OFFICIAL SYLLABUS WILL BE PROVIDED IN THE COURSE

EAST TENNESSEE STATE UNIVERSITY

College of Arts and Sciences

Department of Chemistry

CHEM 2011 - Organic Chemistry Laboratory

Section	Instructor	email	Lab Start Time
000	Dr. Kady (Coordinator) Office: 431 Brown Office Hours: W&F: 8:15-9:10 am only on zoom: (https://etsu.zoom.us)	kadyi@etsu.edu	
940	Kankam	kankam@etsu.edu	M 2:00 PM
941	Kankam	kankam@etsu.edu	M 2:00 PM
942	Enoch	asimbisa@etsu.edu	T 9:45 AM
943	Teye-Kau	johnhayford@etsu.edu	T 2:15 PM
944	Ntim	Ntim1@etsu.edu	T 2:15 PM
945	Enoch	asimbisa@etsu.edu	W 9:20 AM
946	Teye-Kau	johnhayford@etsu.edu	W 2:00 PM
947	Tade	tadeoo@etsu.edu	W 2:00 PM
948	Ntim	Ntim1@etsu.edu	R 2:15 PM
949	Tade	tadeoo@etsu.edu	R 9:15 AM

Course Overview This lab will be taught remotely for the entire semester. Videos of both prelab lectures and experiments will be posted on D2L for you to watch anytime. You will use the data obtained in the experiments videos to complete your lab reports. You do not have to come to the lab in person, however students who desire to have hands-on experience will be accommodated on specific days throughout the semester; this is an optional activity and will not affect your grade in any way if you decide not to do it. If you decide to be involved in a such hands-on activity. please check with your TA ahead of time.

Textbook Microscale Experiments in Organic Chemistry-Part-I: Author: I. Kady. Publisher: Hayden McNeil, 4th ed (2020). Available at the ETSU Bookstore.

Other Sources D2L and hand-outs

Brief Course Objectives To learn basic techniques of practical organic chemistry and underlying principles.
To learn how to collect and analyze experimental data.

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Notebook

The laboratory notebook is included at the end of the lab manual; there is no need to have a separate notebook.. This is to be used for pre-lab preparation (e.g. notes regarding the experimental procedure, tables of physical constants and safety alerts for reagents and products, etc.), and for recording your data and observations during the laboratory period. Your notebook is also the primary source from which individual short reports and formal reports are prepared. Be ready to have your notebook evaluated by your TA at any time during the semester.

Grading

Two Exams	**40%**
Short Lab Report	**15%**
Pre-lab assignments	**5%**
Two Formal Lab Reports	**20%**
Laboratory Notebook	**10%**
Lab Performance/Technique	**10%**

Pre-lab Lectures

The pre-lab lectures will be pre-recorded and the videos will be posted on D2L. You are required to watch the video as part of your preparation for the experiment. You must also read the theory of the experiment and be familiar with experimental procedure.

Pre-lab Assignments

Each experiment has pre-lab assignment questions at the end the chapter. You must answer these questions and submit them in the Dropbox on D2L by Friday of your scheduled experiment week.

Experiments

The experiments will be conducted and recorded; the experiments videos will be available on D2L starting on each Monday of the week of the scheduled experiment. You must watch these videos and use the experimental data in them to complete the short report.

Short Reports

are based upon individual laboratory activities and are due at the end of the week of the scheduled experiment (due by Friday of your scheduled experiment week). Short report forms are in the lab manual, at the end of each chapter. You need to complete each report and submit it in the Dropbox on D2L.

Lab exams

Exams will be based upon lab activities *and* the underlying principles. Exams will be conducted remotely during your scheduled lab time. You should plan to be available during your whole scheduled lab period on the exam day.

Formal Reports

There are two formal reports that you are required to write during the semester and are to be submitted in the Dropbox on D2L by Friday of the scheduled due week. Formal reports must be typed; the format of the reports will be explained in the pre-lab lectures and posted on D2L.

Laboratory Notebooks

Notebooks may be evaluated by your TA at any time during the semester.

Lab Technique

grade is based upon your general laboratory performance including promptness, preparedness, organization, etc.

Grading Scale

A	≥ 94%	B-	≥ 80%	D+	≥ 60%
A-	≥ 90%	C+	≥ 77%	D	≥ 50%
B+	≥ 87%	C	≥ 74%	F	< 50%
B	≥ 84%	C-	≥ 70%		

Attendance

You are expected to make every effort to complete all laboratory requirements. Make-up labs will be authorized only for very special reasons (i.e., serious illness, death in family, etc.), and it is the responsibility of the student to document the reason of absence. Written authorization must be obtained from your lab instructor. Make-up of missed lab must be completed **within one week**. Additionally, it is your responsibility to obtain permission from the instructor for make-up.

Academic Integrity Policy

Please review the Chemistry Department's Academic Integrity Policy posted on D2L under the content section.

Lab Safety

Despite the fact that a chemistry lab has potentially hazardous materials, the careful and correct use of chemicals usually circumvents these hazards. Therefore, certain safety precautions will be taken in this lab throughout the semester. Familiarize yourself with the following Department of Chemistry safety rules, as you will be expected to **strictly** adhere to them. If you are found in violation of any one of these safety rules, the instructor may summarily dismiss you from the laboratory and all work that day will receive a grade of zero. No excuses will be accepted or tolerated:

1. Safety is the responsibility of each person working in lab.
2. Wear *safety* goggles and lab coat at all times while you are in the lab.
3. Minimize exposure to hazardous chemicals. Do not eat, drink, smoke, chew tobacco, or use snuff in the lab. Never taste chemicals, and do not smell unless specifically directed to do so.
4. You are required to wear clothing that covers you from your neck to below your knees and you are required to wear closed-toed shoes that cover the top of the foot to the ankles. We recommend an old t-shirt and blue jeans. Shoes that do not provide top of the foot protection such as sandals, flip-flops and crocs are forbidden. You are welcome to store proper lab clothes in your lab drawer for your convenience.
5. There might be times when your instructor will require you to wear additional personal protective equipment (PPE) such as a lab apron or gloves when performing particular experimental procedures.
6. Read the label of each chemical container before you use it. Make sure it is the correct chemical and the correct concentration, and that you have read and understood the hazards of each chemical. Dispense chemicals in a hood if so directed. Always dispose of waste chemicals in the proper container. *Broken glassware, thermometers, or syringe needles NEVER go in the trash cans!*
7. Do not engage in horseplay or unauthorized experiments. Use each piece of equipment only for its intended purpose, and make sure that it is intact before beginning.
8. Do not use electronic devices while in the laboratory. Calculators are ok, but not computers or cell phones.
9. Clean up spills and broken glass. Your instructor will advise you on the best method. Broken mercury thermometers

are especially hazardous; notify your instructor immediately if one breaks. Minimize risk of accidents by keeping your work area clean and uncluttered.

10. Flush skin and eyes with water in the event of contact with chemicals. Flush skin exposed to hot objects with cool water. Notify your instructor immediately.
11. Wash your hands before leaving the lab.

Additional Notes

Although CHEM 2011 (Lab) is a separate course from CHEM 2010. Lecture is a co-/pre-requisite for the lab; in case of dropping the lecture, you must also drop the lab. Read, sign and turn in the lab safety rules form found at the end of chapter 1 in the manual. Repeated unsafe behavior in the lab will result in expulsion from the course.

Keeping a Good Notebook

If you were working in a research laboratory, your lab notebook could be the most important scientific document that you write. In legal cases, it is treated as a legal record of your experiments, and is sometimes used to prove when and how you conducted the experiments. Although we doubt that your organic lab notebook will ever appear as evidence in a court of law, we want you to keep a good notebook that is an accurate, permanent record of what you have done in the lab. Refer to chapter 1 of the manual for more information on how you prepare the notebook in. Also consider the following hints:

- Use the bound notebook found in the back of your lab manual. Loose-leaf or spiral notebooks are unacceptable.
- All pages must be numbered in sequence.
- A ballpoint pen with non-erasable ink is preferred.
- All errors must be crossed out with a single line, no scribbles or white-out!
- A clear Table of Contents should appear on the first few pages
- No pages must be missing; do not remove any pages. Pages can be crossed out with an (X) if the entire page is incorrect. Avoid leaving any pages blank. Use front and back of each page.
- All experiments must have titles and dates they are performed. Upon completion of each experiment, sign and date the last page of experiment.

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Laboratory Schedule - CHEM 2011
Fall 2020-All Sections

Period	Week of	Lab Activity	Background Reading	Assignment
1	8/24	Introduction (No experiment)	Ch. 1	You must read and sign safety guidelines, p 13-14
2	8/31	Melting Points Measurement of Compounds and Mixtures;	Ch. 2	Pre-lab Qs:p23 Post-lab Qs: p21
3	9/7	Recrystallization	Ch. 3	Pre-lab Qs: p33 Post-lab Qs: p32
4	9/14	Distillation **Formal Report I on this Experiment**	Ch. 4	Pre-lab Qs: p47 Post-lab Qs: p45
5	9/21	Extraction **Formal Report Due date**	Ch.5	Pre-lab Qs: p61 Post-lab Qs: p59
6	9/28	**Exam I: (Periods 1-5)**		
7	10/5	Chromatography	Ch.6	Pre-lab Qs: p77 Post-lab Qs: 75
8	10/12	Stereochemistry	Ch. 7	Pre-lab Qs: p87 Post-lab Qs: p86
11	10/19	Elimination Reactions	Ch.8	Pre-lab Qs: p101 Post-lab Qs: p99
12	10/26	Nucleophilic Substitution Reactions **Formal Report II on this Experiment**	Ch. 9	Pre-lab Qs: p113 Post-lab Qs:p112
13	11/2	Identification of Unknowns by IR **Formal Report Due date**	Ch. 10	Pre-lab Qs: p123 Post-lab Qs:p122
14	11/9	**Exam II: (Over periods 7-13)**		