Chemistry 113A  Organic Chemistry Laboratory (Sec 4)  
Fall 2013

Contact Information

Instructor: Roy K. Okuda, PhD
Office Location: Duncan Hall 9A (basement)
Telephone: (408) (924-2525)
Email: roy.okuda@sjsu.edu
Office Hours: Tues 2:00 to 3:00pm; Wed 11:00am - 12:00 noon
Class Days/Time: Lab: Tues/Thurs 10:30am -1:20pm
Classroom: Science 139
Prerequisites: CHEM 112A (with a grade of "C" or better; "C-" not accepted)

Faculty Web Page and MYSJSU Messaging

Course materials such as syllabus, handouts, notes, assignment instructions, etc. can be found on my faculty web page at http://www.sjsu.edu/people/firstname.lastname. You are responsible for regularly checking with the messaging system through MySJSU (or other communication system as indicated by the instructor) to learn any updates. Check the email on your mySJSU account before each class meeting and on a regular basis for new documents.

Course Description

This course introduces many of the basic techniques for synthesis, isolation, purification and identification of organic compounds. The emphasis is on practical laboratory skills. Sufficient theoretical background will be developed to allow the student to understand the design of experiments and to modify established procedures. The course will also provide practice in the formal writing of experimental procedures and findings. See the "Schedule of Experiments, Quizzes and Final" for important dates.
Course Goals and Learning Objectives

Course Learning Outcomes (CLO)

• Demonstrate understanding of core concepts and to effectively solve problems in organic chemistry as presented
• Mastering a range of laboratory techniques for manipulation and analysis of organic compounds (synthesis, separation, purification)
  • Perform stoichiometric calculations for reactions (limiting reagent, theoretical yield).
• Identify and assess the purity of organic compounds using melting point, thin layer chromatography, and gas chromatography.
• Characterize and identify organic compounds by physical and spectroscopic methods including but not limited to: infrared (IR), proton NMR spectroscopies (and other methods as presented)
  • Select conditions for GC analysis and analyze GC chromatographic data.
  • Maintain an accurate contemporaneous notebook of experimental procedures and data
• Locate scientific data as needed.
• Be able to not only follow directions as presented, but to troubleshoot and explain deviations from expected results.
• Analyze data and prepare reports based on experiments performed in lab.
• Operate safely in the laboratory and dispose of waste properly

Program Learning Outcomes (PLO)

Chemistry 113A satisfies the following Program Learning Outcomes for the Chemistry Department:
PLO #2 - Demonstrate understanding of core concepts and to effectively solve problems in organic chemistry.
PLO #6 - Answer questions regarding safe practices in the laboratory and chemical safety.
PLO #7 - Demonstrate safe laboratory skills (including proper handling of materials and chemical waste) for particular laboratory experiments.

Required Texts/Readings

Textbook

Required Books
1) Chem 113A Lab Notes available for purchase from Maple Press (481 E. San Carlos St.) - you must have your own copy by the second class meeting.
   IMPORTANT: you MUST have the current (Fall 2013) version of the Chem 113A Lab Notes - important procedural and safety changes have been made from prior versions. You must present your copy of your Lab Notes with your prelab notebook for approval

2) Pavia, D.L., Lampman, G.M., Kriz, G.S., Vyvyan, J.R. Introduction to Spectroscopy, SJSU Edition (note this edition is a custom version available only at the SJSU Bookstore)
Other Readings
-American Chemical Society (ACS) Style Guide
-McMurry, John, Organic Chemistry, or any organic chemistry textbook

Other equipment / material requirements
-Scientific laboratory notebook with duplicate numbered pages
-basic calculator
-pencils, rulers

Library Liaison
The Chemistry Library Liaison is Emily Chan (emily.chan@sjsu.edu)

Course Requirements and Assignments

Catalog Description
Fundamental techniques for the isolation, characterization and synthesis of organic compounds. Prerequisite: CHEM 112A (with a grade of "C" or better; "C-" not accepted). Misc/Lab: Lab 6 hours.

The scheduled time for Section 4 is TuesThurs 10:30AM to 1:20 PM in Science 139. You must attend all meetings of this course (see attendance below).

Chem 113A will include eight Experiments (A to H). You will prepare reports for each of these Experiments. Eight laboratory quizzes based on these experiments will also be given, as well as a Midterm and Final Exam.

Dr. Straus has created a website for Chem 113A that provides a wealth of information for this course, including information for each lab experiment, as well as videos and photos depicting most of the techniques you will be performing in Chem 113A. You should bookmark this site and refer to the relevant sections before each lab meeting and as you prepare your reports:

http://www.chemistry.sjsu.edu/straus/visioche.htm

Tentative Course Calendar:
A schedule of experiments, report due dates and lab quizzes appears at the end of this document. In addition, note the following EXAM dates:

Oct 15 Midterm Exam (during lab session)
Dec 16 Final Exam (2:45 to 5:00pm)

Another version of the full schedule can be found on the Chem 113A website under "course handouts" and "Schedule TR 2013"
This is a tentative schedule and is subject to modification (except for the Final Exam and due date for the last experiment). Any changes will only be announced during lab meetings (no notice will be sent by email). See below for the week-by-week schedule.

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in University Policy S12-3 at http://www.sjsu.edu/senate/docs/S12-3.pdf.

NOTE that University policy F69-24, “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.”

Attendance Policy / Lab Makeup

Attendance is mandatory for ALL class and lab meetings. The schedule is set to provide just enough time for most students to complete all of the experiments. Missing labs will cause you to fall behind and options for makeup are limited (see below). Keeping on time with the schedule requires a significant amount of preparation before each lab meeting. If you come to lab unprepared, you will not be allowed to work on your experiment, and will fall behind.

Makeup of labs may be possible in only certain circumstances and is not guaranteed. In general, only unexpected circumstances such as medical reasons with a doctor's note will be considered. A "Permission to work in organic chemistry labs" form must be signed by me and presented to the other lab instructor (which must be the another section of Chem 113A). However, the other instructor may choose to refuse to accept a makeup student, so obtaining a permit does not guarantee additional time to work. Work permits will not be granted due to falling behind due to poor preparation or missing labs due to travel or other unauthorized absences.

Grading Policy

GRADING (see below for numerical breakdown and percentages)

Laboratory Reports: Eight reports will be due for Chem 113A. The format for each varies somewhat, information is provided below (Laboratory Reports) and in the Lab Notes. Points are deducted for reports turned in after the due date for that report (up to 1 pt/day). See below for more information on late reports.

Included in the Report grade are points for the Laboratory Notebook - at the end of each lab day, you must present your lab notebook to be signed by the instructor. If not signed, 1 point/missing signature will be deducted from the total grade for that report. Signatures will not be given once a lab period is over or if you miss a lab due to an excused absence.
Lab Quizzes: A total of 8 laboratory quizzes based on the experiments will be given at the start of certain lab periods - see Schedule. These will be brief quizzes based on the experiment that was just completed.

Experiment reports are due at the start of the lab period indicated by the due date. Once the reports are collected a Lab Quiz will be given, usually in the first 5-10 minutes of the lab period. You must be present to take the lab quiz - no makeups will be provided.

Midterm Exam: a midterm exam based on material covered to that point will be given.

Final Exam: a comprehensive Final Exam will cover all aspects covered in Chem 113A.

Note that the final 113A grade is based on a conglomerate of the individual graded items (each item is not assigned a "grade"). Thus, if you have a somewhat low point total on one item, you can make it up with a better point total of another graded item. The course grades are given on a "+/-" system, and the instructor may modify the point total up to 10% higher or lower based on a student's performance in the lab (such as preparation and efficient use of time, attendance, general lab skills, etc.).

All quizzes and exams are open notes and open book (only for the course notes and textbooks). You are required to bring your OWN books for the exams. Sharing of books during tests is not allowed.

Grading information:

The grades for this course will assigned as "plus/minus" and will be based on the following categories:

- 8 laboratory reports: 45%
- 8 laboratory quizzes: 10%
- Midterm: 15%
- Final exam @ pts: 30%
- Total possible for 113A: 100%

Each graded item will be assigned a letter grade which will be converted to a numerical value based on the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Numerical Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>4.3</td>
</tr>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.4</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.4</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D-</td>
<td>0.7</td>
</tr>
<tr>
<td>F</td>
<td>0</td>
</tr>
</tbody>
</table>

The overall course grade will generally follow the following correlations:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>100-97%</td>
</tr>
<tr>
<td>A</td>
<td>96-93%</td>
</tr>
<tr>
<td>A-</td>
<td>92-90%</td>
</tr>
<tr>
<td>B+</td>
<td>89-87%</td>
</tr>
<tr>
<td>B</td>
<td>86-83%</td>
</tr>
<tr>
<td>B-</td>
<td>82-80%</td>
</tr>
<tr>
<td>C+</td>
<td>79-77%</td>
</tr>
<tr>
<td>C</td>
<td>76-73%</td>
</tr>
<tr>
<td>C-</td>
<td>72-70%</td>
</tr>
<tr>
<td>D+</td>
<td>69-67%</td>
</tr>
<tr>
<td>D</td>
<td>66-63%</td>
</tr>
<tr>
<td>D-</td>
<td>62-60%</td>
</tr>
<tr>
<td>F</td>
<td>59-0% Unsatisfactory</td>
</tr>
</tbody>
</table>
Late reports beyond a deadline will be assessed a penalty of up to 1 point per day past the due date (weekend days will count!) - medical absences with documentation will be considered. Late reports for Experiments will be accepted only up until graded reports are returned to the class (i.e. late reports will not be accepted once I return the graded reports to the rest of the class). The reports for Experiments G and H must be received by the due date shown on your schedule. No late reports will be accepted after the Final Exam.

All formal reports are mandatory: for each formal report not turned in, 10 points will be deducted from the total points accumulated for the semester.

For security, final course grades are not posted, sent by email, or given over the phone. If you would like a breakdown of your 113A scores, leave a stamped and addressed envelope with me at the final exam.

Use the attached schedule to plan your time accordingly. Preparation for the lab will help you immensely to keep on schedule.

*For upper division courses (R, S, V) include the following statements:*

“A minimum aggregate GPA of 2.0 SJSU Studies (R, S, & V) shall be required of all students as a graduation requirement.” To see full text, review University Policy S11-3 at [http://www.sjsu.edu/senate/docs/S11-3.pdf](http://www.sjsu.edu/senate/docs/S11-3.pdf).

**Equipment**

You will be assigned an individual locker of equipment for your use during this course. You will be checked into your locker during the first lab period by the instructor, and sign an acknowledgement that you have all of your equipment. You are responsible for keeping track of all of the contents of your drawer. If you lose or break any item, you will be assessed a replacement fee at the end of the semester, so be careful with your equipment. It is possible to complete this course with a relatively small bill for expendable items: it is also possible to end up with a >$100 bill. At the end of each lab period, make sure you have collected all your locker items before leaving. When you check in, you will be given a coded check out pad from the storeroom. You may use this pad to check out additional equipment from the storeroom which may be required for a particular experiment. Note that certain equipment items checked out must be returned the same day to avoid a late fee. Remember, the code on your pad is assigned to you only, don't lose it, or someone else can check out items which will be charged to you.

At the end of the semester, you must clean out your locker, replace all broken equipment or glassware, and have the instructor sign the check-out form. If this process is not completed fully, you may be charged a fee to clean and refurbish your locker. (also, if you drop the class, you must checkout before December 9 to avoid this fee)

**Classroom Protocols for Chem 113A:**

Schedule:
The detailed schedule at the end of this greensheet gives dates on experiments and due dates. quizzes and exams. A detailed prelab lecture about each experiment will be given on or before the "begin" date of each experiment. In addition, supplemental lectures may be given as needed. The Schedule is subject to change and changes will be announced in class.

**Preparation for Experiments:**
In order to be allowed to begin each Experiment, you must prepare a "Prelab writeup" in your notebook prior to the start of that experiment, and have it approved by me. On the Chem 113A website, under "Course Handouts" see "Notebook Format" - the prelab should be completed for each experiment from items A to I. If anything is missing or erroneous, you will be required to correct the item.

A "Sample Prelab for Exp A" is found on the Chem 113A website under "Course Handouts." For this one experiment only, you may copy this information in your notebook and show it to me as your prelab. For subsequent experiments, use this as a template and provide similar information when you prepare those Prelabs. The importance of the Prelab is not only so you know the details of the experiment, but also so that you are aware of any safety issues that may be involved. **Under no circumstances are you to begin working on a lab experiment without my approval - if you do so, this will be grounds to be dropped from this lab section.**

Obviously, if you have to work on a prelab during the scheduled lab period, you will seriously deprive yourself of adequate bench time to complete the experiment. The lab schedule is arranged so there should be adequate time to complete each experiment well within the allotted dates, but only if you come prepared for each lab.

**When I have approved your prelab, I will sign your yellow Lab Report Summary sheet and provide you with the starting material for your experiment.**

**Observations and Data in Lab Notebooks:**
As stated above, lab notebooks will be a component of your grade. They must be kept up to date on a daily basis with details of your results and progress. The format for lab notebooks and data collection can be found in the Chem 113A website, under the drop down menu for "Course Handouts," The lower seven files contain useful information that will guide you in preparing notebooks and reports for the entire semester.

The preliminary write-up of all notes and observations must be kept in a bound notebook that has pre-numbered duplicate pages. All entries must be made in pen - NEVER erase or use "white out"! **RECORD ALL OF YOUR NOTES AND OBSERVATIONS DIRECTLY INTO THE NOTEBOOK, AND AS THEY OCCUR.** In other words, don't write down numbers on scraps of paper and transfer them later, or try to memorize your measurements. The main purpose of the notebook is to be a daily "journal" for your laboratory activities to which you, or someone else, can read at a later date, and fully understand what you did, how you did it, and why the results came out the way they did. It's OK to scratch out entries - the main point is that it is organized and understandable.
As you'll learn, in professional situations the lab notebook is considered a legal document, and there are rules about how they are prepared and maintained. A typical practice is to have the notebook "countersigned" at the end of each lab day by someone else. For Chem 113A, I will countersign all notebooks - this means you must show me your notebook before you leave each day to review and sign. When grading reports, one point will be deducted per lab day if my signature is missing. This also applies if you miss a lab due to an unexcused absence.

**Lab Reports:**

After the experiment is finished, analyze your data and write your conclusions in your notebook. Again, in the Chem 113A website, Dr. Straus has provided guidelines for writing your notebooks under "Course Handouts" see "Notebook Format" You will also find information to format your report at the end of each experiment in your Chem 113A Lab Manual

Each report should follow the format designated for that type of experiment; in this class there will be two kinds of experiments, preparative and investigative; formats for the two differ (see Notebook Format on the 113A website). Reports must be complete, well-organized and legible. However, do not take inordinate amounts of time for picture-perfect drawings, these will not improve your grade.

Reports are to consist of your own thoughts and be expressed in your own words (see Academic Honesty below). Any time you refer to another person's data you must make clear reference to the source (ie., that person's name) in your lab book as well as on any . Use of another person's data is to be done only when authorized by the instructor. Under no circumstances are you to refer, with attribution or without, to data belonging to anyone outside of your section. **Representing another persons data (of any sort, including spectra and GC traces) as being your own constitutes plagiarism and will be dealt with as such.**

**All of the following must be turned in on a report due date:**

- complete written report (duplicate pages from your notebook), make sure all the writing is legible!
- Product (if required), see how to submit products below
- any supporting information such as GC, IR, NMR

Make sure your name is written on all items!

**On dates when a Lab Report is due, it must be turned in at the start (i.e. first few minutes) of the lab period to be considered turned in "on time." A lab quiz will then follow. Any report turned in once the quiz begins is considered to be "late."

**Late reports:** Your grade for late reports will be lowered by one point per day the report is late (including weekends). Reports are late if not submitted by the beginning of the lab period when that report is due - if you show up late the report is late also. Any report turned in after the start of the lab quiz is also late. Exceptions will only be made if a valid medical excuse is presented in writing to the instructor. There will be a more severe late penalty in effect after the last lab period of the semester.
The time in each lab period is very important and should to be used for lab work, not for writing prelabs or reports!
PRODUCTS:

The preparative experiments involve chemical synthesis, the conversion of one substance (the starting material, a measured sample of which is provided) into a different organic compound (the product). The products of such preparations must be submitted for grading in a vial with a cork or clean polyethylene cap (organic liquids often attack rubber stoppers or black plastic screwcaps). All products must be labeled as follows:

<table>
<thead>
<tr>
<th>NAME OF COMPOUND</th>
<th>% YIELD</th>
<th>WEIGHT</th>
<th>m.p. or b.p.</th>
<th>STUDENT'S NAME</th>
</tr>
</thead>
</table>

(Paper labels and Scotch tape are available from the service center - don't write on glass.) The weight is that of the actual contents only, not the vial. The melting point and boiling point **ranges** are those actually observed for your sample; these will be checked for grading and a significant penalty will apply for misrepresented data. Points will be deducted for any foreign material (dirt, filter paper, cork chips, etc.). Products will also be evaluated by appearance and odor. **Improperly or incompletely labeled samples will not be accepted for grading.**

SAFETY

Before beginning any lab work, the following items must be completed:

1. Attend the Safety Lecture
2. Read and sign the statement on Chemical Safety for Chemistry Labs [http://www.sjsu.edu/chemistry/docs/Safety_Sheet_IIC.pdf](http://www.sjsu.edu/chemistry/docs/Safety_Sheet_IIC.pdf)
3. View the Chemistry Safety film and sign the viewing voucher
4. Take the Lab Safety Quiz and obtain a score of 80% or better; retake the quiz if score is <80%.

_All of the above conditions are required, and must be completed before you will be allowed to work in the lab!_

In addition to the points covered above, the following rules are emphasized in this lab:

1. **AS SOON AS ONE PERSON BEGINS WORK IN THE LAB, YOU MUST ALWAYS WEAR SAFETY GOGGLES, EVEN IF YOU ARE NOT DOING ANY WORK YOURSELF!!!** (over your eyes, not on your forehead!) If you see a fellow student not wearing eye protection, you are obligated to remind them to protect their eyes.
2. Be aware that we will be using some flammable solvents, do not have any flames when you (or someone else in the room) are handling these.
3. Similarly, treat all acids, bases, and reagents as potential hazards. Avoid skin contact with all of these, and treat any contact immediately. If you have a spill, never leave it unattended (let the instructor know).
4. Dispose of all glassware in the special bins, **not in the trash cans**! This includes broken glass, as well at expendable items such as pipettes and melting point capillaries.
5. The texts have sidebars or highlighted sections outlining special safety precautions - always enter these into your procedure section in your notebook (another reason to read ahead!)

6. You are absolutely required to follow any instructions provided by the instructor related to procedures and/or safety. Failure to do so will result in your grade or result in immediate disenrollment from this class (see statement below).

7. Everyone working in the lab is expected to conduct yourself in a professional manner; no horseplay or unsafe actions are allowed.

8. If you are not sure, ask!!

Failure to comply with proper procedures and prescribed safety cautions shall subject the student to disciplinary action. 1) Any student who engages in unauthorized experimentation, or who seriously disregards safety, thereby endangering self or others shall be withdrawn immediately from the class with a grade of F. 2) Any student who shows persistent disregard for safety may have his/her grade lowered, and may risk being withdrawn with a final grade of F.

\begin{center}
Special rules of safety and conduct apply when using the Varian Mercury 300 NMR and the HP MS and other instruments. These will be provided by the instructor.
\end{center}

With preparation and organization, it is possible to complete all of your lab work during the scheduled lab period. In general, no lab work will be permitted outside of the scheduled lab times. Usually, the only situation where this may be allowed is in cases of illness and for which you provide verification by your doctor (see makeup policy above). However, if you miss more than a few lab periods during the semester, it may be difficult to complete the course. In any case, under NO circumstances are you to perform any laboratory work for 113A outside of the scheduled lab time without my written permission. Any student found performing unauthorized lab work for 113A may be disenrolled from the class.

Visitors: No visitors are allowed in the lab at any time. If someone is waiting for you, they must wait outside the lab.

Cell Phones, music/video/game players: These may not be used in the lab. Unless you have an emergency, turn off cell phones and make your calls before or after class.

Computers: You may use your laptop only during class lectures. Once lab work begins, put your computer away since they will take up valuable space on the bench. Computers are available for you to use at anytime - there is one iMac in Sci 139, and 4 PCs in the melting point room.

While working in the lab, distractions while working must be kept to a minimum - this includes music and videos.

Chemical Safety (CHEM 120S)
Chemistry 120S (Chemical Safety) is a required course for all chemistry majors and minors, and a prerequisite for all students involved in Chemistry 180 or 298 research courses.
Academic Integrity:

No form of cheating, copying, or other unfair advantage will be tolerated, and will be dealt with severely. A first infraction will result in “0 points” for that experiment or exam. A second will result in an automatic grade of "F" for the course. The underlying principle will be fairness to all students in the course. In particular, copying or plagiarism (the excessive use of someone else's words, even if acknowledged, see the section from the Academic Senate below) is considered a serious offense, especially with regard to the formal lab reports. Note that simply "re-ordering" words from another source does not constitute an original paper. You must use your own words and analysis in all reports for this course.

Additionally, when you work on and turn in a report, it is expected that the work is your own only. While you may get general advice from your classmates and faculty members, you may not ask others to analyze your data for you. This includes faculty members at SJSU or other colleges/universities, trained professionals in the field, or any commercial services.

From the Office of Student Conduct and Ethical Development: “Your own commitment to learning, as evidenced by your enrollment at San Jose State University, and the University’s Academic integrity Policy requires you to be honest in your academic course work. Faculty are required to report all infractions to the Office of Student Conduct and Ethical Development. The policy on academic integrity can be found here: http://www.sjsu.edu/studentconduct/Students/Student_Academic_Integrity_Process/

From the SJSU Academic Senate Resolution S04-12

1.2 PLAGIARISM:

At SJSU plagiarism is the act of representing the work of another as one's own (without giving appropriate credit) regardless of how that work was obtained, and submitting it to fulfill academic requirements. Plagiarism at SJSU includes but is not limited to:

1.2.1 The act of incorporating the ideas, words, sentences, paragraphs, or parts thereof, or the specific substance of another's work, without giving appropriate credit, and representing the product as one's own work; and
1.2.2 Representing another's artistic/scholarly works such as musical compositions, computer programs, photographs, paintings, drawings, sculptures or similar works as one's own.

BE SURE YOU UNDERSTAND WHAT PLAGIARISM MEANS. IF NOT, ASK!!

University Policies

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester’s Catalog Policies section at
http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic year calendars document on the Academic Calendars webpage at http://www.sjsu.edu/provost/services/academic_calendars/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/latedrops/policy/. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the Advising Hub at http://www.sjsu.edu/advising/.

**Consent for Recording of Class and Public Sharing of Instructor Material**

University Policy S12-7, http://www.sjsu.edu/senate/docs/S12-7.pdf, requires students to obtain instructor’s permission to record the course.

- “Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. You must obtain the instructor’s permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material.”

- “Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”

**Academic integrity**

Your commitment as a student to learning is evidenced by your enrollment at San Jose State University. The University Academic Integrity Policy S07-2 at http://www.sjsu.edu/senate/docs/S07-2.pdf requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The Student Conduct and Ethical Development website is available at http://www.sjsu.edu/studentconduct/.

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person’s ideas without giving proper credit) will result in a failing grade and sanctions by the University. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include your assignment or any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Integrity Policy S07-2 requires approval of instructors.

**Campus Policy in Compliance with the American Disabilities Act**

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible, or see me during office hours. Presidential Directive 97-03 at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the Accessible Education Center (AEC) at http://www.sjsu.edu/drc/ to establish a record of their disability.
• **Emergencies and Building Evacuations**

If you hear a continuously sounding alarm, or are told to evacuate the building by an Emergency Coordinator, walk quickly to the nearest exit (out the door and turn left to exit the Science Building). Take your personal belongings as you may not be allowed to return. Follow the instructions of the Emergency Coordinators. Be quiet so you can hear instructions. Once outside, move away from the building. Do not return to the building unless the Police or the Emergency Coordinator announces that this is permissible.

Following are resources that are available to all students. They may apply to this course as well as other courses you are taking.

**Student Technology Resources**

Computer labs for student use are available in the Academic Success Center at http://www.sjsu.edu/at/asc/ located on the 1st floor of Clark Hall and in the Associated Students Lab on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library.

A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include DV and HD digital camcorders; digital still cameras; video, slide and overhead projectors; DVD, CD, and audiotape players; sound systems, wireless microphones, projection screens and monitors.

**SJSU Peer Connections**

Peer Connections, a campus-wide resource for mentoring and tutoring, strives to inspire students to develop their potential as independent learners while they learn to successfully navigate through their university experience. You are encouraged to take advantage of their services which include course-content based tutoring, enhanced study and time management skills, more effective critical thinking strategies, decision making and problem-solving abilities, and campus resource referrals.

In addition to offering small group, individual, and drop-in tutoring for a number of undergraduate courses, consultation with mentors is available on a drop-in or by appointment basis. Workshops are offered on a wide variety of topics including preparing for the Writing Skills Test (WST), improving your learning and memory, alleviating procrastination, surviving your first semester at SJSU, and other related topics. A computer lab and study space are also available for student use in Room 600 of Student Services Center (SSC).

Peer Connections is located in three locations: SSC, Room 600 (10th Street Garage on the corner of 10th and San Fernando Street), at the 1st floor entrance of Clark Hall, and in the Living Learning Center (LLC) in Campus Village Housing Building B. Visit Peer Connections website at http://peerconnections.sjsu.edu for more information.
SJSU Writing Center

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the Writing Center website at http://www.sjsu.edu/writingcenter. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)

SJSU Counseling Services

The SJSU Counseling Services is located on the corner of 7th Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit Counseling Services website at http://www.sjsu.edu/counseling.
Chemistry 113A  Organic Chemistry Laboratory (Sec 4)  
Fall 2013

NOTE: this is a tentative schedule for the semester. Any changes will be announced in class in advance. Another version of the full schedule can be found on the Chem 113A website under "course handouts" and "Schedule TR 2013"

<table>
<thead>
<tr>
<th>Course Schedule</th>
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<tbody>
<tr>
<td><strong>Week</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>
| 3 | 9/3 & 5 | 9/3 complete A  
9/5 begin B |
| 4 | 9/10 & 12 | 9/10 **Exp A report due, Lab Quiz A**, continue B  
9/12 continue B |
| 5 | 9/17 & 19 | 9/17 **Quiz B part 1**, continue B (report for B turned in 9/26)  
9/19 complete B, begin C (IR lecture), distribute unknown H |
| 6 | 9/24 & 26 | 9/24 continue C, first NMR lecture  
9/26 **Exp B report due, Lab Quiz B part II**, compete C |
| 7 | 10/1 & 3 | 10/1 & 3 begin and continue D |
| 8 | 10/8 & 10 | 10/8 **Exp C report due, Lab Quiz C**, continue D  
(by this time you should be making good progress on unknown H, use time outside of lab hours) |
| 9 | 10/15 & 17 | 10/15 **Midterm Exam**  
10/17 begin E |
| 10 | 10/22 & 24 | 10/22 **Exp D report due, Lab Quiz D**, continue E  
10/24 continue E |
| 11 | 10/29 & 31 | 10/29 complete E  
10/31 begin F |
| 12 | 11/5 & 7 | 11/5 & 11/8 continue F |
| 13 | 11/12 & 14 | 11/2 complete F  
11/14 **Exp E report due, Lab Quiz E**, begin G |
| 14 | 11/19 & 21 | 11/19 **Exp F report due, Lab Quiz F**, continue G, **Turn in complete H to get extra credit sample** (if structure is correct)  
11/21 continue G |
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>11/26</td>
<td>11/26 continue G (11/27 no class)</td>
</tr>
</tbody>
</table>
| 16   | 12/3 & 5 | 12/3 complete G, complete H  
12/4 Reports G and H due, Lab Quiz G (only), checkout |
| Final Exam | 12/16 | **FINAL EXAM**: 2:45 to 5:00pm in Science 139 (or designated room TBA) |