

Instructor: Dr. Bor-Cherng Hong (洪伯誠)

Office: CHEM 514

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Office Hours: Monday 3:00 pm-4:00 pm or by appt.

Lecture Text: Spectrometric Identification of Organic Compounds, 7th Ed.

R. M. Silverstein; F. X. Webster; D. J. Kiemle

References: A Beginner's Guide to Mass Spectral Interpretation. T. A. Lee
Infrared Absorption Spectroscopy. K. Nakanishi; P. H. Solomon.
One-dimensional and Two-dimensional NMR Spectra by Modern Pulse Techniques.
K. Nakanishi
Circular Dichroism: Principles and Applications, 2nd Edition
by Nina Berova, Koji Nakanishi, Robert W. Woody
Modern NMR Spectroscopy J. K. M. Sanders; B. K. Hunter
And much more

Course Grading: Your grade will be determined by your performance in the three areas shown below:

Midterm Examination	40%
Problem Sets or Participation	20%
Final Examination	40%
Total points	100%

Examination Schedule: Please note that all examinations will be held on Friday.
Be advised that there will be no make-up exams.

Midterm Examination	Nov 7	Friday
Final Examination	Jan 2	Friday

IMPORTANT: NOTE THAT NO MAKE-UP EXAMS WILL BE GIVEN!

The topics and their ordering as provided below are only approximate. This agenda reflects an optimism that could well be tempered. Accordingly, I reserve the right to shuffle and delete topics in response to time constraints.

Mass Spectrometry:

Theory and Instrumentation
Interpretation of Spectra
Case Study and Exercise

Infrared Spectrometry:

Theory and Instrumentation
Interpretation of Spectra
Case Study and Exercise

Proton Magnetic Resonance Spectrometry:

Theory and Instrumentation
Interpretation of Spectra
Case Study and Exercise

C-13 NMR Spectrometry:

Theory and Instrumentation
Interpretation of Spectra
Case Study and Exercise

2-D NMR Spectrometry:

Theory
Interpretation of Spectra
Case Study and Exercise

CD, ORD, and Polarimeter:

Theory and Instrumentation
Interpretation of Spectra
Case Study and Exercise

NMR Spectrometry of Other Important Spin 1/2 Nuclei:

Theory and Instrumentation
Interpretation of Spectra
Case Study and Exercise

Case Study and Problems Solving: