

**Chemical Research CHEM 4950**  
**The Summer Institute Course Syllabus 2020**

---

**Instructors:** Dr. Maged Henary & Dr. Jianmei Cui  
**E-mail:** [mhenary1@gsu.edu](mailto:mhenary1@gsu.edu) or [jcui@gsu.edu](mailto:jcui@gsu.edu)  
**Time:** 9:00 am – 11:20 am M - F (July 8<sup>th</sup> - July 30<sup>th</sup>)  
**Office Hours:** Email for appointment

---

**Grading:**

*Final Exam:	100 points
*Oral Presentation	50 points
Quizzes, homework, notebook, attendance	<u>50 points</u>
	Total 200 points

**A+:** 96%; **A:** 92%; **A-:** 89%; **B+:** 86%; **B:** 82%; **B-:** 78%; **C+:** 76%; **C:** 72%; **C-:** 68%; **D:** 64%

**Course Objective:**

This course is designed to introduce international students to various chemistry projects including stereoisomerism, natural product extraction, simple distillation, recrystallization, and techniques and tools that are fundamental in chemistry labs. Students will learn how to identify chemical structure characteristics by using IR, melting point apparatuses and literature search. Students will learn chemistry lab techniques and gain hands-on lab experience, as well as learn to comply with lab safety protocols. Students will also gain the experience of oral presentation on lab techniques learned through the course and how to conduct a chemical structure literature search.

**Course Attendance:**

Attendance is essential for success. The Office of International Initiatives will be notified of any absences. Please talk with the instructor if you are not able to attend class.

**Academic Honesty & Plagiarism:**

You must submit your own work and conduct yourself in an honest manner. One aspect of academic honesty is plagiarism. Plagiarism can include one or more of the following situations:

- a. Copying information from another student's work or from other materials and submitting that work as your own.
- b. Using other people's ideas, words, or data without properly documenting or acknowledging the source.
- c. Overusing sources without incorporating your own ideas.

**Tentative schedule:**

<b>Date</b>	<b>Lecture &amp; Lab #</b>	<b>Tentative Schedule of Lecture/Lab</b>	<b>Instructors</b>
7/8/20	1/Wed	Orientation and Project Overview	Drs. Henary/Cui
7/9/20	2/Thurs	Introduction to Carbonyl Chemistry/IR	Dr. Henary
7/10/20	3/Fri	Recrystallization of Acid	Dr. Henary
7/13/20	4/Mon	Stereoisomerism/Identification of Acid	Dr. Henary
7/14/20	5/Tus	Synthesis of Dibromide from Chalcone	Dr. Henary
7/15/20	6/Wed	Identification of the Chalcone Dibromide	Dr. Henary
7/16/20	7/Thurs	Extraction Coffeine from Tea Powder	Dr. Cui
7/17/20		Mini Break	
7/20/20	8/Mon	Purification of Coffeine - Sublimation	Dr. Cui
7/21/20	9/Tus	Identification of Coffeine - IR, MP, Reference	Dr. Cui
7/22/20	10/Wed	Simple Distillation of Liquid Chemical	Dr. Cui
7/23/20	11/Thurs	PPT - Kelsey Jordan (Science Librarian)	Dr. Henary
7/24/20	12/Fri	Field Trip	Dr. Henary
7/27/20	13/Mon	Identification of liquid Chemical	Dr. Cui
7/28/20	14/Tue	Miscellaneous topics (Final Topic/Presentation Discussion)	Dr. Cui
7/29/20	15/Wed	Students Presentation (30 min/student)	Dr. Cui
7/30/20	16/Thurs	<u>FINAL EXAM (9:00 am -10:30 am)</u>	Dr. Cui