

## Chemistry 4010/6010 Laboratory Syllabus Fall 2018

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**Instructor:** Dr. Jyotsna Thota

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**Office:** CN 219 **Phone:** 404-413-5524

**Lab hours/location:** W 9am – 12:15pm, NSC-240

**Office Hours:** W 12.30 – 1.30 PM

### **Laboratory Attendance:**

Students are expected to attend all laboratory sessions. State law requires that you sign-in and sign-out for each laboratory session that you attend. Pre-lab lecture starts at **3pm**, and takes 20-30 minutes. Students are required to **arrive on time**. Those who miss the lecture may not be allowed to perform the experiment that day.

### **Make-up Labs:**

Make-up labs are **not allowed**, unless you have a legitimate excuse for missing a lab. After obtaining an approval from the instructor the student must take the missed lab within one week of the scheduled lab date and before the final exams week. Students must make prior arrangements with the instructor who is going to give the make-up lab.

### **Laboratory Reports:**

Four formal laboratory reports will be required throughout the semester. Criteria used in grading the Lab Reports are: (1) your understanding of the experiment as judged by your comments and answers to questions, (2) the quality of your data, (3) the completeness and accuracy of your data analysis (including error analysis), (4) the report's clarity, organization, and quality of presentation. Lab report format should follow ACS guidelines.

Laboratory reports are **100 points each**, and must be turned in on the due dates (see the Lab Schedule). Report outlines, tables and figures can be submitted to your laboratory instructor one week in advance of the due date for helpful comments. Laboratory Report #1 can be re-submitted once with corrections for re-grading at a later date (assigned by the instructor). Reports #2-4 can be submitted only once.

Digital data must be saved offsite, and be available upon demand by the instructor for full credit.

### **Laboratory Notebooks:**

Notebook is required for the laboratory sessions, and will contain all of your notes, data, observations and calculations, and notebook reports (see the Lab schedule table below). For additional requirements please see the lab manual (pg. 3). You must turn in a complete laboratory notebook with your final laboratory report. Additionally, whenever you turn in a laboratory report, the corresponding section of your notebook must be complete. The instructor will occasionally spot check your notebook. The maximum grade for a completed notebook is **150 points** (notebook itself 50 pts + 2 notebook reports, 50 pts each).

**Late Assignments:**

Late assignments will be penalized 2 points each workday delay (max 10 pts per week). After 2 weeks from the due date lab reports will not be accepted, and student will receive 0 points on that report.

**Lab Course Grading:**

The maximum grade for this laboratory course is **550 points**: 4×100pts = 400pts for the formal lab reports, 100 pts for the notebook reports, 50 pts for the notebook.

**Schedule of Laboratory Sessions:**

Day	Lab Session#	Exercise	Lab Report	Lab Report Submission
Aug 22	1	<i>Check-in</i>		
Aug 29	2	GC1 - Injection technique	NO Report	
Sep 5	3	GC2 - Qualitative analysis	Report #1	
Sep 12	4	GC3 - Quantitative analysis		
Sep 19	5	GC4 - HETP	Notebook report	Report #1 - 1 <sup>st</sup> subm.
Sep 26	6	GC5 - Kovats retention index	Report #2	
Oct 3	7	GC6 - Temperature programming		Report #1 - 2 <sup>nd</sup> subm.
Oct 10	8	GC7 - Enthalpy		
Oct 17	9	GC8 - Similar boiling points		
Oct 24	10	Thin Layer Chromatography, TLC	Report #3	Report #2
Oct 31	11 A	HPLC1 - Analgesics (group A)	Report #4	
Nov 7	11 B	HPLC1 - Analgesics (group B)		Report #3
Nov 14	12 A	HPLC2 - Gradient Elutions (group A) <i>Check -out</i>	Notebook report	Report #4, Notebook
<b>Nov 21</b>	-	<b>Thanksgiving Break</b>		
Nov 28	12 B	HPLC2 - Gradient Elutions (group B) <i>Check-out</i>	Notebook report	Report #4, Notebook

\*\* HPLC exercises need to be scheduled for smaller groups. Accordingly, the lab section will be divided into two groups (Group A and Group B). Sign-up sheets for the HPLC labs will be provided on the 10th lab session (Oct 25). Each subgroup will have a week on/week off schedule.