CHEM 3211 Organic Spectroscopy Spring 2019

Instructor: Dr. Nolan Carter
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Webpage: Course materials are posted on Blackboard

Lecture:	M,W	1:00 - 1:50 PM	Laney 103
Office hours:	M, F	9:00-10:45 AM	
	W	2:00-3:15 PM	
	Or by appointment		

If I'm not in the office during office hours, check my research lab (Laney 204).

Required textbook:

Introduction to Spectroscopy, 5th ed.; Pavia, D. L.; Lampman, G. M; Kriz, G. S.; Vyvyan, J. R.; Cengage Learning (2014)

Course Description and Objectives:

The objective of this course is for students to develop skills for determining the structures of organic compounds from spectral information. The course will cover mass spectrometry, infrared spectroscopy, and nuclear magnetic resonance spectroscopy.

Prerequisite:

A grade of "C" or better in CHEM 2401 (Organic Chemistry 1) is required. CHEM 3411 (Organic Chemistry 2) is also required as a pre- or co requisite.

Attendance Policy:

Lecture attendance is strongly encouraged. Given the large amount of material we will cover, it will be extremely difficult to be successful in this class if your attendance is poor. Prolonged non-attendance (>4 consecutive class periods) may result in being dropped from the course. Makeup exams and quizzes will not be given unless the reason for absence is an officially sanctioned UCA activity (it is your responsibility to provide me with documentation at least one week prior to the exam or quiz so it can be taken early). For all other absences, if you contact me prior to an exam with a valid excuse (documented serious illness, etc.) that exam will be dropped and your exam grade will be based upon your other exam scores (including the final exam). Missing an exam without an acceptable excuse (as determined by the instructor) will result in a grade of "0".

Class disruptions will not be tolerated. Phones must be turned to silent prior to class. Text messaging or other phone use, talking, and consistent tardiness are also considered disruptive. Penalties for disruptive behavior may range from a deduction of points to dismissal from the course.

How to Be Successful in This Class:

1. **Come to class prepared**. Read through the chapters we will cover in lecture before class.

2. **Participate in class.** Class should be a dialogue not a monologue. In other words, don't be afraid to ask questions and answer questions I ask.

3. **You must work the homework problems.** Interpreting spectra is like solving puzzles. Practice is essential for developing your skills.

4. **Know when to seek help**. If you are having trouble with the course or have a question, stop by my office. If you are having trouble, don't wait until April to ask for help-by then it will be too late!

Grading:

Assessment	Points
3 Exams (100 points each)	300
Final Exam	200
Best 4 of 5 Quizzes (25 points each)	100
Total	**600**

Tentative Grading Scale

Percentage	Letter Grade
90-100	A
80-89	B
70-79	C
60-69	D
≤ 59	F

Exams: The four exams will consist of questions similar to the suggested problems and material covered in class. Although the homework problems will not be collected and graded, you will need to practice to perform well on exams.

Quizzes: Quizzes will be announced at least one class period in advance. The lowest quiz will be dropped. If you are absent the day of a quiz, that will count as your dropped quiz (unless the reason for absence is an officially sanctioned UCA activity).

Final Exam: The cumulative final exam will be given on Monday, April 29 from 11:00 AM to 1:00 PM.

General UCA Policies:

You should familiarize yourself with policies listed in the UCA Student handbook (http://uca.edu/student/student-handbook/), particularly those relating to academics and sexual harassment.

The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the university's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the *Student Handbook*. Penalties for academic misconduct in this course may include a failing grade on an assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student's acceptance of this university policy.

An Emergency Procedures Summary (EPS) for the building in which this class is held will be discussed during the first week of this course. EPS documents for most buildings on campus are available at http://uca.edu/mysafety/bep/. Every student should be familiar with emergency procedures for any campus building in which he/she spends time for classes or other purposes.

If a student discloses an act of sexual harassment, discrimination, assault, or other sexual misconduct to a faculty member (as it relates to "student-on-student" or "employee-on-student"), the faculty member cannot maintain complete confidentiality and is required to report the act and may be required to reveal the names of the parties involved. Any allegations made by a student may or may not trigger an investigation. Each situation differs and the obligation to conduct an investigation will depend on those specific set of circumstances. The determination to conduct an investigation will be made by the Title IX Coordinator. For further information, please visit: https://uca.edu/titleix. **Disclosure of sexual misconduct by a third party who is not a student and/or employee is also required if the misconduct occurs when the third party is a participant in a university-sponsored program, event, or activity.*

Student evaluations of a course and its professor are a crucial element in helping faculty achieve excellence in the classroom and the institution in demonstrating that students are gaining knowledge. Students may evaluate courses they are taking starting on the Monday of the thirteenth week of instruction through the end of finals week by logging in to myUCA and clicking on the Evals button in the top right.

The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Disability Resource Center, 450-3613.

Tentative Schedule

Exam dates may change

Week	
1/10,1/11	**No Class**
1/14-1/18	Ch. 1 Molecular Formulas
1/22-1/25	Ch. 2 IR Spectroscopy
1/28-2/1	Ch. 2 Continued, Ch. 3 Mass Spectrometry, Part 1
2/4-2/8	Ch. 3 Continued Ch. 4 Mass Spectrometry, Part 2
2/11-2/15	Ch. 4 Continued **Exam 1 Wednesday, 2/13**
2/18-2/22	Ch. 5 NMR Spectroscopy, Part 1
2/25-3/1	Ch. 5 Continued
3/4-3/8	Ch. 6 NMR Spectroscopy, Part 2
3/11-3/15	Ch. 6 Continued
3/18-3/22	**No Class, Spring Break**
3/25-3/29	**Exam 2, Monday 3/25** Ch. 7 NMR Spectroscopy, Part 3
4/1-4/5	Ch. 7 Continued Ch. 8 NMR Spectroscopy, Part 4
4/8-4/12	Ch. 9 NMR Spectroscopy, Part 5 Ch. 11 Combined Structure Problems
4/15-4/19	Ch. 11 Continued **Exam 3, Wednesday 4/17**
4/22-4/26	Ch. 11 Continued
	Final Exam 11:00 AM-1:00 PM **Monday, April 29**

Last day to drop is Friday, March 29