

## CHEM 4190/6190 Lab Syllabus (Spring 2020)

**Instructor:** Dr. Yanyi Chen

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**Office Hours:** Tue/Wed 11:00 – 1:00 PM; by appointment only.

**Laboratory Times and Location:** Monday Session: 9:00 AM – 12:15 PM, Science Annex 562

**Text:** Laboratory Manual for Chem. 4190/6190 (distributed on the first lab meeting)

### Required Laboratory Materials:

- 1) A stitched and bound notebook; *no spiral notebooks, no tear-out pages*
- 2) Safety goggles or glasses. May purchase from lab coordinator,

### Laboratory Notebooks:

- A *bound* (stitched, not spiral) notebook is required and must be used for recording data and observations in all laboratory sessions. All data taken by yourself and your group must be included in your notebook.
- If a sample was prepared by another member of your group, you may simply state this fact in your notebook.
- Include copies in your notebook of all spectra presented, discussed, or reported as data in your formal laboratory reports.
- You must submit the laboratory notebook along with your final laboratory report. In addition, when you turn in any laboratory report, the corresponding section of your notebook must be complete and up to date. (Instructors may spot check your notebook, and any omissions (e.g., spectra) in the *notebook* may result in a lower grade on the submitted report. Graded notebooks can be picked up within one week after final semester grades are due at the registrar's office outside of the instructor's office. After that time they may be discarded.)

### Safety Glasses:

**State law *requires* that you wear regular glasses or safety glasses at all times in any laboratory.** Contact lenses are not safe and should not be worn. However, you can fill out a waiver of your right to sue Georgia State University and then wear them *with safety glasses* at your own risk.

### Sign-in and Sign-out of Laboratory:

**State law also *requires* that you sign in and out of each laboratory.** Please include the time in and time out.

**Attendance:** Students are expected to attend each pre-lab lecture and lab session. Arrive on time. Keep cell phones OFF.

### **Safety Requirement:**

- **Safety glass** or **goggles** *must be worn at all times* inside the lab.
- **Dress appropriately:** no open-toe shoes (flip-flops, sandals, crocks, etc.); no very short shorts/skirts.
- **No food, drink, gum,** etc. inside the lab.

### **Grading/Requirements:**

- **Grading:** Lab reports, lab preparation, and notebook 30%

Lecture Quizzes 50%

Final exam 20%

#### **Laboratory report requirements:**

1. Three (3) lab reports are required for *all* students, covering UV-visible, fluorescence, and FT-NMR experiments. No re-submission for any report.
2. **For students enrolled in CHEM 4190**, each report (Uv-Vis, fluorescence and FT-NMR spectroscopy) will be worth 10% of the total grade for the course. The FT-IR report is optional. If a student chooses to submit four papers instead of three, the best three scores are counted in the final lab grade.
3. **For students enrolled in CHEM 6190**, besides the above three reports, the fourth report about the work with FT-IR instrumentation is also required. Each report will be worth 7.5% of the total grade for the course.
4. Students are working in groups, but are required to analyze the data and write each paper independently. **IT IS NOT PERMITTED TO USE OTHER PEOPLE'S DATA/DISCUSSION IN THE PAPER WITHOUT MENTION. If that happens, it will be considered cheating and zero score will be given on this paper.**
5. A past-due penalty will be given, 5 pts off for each past-due day.
6. **Lab report due dates: Paper #1: 03/02; Paper #2: 04/06; Paper #3 04/27; Paper #4 05/04.**
7. Reports have to be pre-checked by Grammary with minimum 95pts. A summary page from Grammary has to be submitted with report.

### **Chemistry Department Student Integrity Policy:**

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." All tests and quizzes taken and reports submitted must represent the student's individual unaided effort. To receive or offer information during an examination will be considered cheating. Any suspected offenses may be referred to the Department Chair for appropriate action. Classes will never be canceled unless an official from the Chemistry Department gives the class personal notification. Don't assume a note to be enough without checking with the Department office (404-413-5500).

The University requires that faculty members must, on a date after the mid-point of the course to be set by the Provost (or his designee):

1. Give a WF to all those students who are on their rolls but no longer taking the class
2. Report the last day the student attended or turned in an assignment.

Students who are withdrawn may petition the Department Chair for reinstatement into their classes.

## Laboratory Schedule

Week No.	Date		Experiment	Report Due
1	01/13	Check In		
	01/20	M.L.K.		
2	01/27	UV-vis Part A	Energy Scan	
3	02/03	UV-vis Part A	Ethylbenzene	
4	02/10	UV-vis Part B	HQS Dilution	
5	02/17	UV-vis Part B	HQS-Mg Binding	
6	02/24	Catch up	Data Fitting	
<b><u>7</u></b>	03/02	Fluorescence	Water Peak	<b><u>[Report #1]</u></b>
8	03/09	Fluorescence	8-QBA-Fructose	
	03/16	Spring Break		
9	03/23	Catch up		
10	03/30	NMR Facility Tour at NSC 134 <b><u>Cancelled</u></b> <b><u>Catch up for report 2 Q&amp;A</u></b>		
<b><u>11</u></b>	04/06	NMR	1H-NMR ( <b><u>online</u></b> )	<b><u>[Report #2]</u></b>
12	04/13	NMR	Thermo-NMR ( <b><u>online</u></b> )	
13	04/20	Catch up	<b><u>Catch up for report 3 Q&amp;A</u></b>	
<b><u>14</u></b>	04/27	IR	Polystyrene/HCl	<b><u>[Report #3]</u></b>
<b><u>15</u></b>	05/04	Online Check Out	Notebook Due	<b><u>[Report #4]*</u></b>

- 1) The first week will be “check-in” (01/13/20). The laboratory instructor may want to give instruction on the Uv-Vis instruments.
- 2) The IR report is due no later than 05/04/20.
- 3) \* Graduate students only.