

# Online Intermediate Organic Chemistry I Lab - CHEM 2100

M/W Section (CRN 53346)

## Course Syllabus - Summer 2021

**Instructor:** Dr. Danzhu Wang

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**Class Meeting Time:** Monday/Wednesday 4:00 pm – 4:45 pm via Webex through icollege (Synchronous Pre-Lab Lecture will be held at this time)

**Online Office Hours:** T/TR 12:30 pm – 1:30 pm via Webex through iCollege

Please allow 24-36 hours for a response via email Monday through Friday, emails on the weekend will not be checked until Monday. Any email concerning technology issues needs to be accompanied with a help ticket from the appropriate source (iCollege or labflow).

**How to enroll on labflow? Please read announcement on icollege!!**

### Course Description

This is a first semester organic chemistry lab which will introduce the student to techniques and instruments commonly used in an organic chemistry lab. There will be an emphasis on methods for the preparation, isolation, purification, molecular spectroscopy and characterization of organic compounds, and product analysis. This course is designed for students majoring in science, engineering, pre-medicine, pre-dentistry, and pre-pharmacy. The bulk of this course will be administered through Labflow in which you will watch videos of labs and concepts and then answer follow up questions. You will receive instruction on iCollege on how to set up your Labflow account at **no cost to you**.

\*\*Please note that this syllabus reflects a plan for the semester. Deviations may become necessary.

### Text and Materials

Textbook: Organic Chemistry Lab Techniques by Lisa Nichols free download  
<https://organiclabtechniques.weebly.com/download.html>

You will need a device capable of using the Respondus Lockdown Browser and the Respondus Monitor if you do not have a device you can obtain one here:

<https://cetl.gsu.edu/resources/resources-for-learning-remotely/internet-options/>

A spreadsheet program capable of graphing Microsoft excel is recommended and can be downloaded through the Microsoft Office Suite free of charge here:

<https://technology.gsu.edu/technology-services/it-services/software-computer-purchase/software-download-and-purchase/>

## **Student learning Outcomes**

After studying all materials and resources presented in the course, the student will be able to:

1. Correlate molecular structure with physical and chemical properties of aliphatic and aromatic organic molecules.
2. Describe reaction mechanisms in terms of energetics, reaction kinetics, and thermodynamics.
3. Use spectroscopic techniques to characterize organic molecules and subgroups.
4. Perform chemical experiments, analysis procedures, and waste disposal in a safe and responsible manner.
5. Utilize scientific tools such as glassware and analytical instruments to collect and analyze data.
6. Identify and utilize appropriate separation techniques such as distillation, extraction, and chromatography to purify organic compounds.
7. Record experimental work completely and accurately in laboratory notebooks and communicate experimental results clearly in written reports.

## **Assessment**

You will complete **13 quizzes** via Labflow each valued at 5 points, **the lowest one will be dropped.**

You will have **13 reports** due on Labflow valued at 20 points each, **the lowest one will be dropped.**

You will have **4 homeworks** that are worth 20 points.

You will have a **final exam** that is worth 80 points.

## **Course Grades Breakdown**

The grading scale for this course is as follows:

|                    |         |     |
|--------------------|---------|-----|
| Pre-lab quizzes    | 12 × 5  | 60  |
| Laboratory reports | 12 × 20 | 240 |
| Homeworks          | 4 × 5   | 20  |
| Final Exam         | 1 × 80  | 80  |
| Total Points       |         | 400 |

## Letter Grades

A+: 97% A: 93%; A-: 90%; B+: 87% B: 83% B-: 80%, C+: 77% C: 73% C-: 70% D: 60%  
F:<60%

## Course Overview

This course will be administered through Labflow and you will be responsible for completing the lab modules every week for 7 weeks. Every lab has an associated pre-lab quiz that need to be taken which will be given on Mondays and Wednesdays from 3:00 pm to 4:00 pm. It is anticipated that you will complete the quiz and lab during the scheduled lab time. That is when I will have the most availability for you. I will have a Webex session every Mondays and Wednesdays 4:00 pm - 4:45 pm to give you a pre-lab lecture and to answer questions about that week's lab. All assignments will be graded within a few days.

## Make up Policy

**There is NO lab make ups**, you are given 24 hours to complete each lab module and you are expected to finish the module in that time. It is very important that you do the experiments promptly and not wait until the last moment.

## Course Help

Note that this is a 100% online course. Here are a few tips to get you started:

**How Do I Contact You?** Official GSU email is the best method of communication between the instructor and the students. Use your GSU student email, not the iCollege email. Every effort will be made to reply to emails within 24-36 hrs. Please include the course number in the subject line, e.g. CHEM 2100.

**How Do I Access My Course?** In the beginning of the semester, you will be given an access code to the online laboratory platform, where experiments are conducted. In addition, announcements regarding assignments, due dates, etc. will be made in iCollege, Georgia State University's learning management system. It is the student's responsibility to follow the iCollege schedule and keep up to date with the assignments.

**What Are the Required and Optional Materials?** You will require a composition notebook and a basic scientific calculator. Experimental Organic Chemistry by Wilcox and Wilcox, 2nd edition (recommended).

**Are There Any Required Meetings?** It is highly recommended that students meet with the instructor at least once a week during office hours to discuss progress with lab experiments.

**Are There Any Additional Fees? This course has no additional fees. How Do I Succeed in this Course?** If this is your first time taking an online course, you should refer to GSU's online student success guide.

If you want to borrow equipment such as an ipad or a chrome book, please contact <https://library.gsu.edu/services-andspaces/spaces-and-technology/borrow-equipment/> or <https://cetl.gsu.edu/resources/resources-for-learning-remotely/internet-options/>

## **Schedule**

Although this is an online course, we do have a set schedule. Please note that deviations may become necessary as the semester progresses. You'll want to refer to the calendar below frequently as we work together. I've also designed the course in such a way to help you stay on track, weekly intros, due dates attached to grade items, announcements, etc. If this is your first time taking an online course, you'll want to review the Online Time Management Essentials guide (<https://cetl.gsu.edu/resources/resources-for-learning-remotely/internet-options/>). Please note that deviations may become necessary as the semester progresses.

### **Tentative Laboratory Schedule**

| DATE    | WEEK | LAB EXPERIMENTS  |
|---------|------|--|
| June 7  | 1    | <input type="checkbox"/> <b>Safety and Graphing with Excel</b><br><input type="checkbox"/> pre-lab quiz (Jun 7 3:00 pm - Jun 7 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 7 4:00 pm - Jun 8 4:00 pm)   |
| June 9  | 1    | <input type="checkbox"/> <b>Melting Points</b><br><input type="checkbox"/> Pre-lab Quiz (Jun 9 3:00 pm – Jun 9 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 9 4:00 pm - Jun 10 4:00 pm)  |
| June 14 | 2    | <input type="checkbox"/> <b>Recrystallization</b><br><input type="checkbox"/> Pre-lab Quiz (Jun 14 3:00 pm – Jun 4 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 14 4:00 pm - Jun 15 4:00 pm)   |
| June 16 | 2    | <input type="checkbox"/> <b>Separation of Benzoic Acid, Aniline, and Naphthalene</b><br><input type="checkbox"/> Pre-lab Quiz (Jun 16 3:00 pm – Jun 16 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 16 4:00 pm - Jun 17 4:00 pm)<br><input type="checkbox"/> <b>Homework (Due on Jun 21)</b> |

|               |   |   |
|---------------|---|---|
|               |   | Where? icollege → Contents → Homeworks<br>Submit? icollege → Assessments → Assignments  |
| June 21       | 3 | <input type="checkbox"/> <b>Extraction of Caffeine</b><br><input type="checkbox"/> Pre-lab Quiz (Jun 21 3:00 pm – Jun 21 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 21 4:00 pm - Jun 22 4:00 pm)  |
| June 23       | 3 | <input type="checkbox"/> <b>Synthesis of Ester</b><br><input type="checkbox"/> Pre-lab Quiz (Jun 23 3:00 pm – Jun 23 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 23 4:00 pm - Jun 25 4:00 pm)  |
| Jun 28        | 4 | <input type="checkbox"/> <b>Simple Distillation</b><br><input type="checkbox"/> Pre-lab Quiz (Jun 28 3:00 pm – Jun 28 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 28 4:00 pm - Jun 29 4:00 pm)<br><input type="checkbox"/> <b>Homework (Due on July 7)</b><br>Where? icollege → Contents → Homeworks<br>Submit? icollege → Assessments → Assignments             |
| Jun 30        | 4 | <input type="checkbox"/> <b>Fractional Distillation</b><br><input type="checkbox"/> Pre-lab Quiz (Jun 30 3:00 pm – Jun 30 4:00 pm)<br><input type="checkbox"/> Lab report (Jun 30 4:00 pm – July 1 4:00 pm)   |
| <b>JULY 2</b> |   | <b>Last day to Withdraw !!!</b>   |
| July 5        | 5 | <b>Holiday! No class on July 5<sup>th</sup> ☺</b>   |
| July 7        | 5 | <input type="checkbox"/> <b>Aldehyde and Ketones</b><br><input type="checkbox"/> Pre-lab Quiz (July 7 3:00 pm – July 7 4:00 pm)<br><input type="checkbox"/> Lab report (July 7 4:00 pm – July 8 4:00 pm)  |
| July 12       | 6 | <input type="checkbox"/> <b>Classification of Alcohols</b><br><input type="checkbox"/> Pre-lab Quiz (July 12 3:00 pm – July 12 4:00 pm)<br><input type="checkbox"/> Lab report (July 12 4:00 pm – July 13 4:00 pm)<br><input type="checkbox"/> <b>Homework (Due on July 19)</b><br>Where? icollege → Contents → Homeworks<br>Submit? icollege → Assessments → Assignments |
| July 14       | 6 | <input type="checkbox"/> <b>IR Identification</b><br><input type="checkbox"/> Pre-lab Quiz (July 14 3:00 pm – July 14 4:00 pm)<br><input type="checkbox"/> Lab report (July 14 4:00 pm – July 15 4:00 pm)   |

|                   |   |   |
|-------------------|---|---|
| July 19           | 7 | <input type="checkbox"/> <b>Dehydration of an Alcohol</b><br><input type="checkbox"/> Pre-lab Quiz (July 19 3:00 pm – July 19 4:00 pm)<br><input type="checkbox"/> Lab report (July 19 4:00 pm – July 20 4:00 pm)   |
| July 21           | 7 | <input type="checkbox"/> <b>SN2 Reaction of Neerolin</b><br><input type="checkbox"/> Pre-lab Quiz (July 21 3:00 pm – July 21 4:00 pm)<br><input type="checkbox"/> Lab report (July 21 4:00 pm – July 22 4:00 pm)<br><input type="checkbox"/> <b>Homework (Due on July 26)</b><br>Where? icollege → Contents → Homeworks<br>Submit? icollege → Assessments → Assignments |
| <b>July 26-27</b> |   | <b>Final Exam</b><br>Where? icollege → Assessments → Quizzes  |

\*This schedule is tentative, and deviations may be necessary.

\*\*The **pre-lab quizzes** will be accessible from 3:00 pm to 4:00 pm the day of that particular lab. They must be completed during that time to receive credit.

\*\*\***Pre-lab Lecture** will begin promptly at 4:00 pm as soon as the quiz time closes.

\*\*\*\*Tentative **homework assignments** are planned for week 2, 4, 6 and 7.

## Course Policies

I have developed several policies that seem to work well in this course. Please review these very closely. You'll have an opportunity to voice your opinion on these policies and other aspects of the course when we reach evaluation points during the semester.

## Attendance and Participation Policy

Participation and completion are required of all labs. Completion of all components of individual experiments and the final exam is required to successfully pass the lab. Participation is monitored and recorded. However, this level of instruction includes expected personal responsibility that will not always be addressed. YOU are responsible for missed work. Legitimate reasons such as emergencies, hospitalization, etc. will be considered as excused absences for missed work provided proper documentation. Participation be counted as part of your grade.

**Withdrawal: Semester midpoint and the last day to withdraw from the course without a penalty is July 2nd, 2021.** After this day, withdrawing results in a 'WF' grade on your transcript. Missed work does not guarantee automatic withdrawal. Any student who does not withdraw formally and has unexcused absences for the lab assignments/s will receive an 'F'. A withdrawal from this course will necessitate re-taking the laboratory. \*Please talk to your instructor and your advisor before withdrawing from the course. We care about your success and are here to discuss your options with you.

### **Make-up Exam Policy**

Students are required to complete ALL lab experiments, take ALL the quizzes and submit ALL the reports by the DUE DATES given in the syllabus. Incomplete assignments WILL count as zero. Assignments will NOT reopen after the due date.

### **Course Evaluation**

Your constructive assessment of this course plays an indispensable role in shaping education at Georgia State. Upon completing the course, please take time to fill out the online course evaluation.

### **Other Policies**

#### GSU Policy Regarding Student Conduct and Integrity:

The Georgia State University Policy on Academic Honesty is in force in this course, including, but not necessarily limited to, infractions in the areas of plagiarism, cheating on examinations, unauthorized collaboration, falsification, and multiple submissions. The University's policy is published in the "On Campus: The Student Handbook", available to all members of the university community. Therefore, all exams taken must represent your individual unaided efforts.

Cheating: "Cheating" is defined as unauthorized help on an examination or assigned course material.

A student must not receive from any other student or give to any other student any information, answers, or help for a lab assignment. A student must not "steal" the answers or data from an unsuspecting student. A student must not use any sources for answers during a quiz or completion of a report (including, but not limited to: notes, books, or electronic devices) without prior authorization from the instructor. A student must not obtain quiz/report questions illegally, tamper with the exam questions, nor change the results of an exam after it has been graded. All cheating infractions will result in a grade of "0" for the assignment. This policy shall be adhered to unless

mitigating circumstances should prove a lesser penalty should apply. Students shall have the right to contest a cheating claim. The appeals process is specifically defined in the student handbook.

Sharing information/cheating via group messaging apps such as GroupMe or Slack is a violation of the Academic Honesty Policy.

Plagiarism: "Plagiarism" is defined as the taking of a person's ideas, words, or information and claiming those properties as one's own. The use of all ideas, words, or information from any source must be properly referenced and due credit must be given to its author. Any assignment which scores higher than 30% on copied material will automatically receive a grade of "0". Properly quoting and citing borrowed information is NOT plagiarism. However, since the integrity of the assignment is based upon the originality of the student's work, no student may turn in a paper which exceeds a 30% score in properly quoted and cited material. The instructor reserves the right to employ means to check the "originality" of a student's work. Students shall have the right to contest a plagiarism or cheating claim. The appeals process is specifically defined in the student handbook.

Conduct or actions that disrupt class or test periods or falsification of information related to chemistry courses by any student will be taken as violation of the policies of the Board of Regents of the University System of Georgia and the GSU Student Code of Conduct, Section 6.0. Any suspected offenses may be referred to the Department Chair and the Dean of Students for appropriate disciplinary action. Any student presenting falsified documentation will receive an "F" for the course and be referred to the Chemistry Department Chair or Dean of Students for disciplinary action. Consequences beyond school- Should you consent to a background check, GSU is required to report all academic integrity violations which could interfere with plans for a promising career in a given field.

### Special Needs

Students who wish to request accommodation for a disability may do so by registering with the Office of Disability Services. Students may only be accommodated upon issuance by the Office of Disability Services of a signed Accommodation Plan and are responsible for providing a copy of that plan to instructors of all classes in which accommodations are sought. Students with special needs should then make an appointment with me during the first week of class to discuss any accommodations that need to be made.

### FERPA

In keeping with USG and university policy, this course website will make every effort to maintain the privacy and accuracy of your personal information. Specifically, unless otherwise noted, it will



not actively share personal information gathered from the site with anyone except university employees whose responsibilities require access to said records. However, some information collected from the site may be subject to the Georgia Open Records Act. This means that while we do not actively share information, in some cases we may be compelled by law to release information gathered from the site. Also, the site will be managed in compliance with the Family Educational Rights and Privacy Act (FERPA), which prohibits the release of education records without student permission.

### Sexual Harassment

In instances of sexual misconduct, the present instructor(s) and teaching assistants, are designated as Responsible Employees who are required to share with administrative officials all reports of sexual misconduct for university review. If you wish to disclose an incident of sexual misconduct confidentially, there are options on campus for you do so. For more information on this policy, please refer to the Sexual Misconduct Policy which is included in the Georgia State University Student Code of Conduct.

### Basic Needs Statement

Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable us to provide resources that we may possess. The Embark program at GSU provides resources for students facing homelessness.