

Syllabus – Chemistry Research
CHE 492

- Instructor:** Dr. K. Walters
SC 348
572-5315
walterske@nku.edu
<http://www.nku.edu/~walterske>
- Office Hours:** I have an open office policy, so stop by whenever you have a question (I will not always be in my office but will always indicate where I can be found or when I will return). My formal office hours are listed on my website.
- Prerequisite:** Consent of instructor
- Lab Times:** By arrangement with instructor (8 hours per week per enrolled credit hour spent on research). Research may take place outside the timespan of the term with the consent of both the instructor and department chair. The student must also schedule a weekly 30 minute meeting with the instructor **in addition to** the lab time.
- Student Learning: Outcomes** CHE 492 fulfills the following NKU chemistry department student learning outcomes:
1. Explain the major concepts and experimental findings in the chemical sciences.
 2. Demonstrate the ability to carry out experimental protocols using modern instrumentation and methods.
 3. Utilize critical thinking skills to apply concept knowledge and adapt experimental techniques to: a) form and test hypotheses and b) solve scientific problems.
 4. Compile, critically evaluate, and interpret scientific information and data.
 5. Effectively communicate scientific information through written and oral means.
 6. Apply effective group strategies to solve scientific problems.
 7. Evaluate the relationships between chemistry and mathematics, physics, biology, and other disciplines and between chemistry and society.
 8. Apply computer technology and other technologies in the comprehension, interpretation, and presentation of the chemical sciences.
- Objectives:** The overall goal of your undergraduate research experience is for you to develop the skills necessary to become a professional research scientist, whether that be in graduate school or in an industrial setting.
- In order to achieve that goal, the NKU chemistry department faculty have agreed that you will need to meet the following objectives:
1. Have a mastery of your research project, including understanding what you are doing, why you are doing it, and the “bigger picture”.
 2. Search the literature for publications related to your research as needed, and critically review (read) those papers.
 3. Keep accurate and detailed records of your experiments and results in a laboratory notebook.
 4. Be a good laboratory citizen, which means working with and watching out for others, following safety guidelines, taking care of lab responsibilities and keeping your lab space and common areas clean.
 5. Learn to work and think independently.
 6. Present your work at the end of the term in the form of a publication quality report as specified by your instructor.
- For more information regarding these objectives, refer to the research policies document supplied by your instructor.
- Grading Policy:** Your grade in CHE 492 will be based on how well you achieve the objectives stated above (in addition to any requirements outlined in your instructor’s research policies).
- Safety Contract:** You are required to sign the departmental research safety contract and abide by its policies. Failure to do so will result in dismissal from the lab.
- Research Contract:** You are required to complete and sign a departmental research contract. This contract ensures that you and your instructor understand the goals of your research project and the times that you will conduct research during the term.
- Research Reports:** You are required to send your instructor biweekly report emails updating them on your research progress. This email can be informal but assures that you and your instructor are “on the same page”. You are also required to prepare a research report at the end of the term according to your instructor’s specifications. You may also be invited to participate in research meetings to contribute an oral or poster presentation.

This syllabus is subject to change. If you do not understand anything in this syllabus, you must bring it to your instructor’s attention immediately.