



CHE 201.01: Organic Chemistry I Fall 2016, MWF 11:00 – 11:50 am



Instructor: Dr. Joshua Ring (Office: Minges Science Room 211 B, Office Phone: x7927, Email: joshua.ring@lr.edu)

Text: Organic Chemistry Principles and Mechanisms *the textbook* (highly suggested), by Joel Karty (Norton Publisher).

Information Covered: Chapters 1-12 of the text:

- Structure and nomenclature of organic molecules
- Stereochemistry and conformations of organic molecules
- Thermodynamics and kinetics of elementary reaction steps (including acid-base)
- Nucleophilic substitution and elimination reactions
- Electrophilic addition reactions to nonpolar π bonds

You are responsible for any supplementary information provided in lectures; tests and quizzes will be from the video lectures, class notes, and the textbook.

Student Learning Objectives: The student outcomes are grouped into essential outcomes, which every student will master in order to pass the class, and general outcomes, which will determine a student's passing grade.

Essential Outcomes:

1. Drawing Lewis Dot Structures
2. Interconverting Lewis Dot Structures, Condensed Formulas, and Line-Angle Structures
3. Using Basic Nomenclature
4. Identifying and Explaining Charge Stability
5. Drawing Reaction Mechanisms (Acid-Base, Substitution, Addition, Elimination)
6. Predicting Reactive Sites

General Outcomes:

1. Classifications and Comparisons of Bonds and Angles
2. Indicating Stability of Cycloalkane Conformations
3. Identifying and Designating Chirality
4. Classifying Isomeric Relationships
5. Using Advanced Nomenclature I
6. Predicting Relative Acidity and Basicity
7. Understanding Single-Step and Multistep Substitution and Elimination
8. Predicting Reaction Mechanisms and Products (SN2/E2/SN1/E1)
9. Predicting Products of Advanced Substitution Reactions
10. Identifying Reactants and Reagents for Substitution and Elimination Reactions
11. Understanding Electrophilic Addition Reactions
12. Predicting Products of Advanced Addition Reactions
13. Identifying Reactants and Reagents for Addition Reactions
14. Biochemical Application of Organic Chemistry

Mastery of each of these outcomes will be demonstrated by the student during class, by pass/fail mastery evaluations of individual outcomes. Outcome #14 will be periodically tested throughout the semester.

Office Hours: I will be available at my office every Tuesday from 3:00 (after lab) to 5:00pm, and Thursday from 9:00 to 11:00 am; other office hours may be available by appointment, by contacting me via the phone or email address above.

Grading: In this course, students will be given the opportunity to demonstrate mastery in each of the above learning outcomes after they have been covered during class. In general, these pass/fail outcome evaluations will take place during the class following completion of each outcome, with approximately one or two outcome evaluations per week of class, which will always take place during the first 10 minutes of class.

To pass the course, each student MUST demonstrate mastery of each of the essential learning outcomes (EOs). Higher passing grades will be assigned based on the number of general learning outcomes (GOs) for which the student demonstrates mastery:

A:	Pass 6 EOs + 13-14 GOs	C:	Pass 6 EOs + 7 GOs
A- :	Pass 6 EOs + 12 GOs	C-:	Pass 6 EOs + 6 GOs
B+:	Pass 6 EOs + 11 GOs	D+:	Pass 6 EOs + 5 GOs
B:	Pass 6 EOs + 10 GOs	D:	Pass 6 EOs + 4 GOs
B-:	Pass 6 EOs + 9 GOs	D-:	Pass 6 EOs + 3 GOs
C+:	Pass 6 EOs + 8 GOs	F:	Pass less than 6 Eos and/or 3 GOs

Outcome evaluation retakes: During the semester, there will be three hour-long periods during which a student can retake up to 6 failed outcome evaluations each (October 3rd, November 4th, and November 28th). Furthermore, students can retake up to 6 more failed outcome evaluations during the final exam period.

Make-up exams: If a student misses the initial outcome evaluation due to a properly authorized excused absence, you can contact me within two class days of the missed evaluation, to schedule a make-up.

Final exam: During the 2-hour exam period (Monday, December 12th from 10:30am to 12:30pm), you will be given a 1-hour final exam which will be comprised of 50% EO questions and 50% GO questions. Your score on the exam can raise or lower your grade standing as indicated above by +2, +1, 0, -1, or -2 GOs (for example, a student who passes 9 GO's may raise their grade from a B- to an B+, or lower their grade from a B- to a C, but cannot be affected any more than that). Details about grading will be shared in class before the final exam.

After the final exam, students may use the rest of the hour to retake any failed outcome evaluations.

Problems and homework: In organic chemistry, there is no substitute for working problems/homework. Reading your book or following lectures is important, but without problems, you are very unlikely to pass this course. Therefore, this course will be arranged around working problems with lectures delivered online before class, and class time centered on working problems together in groups with the instructor's guidance.

Therefore, for each "class", problems will be worked in three different ways:

- 1) Pre-class problems. In this course, you'll be watching video lectures, during which you'll be asked some simple questions*. Example exam problems are given on Canvas below each video. These problems are ungraded, but please bring any questions to class with you!
**Note: you'll need to go to playposit.com and sign up, then add the class with code w8871d*
- 2) In-class problems. We will work moderate/advanced problems, including application problems in the realm of biochemistry, in groups in class. These problems will be ungraded, but are meant to solidify your knowledge of the material in an environment where you can freely ask questions of your friends and the professor.
- 3) After-class problems. Any of the sample problems that you don't complete before class should be worked after class. These should be used primarily as your method of self-assessment; I'd advise you to do as many as necessary until you know that you know the concepts and material from the class. *Use these as practice exams!* If you have any questions, feel free to contact me, or come by during my office hours.

Attendance: You are expected to attend every class, and are responsible for all material from class. As is probably apparent, class attendance will be wasted time unless you have taken the time to watch the lectures or read the text and work on some problems before class.

Laboratory: Students enrolled in CHE 201L (the laboratory class) will first meet the week of August 29th – September 2nd. You will not be admitted into any Chemistry lab wearing shorts or pajamas, nor sandals, clogs, or other open shoes, so please adjust your clothing appropriately.

Academic integrity policy: A fundamental purpose of a liberal education is its attempt to cultivate in the student a sense of honor and high principles pertaining especially to academics, but extending to all areas of life. An inherent feature of Lenoir-Rhyne University is its commitment to an atmosphere of integrity and ethical conduct. As a student of Lenoir-Rhyne University, I accept as my personal responsibility the vigorous maintenance of honesty, truth, fairness, civility, and concern for others. My devotion to integrity demands that I will not cheat in academic work and that I adhere to the established and required community code of conduct. I accept the responsibility for upholding the established standards against those who would violate them. And I understand and accept the consequences of infracting upon or assisting others in infracting upon this code. In addition to and beyond the requirements of any code or law, I affirm my own commitment to personal honor and integrity in all matters large and small. Even though the ideal of honor is an abstract one, by implementing this ideal, I join the men and women of Lenoir-Rhyne University in making the concept of honor a reality. (For additional information, see <http://student.lr.edu/cub/17> or the academic regulations section of the University Catalog at <http://registrar.lr.edu/catalog>.)

Accommodations for disabilities policy: It is the mission of the Office of Disability Services to ensure that every student with a disability has an equal opportunity to benefit from university programs. Students with disabilities are encouraged to contact the Office of Disability Services on the web at <http://disabilities.lr.edu/home> or by phone at (828) 328-7296. Students who need accommodations are asked to arrange a meeting with me during the first week of classes, or as soon as possible if accommodations are needed immediately. If you have a conflict with my office hours, please contact me by email or phone to set up an alternate time to meet.