

# CHEM 3110 Lab II Syllabus (CRN 21559 & 18193) Spring 2021

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<b>Instructor:</b>	Dr. Jianmei Cui
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<b>Class Meeting Time:</b>	Monday 8am–8:50am via Webex ( <b><u>mandatory and attendance will be recorded</u></b> )
<b>Office Hours:</b>	Via Webex, Email me at <a href="mailto:jcui@gsu.edu">jcui@gsu.edu</a> for appointment
<b>Required Texts:</b>	Organic Chemistry by John E. McMurry, 9 <sup>th</sup> Edition
<b>Optional Texts:</b>	Experimental Organic Chemistry by Wilcox and Wilcox, 2 <sup>nd</sup> edition

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## Important Dates:

Jan. 11 <sup>th</sup> – Jan.15 <sup>th</sup>	Week of Classes begin
Mar. 2 <sup>nd</sup>	Last day to withdraw with grade “W”
Apr. 12 <sup>th</sup> – Apr. 14 <sup>th</sup>	Final Exam

## Course Overview:

This course CHEM 3110 is designed to introduce students to organic synthesis, including design, synthesis and identification of target compounds. During the process, students will learn chemistry lab techniques, including organic synthesis, purification and identification chemical structure characteristics by using IR, melting point apparatuses, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR and literature search. **This course will be learned through Labflow and iCollege, more information will be posted on iCollege, including how to set up your labflow account at no cost to you.**

## Course Organization and Structure:

1. This course will be administrated through Labflow ([www.labflow.com](http://www.labflow.com)), including 10 lab modules. Also, I will post some information on iCollege including videos, announcement and office hours.
2. **Students are required to attend all class meetings; absence will cause credit loss.**
3. Students will be responsible for the timely completion of all assignment. We will have weekly assignments including videos, prelab quizzes and lab reports.
4. Each lab module will have scheduled open/close time for lab report/quiz and each module will take several hours to finish, please plan according your time and make sure you can finish on time. Email me during weekday for fast reply, I may not check/reply email during weekend.
5. For each lab from labflow, please:
  - Read background information and procedure
  - Watch videos
  - Finish pre-lab questions and take the pre-lab quiz
  - Complete lab report and post-lab questions

## Grading:

*Below is a breakdown of points for each assessment activity in each module (except modules 1&8)*

Pre-lab Questions	= 10 points
Pre-lab Quiz	= 10 points
Lab Report + Post-lab Questions	= <u>80 points</u>

Total Points = 100 points

*The overall total points for each module are indicated below:*

Module #	lab contents	Points
1	Lab Safety Review	15
	Melting Points Experiment	0
	Syllabus Quiz (iCollege)	15
2	Grignard Reaction: Synthesis of Benzoic Acid	100
3	Diels-alder Reaction	100
4	Nucleophilic Aromatic Substitution Reaction	100
5	Hydration of 1-Hexene	100
6	Reducing Benzil	100
7	Cannizzaro Reaction Without Solvent	100
8	Synthesis of Aspirin	60
9	<sup>1</sup> H-NMR Experiment	100
10	<sup>13</sup> C-NMR Experiment	100
11	Review & Prepare for Final Exam	0
12	FINAL EXAM	200
	Attendance (module 1-10, 1pts each)	10
	<b>Total Points</b>	<b>1100</b>

A+: 96%, A: 92%; A-: 89%; B+: 86%; B: 82%; B-: 78%; C+: 76%; C: 72%; C-: 68%; D: 64%; D-: 60%; F<60%.

### **Miscellaneous:**

1. Department of Chemistry Statement on Student Integrity applies to this course (see below).
2. **Course Learning Suggestions:** Starting assignments early so that you have time to study and discuss your questions with instructor, please do not wait until the last minutes; pay attention to any announcement made in iCollege in case you miss out important requirement.
3. **Make-up/Absence Policy:** It is the student's responsibility to finish all assignment on time, you have 24 hours to finish each assignment. However, please do not try to finish your assignment at the last minutes, you may be out of time and lose points. Remember that there will be no make-up given. If a student is unable to finish due to extenuating circumstances, such as a family emergency, illness, or injury, then possible time extension may be offered to the student at the instructor's discretion, please email me as soon as possible. Otherwise, late submission/extension will result in credit loss (*50% of the module points will be deducted in two days after due date/time, it will be counted as zero after two days*).
4. **Disability Services:** 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.
5. **Grading Policy:** Please bring to my attention any discrepancies or an issue within one week after your grade is posted. No change will be made after this period.

### **Department of Chemistry Policy Statement Regarding Student Integrity:**

The Department of Chemistry follows the university policy on academic honesty published in the “Faculty Affairs handbook” and the “On Campus: The Undergraduate Co-Curricular Affairs handbook.” Any suspected offenses may be referred to the Department Chair for appropriate action. All tests taken must represent your individual, unaided efforts. To receive or offer information during an examination is cheating. The use of unauthorized supplementary materials during tests is also cheating. All laboratory work performed during this course must reflect your individual effort. Only original data obtained by your own laboratory experimentation are to be used, except when specifically authorized by your laboratory professor. Data from supplementary sources (handbooks, reference literature, etc.) must be clearly referenced (title, author, volume, page(s), etc.). Falsification or destruction of data constitutes cheating.

### **Tentative schedule:**

*Changes and deviations from this syllabus may come and will be announced on iCollege.*

Module #	Starting Time and Date	Ending Time and Date	Labflow Assignments and Organic Chemistry by McMurry Chapter #
1	8:00 am 01/11	8:00 am 01/14	<ul style="list-style-type: none"> <li>• Lab Safety (<a href="http://www.Labflow.com">www.Labflow.com</a>)</li> <li>• Review: MP of Compounds &amp; Significant Figures and Conversions</li> <li>• Syllabus Quiz (iCollege)</li> </ul>
2	8:00 am 01/25	8:00 am 01/26	<ul style="list-style-type: none"> <li>• Grignard Reaction - 19.7 &amp; 20.5</li> </ul>
3	8:00 am 02/01	8:00 am 02/02	<ul style="list-style-type: none"> <li>• Diels-Alder Reaction - 14.4 &amp; 14.5</li> </ul>
4	8:00 am 02/08	8:00 am 02/09	<ul style="list-style-type: none"> <li>• Nucleophilic Aromatic Substitution - 16.6</li> </ul>
5	8:00 am 02/15	8:00 am 02/16	<ul style="list-style-type: none"> <li>• Hydration of 1-Hexene - 8.4</li> </ul>
6	8:00 am 02/22	8:00 am 02/23	<ul style="list-style-type: none"> <li>• Reducing Benzil - 5.1, 5.6, 5.7, 19.7</li> </ul>
7	8:00 am 03/01	8:00 am 03/02	<ul style="list-style-type: none"> <li>• Cannizzaro Reaction Without Solvent</li> </ul>
		<b><u>03/02/2021</u></b>	<b><u>Last day to withdraw and receive a W</u></b>
8	8:00 am 03/08	8:00 am 03/09	<ul style="list-style-type: none"> <li>• Synthesis of Aspirin - 21.5</li> </ul>
9	8:00 am 03/22	8:00 am 03/23	<ul style="list-style-type: none"> <li>• <sup>1</sup>H-NMR Experiment</li> </ul>
10	8:00 am 03/29	8:00 am 03/30	<ul style="list-style-type: none"> <li>• <sup>13</sup>C-NMR Experiment</li> </ul>
11	8:00 am 04/05	8:00 am 04/06	<ul style="list-style-type: none"> <li>• Review all iCollege and labflow contents to prepare for final exam</li> </ul>
12	8:00 am 04/12	11:59 pm 04/14	<ul style="list-style-type: none"> <li>• Final Exam on iCollege</li> </ul>