

Advanced Topics- SPECTROSCOPY
CHEM 4685
Fall 2016

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Class Period: MW 11:00am-12:15pm **Classroom:** TLC2105

Office hours: M9-10&2-4, T2-4, W9-10, R9-12, F9-10

Pre-Requisite: Completion of CHEM3422 (Organic Chemistry II) with C or higher

Required course materials (bring to every class)

- **Textbook: Organic Structures from Spectra, Fifth Edition**
by L. D. Field, S. Sternhell, J. R. Kalman, 2013.
- **i-Clicker**
- **Pencil, eraser, ruler, and calculator** are all required for each class

Course description

The objective of the course is to gain analytical skills to decipher UV-Vis, MS, IR, ^1H and ^{13}C NMR and 2D-NMR to identify organic compounds.

Learning Outcomes

Students will be able to identify organic compounds from given spectra within a reasonable time period. Students will be able to assign and rationalize signals of each spectrum according to the functional groups and structural characteristics.

Grades

Clicker quizzes and active in-class performance	20%
Quizzes (open-book)	20%
Exam 1 (closed-book)	20%
Exam 2 (closed-book)	20%
Final exam (closed-book)	20%

≥90%: A ≥80%: B ≥70%: C ≥60%: D ≤60%: F

- **Clicker quizzes:** Class attendance is mandatory and will be recorded in the form of clicker quizzes.
- **Active in-class performance:** In each class period, several students are named to present spectral analysis and structural identification of a particular problem. The quality and thoroughness of the presentation will be graded.
- **Quizzes:** Short open-book quizzes will be given throughout the semester.
- **Exams:** There will be two in-class exams and one final exam.

- The tentative exam dates are the following:

Exam 1: Monday, September 26

Exam 2: ~~Monday, November 11~~ Wednesday, November 9?16?

Final Exam: Monday, December 5, 11:00-1:00

Study Strategy

- Use the textbook as a workbook. Actively write in, label important pages. It is important that you are able to find relevant information in a timely manner in the book.
- To do well in in-class problems, work on assigned problems prior to class.
- To do well in quizzes and review clicker questions, do all homework assignments in a timely manner and keep building up your spectral analysis skills.
- Do practice on as many problems as possible, including those we do not do in class. I will be happy to discuss solutions outside of class.

HONOR CODE

At the University of West Georgia, we believe that academic and personal integrity are based upon honesty, trust, fairness, respect, and responsibility. Students at West Georgia responsibility for upholding the honor code. West Georgia students pledge to refrain from engaging in acts that do not maintain academic and personal integrity. These include, but are not limited to, plagiarism, cheating, fabrication, aid of academic dishonesty, lying, bribery or threats, and stealing.

The University of West Georgia maintains and monitors a confidential Academic Dishonesty Tracking System. Reported incidents become part of the student's conduct record at UWG.

UWG EMAIL POLICY

The UWG-issued e-mail address will be an official means of communication between the University and the student. The purpose of the official use of the student e-mail account is to provide an effective means of communicating important university related information to UWG students in a timely manner. It is the student's responsibility to check his or her email.

CELL PHONES AND ELECTRONIC DEVICES

All cell phones and electronic devices must be turned off in class. If a cell phone rings, or if you were found using a phone or electronic device in a silent mode, I will confiscate your phone for the remainder of the class period. If you refuse to turn in your phone, you will get a zero for the day's clicker and quiz points.

ACADEMIC SUPPORT

Students with a documented disability may work with UWG Accessibility Services to receive essential services specific to their disability. All entitlements to accommodations are based on documentation and USG Board of Regents standards. If a student needs course adaptations or accommodations because of a disability or chronic illness, or if he/she needs to make special arrangements in case the building must be evacuated, the student should notify his/her instructor in writing and provide a copy of his/her Student Accommodations Report (SAR), which is available only from Accessibility Services. For more information, please contact Accessibility Services.