CHE 383 Introductory Synthetic and Spectroscopic Technique Fall 2007

Among sources of information in CHE 383 are handouts such as this one; announcements in lab lecture; notices written on the board in lab each week; and postings on Blackboard.

Course Description
It is a one-semester, 2-credit course that focuses on fundamental laboratory techniques, including methods of separation, purification, synthesis, and analysis. Emphasis is on organic with an introduction to inorganic problems. It is recommended that students take CHE 383 at the same time as or immediately following CHE 321. Six laboratory hours and one lecture hour per week. Not for credit in addition to CHE 327.

Lecture: Thursday 1:15 pm, Physics P116
Lab: Monday 11:45 am-6 pm, Tuesday 9:50 am-4:05 pm, Chemistry 362 & 364
Instructors: Prof. Dale Drueckhammer Dr. Zachary Katsamanis
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Office Hours: Prof. Drueckhammer -- 10:30-11:30am, Monday; 2:15-3:15 pm, Wednesday and Thursday.
Dr. Katsamanis -- 10-11:30 am, Wednesday and Thursday.

Office hours of TAs will be posted early in the semester. We urge you to use these scheduled times to discuss the techniques and experiments with any CHE 383 staff member. See Dr. Katsamanis for questions regarding the course organization.

Responsibilities
Each student is responsible for knowing all procedures and course expectations detailed in this document, in the laboratory guide, in other handouts, on the course web site or those announced in lecture or lab. Failure to attend a lecture is not an excuse for not knowing what was presented or announced. If you miss a lecture it is your responsibility to find out what transpired from a fellow student, or from your lecturer.

Required Books and Supplies
- The CHE 383 Fall 2007 Lab Manual. This manual guides you to teach yourself concepts and techniques as you do the experiments. It has important introductory material about grading and course policies.
- A bound notebook whose pages are pre-numbered and duplicated. You will probably need 75-100 pages. Your notebook may be one that was used in another course, but not for a previous offering of CHE 383. Because your notebook is your own record, do not be referencing a previous notebook while you are in the lab – such an action must be considered academic dishonesty.
- Safety goggles that are in compliance with the latest Z87.1 Standard for Occupational and Educational Eye and Face Protection established by ANSI. These may be obtained at the bookstore; be sure you purchase chemical splash goggles and not a less effective kind of eye protection.
- Heavy-duty gloves. Lab Safety Supply Neoprene Gloves are recommended as they resist a broad range of organic and inorganic chemicals. Playtex Living Gloves are also satisfactory and probably the cheapest available. Try a hardware or grocery store or the bookstore.
Grading
You will be graded relative to other students, present and past. In this way, we may be sure our goals for a particular assignment are realistic.

1. Products, notebook, and reports/results (335 points)

Products and reports/results are submitted with accompanying forms contained in this Lab Manual.

If you are in a situation where you must make a decision between greater purity vs. greater yield, you should be aware that we grade both but purity will count more.

A special case is getting a refill from the stockroom: A zero yield grade will be assigned. (Do not be discouraged; yield is generally less than 15% of the total grade on any assignment.) Sometimes the choice is yours as to whether to proceed with what you have or to start over. You might decide to take the yield penalty if the refill gives you a chance to obtain a significantly purer product.

The laboratory notebook is also evaluated. There are two important elements:

- Pre-lab write-up. For most experiments you should write a pre-lab in your notebook. The pre-lab is the evidence that you are adequately prepared to do the experiment. It does not have to be lengthy or elaborate. In appropriate cases, the pre-lab should include procedure in the form of a work plan (the format used in this Lab Manual is suggested). Early in the lab period, your pre-lab will be checked by one of the instructors and the result will be reflected in your Technique grade (see the section Technique below).

- Notebook questions. There will be questions regarding your notebook record. In section 2.2 of the Lab Manual, there is a detailed description of what belongs in your notebook and how it will be collected and graded. Read it over carefully and review it several times early in this semester.

No grade will be dropped. Instead, the value of your lowest grade will be adjusted upward at the end of the course. With our algorithm, you can achieve your highest total by trying for your best product in each experiment.

2. Theory exams (135 points)

There will be two theory quizzes on theory and practice. There may also be quizzes in lecture.

Study Questions at the beginning and/or end of the experiments are intended to aid you in preparing for quizzes (as well as for lab). Also to aid you, selected previous exams are reproduced on Blackboard.

3. Reports (80 points)

There will be reports for the Ester, Ferrocene, and Unknown experiments

4. Technique (30 points)

You should endeavor to prepare thoroughly, work independently, show concern for safety, show consideration for others, and in general develop a team player relationship of a professional nature.

2 points will be deducted from the technique grade for each time a student is observed eating/drinking/chewing gum, not wearing safety goggles, or not following the dress code at any time during a lab period.

Academic Integrity
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/.
Webpage

This course is linked to a Blackboard supported webpage, [http://chalk.ic.sunysb.edu/](http://chalk.ic.sunysb.edu/) where students can download course materials, check course information, communicate with classmates or CHE 383 staff, and view grades, etc.

It is also linked to the Chemistry Department page under Course Servers. Our direct address is [http://www.sinc.sunysb.edu/Class/orgolab](http://www.sinc.sunysb.edu/Class/orgolab). There are useful links to external sites, and our own photos of lab set-ups that you may wish to print out for in-lab reference.

University Policy on Students with Disabilities

If you have a physical, psychological, medical, or learning disability that may impact your coursework, please contact Disability Support Services, ECC (Educational Communications Center) Building, room 128, (631) 632-6748. DSS will determine with you what accommodations are necessary and appropriate. All information and documentation are confidential.

Students who may require emergency evacuation are encouraged to discuss in advance their needs with their professors and DSS. For procedures and information, visit the website at: [http://www.ehs.stonybrook.edu/fire/disabilities.asp](http://www.ehs.stonybrook.edu/fire/disabilities.asp).

Planning Your Use of Lab Time

An approximate course schedule is given on the following pages. Each period, allow enough time at the end to clean your glassware, which can then dry over the week. Since for most experiments the glassware has to be both clean and dry, pre-cleaning is by far the most efficient way for you to prepare. See cleaning and drying techniques at the beginning of the Lab Manual.

More about the course policies, as well as the tips on how to succeed in CHE 383, are given in the “Introduction” part of the Lab Manual.