CHEMISTRY 1407
LAB SYLLABUS, SPRING 2018

Instructor Information

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Office Hours: Monday through Friday: 1:00-4:00 p.m.

(Please note that I may not sometimes be available in the given time periods, so that I would like to receive an e-mail ahead of time, and also I would prefer to answer to your questions by e-mail)

Course Description and Objectives

This is the laboratory portion of the chemistry 1407. The lab is designed to offer you *laboratory experience in areas of fundamental organic chemistry and biochemistry, as well as factual knowledge about the physical and chemical characteristics of several classes of organic and biological molecules*. This lab portion will count for 25% of the overall grade of CHEM 1407 course. *Since the lab and lecture are no longer be separated courses, if you fail either the lab or lecture, you will require to retake the both lab and lecture (combined) courses.*

Lab Course Manual

Chemistry 1407—Organic and Biochemistry Laboratory Manual*; you must have your own personal copy of this lab manual that you should not share with others* and I advise you to buy this book in time at the beginning of the semester**.**

Lab Locations

Every section of this laboratory portion of CHEM 1407 meets in *CFS 213 two days a week for two lab sessions (fifty-minute per lab session)*.

Lab Course Requirements

To get credit, *you MUST ATTEND to the section for which you registered* and you would see your location, section and lab meeting time in your class schedule. You need the lab book before your labs begin, as you need to be aware of lab safety rules and study for *EXP 1* for the first lab. Also, be aware that the bookstore sometimes runs out of the lab manuals. *In the laboratory, you must* **WEAR SAFETY GLASSES OR GOGGLES** *for all experiments during the entire time you are in the laboratory**.** You must have A* **PROPER DRESS CODE** as described in following paragraph. You must obey *all the safety rules, and must follow your TA's instructions and must behave in a professional manner.*

Otherwise, *you will be expelled from the lab and will receive a ZERO GRADE for that day lab. Announcements will be made through e-mail and through postings on blackboard.* Your TA does not set grading and attendance policies, does not receive or accept any absence documentation, does not make up or grade exams, and does not assign your final lab course grade. *All of these matters should be discussed only with me, either by email or in person*. The approved calculator for the final examination is TI 30, and you will need a SCANTRON FORM 882-E (50 multiple choices on each side) for the final exam.

Lab Safety Requirements

Students are required to read, acknowledge, and sign their agreement to the safety rules for laboratory (printed in the lab manual). *Approved safety* **GOGGLES or GLASSES** *(prescription safety glasses do NOT meet this standard) must be worn for all experiments during the entire time you are in the laboratory, except for 100% dry labs*. *This is an absolute* REQUIREMENT. You can buy goggles/glasses from the Chemistry Club (CFS lobby under the stairs during 1st week of lab) or at home improvement stores in the safety equipment section. *While in the lab, you must also wear pants (or long skirt) that cover the whole leg and shoes that enclose the whole foot (not sandals, backless or strappy shoes, shorts, or capris)*. *Long hair or loose flowing garments must be pinned back*. *There is to be no food or drink of any kind, and no smoking. Failure to follow ALL of the safety rules will result in expulsion from the laboratory and a zero for that day's grade.* Even if you feel that your TA might not enforce the rules and make you leave, you can still be required to leave. Your TA does have my permission to do so.

Conduct

Students are expected to follow the TA's instructions, wear appropriate attire and safety equipment, treat others with respect, maintain honesty and integrity, and behave in a professional manner that is conducive to learning. There is to be no food or drink, no smoking, no use of cell phones, no loud talking, and no playing with chemicals or equipment in the laboratory. Poor management of laboratory materials, abuse of equipment, sloppiness in the work area, improper *waste disposal*, and any other action the instructor feels is detrimental to the development of good laboratory skills may *result in a lowered lab grade*. If you check in to a lab drawer, it is mandatory that you check out (even if you drop the course). Failure to check out of your drawer may result in a fine in addition to any breakage that has accrued.

Pregnancy

Pregnant students are required to make an appointment to talk with me about what you should and should not do in the lab or options for minimizing chemical exposure. *You will still be responsible for all the material in the regular lab manual, and you will need to take the same final exam. If at any time during the semester you learn that you are pregnant, you should immediately inform your TA and me.*

Attendance and Grading

To earn credit for this course, student's attendance and participation are required for a minimum of 15 out of 19 laboratory sessions. *If you missed more than 4 lab sessions, you will fail no matter how many points you earn overall. You must make at least a D in lab to pass the course.* In other words, *if you either fail the lab* OR *lecture, you will have to retake the entire combined course to get credit*. Your TA, at the beginning of a lab, gives instructions, safety issues, and quizzes, so you need to arrive on time. If you miss a quiz due to tardiness, you will receive a zero for that quiz.

You may miss up to two lab experiments (out of 19 labs) without penalty. *Additional missed experiments may carry zero marks* for participation*. If you have attended for all 17 labs, the extra points count as BONUS. Due to time, space, and resource restraints, there are* **NO MAKE-UP LABS***. You may* NEVER ATTEND *any other lab section to make up missed laboratories, and you are responsible for any material covered in a missed lab*. **Students who miss the final exam MUST HAVE an official unavoidable documented reason,** *and must make an appointment with me to discuss that situation as soon as they are aware of it.* You should keep track of your grades. *It is your responsibility to check your posted grades on blackboard and reach an understanding with your TA about them. Unless you have discussed unresolved difficulties with me, I will assume the grades/scores posted at the time of the final exam are correct and complete. The official attendance record for the course is a class attendance roster that will be present in the lab*. *You need to sign the roaster each day. If you do not* sign, *your TA cannot verify with certainty that you were presence, so that it might count as an absence*. Signing the attendance roster for another student is *academic misconduct.*

The Mid Term and Final Exams will be comprehensive: Mid Term Exam *will cover the experiments performed: EXP1—9 and* Final Exam *will cover all experiments, which you performed in the laboratory. The* Final Exam Questions *will emphasize more on the theories of the experiments after Mid Term Exam.*

Lab Participation and Activity: (10 points for each experiment for 17 Exp.) **-- 170**

Pre-Lab Quizzes: (5 points for each pre lab quiz) ---------- **85**

Post-Lab Quizzes: (5 points for each post-lab quiz) ---------- **85**

Mid Term Exam: ---------- **100**

Final Exam: ---------- 100

Total points (grading scale)**: ---------- 540**

Bonus points (40 points max): ---------- 40

Total possible (max)**: ----------** 580

Please note that while you will be assigned a letter grade for lab on Blackboard, your percentage grade is reported to your lecture instructor for calculating your overall course grade.

COURSE LETTER GRADES	TOTAL POINTS REQUIRED	PERCENTAGE REQUIRED
A	486-540	(90%)
B	432-485	(80%)
C	378-431	(70%)
D	324-377	(60%)
F	0-323	(<60%)

Tentative Lab Schedule may be changed and ***lab content*** may be subject to revision

DATE	DAY	ACTIVITY	SUBJECT
Mon/Tue	**2/5 or 2/6**	**CHECK IN/EXP 1**	Comparison Properties of Org.& In. comp…
Wed/Thu	2/7 or 2/8	EXP 2	Identification of Elements in Org. Comp.…
Mon/Tue	2/12 or 2/13	EXP 3	Solubility Properties of Organic Compounds
Wed/Thu	2/14 or 2/15	EXP 4	Reaction of Hydrocarbons
Mon/Tue	2/19 or 2/20	EXP 5	Properties and Reactions of Alkyl Halides
Wed/Thu	2/21 or 2/22	EXP 6	Reactions of Alcohols
Mon/Tue	2/26 or 2/27	EXP 7	Aldehydes and Ketones
Wed/Thu	2/28 or 3/1	EXP 8	Oxidation of Sugars By benedict's Reagent
Mon/Tue	3/5 or 3/6	EXP 9	Properties of Carbohydrate
Wed/Thu	**3/7 or 3/8**	**MID TERM EXAM**	***Covers EXP 1—9***
Mon-Thu	**3/12-3/15**	**No experiments**	***Spring Recess***
Mon-Tue	3/19 to 3/20	EXP 10	Acidic Hydrolysis of carbohydrate
Wed/Thu	3/21 or 3/22	EXP 11	Enzymatic Hydrolysis of carbohydrate
Mon/Tue	3/26 or 3/27	EXP 12	Properties of carboxylic acids
Wed/Thu	3/28 or 3/29	EXP 13	Carboxylic Acid Esters
Mon/Tue	4/2 or 4/3	EXP 14	Preparation of Soap (Saponification of Lipids)
Wed/Thu	4/5 or 4/6	EXP 15	Chemistry of Amines
Mon/Tue	4/9 or 4/10	EXP 16	Chemistry of Amides
Wed/Thu	4/11 or 4/12	EXP 17	Detection of Amino Acids and Proteins
Mon/Tue	4/16 or 4/17	EXP 18	Denaturation of Proteins
Wed/Thu	4/18 or 4/19	EXP 19	Vitamin C
Mon/Tue	**4/23 or 4/24**	**Review / CHECK OUT**	*Covers EXP 1-19*
Wed/Thu	**4/25 or 4/26**	**FINAL EXAM**	***Covers EXP 1—19***

All University policies and procedures will be adhered to, so more detailed descriptions of these may be found at http://www.shsu.edu/syllabus/