

**Chemistry 3100 Organic I**  
Fall Semester 2015  
Thursday 12:00 pm – 16:45 pm

**Instructor:** Dr. Danzhu Wang [dwang19@gsu.edu](mailto:dwang19@gsu.edu)

When sending me an email, please use your official GSU email and put course name (CHEM 3100 TR) in the subject line.

**Office:** Courtland North 202

**Office Hours:** Wednesday 3:00 pm-5:00 pm

**Texts & Materials:**

Experimental Organic Chemistry by Wilcox & Wilcox 2<sup>nd</sup> (**required**)

GSU Chemistry 3100 lab manual (**provided**)

Hard bound lab notebook (**required**)

Safety glasses or goggles (**required**)

**Lab policies:**

**1. Safety glasses or goggles required to be worn at all times inside the lab. Remember to bring your goggles every time include the first class (check-in). No free goggles will be provided for the first class.**

**2. Dress appropriately. Students will not be allowed to enter the lab without appropriate clothing.**

No open-toed shoes, shorts, sleeveless shirts/tops

**3. No food or drink allowed in the lab includes chewing gum and candy.**

**Failure to follow safety rules will result in expulsion from the lab with no make-up allowed.**

**4. Notebook: Stitched, bound notebook required**

All data must be recorded in ink.

Take notes in lab notebook during pre-lab lecture

Sign by TA. **Data must NEVER be recorded in pencil or on other books/papers and later transferred to the notebook.**

**5. Quiz and Exam: No makeup quizzes and exams given.**

**6. Cleaning up is part of the lab session. 30 minutes before the closing time of lab session. Return all checked out items to TA 15 minutes before the end of lab.**

**To pass the lab: Students MUST 1) take the written lab final exam, 2) turn in mid-tern/final lab report, and 3) Lab notebook check. All these are due on Dec 3, 2015.**

**Grading Scheme:**

Attendance, Activity, Homework, mid-term exam, quizzes, notebook	150 pts
Final Exam	100 pts
Final Report	100 pts
Midterm Report	50 pts
Total	400 pts

**Grades:**

A+	>96%
A	90%
A-	87%
B+	84%
B	80%
B-	77%
C+	74%
C	70%
C-	67%

**Class Preparation and attendance:**

Students are expected to attend all laboratory sessions and all pre-lab lectures. Students will not be allowed to participate in the lab without attending the lecture and preparing a pre-lab procedure in the lab notebook. Every effort should be made to arrive on time, as important pre-lab advisories will be given at the start of each session. The student is individually responsible for the timely completion of all assignments, regardless of any reason of absence. Reading assignments, which will be given in lecture, should be completed prior to the following lecture and will constitute the quiz material.

**Teaching Schedule:**

The lab/lecture schedule listed on page 7 of the GSU laboratory manual will be adhered to as far as is possible.

**Students are requested NOT to bring cellular telephones and/or pagers to lectures or exams. Persons violating this request will be asked to leave the room.**

\*Deviations from this syllabus may be required.

SCHEDULE OF CHEMISTRY 3100

DATE	WEEK	LAB EXPERIMENTS
Aug 27	1	<input type="checkbox"/> Whole picture of Chem3100 <input type="checkbox"/> Check in <input type="checkbox"/> Safety quiz
Sept 3	2	<input type="checkbox"/> <b>Separation of benzoic acid and acetanilide by extraction</b> <input type="checkbox"/> Record the bottle number and the initial weight of the solid mixture before starting separation <input type="checkbox"/> Separated compounds will be left over weekend for drying
Sept 10	3	<input type="checkbox"/> <b>Isolation of natural products--Caffeine</b> <input type="checkbox"/> Melting points determination of benzoic acid and acetanilide
Sept 17	4	<input type="checkbox"/> <b>Isolation of natural products--Trimyristin</b> <input type="checkbox"/> Record the empty weight of RB flask before evaporating solvent <input type="checkbox"/> Sublimation (group) of caffeine and IR analysis
Sept 24	5	<input type="checkbox"/> <b>Purification of natural products--Trimyristin--recrystallization</b> <input type="checkbox"/> Record the crude weight of Trimyristin before starting separation <input type="checkbox"/> <b>Synthesis and purification of butyl acetate</b> <input type="checkbox"/> Record the empty weight of (vial+cap) before starting separation <input type="checkbox"/> IR, RI
Oct 1	6	<input type="checkbox"/> <b>Simple distillation: purification of neat liquid (NL)</b> <input type="checkbox"/> Record the unknown number of NL <input type="checkbox"/> Save NL for chemical tests on week 10 ( <b>parafilm, a lot!!</b> ) <input type="checkbox"/> Density determination <b>Mid-term exam ☹</b>
Oct 8	7	<input type="checkbox"/> <b>Introduction to Fraction distillation</b> <input type="checkbox"/> Record the unknown number of binary liquid (BL) <input type="checkbox"/> Fraction distillation of unknown binary liquid <input type="checkbox"/> SAVE ~1mL BL for GC analysis <b>Mid-term report due today!!</b>
Oct 13		<b>Last day to Withdraw !!!</b>
Oct 15	8	<input type="checkbox"/> <b>Introduction to Gas Chromatography (GC)</b> <input type="checkbox"/> CONTINUE: Separation of Low boiler (LB) and High boiler (HB) and boiling point. <input type="checkbox"/> GC Experiment start
Oct 22	9	<input type="checkbox"/> <b>Introduction to Infrared (IR) Spectroscopy</b> <input type="checkbox"/> CONTINUE: Separation of Low boiler (LB) and High boiler (HB) and boiling point determination. <input type="checkbox"/> SAVE all LB and HB vials for chemical test <input type="checkbox"/> CONTINUE: Gas Chromatography (GC)
Oct 29	10	<input type="checkbox"/> <b>Introduction to Chemical tests</b> <input type="checkbox"/> CONTINUE: Separation of Low boiler (LB) and High boiler (HB) and boiling point determination.

		<input type="checkbox"/> CONTINUE: Gas Chromatography (GC) <input type="checkbox"/> Chemical tests
Nov 5	11	<input type="checkbox"/> <b>Introduction to Mass spectrometry (I)</b> <input type="checkbox"/> CONTINUE: Separation of Low boiler (LB) and High boiler (HB) and boiling point. <input type="checkbox"/> CONTINUE: Gas Chromatography (GC) <input type="checkbox"/> CONTINUE: Chemical tests <input type="checkbox"/> <b>Mass spectrometry request</b>
Nov 12	12	<input type="checkbox"/> <b>Introduction to Mass spectrometry (II)</b> <input type="checkbox"/> CONTINUE: Separation of Low boiler (LB) and High boiler (HB) and boiling point. <input type="checkbox"/> <b>Mass spectrometry request</b> <input type="checkbox"/> <b>Last week for GC</b>
Nov 19	13	<input type="checkbox"/> <b>Final preparation</b> <input type="checkbox"/> Form of Final report <input type="checkbox"/> Make up lab <b>Only</b> bp, chemical tests, IR, RI, density and literature search are allowed. <b>No more distillations and GC.</b>
Nov 26		<b>Thanksgiving break ☺</b>
<b>Dec 3</b>	14	<b>Final Exam (NO make-up!!!) ☹</b> Lab Notebook grading and Final report submit <b>BEFORE</b> final exam

This schedule is only tentative and subjected to changes.