

## Organic Chemistry I Laboratory (3210.001)

### Instructor Contact

**Name:** Dr. Sreekar Babu. Marpu

**Pronouns:** He, Him, His

**Office Location:** CHEM 371

**Phone Number:** 940-565-4850

**Office Hours:** Tuesday's 10.00 am to 10.30 am

**Zoom Meeting ID (office hour, recommended, not required):** <https://unt.zoom.us/j/89597368821>

**Email:** [sreekarbabu.marpu@unt.edu](mailto:sreekarbabu.marpu@unt.edu)

**Note:** Please take the time to read the entire syllabus document, course policies are described in this document clearly.

**Laboratory Coordinator** - Dr. Charles Browning ([charles.browning@unt.edu](mailto:charles.browning@unt.edu))

**Teaching Assistants:** Responsible for conducting the labs, grading, and monitoring safety guidelines in the laboratory. First point of contact for any student questions/concerns.

Section Number	Day/Time	TA Name	Contact Information	RM
301	T/W/R <b>9.00 am to 11.50 am</b>	Norris Hailey	haileynorris@my.unt.edu	241
302	T/W/R <b>12.00 pm to 2.50 pm</b>	Jayasundara Sameera	sameerajayasundara@my.unt.edu	241
303	T/W/R <b>3.00 pm to 5.50 pm</b>	Oji Uka	ukaoji@my.unt.edu	241
304	T/W/R <b>6.00 pm to 8.50 pm</b>	Sindhu Shankar	sindhukonanurshankar@my.unt.edu	241

**Communication Expectations:** Any questions, first reach out to the TA. TA's are in charge of the laboratory section and needs to be contacted for any question or concern related to the labs. The students can expect a response from the TA in less than 24 hours during the weekdays. The students are expected to reach out to TA's well in advance for reporting an absence for the labs or for arranging a late submission of reports/assignments/quizzes. Everyone is welcome to reach out to the instructor if the TA is unresponsive or the issue is resolved with the TA.

**Important Note:** Please mention the course number (3210) and laboratory section number (3xx) in your subject line of the email. Do not expect a quick response from the instructor or from the TA if this information is missing.

**COVID related NOTE:** If you are experiencing any [symptoms of COVID-19 \(Links to an external site.\)](https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html) (<https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html>) please seek medical attention from the Student Health and Wellness Center (940-565-2333 or [askSHWC@unt.edu](mailto:askSHWC@unt.edu)) or your health care provider before coming to campus. UNT also requires you to contact the UNT COVID Hotline at 844-366-5892 or [COVID@unt.edu](mailto:COVID@unt.edu) for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure. While attendance is an important part of succeeding in this class, your health, and those of others in the community, are more important. Please report any suspected COVID exposure or symptoms to the COVID hotline immediately (844-366-5892 or email [COVID@unt.edu](mailto:COVID@unt.edu)). The note from the Dean of Students office will serve as an excuse note but submission of "REPORTS" is required. "The North Texas region is currently experiencing high transmission of the highly contagious and dangerous Delta variant of COVID-19. The University of North Texas is very concerned about the risks of this new variant. UNT is requesting that all students, faculty and staff, whether vaccinated or not, comply with the public health recommendations of the U.S. Centers for Disease Control & Prevention. UNT encourages that all students wear a mask during class and in other indoor locations on campus until we receive guidance that the public health risks are decreasing. I understand that masks are uncomfortable, but they will help us achieve our goal of protecting vulnerable members of the community and their families, including unvaccinated children, during this latest resurgence of COVID-19. Read more about CDC guidelines for vaccinated people here: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>"

## Welcome to UNT!

As members of the UNT community, we have all made a commitment to be part of an institution that respects and values the identities of the students and employees with whom we interact. UNT does not tolerate identity-based discrimination, harassment, and retaliation. UNT's full Non-Discrimination Policy can be found in the UNT Policies section of the syllabus.

## Course Description

1 credit - No lab lecture; 3 hours laboratory.

This course is designed to introduce students to organic chemistry laboratory techniques. Organic reactions and selective organic synthesis techniques – Melting Point, Recrystallization, Distillation, Solvent Extraction, and Separation of Mixtures. The organic reactions include dehydration (elimination) and bromination.

Some of these techniques/reactions will be completed as homework assignments using experimental videos and/or Labster simulations.

Prerequisite(s): "C" or better in CHEM 1420 and CHEM 1440.

Core Requisite(s): concurrently enrolled in CHEM 2370 or completed prior with a "C" or better

The course covers organic I laboratory experiments. The syllabus is designed to provide hands-on laboratory experience with selective organic synthesis techniques and reactions in congruent with the ongoing CHEM 2370 course. The course will involve 6 in-person laboratory experiments, covering all the topics mentioned above. The main objective of the course is to cement the knowledge and practical understanding of theoretical techniques discussed and taught in various chapters of the ongoing CHEM 2370 course. The laboratory experiment sequence is designed to overlap with 2370 teaching content. The experiments are planned and implemented on a microscale considering lab duration and safety concerns.

### Course Structure

The laboratory part of the course is fully face-to-face that includes few homework assignments. The course contains 6 weekly modules made of 6 experiments that are spread over 8 weeks. A prep day is included for every experiment that allows students to get ready for performing the experiment in the lab. The prep-day contains prelab quiz, some additional materials that are useful for understanding the concepts of the experiment and getting fully ready for performing the experiment in the lab. Students are required to finish all the assigned activities during the prep day before going to the lab. The syllabus includes 6 laboratory experiments, 6 prelab activity quizzes, and 2 quizzes. A makeup assignment will be offered at the end of the course depending on grades of the complete class. See the detailed breakdown of points in the syllabus section.

For safety and effective hands on training, depending on number of students in a section, the section will be divided into two groups (**Group A and Group B**) and each group will meet on different days of the week covering same syllabus. ***The TA will divide the lab section into two groups before the first experiment.*** The students are required to work with the laboratory section TA in the laboratory, strictly follow instructions to ensure personal safety and safety of everyone in the lab. Students are required to understand the chemistry concepts of each experiment, get prepared for the experiment, finish online activities, prepare required prelabs, perform the experiment in the lab, and submit the lab reports. If you have any questions or unsure about anything, DO NOT HESITATE TO ASK!!! Very important that you are aware of everything listed in the syllabus document. We are looking forward to sharing our knowledge and experience to facilitate a unique and the best laboratory teaching experience for every student enrolled in the 3210 course. I know that you will bring experience and insight into lab activities, the student's feedback is highly recommended. We are truly looking forward to this course this semester!

### Weekly Laboratory Work

**Part 1: Prelab Preparation:** Know your experiment for the week, read the course material, and understand the experiment. Very important! to understand the underlying chemistry concepts of the experiment. Finish all the activities, so to get fully prepared for the experiment. Submit the prelab online and print a copy of the prelab to carry to the laboratory. The prelab should contain the Objective, Reference Table and Experimental Procedure. A sample of prelab is available on Canvas. Please check the "LAB REPORT" help documents (Week # 1 Module) for additional information. Reach out to your TA if you have any questions, **submission of prelab is mandatory for every experiment.**

**Part 2: Laboratory Work:** Attend the lab, make sure you have submitted the prelab and finished other assigned activities before going to the lab. Carry a copy of the prelab, perform the experiment following the procedure from the prelab. Follow safety and disposal instructions, reach out to

your TA in the lab. Record observations, data/results in your notebook. Any regular notebook can be used. Make sure you have - acceptable dress code, fully protected shoes, goggles, face mask (as per UNT policies), and prelab when you do the lab.

**Part 3: Submission of Lab Report:** Finalize the lab report (add observations, data/results, conclusions and postlab questions to the prelab), submit following the due dates. Ask your TA if you have questions.

**NOTE:** TA's will use plagiarism or copy check software, DO NOT COPY, check the "Academic Integrity" policy carefully. A sample of prelab and full lab reports are available in the weekly 1 module on Canvas. During the first week of the semester, the section TA will post a zoom recording explaining in detail the weekly activities, syllabus and other important items. Please watch the recording and reach out to your TA for any additional questions.

3210.001 platform is only for the instructor to reach out to the entire class. Do not upload any report(s) or quizzes or any other document on 3220.001 platform. Each section (3210.3XX) will contain exactly same information as 3210.001 platform. Your TA will create submission sections for reports and prelabs.

#### How to get through the first week of labs

Steps	Actions
1	Check your enrollment, confirm your lab section, lab time, and room number.
2	Check syllabus document, and understand guidelines and rules, know your TA (name and contact info) – check 3210.3xx course on Canvas and watch for announcements from your TA and the instructor. Know course guidelines, grading scheme, and required work from your end for finishing the course successfully.
3	Know your group (group A or B), your week#1 module start date and items to finish in week#1 module.
4	Preparing for first in-person lab – finish all prep week assignments (safety quiz, safety agreement, prelab quiz, prelab), gather goggles, make sure to adhere to the dress code rules, facemask recommended. Make sure the safety agreement, safety quiz, prelab quiz and prelab are submitted before going to the lab.
5	First in-person lab – Arrive at least 10 minutes early, be prepared (dress code, goggles, <i>prelab</i> ).
6	Record observations, data, results in the lab. Compile these data into the prelab and submit the lab report on/before the due date.

#### Course Prerequisites or Other Restrictions

Please check the course requirements at [https://registrar.unt.edu/sites/default/files/feeds/registrar\\_course](https://registrar.unt.edu/sites/default/files/feeds/registrar_course) (Links to an external site.) or reach out to [chem-advising@unt.edu](mailto:chem-advising@unt.edu) for additional information.

Must have had or be concurrently registered in chem 2370. Must also be enrolled in a chem 3210 lab. Chem 1440 and must have had or be concurrently registered for chem 2370 must also be enrolled in any chem 3210.3xx lab section. Lab lecture must meet at least one day before the

actual lab meets. web-based instruction. This is an internet course with laboratory work. For enrollment questions, please reach out to the department ([chem-advising@unt.edu](mailto:chem-advising@unt.edu)) or UNT registrar's office.

### Course Objectives

Upon successful completion of this course, students will be able to

1. Recognize the key aspects of online learning and evaluate the differences between in-person and online teaching for organic chemistry laboratory courses.
2. Identify different equipment, glassware commonly used in the organic chemistry laboratory, and handle them safely and effectively.
3. Demonstrate the ability to work safely in the organic laboratory environment - bench and hood spaces.
4. Review and follow safe laboratory practices in an organic lab setting. Includes safe handling and disposal of organic chemicals (solids, solvents, waste).
5. Apply selectively the theoretical concepts covered in CHEM 2370 or equivalent organic course in a laboratory setting.
6. Operate at least five organic laboratory techniques including melting point analysis, recrystallization, thin-layer chromatography, sublimation, distillation, and extraction in an organic lab setting.
7. Handle selective organic reactions in an organic lab setting following a written experimental procedure. In the laboratory, able to work individually or within a team to complete the experiment, collect the data, and analyze for a report.
8. Create a standard and legitimate scientific lab report using data generated in an organic lab setting.
9. Handle more comprehensive and bulkier CHEM 3220 labs in the future.
10. Predict and apply fundamental organic chemistry laboratory skills and techniques for advanced courses in chemistry and other branches of life sciences.
11. Adapt good laboratory practices to all compliance items (laboratory work and lab reports).

### Materials

**Recommended Reading:** "Macroscale and Microscale Organic Experiments," 6<sup>th</sup> or 7<sup>th</sup> Edition by Kenneth L. Williamson and Katherine M. Masters.

Any format of the textbook is acceptable for the course. The textbook is recommended as an additional source of information only, "NOT REQUIRED".

All the information required to perform the experiments in the labs is available on Canvas. Any additional information can be obtained from open online resources. For details related to organic chemistry mechanisms, refer to CHEM 2370 course material as needed.

**A lab notebook is required for in-person labs to record data, observations, and results. Any regular notebook will work.**

**Lab Reports:** Submission of a lab report is required for any laboratory experiment, quizzes and makeup assignment do not require a lab report. Homework assignments do not require a lab report. Please refer to the Week#1 module on Canvas for sample lab report. Again, any questions or concerns do not hesitate to reach out to your section TA.

### Lab Recitation and Materials

The recitation for this lab is completely online. Contains no lab lectures, in addition to powerpoint presentation, experiment handouts, pre-recorded lectures are posted on Canvas. Each weekly module contains Prelab quizzes, power point presentation of the experiment, experimental procedure handout, zoom recording of the ppt (from previous semesters) that explains the experiment, and an experimental video. Please use information from these different sources as needed to finish the experiment and lab report successfully. The video demonstrations will provide information for setting up the experiment, usage of the glassware, chemicals/materials, safety disposal protocols and other items in the laboratory. **Some of the zoom video recordings will contain bonus points, please ignore them.** The handouts will contain the experimental protocol, please use these handouts while preparing the prelab. The students are required to use the information from the experimental handout and prepare their prelab/lab report. The quizzes will be published on Canvas following the schedule in the syllabus. **Please follow the due dates for the submission of lab reports and quizzes. Do not expect any partial credit for late submission unless prearranged with the TA.**

**Important Note:** The zoom lecture recordings and YouTube demos are from previous semesters, so please kindly disregard the references to previous semesters information (date, experiment number, name of the TA). Reach out to the instructor or the TA if you have any questions.

**Important Note:** At this point (as of 01/17/22), no bonus points are included in the syllabus, the instructor will decide on bonus questions/points depending on progress of the class.

### Teaching Philosophy

The course covers organic I laboratory experiments. The syllabus is designed to provide hands-on laboratory experience with selective organic synthesis techniques and reactions incongruent with the ongoing CHEM 2370 course. The main objective of the course is to cement the knowledge and practical understanding of theoretical techniques discussed and taught in various chapters of the CHEM 2370 course. The laboratory experiment sequence is designed to overlap with 2370 teaching content. Understanding the concepts of CHEM 2370 teachings is very important for getting the best from the 3210 labs.

### Course Technology & Skills

Minimum Technology Requirements

Provide a list of the minimum technology requirements for students, such as:

- Computer

- Reliable internet access
- Speakers
- Microphone
- Plug-ins
- Microsoft Office Suite
- Canvas Technical Requirements (<https://clear.unt.edu/supported-technologies/canvas/requirements>)

#### Computer Skills & Digital Literacy

Provide a list of course-specific technical skills learners must have to succeed in the course, such as:

- Using Canvas
- Using email with attachments
- Downloading and installing software
- Using spreadsheet programs
- Using presentation and graphics programs

#### Technical Assistance

Part of working in the online environment involves dealing with the inconveniences and frustration that can arise when technology breaks down or does not perform as expected. Here at UNT we have a Student Help Desk that you can contact for help with Canvas or other technology issues.

**UIT Help Desk:** UIT Student Help Desk site (<http://www.unt.edu/helpdesk/index.htm>)

**Email:** [helpdesk@unt.edu](mailto:helpdesk@unt.edu)

**Phone:** 940-565-2324

**In Person:** Sage Hall, Room 130

**Walk-In Availability:** 8am-9pm

**Telephone Availability:**

- Sunday: noon-midnight
- Monday-Thursday: 8am-midnight
- Friday: 8am-8pm
- Saturday: 9am-5pm

**Laptop Checkout:** 8am-7pm

For additional support, visit Canvas Technical Help (<https://community.canvaslms.com/docs/DOC-10554-4212710328>)

## Rules of Engagement

Rules of engagement refer to the way students are expected to interact with each other and with their instructors. Here are some general guidelines:

- While the freedom to express yourself is a fundamental human right, any communication that utilizes cruel and derogatory language on the basis of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law will not be tolerated.
- Treat your instructor and classmates with respect in any communication online or face-to-face, even when their opinion differs from your own.
- Ask for and use the correct name and pronouns for your instructor and classmates.
- Speak from personal experiences. Use “I” statements to share thoughts and feelings. Try not to speak on behalf of groups or other individual’s experiences.
- Use your critical thinking skills to challenge other people’s ideas, instead of attacking individuals.
- Avoid using all caps while communicating digitally. This may be interpreted as “YELLING!”
- Be cautious when using humor or sarcasm in emails or discussion posts as tone can be difficult to interpret digitally.
- Avoid using “text-talk” unless explicitly permitted by your instructor.
- Proofread and fact-check your sources.
- Keep in mind that online posts can be permanent, so think first before you type.
- Be cautious when using humor or sarcasm as the tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound offensive.
- Be careful with personal information (both yours and others).
- Do not send confidential information via e-mail
- Any profanity in the lab reports will not be excused – will result in zero and removing from the course. Any student behavior that is disruptive, harassing towards the instructor or the TA or the laboratory manager will be reported to the DOS. Check Code of Student Conduct for acceptable student behavior.

See these [Engagement Guidelines \(https://clear.unt.edu/online-communication-tips\)](https://clear.unt.edu/online-communication-tips) for more information.

<i>Assignment</i>	<i>Points Possible</i>	<i>Percentage</i>
<i>2 Quizzes. Quiz # 1: Safety quiz mandatory. Quiz # 2 – based on experiments covered in the syllabus</i>	<i>40 points</i>	<i>13.7%</i>
<i>6 Lab Reports</i>	<i>120 points</i>	<i>41.3%</i>



<i>Assignment</i>	<i>Points Possible</i>	<i>Percentage</i>
<i>6 Prelab activity quizzes</i>	<i>120 points</i>	<i>41.3%</i>
<i>TA Assessment</i>	<i>10 points</i>	<i>3.4%</i>
<i>Total Points Possible</i>	<i>290 points</i>	<i>100%</i>

\*Bonus points and makeup lab are the instructor's discretion. Depending on the performance of the entire class, the instructor reserves right to release the bonus points and/or makeup assignment. 5 extra points for TA SPOT evaluation.

### Grading

Include the grading scale (A-F) along with the point totals/percentages you will use to calculate the final grade. For example:

A = 90.0%-100%

B = 80.0%-89.9%

C = 70.0%-79.9%

D = 60.0%-69.9%

F = 50.0%-59.9%

### Grading Rubric for Lab Reports - 20 points

<b>Section</b>	<b>Resource Material</b>	<b>Points</b>	
Purpose/Objective	Use the handout/ppt/reference material	1.0	
Reaction Schematics/Apparatus/Reagent Table		2.0 or 3.0	
Procedure		3.0 or 4.0	
Prelab questions		0.0	
Post lab questions		2.0	
Data/Observations/Calculations/Results	In lab work	8.0	
Conclusions			
	A detailed explanation of the results, not just mentioning	3.0	

	successful/unsuccessful. Report yield as needed		
Total		20	

**List of Modules with Description and Submission Dates for Student Groups\* A and B**

To accommodate the safety and better hands on laboratory experience to the students, each lab section will be divided into two groups by the TA at the beginning of the semester. The students are required to stick to their group for the rest of the semester. This arrangement will cover more than 50% of the experiments in person, selection of in-person experiments is designed to cover all techniques and practices expected to be covered in 100% in-person arrangement. The arrangement will help the TA’s to focus and help each student one -to-one more effectively. The bi-weekly meeting will also provide students more time for lab reports and subside safety/health concerns. See the details below for Group A and B.

Please look at the UNT deadlines. UNT holiday: Jan 17; Classes Begin: Jan 18; Last day to drop a course with a grade of W: April 8; First day to request grade of incomplete: April 9<sup>th</sup>; Pre-final: May 4-5<sup>th</sup>; Last regular class meeting: May 5<sup>th</sup>; Reading day no classes: May 6<sup>th</sup>; Finals: May 7 – 13<sup>th</sup>; University grade submission: May 16<sup>th</sup>; Grades/academic standings posted on official transcript: May 18<sup>th</sup>.

**GROUP A - Will perform the experiments on Wednesdays.**

(Will use Tuesday as prep day)

**GROUP B - Will perform the experiments on Thursdays.**

(Will use Wednesday as prep day)

<b>Weekly Modules</b>	<b>Module Description and Reference Materials</b>	<b>*Module Week Dates</b>	<b>Activities for the Week</b>
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Week #1	Prep Week	Week of May 16th	<p>Instructor will post a zoom recording in first 1-3 days of the semester to help understand the course.</p> <p>ITEM 1: Go over your course on Canvas, ask questions (if any).</p> <p>ITEM 2: Know your TA, check syllabus, understand the course and activities, reach out to your TA if you have any questions</p> <p>ITEM 3: Finish the <b>safety quiz (quiz #1)</b>, safety agreement (submit)</p> <p>ITEM 4: Review lab report help documents that will help to write a prelab and lab report.</p> <p>Review other documents from week 1 module to get ready for experiment 1 the next week.</p> <p>ITEM 5: (optional) -Watch Labster simulations related to chemical safety and disposal (not graded).</p> <p>ITEM 6: Experiment -1 preparation (finish the prelab quiz, go over experiment details, prepare the prelab, submit the prelab, make sure the safety docs are submitted, gather items required for first in-person lab (goggles, dress code, prelab copy).</p> <p>• .</p>
Week #2	Experiment 1- Two Physical Properties (Recrystallization and Melting Point)	Week of May 23	<p>ITEM 1: Finish the prelab quiz for experiment 1</p> <p>ITEM 2: Finish the prelab document and submit at least 24 hours before the experiment.</p>

			<p>ITEM 3: Perform the experiment in the lab using the prelab document. Carry the doc to the lab.</p> <p>ITEM 4: Finish the lab report and submit</p> <p>ITEM 5: Start working on Experiment 2 preparation items.</p>
Week #3	Experiment 2 – TLC	Week of May 30	<p>ITEM 1: Finish prelab quiz for experiment 2</p> <p>ITEM 2: Finish the prelab document and submit at least 24 hours before the experiment.</p> <p>ITEM 3: Perform the experiment in the lab using the prelab document. Carry the doc to the lab.</p> <p>ITEM 4: Finish the lab report and submit</p> <p>ITEM 5: Start working on Experiment 3 preparation items.</p>
Week #4	Experiment 3 – Extraction	Week of June 6th	<p>ITEM 1: Finish prelab quiz for experiment 3</p> <p>ITEM 2: Finish the prelab document and submit at least 24 hours before the experiment.</p> <p>ITEM 3: Perform the experiment in the lab using the prelab document. Carry the doc to the lab.</p> <p>ITEM 4: Finish the lab report and submit</p> <p>ITEM 5: Start working on Experiment 4 preparation items.</p>
Week #5	Experiment 4 - Distillation + QUIZ 2	Week of June 13	<p>ITEM 1: Finish prelab quiz for experiment 4</p> <p>ITEM 2: Finish the prelab document and submit at least 24 hours before the experiment.</p>

			<p>ITEM 3: Perform the experiment in the lab using the prelab document. Carry the doc to the lab.</p> <p>ITEM 4: Finish the lab report and submit</p> <p>ITEM 5: Start working on Experiment 5 preparation items.</p> <p>ITEM 6: Quiz #2 will be available and will have one week to finish</p>
Week #6	Experiment 5 – Dehydration	Week of June 20	<p>ITEM 1: Finish prelab quiz for experiment 5</p> <p>ITEM 2: Finish the prelab document and submit at least 24 hours before the experiment.</p> <p>ITEM 3: Perform the experiment in the lab using the prelab document. Carry the doc to the lab.</p> <p>ITEM 4: Finish the lab report and submit</p> <p>ITEM 5: Start working on Experiment 6 preparation items.</p>
Week #7	Experiment 6 – Stereospecific Bromination Reaction	Week of June 27	<p>ITEM 1: Finish prelab quiz for experiment 6</p> <p>ITEM 2: Finish the prelab document and submit at least 24 hours before the experiment.</p> <p>ITEM 3: Perform the experiment in the lab using the prelab document. Carry the doc to the lab.</p> <p>ITEM 4: Finish the lab report and submit</p> <p>ITEM 5: Make sure any missing lab reports are submitted</p>

			<b>Note: Late reports will not be accepted unless there is a DOS note or health note explaining the reasons for missing the due dates.</b>
Week # 8 : Time for students and TA's to catch up with missing assignments and grading.			

Please look at the <https://registrar.unt.edu/registration/spring-registration-guide> for UNT deadlines.

UNT holiday: July 4th - Independence day; classes begin May 16th. Last day of class - July 7th; Finals/Final day of the class - July 8th.

#### Brief description of activities

Laboratory Experiment (in-person and online)	Short Description and Objectives
<b>Safety and guidelines</b>	Students are required to review the safety rules and sign the document. Send it over to the TA. Review the safety materials, finish the safety quiz, and send it over to the TA. Review the syllabus, "lab report help" documents, and get ready for the first in-person lab the following week. Able to acquire skills to write a lab report. Able to practice safety guidelines in the organic laboratory.
<b>Two Physical Properties (Recrystallization and Melting Point)</b>	Recrystallization of an organic compound (Benzoic acid or Benzoic acid mixture or a similar compound) will be performed in the lab. The module material will cover concepts for performing a simple recrystallization experiment in the laboratory. The concepts of both techniques are covered in the presentation and in the demo videos. Able to describe different steps of the recrystallization technique in the final lab report. Able to acquire the skills required to perform a simple recrystallization technique. Able to compile data and observations of recrystallization for the lab report from the laboratory experiment. Able to compare the efficiency and recovery of two methods.  Along with recrystallization technique, the module will contain materials related to "Melting Point" experiment. Students are required to watch the demo videos for better understanding the concepts/working of melting point experiment. We will determine the melting point of an organic compound using the Mel-Temp apparatus. The effect of mixtures and impurity on the melting point of the organic compound will be analyzed depending on time constrain. The purity of the organic compound after recrystallization is analyzed using melting point data. Able to characterize the melting point technique and its uses in organic chemistry. Able to compile data and observations

	for the lab report from. Able to predict the effect of impurity and the effect of mixing on the melting point of organic compounds.
<b>Thin Layer Chromatography (TLC)</b>	The module material will cover concepts for performing the TLC technique in the laboratory. The application of the TLC technique for isolation and purification will be discussed. The experiment will be performed using 3 typical analgesic compounds - Aspirin, Acetaminophen, and Caffeine. A colored compound, Paprika will be part of the experiment. The effect of polarity on the movement of compounds on the TLC plate will be analyzed. An unknown organic compound will be identified as part of the experiment. Able to characterize the Thin Layer Chromatography (TLC) technique and its uses in organic chemistry. Able to acquire skills required to perform TLC analysis of organic compounds for future labs. Able to describe different steps involved in performing TLC analysis in the final lab report. Able to compile data and observations for the lab report. Students are advised to watch the demo videos for getting better prepared for performing the experiment in the lab
<b>Sublimation and Liquid-Liquid Extraction (Acid-Based Extraction) – Part of Homework Assignment ONLY.</b>	Sublimation and Extraction are important purification and separation techniques performed in chemistry labs for selective compounds/complexes. The syllabus does not cover sublimation and Extraction as individual experiments but are covered as part of extraction experiment, so, understanding concepts related to both techniques is important. Students are required to watch the demo videos, go over the ppt and zoom lecture recordings containing both Sublimation and LLE topics. The material will cover concept demonstrating sublimation of Benzoic acid and separation of benzoic acid (BA) and Naphthalene (NA) using extraction technique. Students are required to watch the demo videos related to both the techniques so both the concepts are clear while performing Caffeine Extraction experiment.
<b>Extraction and Sublimation (Caffeine Extraction)</b>	The module material will cover concepts for performing caffeine extraction and purification in the lab. Students are advised to watch the demo videos related to sublimation and extraction as mentioned above to gain knowledge related to both the concepts. The students will have the opportunity to perform both techniques during caffeine extraction experiment. Caffeine will be extracted from the tea solution, followed by purification by sublimation technique. Able to characterize the extraction technique and its uses/applications in organic chemistry. Able to acquire the skills required to perform the extraction of organic compounds for future labs. Able to describe different steps involved for performing extraction technique in the final lab report. Able to compile data and observations for the lab report from experimental data in the lab. Depending on time constrain, students will be able to perform TLC for understanding the purity of the Caffeine.
<b>Distillation</b>	The module material will cover concepts for performing distillation (fractional distillation) of a mixture of organic solvents based on the difference in boiling point in the laboratory. The experiment will be performed using a mixture of toluene and cyclohexane or toluene and acetone depending on chemicals availability. The application of distillation as a purification technique will be analyzed. Will calculate the percent of recovery of organic solvent after distillation. Able to characterize the distillation technique and its uses/applications in organic chemistry. Able to acquire the skills required to perform distillation for future labs. Able to describe different steps involved in performing the distillation technique in the final lab report. Able to compile data and observations for the lab report from an in-person laboratory experiment.
<b>Nucleophilic Substitution Reactions of Alkyl Halides –</b>	This is the first of series of organic reactions in 3210 labs, The SN reaction is not performed in the laboratory but because of significance of the reaction, students are required to finish a homework assignment related to SN

<p><b>Part of Homework Assignment ONLY.</b> The instructor will decide on inclusion/exclusion of this assignment based on progress of the entire class.</p>	<p>reactions. The materials covering concepts of SN reactions including ppt, demo video, zoom recorded lecture and handout are available for helping with the assignment. The assignment will include determining the reaction rates of different alkyl halides based on concepts covered in the module material. The rate of reaction of different alkyl halides using two reagents is estimated and recorded in the assignment. Students can take help from the demo video for better understanding of the experiment (if performed in the lab). In the demo video, you will notice that reactions will be performed in a test tube and the rate of reactions are estimated based on the formation of precipitate in the presence of the reagent. Able to characterize the SN reaction mechanism and its application in organic chemistry. Able to acquire the skills required to perform this simple organic reaction, simple mixing of reagents to understand the kinetics of the reaction. No lab report is required for this assignment, only filling the SN reaction table is required for the grade.</p>
<p><b>Alkenes from Alcohols (Elimination Reaction)</b></p>	<p>The reaction is based on elimination mechanism covered during CHEM 2370. The weekly module material will cover concepts for performing the acid-catalyzed dehydration of cyclohexanol in the lab. The reaction mechanism will be analyzed. Able to characterize the cyclohexanol dehydration reaction mechanism. Able to acquire the skills required to perform the cyclohexanol reaction in the laboratory. Able to describe different steps involved in performing cyclohexanol dehydration in the final lab report. Able to compile data and observations for the lab report from the laboratory experiment. Able to characterize product formation using specific reagents. Able to characterize the product yield. Students are required to watch the demo video before going to the lab for a better output.</p>
<p><b>Synthesis of Stereospecific trans-Cinnamic Acid (Bromination reaction)</b></p>	<p>This is a stereo-specific reaction, includes bromination of an alkene resulting in a stereo specific dibromo compound. The weekly module material will cover concepts for performing the simple bromination reaction in the laboratory. Able to characterize the simple alkene bromination reaction mechanism. Able to acquire the skills required to perform the bromination reaction in the laboratory. Able to describe different steps involved in performing the alkene bromination reaction in the final lab report. Able to compile data and observations for the lab report from the laboratory experiment. Able to characterize the product yield.</p>
<p><b>MAKEUP ASSIGNMENT –</b></p>	<p>The instructor will decide on inclusion of a makeup assignment depending on progress/grades of the entire class. If a makeup assignment is introduced, the assignment will be either a Labster module or an experimental video that students need to finish for additional points.</p>

#### Evaluation

Student Perceptions of Teaching (SPOT) is the student evaluation system for UNT and allows students the ability to confidentially provide constructive feedback to their instructor and department to improve the quality of student experiences in the course. Spot evaluations become available from Nov 15 to December 02. Students will receive 5 bonus points for SPOT evaluation of their TA. Students are required to submit proof of SPOT evaluation to their TA.

#### Face Coverings and COVID Related Questions

UNT encourages everyone to wear a face covering when indoors, regardless of vaccination status, to protect yourself and others from COVID infection, as recommended by current CDC guidelines. Face covering guidelines could change based on community health conditions. Please



check health alerts <https://healthalerts.unt.edu/> for more information. For guidelines related to quarantine and questions on returning to in-person learning at UNT, please check [Return to Learn | Office of the Provost \(unt.edu\)](#). COVID help desk and hotline will provide additional information. If you are experiencing any [symptoms of COVID-19](https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html) please seek medical attention from the Student Health and Wellness Center (940-565-2333 or [askSHWC@unt.edu](mailto:askSHWC@unt.edu)) or your health care provider PRIOR to coming to campus. UNT also requires you to contact the UNT COVID Team at [COVID@unt.edu](mailto:COVID@unt.edu) for guidance on actions to take due to symptoms, pending or positive test results, or potential exposure.

#### Attendance

Students are required to attend the in-person labs and to abide by the attendance policy established for the course. It is important that you communicate with the professor and the TA prior to being absent, so you, the professor, and the TA can discuss and mitigate the impact of the absence on your attainment of course learning goals. Please inform the professor and TA if you are unable to attend in-person labs because you are ill, in mindfulness of the health and safety of everyone in our community. Please provide required excuse note/documentation for absence. Visit the [University of North Texas' Attendance Policy](http://policy.unt.edu/policy/15-2-) to learn more.

If absent, the students are required to submit the reports along with the excused absence documentation for full points. Arrange with the TA for the late submission of the report. Students without excused absence documentation can receive partial credit only with the submission of the full report. The data and observations can be obtained from the demo vide or from another student in the same section, check with the TA.

#### Course Materials for Remote Instruction

Remote instruction may be necessary if community health conditions change or you need to self-isolate or quarantine due to COVID-19. Students will need access to a computer, and internet for finishing labs remotely. Information on how to be successful in a remote learning environment can be found at <https://online.unt.edu/learn>

#### Class Participation

Students are required to attend the in-person labs. Please reach out to DOS for excuses related to in-person labs.

#### Late Work

Late work will not be accepted unless arranged with the TA or the instructor

Attendance to in-person labs is *mandatory*. Visit the [University of North Texas' Attendance Policy](http://policy.unt.edu/policy/15-2-) to learn more. **Excused Absences:** An absence may be excused for the following reasons: 1. religious holy day, including travel for that purpose; 2. active military service, including travel for that purpose; 3. participation in an official university function; 4. illness or other extenuating circumstances; 5. pregnancy and parenting under Title IX; and 6. when the University is officially closed. The students are required to submit the reports along with the excused absence documentation for full points. Arrange with the TA for the late submission of the report. Students without excused absence

documentation can receive partial credit only with submission of the full report. The data and observations can be obtained from the video demo of the missed experiment. Students excused due to COVID 19 concerns are required to submit the reports online. Please reach out to your TA to request extra time for late submissions.

Late reports will not be accepted unless the student encounters an emergency or extreme situation. All work turned in after the deadline will receive a grade of zero unless the student has a university-excused absence and provides documentation with 72 hours of the missed deadline. Do not expect any partial credit for the late reports unless prearranged with the TA. ***Swapping Lab Sections is strictly NOT allowed.***

#### Examination Policy

There are no exams in this course

#### Assignment Policy

The exact due dates for each experiment (module) depends on the lab section. Only PDF and MS word documents are acceptable formats for online and in-person submission, detailed instructions will be provided by the TA of the individual section during the first lab. The TA's will employ Turnitin or similar software for assignment submission. If there is a technical issue or server unavailability, submission dates will be extended as required by the TA. ***Late assignments will not be accepted. Do not expect any partial credits for late returns unless there is an emergency or excused absence (as per UNT guidelines) or prearrangement with the TA. Cheating or copying other student reports will result in ZERO.***

The University is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows and provide an appropriate accommodation based on the situation. Students should immediately report any problems to the instructor and contact the UNT Student Help Desk: [helpdesk@unt.edu](mailto:helpdesk@unt.edu) or 940.565.2324 and obtain a ticket number. The instructor and the UNT Student Help Desk will work with the student to resolve any issues at the earliest possible time.

#### Instructor Responsibilities and Feedback

The instructor is fully responsible designing the experiments and the entire syllabus for this course. Instructor is assisted by Organic Laboratory supervisor Dr. Charles Browning who will be responsible for smooth operation of organic labs. The designated TA for each section is fully in charge of the lab. The students will be provided all the help with every item related to experiments, safety, lab reports and quizzes as required/requested by the student. Instructor will provide all the information required to perform in-person and online labs, all information is uploaded on Canvas or uploaded during the semester as needed. TA's are responsible for grading the lab reports and quizzes, TA's and instructors will try to respond and address students questions/emails within 48 hours. TA's will provide feedback and grades for the reports within 1-2 weeks after every student has submitted the report.

### Syllabus Change Policy

The syllabus copy provides all information for the course but its not a contract, any changes in the syllabus will be immediately updated to students by the instructor.

### UNT Policies

#### Academic Integrity Policy

Academic Integrity Standards and Consequences. According to UNT Policy 06.003, Student Academic Integrity, academic dishonesty occurs when students engage in behaviors including, but not limited to cheating, fabrication, facilitating academic dishonesty, forgery, plagiarism, and sabotage. A finding of academic dishonesty may result in a range of academic penalties or sanctions ranging from admonition to expulsion from the University. [Insert specific sanction or academic penalty for specific academic integrity violation.]

#### ADA Policy

UNT makes reasonable academic accommodation for students with disabilities. Students seeking accommodation must first register with the Office of Disability Accommodation (ODA) to verify their eligibility. If a disability is verified, the ODA will provide a student with an accommodation letter to be delivered to faculty to begin a private discussion regarding one's specific course needs. Students may request accommodations at any time, however, ODA notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet with each faculty member prior to implementation in each class. For additional information see the [ODA website \(https://disability.unt.edu/\)](https://disability.unt.edu/).

#### Prohibition of Discrimination, Harassment, and Retaliation (Policy 16.004)

The University of North Texas (UNT) prohibits discrimination and harassment because of race, color, national origin, religion, sex, sexual orientation, gender identity, gender expression, age, disability, genetic information, veteran status, or any other characteristic protected under applicable federal or state law in its application and admission processes; educational programs and activities; employment policies, procedures, and processes; and university facilities. The University takes active measures to prevent such conduct and investigates and takes remedial action when appropriate.

#### Emergency Notification & Procedures

UNT uses a system called Eagle Alert to quickly notify students with critical information in the event of an emergency (i.e., severe weather, campus closing, and health and public safety emergencies like chemical spills, fires, or violence). In the event of a university closure, please refer to Canvas for contingency plans for covering course materials.

#### Retention of Student Records

Student records pertaining to this course are maintained in a secure location by the instructor of record. All records such as exams, answer sheets (with keys), and written papers submitted during the duration of the course are kept for at least one calendar year after course completion.

Course work completed via the Canvas online system, including grading information and comments, is also stored in a safe electronic environment for one year. Students have the right to view their individual record; however, information about student's records will not be divulged to other individuals without proper written consent. Students are encouraged to review the Public Information Policy and the Family Educational Rights and Privacy Act (FERPA) laws and the University's policy. See UNT Policy 10.10, Records Management and Retention for additional information.

#### Acceptable Student Behavior

Student behavior that interferes with an instructor's ability to conduct a class or other students' opportunity to learn is unacceptable and disruptive and will not be tolerated in any instructional forum at UNT. Students engaging in unacceptable behavior will be directed to leave the classroom and the instructor may refer the student to the Dean of Students to consider whether the student's conduct violated the Code of Student Conduct. The University's expectations for student conduct apply to all instructional forums, including University and electronic classroom, labs, discussion groups, field trips, etc. Visit UNT's [Code of Student Conduct](https://deanofstudents.unt.edu/conduct) (<https://deanofstudents.unt.edu/conduct>) to learn more.

#### Access to Information - Eagle Connect

Students' access point for business and academic services at UNT is located at: [my.unt.edu](http://my.unt.edu). All official communication from the University will be delivered to a student's Eagle Connect account. For more information, please visit the website that explains Eagle Connect and how to forward e-mail [Eagle Connect](https://it.unt.edu/eagleconnect) (<https://it.unt.edu/eagleconnect>).

#### Student Evaluation Administration Dates

Student feedback is important and an essential part of participation in this course. The student evaluation of instruction is a requirement for all organized classes at UNT. The survey will be made available during weeks 13, 14 and 15 [insert administration dates] of the long semesters to provide students with an opportunity to evaluate how this course is taught. Students will receive an email from "UNT SPOT Course Evaluations via IASystem Notification" ([no-reply@iasystem.org](mailto:no-reply@iasystem.org)) with the survey link. Students should look for the email in their UNT email inbox. Simply click on the link and complete the survey. Once students complete the survey they will receive a confirmation email that the survey has been submitted. For additional information, please visit the [SPOT website](http://spot.unt.edu/) (<http://spot.unt.edu/>) or email [spot@unt.edu](mailto:spot@unt.edu).

#### Survivor Advocacy

UNT is committed to providing a safe learning environment free of all forms of sexual misconduct. Federal laws and UNT policies prohibit discrimination on the basis of sex as well as sexual misconduct. If you or someone you know is experiencing sexual harassment, relationship violence, stalking and/or sexual assault, there are campus resources available to provide support and assistance. The Survivor Advocates can be reached at [SurvivorAdvocate@unt.edu](mailto:SurvivorAdvocate@unt.edu) or by calling the Dean of Students Office at 940-5652648.

#### Important Notice for F-1 Students taking Distance Education Courses

##### **Federal Regulation**

To read detailed Immigration and Customs Enforcement regulations for F-1 students taking online courses, please go to the [Electronic Code of Federal Regulations website](http://www.ecfr.gov/) (<http://www.ecfr.gov/>). The specific portion concerning distance education courses is located at Title 8 CFR 214.2 Paragraph (f)(6)(i)(G).

The paragraph reads:

(G) For F-1 students enrolled in classes for credit or classroom hours, no more than the equivalent of one class or three credits per session, term, semester, trimester, or quarter may be counted toward the full course of study requirement if the class is taken on-line or through distance education and does not require the student's physical attendance for classes, examination or other purposes integral to completion of the class. An on-line or distance education course is a course that is offered principally through the use of television, audio, or computer transmission including open broadcast, closed circuit, cable, microwave, or satellite, audio conferencing, or computer conferencing. If the F-1 student's course of study is in a language study program, no on-line or distance education classes may be considered to count toward a student's full course of study requirement.

### **University of North Texas Compliance**

To comply with immigration regulations, an F-1 visa holder within the United States may need to engage in an on-campus experiential component for this course. This component (which must be approved in advance by the instructor) can include activities such as taking an on-campus exam, participating in an on-campus lecture or lab activity, or other on-campus experience integral to the completion of this course.

If such an on-campus activity is required, it is the student's responsibility to do the following:

- (1) Submit a written request to the instructor for an on-campus experiential component within one week of the start of the course.
- (2) Ensure that the activity on campus takes place and the instructor documents it in writing with a notice sent to the International Student and Scholar Services Office. ISSS has a form available that you may use for this purpose.

Because the decision may have serious immigration consequences, if an F-1 student is unsure about his or her need to participate in an on-campus experiential component for this course, s/he should contact the UNT International Student and Scholar Services Office (telephone 940-565-2195 or email [internationaladvising@unt.edu](mailto:internationaladvising@unt.edu)) to get clarification before the one-week deadline.

### **Student Verification**

UNT takes measures to protect the integrity of educational credentials awarded to students enrolled in distance education courses by verifying student identity, protecting student privacy, and notifying students of any special meeting times/locations or additional charges associated with student identity verification in distance education courses.

See UNT Policy 07-002 Student Identity Verification, Privacy, and Notification and Distance Education Courses (<https://policy.unt.edu/policy/07-002>).

#### Use of Student Work

A student owns the copyright for all work (e.g. software, photographs, reports, presentations, and email postings) he or she creates within a class and the University is not entitled to use any student work without the student's permission unless all of the following criteria are met:

- The work is used only once.
- The work is not used in its entirety.
- Use of the work does not affect any potential profits from the work.
- The student is not identified.
- The work is identified as student work.

If the use of the work does not meet all of the above criteria, then the University office or department using the work must obtain the student's written permission.

Download the UNT System Permission, Waiver and Release Form

#### **Transmission and Recording of Student Images in Electronically-Delivered Courses**

1. No permission is needed from a student for his or her image or voice to be transmitted live via videoconference or streaming media, but all students should be informed when courses are to be conducted using either method of delivery.
2. In the event an instructor records student presentations, he or she must obtain permission from the student using a signed release in order to use the recording for future classes in accordance with the Use of Student-Created Work guidelines above.
3. Instructors who video-record their class lectures with the intention of re-using some or all of recordings for future class offerings must notify students on the course syllabus if students' images may appear on video. Instructors are also advised to provide accommodation for students who do not wish to appear in class recordings.

Example: This course employs lecture capture technology to record class sessions. Students may occasionally appear on video. The lecture recordings will be available to you for study purposes and may also be reused in future course offerings.

No notification is needed if only audio and slide capture is used or if the video only records the instructor's image. However, the instructor is encouraged to let students know the recordings will be available to them for study purposes.

## Academic Support & Student Services

### Student Support Services

#### *Mental Health*

UNT provides mental health resources to students to help ensure there are numerous outlets to turn to that wholeheartedly care for and are there for students in need, regardless of the nature of an issue or its severity. Listed below are several resources on campus that can support your academic success and mental well-being:

- [Student Health and Wellness Center](https://studentaffairs.unt.edu/student-health-and-wellness-center) (https://studentaffairs.unt.edu/student-health-and-wellness-center)
- [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (https://studentaffairs.unt.edu/counseling-and-testing-services)
- [UNT Care Team](https://studentaffairs.unt.edu/care) (https://studentaffairs.unt.edu/care)
- [UNT Psychiatric Services](https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry) (https://studentaffairs.unt.edu/student-health-and-wellness-center/services/psychiatry)
- [Individual Counseling](https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling) (https://studentaffairs.unt.edu/counseling-and-testing-services/services/individual-counseling)

#### *Chosen Names*

A chosen name is a name that a person goes by that may or may not match their legal name. If you have a chosen name that is different from your legal name and would like that to be used in class, please let the instructor know. Below is a list of resources for updating your chosen name at UNT.

- [UNT Records](#)
- [UNT ID Card](#)
- [UNT Email Address](#)
- [Legal Name](#)

*\*UNT eUIDs cannot be changed at this time. The collaborating offices are working on a process to make this option accessible to UNT community members.*

#### *Pronouns*

Pronouns (she/her, they/them, he/him, etc.) are a public way for people to address you, much like your name, and can be shared with a name when making an introduction, both virtually and in-person. Just as we ask and don't assume someone's name, we should also ask and not assume someone's pronouns.

You can [add your pronouns to your Canvas account](#) so that they follow your name when posting to discussion boards, submitting assignments, etc.

Below is a list of additional resources regarding pronouns and their usage:

- [What are pronouns and why are they important?](#)
- [How do I use pronouns?](#)
- [How do I share my pronouns?](#)
- [How do I ask for another person's pronouns?](#)
- [How do I correct myself or others when the wrong pronoun is used?](#)

#### *Additional Student Support Services*

- [Registrar](https://registrar.unt.edu/registration) (<https://registrar.unt.edu/registration>)
- [Financial Aid](https://financialaid.unt.edu/) (<https://financialaid.unt.edu/>)
- [Student Legal Services](https://studentaffairs.unt.edu/student-legal-services) (<https://studentaffairs.unt.edu/student-legal-services>)
- [Career Center](https://studentaffairs.unt.edu/career-center) (<https://studentaffairs.unt.edu/career-center>)
- [Multicultural Center](https://edo.unt.edu/multicultural-center) (<https://edo.unt.edu/multicultural-center>)
- [Counseling and Testing Services](https://studentaffairs.unt.edu/counseling-and-testing-services) (<https://studentaffairs.unt.edu/counseling-and-testing-services>)
- [Pride Alliance](https://edo.unt.edu/pridealliance) (<https://edo.unt.edu/pridealliance>)
- [UNT Food Pantry](https://deanofstudents.unt.edu/resources/food-pantry) (<https://deanofstudents.unt.edu/resources/food-pantry>)

#### *Academic Support Services*

- [Academic Resource Center](https://clear.unt.edu/canvas/student-resources) (<https://clear.unt.edu/canvas/student-resources>)
- [Academic Success Center](https://success.unt.edu/asc) (<https://success.unt.edu/asc>)
- [UNT Libraries](https://library.unt.edu/) (<https://library.unt.edu/>)
- [Writing Lab](http://writingcenter.unt.edu/) (<http://writingcenter.unt.edu/>)



