days	Tuesday, November 22 (Thursday Classes)
	Wednesday, November 23 (Friday Classes)
Thanksgiving Recess	Thursday, November 24 - Sunday, November 27
Regular Classes End	Wednesday, December 14
Reading Days	Thursday, December 15
Fall Exams Begin	Friday, December 16
Fall Exams End	Friday, December 23

COURSE SCHEDULE		MO = MONDAY ; W = WEDNESDAY
September		
W	7	Chapter 1: Covalent Bonds & Shapes of Molecules
Mo	12	Chapter 1
W	14	Chapter 2: Alkanes & Cycloalkanes
Mo	19	Chapter 2
W	21	Chapter 3: Stereoisomerism & Chirality
Mo	26	Chapter 3
W	28	Chapter 4: Acids & Bases
October		
Mo	3	Chapter 5: Alkenes: Bonding & Properties
W	5	Chapter 5
Mo	10	Chapter 6: Reactions of Alkenes
W	12	Chapter 6
Mo	17	Exam 1 Chapters 1-6
W	19	Chapter 7: Alkynes
Mo	24	Chapter 7
W	26	Chapter 8: Haloalkanes & Radical Reactions
Mo	31	Chapter 8
November		
W	2	Chapter 9: Nucleophilic Substitution & Elimination
Mo	7	Chapter 9
W	9	Chapter 10: Alcohols
Mo	14	Chapter 10
W	16	Chapter 10
Mo	21	Exam 2 Chapters 7-10
W	23	No class Thanksgiving-- change in designation day
Mo	28	Chapter 11: Ethers, Sulfides, & Epoxides
W	30	Chapter 11
December		
Mo	5	Chapter 12: Infrared Spectroscopy
W	7	Chapter 12
Mo	12	Chapter 12
W	14	REVIEW
Mo	19	Starts at 11:45am in Smith Hall 220 FINAL (Chapters 1-12)

GRADING POLICY

Midterm 1: 20% Midterm 2: 20% Quizzes (Dr. Liotta, recitations): 20% Final: 40%
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Two 80-minute midterms exams will count for 40% of the course grade, recitation quizzes will count for 20% and a comprehensive final exam will count for 40% of the course grade. All exams are in person and are closed book, no notes.

Make-up policy: The final exam, which is cumulative, will serve as the make-up exam for any student who is absent from Midterm 1 or 2 with a valid excuse

Letter grades will be assigned according to the following scale (scores are percentages of the maximum possible points):

A (100-85), B+ (84-80), B (79-70), C+ (69-65), C (64-55), D (54-50), F (49-0)

ABOUT MIDTERMS 1 & 2

- a) The 2 eighty-minute midterms will cover selected chapters
- b) Each midterm will consist of **40 multiple-choice questions** (1 point per question, only 1 answer choice for each question is correct, no open ended questions, 4 choices each question) + **4 bonus questions (44 total)**. In each exam **the score will be normalized to 40 questions**. Example: if someone scores all 44, this counts as $44/40 = 110\%$, if someone scores 30 of the 44 then it is $30/40 = 75\%$.

ABOUT THE FINAL

- a) The final examination is comprehensive (= all chapters)
- c) The final will consist of **40 multiple-choice questions** (1 point per question, only 1 answer choice for each question is correct, no open ended questions, 4 choices each question) + **4 bonus questions (44 total)**. **The score will be normalized to 40 questions**. (Example: if someone scores all 44, this counts as $44/40 = 110\%$, if someone scores 30 of the 44 then it is $30/40 = 75\%$)

ABOUT THE QUIZZES (administered by Dr. Liotta)

20% of the final score from recitation quizzes. All quizzes are administered in person during recitations by Prof. Fina Liotta who will communicate the format and the schedule.

TEXTBOOK & OTHER RESOURCES**Required Textbook:**

- “Brown, Iverson, Anslyn, & Foote *Organic Chemistry*, 8th ed., and the accompanying *Student Study Guide and Solutions Manual*, (Brooks/Cole-Cengage Learning).
- The problems are identical in the 7th edition in case you want to save \$ on the solutions manual.

publisher's mini-site for the 8th edition of the text book:

<https://www.cengage.com/c/organic-chemistry-8e-brown/9781305580350PF/>

Recommended Molecular model kit:

<https://ochemkit.com/index.html>:

it is recommended. You can bring it to the exams but must be in a transparent plastic bag.

Other Resources that will be shared :

- Powerpoints used in class and handwritten notes will be made available ahead of each lecture on [Canvas](#)
- Chapter summaries will be available in Canvas
- A studyguide will be provided a week prior to each exam.

Recommended Test Banks:

Make sure that you cover all sample multiple-choice questions that are included in the lecture slides. Additional resources for multiple-choice questions are below:

<https://www2.chemistry.msu.edu/faculty/reusch/VirtTxtJml/Questions/problems/indexam.htm>

<https://www.sanfoundry.com/1000-organic-chemistry-questions-answers/>

<https://global.oup.com/uk/orc/chemistry/okuyama/student/mcqs/>

<https://www2.chemistry.msu.edu/faculty/reusch/virttxtjml/questions/problems.htm>

<https://www.albert.io/organic-chemistry-2>

Useful Websites (see also in Canvas):

- <https://www.name-reaction.com/list>
- <https://www.organic-chemistry.org/namedreactions/>
- <https://www.masterorganicchemistry.com/>
- <https://organicchemistrydata.org/>

SOME COURSE RULES

- Please be punctual: classes start at 10:00 pm exactly.
- **Emails must be professional: emails that do not have salutation, closure and signature will be completely ignored.**

SUGGESTED END OF CHAPTER HOMEWORK PROBLEMS FROM TEXTBOOK

Homework **will not be graded** but selected problems will be in exams.

Ch 1: 1-7,13-19,20,21,23,25-29,32,37,38,51,52,55,57,60

Ch 2: 1-10,12-15,16,20,21,26,27,28,32,34,42,48,58,60

Ch 3: 1-8,13,14,16-19, 22,23,26,27,30,31,37

Ch 4: 1-6,8,9,10,12,15,16,17,20,22,26,32,34

Ch 5: 3-11,13,14,16,18,29,35

Ch 6: 2-10,12,13,15-19,23,24,30,34,37,39,40,42,45,46

Ch 7: 1-8,10-14,16,17,20,23

Ch 8: 1,2,5-15,29,30,32

Ch 9: 1-13,15,17,18,20,22,25,26,28,30,34,37,38,43-45,47,51,56,58

Ch 10: 1-16,18-21,23,26,28-33,34,35,38,40,45,54,55

Ch 11: 1-8,10-12,15-17,21,23,27,31,33,34,44

Ch 12: 1-8,9,11

HELP !

- *Help!* If you need assistance, study tips, or have questions about the course material or homework problems, see Dr. Galoppini and Dr. Liotta during office hours, make an appointment to see them at times other than office hours, or contact the Learning Center for other options.
- *The Learning Resource Center* in Conklin Hall can provide various types of assistance:
- *Free Tutoring.* If there are enough requests at the Learning Resource Center for tutors, free tutoring will be provided.
- *Learning Assistants.* If you would like advice on how to develop better study habits and skills, make an appointment with a learning assistant at the Learning Resource Center.

ACADEMIC POLICIES AND PROCEDURES**Attendance Policy.**

- Not attending class is a bad, bad idea. Classes will NOT be recorded.
- Please, review Rutgers University attendance policy, which can be found at <http://policies.rutgers.edu/view-policies/academic-%E2%80%93-section-10#2>
- You are responsible for material covered in any class that you do not attend. If you miss a class, you must contact a classmate or me for the missed information. If you have a situation that might cause you to miss an entire week of class, discuss it with me as soon as possible.

This course adheres to Rutgers University policies on academic integrity.

Please see: <http://academicintegrity.rutgers.edu/academic-integrity-policy> and <http://academicintegrity.rutgers.edu/resources-for-students/>

STUDENT CODE OF CONDUCT

Students are required to adhere to the [University Student Code of Conduct](#) delineated in the Rutgers Student Affairs website [Student Conduct](#) page:

<http://studentconduct.rutgers.edu/student-conduct-processes/university-code-of-student-conduct/#1495568095620-2f5ce77d-17dd>

STUDENT SUPPORT SERVICES AND ACCOMMODATIONS

Rutgers University Newark (RU-N) is committed to the creation of an inclusive and safe learning environment for all students and the University as a whole. RU-N has identified the following resources to further the mission of access and support:

For Individuals with Disabilities: The Office of Disability Services (ODS) is responsible for the determination of appropriate accommodations for students who encounter barriers due to disability. Once a student has completed the ODS process (registration, initial appointment, and submitted documentation) and reasonable accommodations are determined to be necessary and appropriate, a Letter of Accommodation (LOA) will be provided. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at ods.rutgers.edu. Contact ODS at (973)353-5375 or via email at ods@newark.rutgers.edu.

For Individuals who are Pregnant: The Office of Title IX and ADA Compliance is available to assist with any concerns or potential accommodations related to pregnancy. Students may contact the Office of Title IX and ADA Compliance at (973) 353-1906 or via email at TitleIX@newark.rutgers.edu.

For Absence Verification: The Office of the Dean of Students can provide assistance for absences related to religious observance, emergency or unavoidable conflict (e.g., illness, personal or family emergency, etc.). Students should refer to [University Policy 10.2.7](#) for information about expectations and responsibilities. The Office of the Dean of Students can be contacted by calling (973) 353-5063 or emailing deanofstudents@newark.rutgers.edu.

For Individuals with temporary conditions/injuries: The Office of the Dean of Students can assist students who are experiencing a temporary condition or injury (e.g., broken or sprained limbs, concussions, or recovery from surgery). Students experiencing a temporary condition or injury should submit a request using the following link: <https://temporaryconditions.rutgers.edu>.

For English as a Second Language (ESL): The Program in American Language Studies (PALS) can support students experiencing difficulty in courses due to English as a Second Language (ESL) and can be reached by emailing PALS@newark.rutgers.edu to discuss potential supports.

For Gender or Sex-Based Discrimination or Harassment: The Office of Title IX and ADA Compliance can assist students who are experiencing any form of gender or sex-based discrimination or harassment, including sexual assault, sexual harassment, relationship violence, or stalking. Students can report an incident to the Office of Title IX and ADA Compliance by calling (973) 353-1906 or emailing TitleIX@newark.rutgers.edu. Incidents may also be reported by using the following link: tinyurl.com/RUNReportingForm. For more information, students should refer to the University's Student Policy Prohibiting Sexual Harassment, Sexual Violence, Relationship Violence, Stalking and Related Misconduct located at <http://compliance.rutgers.edu/title-ix/about-title-ix/title-ix-policies/>.

For support related to interpersonal violence: The Office for Violence Prevention and Victim Assistance can provide any student with confidential support. The office is a **confidential resource** and does *not* have an obligation to report information to the University's Title IX Coordinator. Students can contact the office by calling (973) 353-1918 or emailing

run.vpva@rutgers.edu. There is also a confidential text-based line available to students; students can text (973) 339-0734 for support.

For Crisis and Concerns: The Campus Awareness Response and Education (CARE) Team works with students in crisis to develop a support plan to address personal situations that might impact their academic performance. Students, faculty and staff may contact the CARE Team by using the following link: tinyurl.com/RUNCARE or emailing careteam@rutgers.edu.

For Stress, Worry, or Concerns about Well-being: The Counseling Center has confidential therapists available to support students. Students should reach out to the Counseling Center to schedule an appointment: counseling@newark.rutgers.edu or (973) 353-5805. If you are not quite ready to make an appointment with a therapist but are interested in self-help, check out *TAO at Rutgers-Newark* for an easy, web-based approach to self-care and support: <https://tinyurl.com/RUN-TAO>.

For emergencies, call 911 or contact Rutgers University Police Department (RUPD) by calling (973) 353-5111.

Academic Services:

- For academic support visit Rutgers Academics Student Support at <https://www.rutgers.edu/academics/student-support>
- Any student can obtain tutoring and other help at the [Learning Centers](#) on each campus. Check the website at <https://rlc.rutgers.edu/>
- For coaching help with writing skills and assignments visit the [Writing Coaching](#) webpage at <https://rlc.rutgers.edu/student-services/writing-coaching>
- Many library resources are available online. Assistance is available through phone, email, and chat. For information, check the [Rutgers Libraries](#) website at <https://www.libraries.rutgers.edu/>

Rutgers Student Health Services:

For more information visit: <http://health.rutgers.edu/>

Veteran Services:

Please visit the [Office of Veteran and Military Programs and Services](#) website for more information: <https://veterans.rutgers.edu/>

Outline of lectures. Content will be refined as we progress in the course (for instance what reactions to focus on and what reactions to skip)

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