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 synthetic techniques, with an introduction to inorganic synthesis. 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.

Prerequisite: CHE 134 or 144. Pre- or Corequisite: CHE 321 or 331. Not for credit in addition to CHE 327.

Lecture: Thursday 10:00 – 10:53 am, Psychology A 137

Lab: Mondays (L01 & L02) 11:00 am – 5:15 pm, Labs A & B
     Tuesdays (L03 & 04) 10:00 am – 4:15 pm, Labs A & B

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Office Hours: Prof. Parker – 12 – 1 pm, Wednesdays and Thursdays, or by appointment, in Chemistry 703.
             Dr. Chen – 3 - 4 pm, Wednesdays and Thursdays, or by appointment, in Chemistry 523 or the lab.

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. Chen for questions regarding the course organization. Use the email address listed above to contact either instructor.

LEARNING OUTCOMES/COURSE OBJECTIVES:

At the end of the course, the students should be able to:

- Isolate, purify, synthesize, and characterize organic substances with safety precaution
- Interpret experimental data (including the spectroscopic data)
- Keep an up-to-date laboratory notebook

RESPONSIBILITIES

Each student is responsible for knowing all procedures and course expectations detailed in this document, in the Lab Manual, in other handouts, on Blackboard 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 instructor.

REQUIRED BOOKS AND MATERIALS

- The CHE 383 Fall 2014 Lab Manual. This manual contains the experimental procedures. It also 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. Since your notebook is your own record, you cannot reference a previous CHE 383 notebook while you are in the lab – such an action will 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. They can be found at a hardware or grocery store, or the bookstore.

- **Two padlocks.** These will be used to lock your two lab drawers.

**BLACKBOARD**

The Blackboard supported web site should be checked on a regular basis. Reading and homework assignments, course announcements, lecture notes and various other course materials can be found there. Old examinations will be posted selectively, but you should realize that they may have been written by different faculty. This Blackboard supported web site can be found at: http://www.chalk.sunysb.edu, where you can also view your grades and communicate with classmates or CHE 383 staff. The most recent class notice and/or announcement will be emailed through Blackboard. **Effective Monday, January 7, 2013, email addresses in Blackboard were systematically reset to users’ official University EPO email address (firstname.lastname@stonybrook.edu). Users can no longer change their email address in Blackboard. In order to receive the most recent email notice and/or announcement through Blackboard, you must update your email address on Blackboard.**

This course is also linked to the Chemistry Department Course Servers. The direct web address is 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.

**ABSENCE AND LATENESS POLICIES**

If you miss a lab session once during the semester, you will be required to attend the make-up lab session (see ‘Course Schedule’ for dates). You cannot come to a different lab section to complete a lab that was missed. Missing more than one lab session will result in an “Incomplete” grade. In unusual circumstances, permission for additional accommodation may be granted with official written documentation of the reason for the absence, and approval by the lab coordinator.

You should strive to arrive to your lab session on time. You will be responsible for any announcements that are made before each lab session. **Arriving to lab past 11:30 am on Monday (or 10:30 am on Tuesday) will result in an automatic absence, and you will NOT be allowed to perform the lab experiment that day.**

Any reports/quizzes that are handed in late will receive a 10% late grade penalty. The absolute deadline for submitting a late report/quiz is the following lab session. **No report/quiz will be collected or graded after that date.** If a report/quiz was due the day you were absent from lab, it MUST be submitted at the beginning of the following lab session (without a late grade penalty).

**STOCKROOM POLICIES**

You will check-in glassware and equipment, which you will keep in an assigned drawer. At the end of the semester, the drawer and its contents should be clean and in the condition you received them (other than expendables such as litmus paper). Failing to check-out before the course ends will result in a fee, including the cost of: 1) the examination of the drawer by lab staff, and 2) the replacement of damaged equipment, if any.

Equipment you borrow should be returned to the stockroom as soon as practical during the same lab period. Keep in mind that the stockroom closes fifteen minutes before the scheduled end of the lab period. If the stockroom is closed so that you cannot return borrowed equipment, you should lock it in your drawer. If the equipment is still in your drawer the next period, be sure to return it promptly.

The stockroom will allow you to borrow a pair of safety goggles for one lab experiment, in the event that you do not have any goggles to use. However, **borrowing goggles a second time will result in a five (5)-point penalty being applied to your overall course total. Any subsequent need for goggles will also result in a five (5)-point penalty.**
**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. The total possible points obtained in this course are 500.

1. **Products and Experiment Reports/Results for experiments (170 points)**

Products and results are submitted with accompanying forms contained in CHE 383 Fall 2014 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 or low 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.

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. **Notebook Quizzes (120 points)**

There will be questions regarding your notebook record. In the section “The Notebook” of the 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 this semester.

3. **Theory Quizzes (120 points)**

There will be two quizzes on theory and practice, and possibly a couple of other minor quizzes. Therefore, your attendance at lecture is required. Study Questions at the end of the experiments are intended to aid you in preparing for theory quizzes (as well as for lab). Also to aid you, selected previous theory quizzes can be found on Blackboard.

4. **The Lidocaine Synthesis Report (60 points)**

The products and result form for the final experiment will account for 12% of your course total points.

5. **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. You are required to clean up your bench area before you leave the lab. Fifteen minutes before the end of each lab session, all lab work must stop in order to allow time for cleanup.

2 points will be deducted from the overall technique grade for eating/drinking/chewing gum, disposing of waste irresponsibly, or for any type of horseplay.

**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 the Manual is suggested) and the safety information of the chemicals involved and procedure used. 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 above).
ACADEMIC INTEGRITY STATEMENT
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. Faculty are required to report any suspected instance of academic dishonesty 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/

DISABILITY SUPPORT SERVICES (DSS) STATEMENT
If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact Disability Support Services (631) 632-6748 or http://studentaffairs.stonybrook.edu/dss/. They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the following website: http://www.stonybrook.edu/ehs/fire/disabilities/asp.

CRITICAL INCIDENT MANAGEMENT
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, and/or inhibits students' ability to learn.

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 Manual.