

Chemical and Instrumental Methods of Identification of Organic Compounds

Chemistry 380

Section: D100

Term: 2006 Fall

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Discussion Topics: General Course Description:

Basic principles of infrared, ultraviolet, nuclear magnetic resonance and mass spectroscopy as applied to the identification of organic compounds.

3 lecture hours per week for 12 weeks; 1 x 4 hours laboratory period for 12 weeks.

Week

Topics

1 IR spectroscopy

2 IR spectroscopy

3 ¹H NMR spectroscopy

4 ¹H NMR spectroscopy

5 ¹H NMR spectroscopy

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6 UV spectroscopy

7 ^{13}C NMR spectroscopy

8 ^{13}C NMR spectroscopy

9 ^{13}C NMR spectroscopy

10 Mass spectroscopy

11 Mass spectroscopy

12 Mass spectroscopy

Grading: 30% Problem Sets and Quizzes

35% Final Exam

35% Lab Reports

Required Texts: "Introduction to Spectroscopy" 3rd Edition. Pavia, Lampman & Kris

Recommended Texts:

Materials/Supplies: None

Prerequisite/Corequisite: Prerequisite: CHEM 260 and 282 and 286, or permission of the department.

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Notes: None

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