

REGULAR COURSE SYLLABUS

School of: Letters, Arts & Sciences

Department: Chemistry

CIP Code: 40.0504

Prefix & Course Number: CHE 3130

Crosslisted With*: _____

Course Title: Organic Chemistry Laboratory II

Check All That Apply: Required for Major: Required for Minor: Specified Elective: _____
Required for Concentration: Elective: _____ Service Course: _____

Credit Hours: 2 (0+4)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture _____ Lab 60 Internship _____ Practicum _____ Other (please specify type and hours): _____

Schedule Type(s): A Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): None

Prerequisite(s): CHE 3100 and CHE 3120

Corequisite(s): _____

Prerequisite(s) or Corequisite(s): CHE 3110

Banner Enforced:

Prerequisite(s):

Corequisite(s):

Prerequisite(s) or Corequisite(s):

Catalog Course Description:

This course is a continuation of CHE 3120. It is a qualitative organic analysis course in which both classical and instrumental techniques are utilized to elucidate organic structure. Chemical literacy will be enhanced through the use of web based chemical literature search and American Chemical Society based report writing.

APPROVED:

Charles H. Tindall

Department Chair OR Program Director

Hal Academy

Dean OR Associate Dean

Randa S. Curran

Associate VP, Academic Affairs

11/8/05

11/15/05

2/6/06

Date

Date

Date

Prefix and Course Number: CHE 3130

Required Reading and Other Materials will be equivalent to:

Introduction to Organic Laboratory Techniques, Pavia, 2nd Edition, Brooks/Cole Publishers, 2005.

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:

1. Determine appropriate physical properties of organic compounds (e.g., m.p., b.p., refractive index.).
2. Obtain and interpret infrared spectra and interpret infrared and NMR spectra.
3. Determine solubilities of organic compounds in various solvent systems.
4. Use chemical tests to classify organic compounds according to functional group.
5. Prepare and purify derivatives of organic compounds.
6. Use appropriate experimental techniques to determine the structure of organic compounds.
7. Conduct a web based literature search in support of a project.

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision) (format: I, A, 1, a, etc.):

- A. Introduction to Organic Structure Determination
- B. Physical Properties
- C. Solubility Tests
- D. Classification Tests
- E. Spectroscopic Methods
- F. Preparation of Derivatives
- G. Determination of the Structure of Unknowns
- H. Laboratory Examination
- I. Introduction to Scifinder Scholar

Evaluation of Student Performance (format: 1, a, i, ii, etc.):

Students will submit laboratory reports in which unknown organic compounds are identified. Students will utilize web based library search in support of a laboratory project. A written final examination will be given. A student's overall grade will be based on grades received on laboratory reports and on the final examination.