

Instructor: Dr. Anthony F. Tierno
E-mail: atierno@towson.edu
Office: SM 528B
Office hours: M (1:00 – 2:00 PM), Th (3:30 – 5:00 PM), F (9:00 – 10:00 AM), and by appointment
Website: <https://blackboard.towson.edu>

** Due to ongoing uncertainty related to the COVID pandemic, the following policies, number and type of assignments, and grading scheme are subject to change. Any changes will be communicated with students in writing and will include a new syllabus posted to Blackboard. **

Class Meeting Times and Locations:

Lecture:	M/W from 9:00 – 9:50 AM	Zoom – Online
Lab:		
004	W from 12:00 – 3:50 PM	SM 589
101	M from 4:30 – 7:50 PM	SM 589
102	Th from 6:00 – 9:50 PM	SM 589

Required Materials:

- Textbook: *Organic Chemistry: Principles and Mechanism*, Joel Karty, 2nd Edition, W. W. Norton & Company

This can be accessed through Blackboard as an ebook by the Direct Access program (for more details see <https://towsonustore.com/directaccess>).

Recommended Materials:

- Solutions Manual/Study Guide for Karty book: *Study Guide and Solutions Manual for Organic Chemistry: Principles and Mechanisms* (2nd edition) by Joel Karty, W. W. Norton & Company ISBN: 978-0-393-65555-1 (also available on course reserve in the Cook Library)
- Model kit: Organic Chemistry Molecular Model Set by Mega Molecules [ASIN: B002MN9C9]

The *Molecular Visions* kit by Darling Models is available from the University Bookstore. **However, I think there are more useful model kits and I personally would not recommend this one.**

Organic chemistry is a very visual discipline and being able to see molecules in three dimensions is crucial to success. Though not required, it's highly recommended, even more so if you plan to take CHEM 332.

Course Catalog Description:

Structure, stereochemistry, reactions and their mechanisms, preparation and properties of alkanes, alkenes, alkynes, alkyl halides, ethers, and alcohols. Laboratory techniques include purification, spectroscopic (MS, IR, NMR), and chromatographic (TLC, GC) methods of identification, and synthesis. Three lecture hours, one hour of laboratory lecture, and one three-hour laboratory period. CHEM 331 and 332 comprise a traditional two-term organic chemistry sequence. Prerequisite: [CHEM 132](#) and [CHEM 132L](#) with an average grade of C or better. Lab/Class fee will be assessed.

Learning Outcomes:

This course is the first of a two-semester sequence designed to introduce students to the theory and practice of modern Organic Chemistry. At the end of CHEM 331, students should have a solid grasp on doing the following:

1. Systematically name hydrocarbons and simple derivatives, and categorize the major classes of organic compounds by functional group and structural features.
2. Understand isomerism in organic compounds and be able to accurately identify isomeric relationships between compounds.
3. Understand factors that determine the physical properties, shapes, and fundamental reactivities of different classes of compounds.
4. Propose reaction mechanisms using electron-pushing formalism for the transformations of the following discussed throughout the course: nucleophilic substitution, elimination, electrophilic addition, and radical reactions.
5. Identify the important reactions of simple hydrocarbons alkanes, alkenes, alkynes, alkyl halides, alcohols, and ethers, and their applications in synthesis.

Course Overview and Requirements:

A: Class Attendance and Participation. Attendance is not mandatory although highly encouraged as it is essential to your success. Towson University policy is such that you cannot be required to come to campus, therefore you are allowed to switch between in-person and online.

We are presented with additional challenges in remote learning, particularly in building a sense of community. Online learning requires discipline to keep up with course material, and engaging with fellow students and the instructor are crucial to success in organic chemistry. Therefore, you should be rewarded for **attending the twice-a-week synchronous lectures**. This will contribute 5% (50 points) to your overall grade. Your ultimate semester goal is to reach 50 points, but you cannot earn more than those 50 points.

- Attending each synchronous lecture/problem solving session on Zoom is worth **2 points**. There is a 4 point per week cap.
- Attending is defined by being logged into each meeting for at least 40 of the 50 minutes.

B: Exam Attendance. Should a student miss an exam with a university-approved documented excuse, the student will receive no grade for the exam and the final exam will be weighted appropriately to compensate for the missing points. The opportunity for an alternate or make-up exam will be considered on a case-by-case basis. **Should a student miss an exam with no university-approved documented excuse, a grade of ZERO will be recorded.**

See Towson University's full policy here <http://catalog.towson.edu/undergraduate/academic-policies/class-attendance-absence-policy/>.

C: Reading Assignments. Reading assignments corresponding to chapters in the 2nd edition of the Karty textbook are provided for each lecture on the accompanying lecture schedule. It is expected that students will complete the corresponding reading assignments **before** the lecture in which the topics will be discussed. You may find it helpful to re-visit readings after lecture if you identify a concept that is still unclear.

D: Homework. Online homework assignments will be administered through the Smartwork5 interactive online assessment platform associated with your textbook. At the end of the semester, your combined score from the homework assignments will be counted out of 100 points (10% of the overall grade). The purpose of these assignments is to serve as a review of the lecture content and provide you practice for the online ACS Final Exam format. **The online assignments will be due by 10:00 PM on the dates listed in the course schedule.** As graded assignments, they are subject to the regulations posted in both the academic integrity and copyright sections at the end of this syllabus.

E: Problems Sets. To provide you with additional practice, I will be posting weekly problem sets with detailed answer keys. Though I will not grade any of these problems, I do expect that you will be working on them. The purpose of these assignments is to serve as practice for your exams. The types and format of these problems mimic your mid-term exams.

F: Exams. This course will contain 4 midterm exams and 1 final exam provided by the ACS:

Exam 1:	Friday, February 19th
Exam 2:	Friday, March 12 th
Exam 3:	Friday, April 2 nd
Exam 4:	Friday, May 7 th
Final Exam:	Friday, May 14 th (8:00 – 10:00 AM)

All exams are given in a "closed book" environment unless otherwise noted. All books, notes, or any other unauthorized written or electronic references are strictly prohibited. You may use a model kit.

G: Grading Scheme. A single letter grade will be assigned for the entire course. The overall grade in the course will be determined by how many points you earn out of possible 1000. The lecture portion of the course is worth 70% and the lab portion 30% of the overall course grade, respectively.

	<u>Point Breakdown</u>	<u>Total Points</u>	<u>Letter Grade</u>
participation	50 points	900 - 1000	A
online homework	100 points		A ⁻
midterm exams	400 points (100 each)		B ⁺
final exam	150 points		B
<hr/>			
<i>overall lecture (70%)</i>	<i>700 points</i>	700 - 799	B ⁻
<i>spectroscopy (10%)</i>	<i>100 points</i>		C ⁺
<i>lab component (20%)</i>	<i>200 points</i>		C
Overall	1000 points	600 - 699	D ⁺
			D
		0 - 599	F

As you can see in the table above, the correlation between point total and final grade are given; note that the (+/-) grade cutoffs will only be determined at the end of the semester after examining the final grade distribution. I reserve the right to adjust these grade boundaries at the end of the semester under the appropriate circumstances. **You will never be assigned a grade lower than what you have received in earned points alone.** This policy exists in the situation that the class average is too low.

I do not have a pre-determined amount of letter grades I will assign. Your grade is purely determined by the amount of earned points out of the possible point total. It is important to me that the grading scheme is completely transparent. If there are questions please let me know.

Some Friendly Advice:

Organic chemistry has a notorious reputation for being a difficult course and for some of you it will be the most challenging and time-consuming course of your college career. With that said, it can be a very rewarding course full of beautiful examples of chemistry's real-life applications, and it provides a great opportunity to hone problem-solving and critical-thinking skills. Below I've included some key advice and experiences that will help you on your journey:

1. It is about recognition not memorization... roll up your sleeves and do as many problems as you can! Brute memorization will fail you in this course so **DO NOT** think cramming will work
2. Related to the first point, you need **consistent** studying, falling behind means less time for problems
3. This is like learning a **new language**, you won't be fluent unless you speak it... form study groups
4. If you feel like you're drowning, **get help immediately!** You have resources on campus to get the help you need:
 - a. **ME!** Make use of my office hours. I am also willing to schedule individual meetings with you
 - b. **TUTORS!** There is free help available through the Chemistry Tutor Center, coordinated by Liina Ladon (SM 538 – lladon@towson.edu)

General Course and University Policies:

A: Academic Integrity:

“The acquisition, sharing, communication, and evaluation of knowledge is at the core of a university’s mission. To realize this part of its mission, a university must be a community of trust. Because integrity is essential to the purpose of an academic community, the responsibility for maintaining standards of integrity is shared by all members of that academic community.”

<https://www.towson.edu/about/administration/policies/documents/policies/03-01-00-student-academic-integrity-policy.pdf>

The university’s policy comprehensively details the types of unacceptable behaviors generally known as “cheating”. Instances of misconduct will be treated in accordance with this policy and will, at minimum, result in a grade of ZERO for the assignment for all involved. Please note that knowingly allowing someone to copy or cheat from you is considered an equal offense and will be punished in the same manner - no attempt will be made to determine who was copying from whom. Actions that are considered cheating in this course include, but are not limited to:

1. Direct copying of submitted assignments (lab reports, online homework, exams, etc.)
2. Indirect copying through, for example, extensive paraphrasing or sharing of computer files
3. Wandering eyes (attempts to look at others’ papers), use of cellphones, or unauthorized outside materials during exams. **This includes services such as Chegg and Course Hero.**
4. Falsification or manipulation of lab data

B: Chemistry Department Statement on Classroom Diversity:

The students, faculty, and staff at Towson University represent a diverse and vibrant community of learners and scholars. As a community, we value the unique contributions of each individual and promote active participation in all aspects of the learning process by each community member. Your instructor supports Towson University’s goal of fostering a diverse and inclusive educational setting. Your instructor strives to create a classroom environment built upon the principles of mutual respect and support. Toward this end, all members participating in this course are expected to demonstrate respect for all other members of the class. If you feel these expectations have not been met, please speak with your instructor or the designated diversity liaison, [Dr. Cindy Zeller \(czeller@towson.edu\)](mailto:czeller@towson.edu).

For further information regarding the diversity and inclusion policies of Towson University, please see [Towson University’s Commitment to Diversity](#), [the Fisher College of Science and Mathematics Diversity Action Plan](#), and the [Chemistry Department Diversity Action Plan](#).

C: Students with Disabilities:

Students with any sort of disability who may need special consideration should see *the instructor during the first week of class* with appropriate paperwork. This course is in compliance with Towson University policies for students with disabilities. Students with disabilities are encouraged to register with Disability Support Services (DSS), 7720 York Road, Suite 232, 410-704-2638 (Voice) or 410-704-4423 (TDD).

Students who suspect that they have a disability but do not have documentation are encouraged to contact DSS for advice on how to obtain appropriate evaluation. A memo from DSS authorizing your accommodation is needed before any accommodation can be made.

D: Course Repeat Policy:

Students may not repeat a course more than once without prior permission of the University Academic Standards Committee. Students who are repeating this course may opt to repeat lecture without lab if they have obtained 80% or above in the lab portion of the same course within the previous 3 semesters (including summer). Students in this situation must have their previous lab grade verified by their current instructor by the end of the change-of-schedule period. The student's previous lab grade will be used in calculation of their overall grade in the current semester. A previous lab grade may only be used for one subsequent attempt at the same course.

E: Copyright Notice:

Your instructor retains the copyright to all original materials distributed in this course (including, but not limited to, hard copies or electronic copies of lecture notes, problem sets, handouts, assignments, exams, answer keys, and lab materials). Reposting, selling, or otherwise distributing these materials in any fashion at any time is prohibited.