



**CHE 492 - 006: Chemistry Research
Spring 2005**

Instructor : Prof. K.C. Russell

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- Prerequisites:** By agreement with Dr. Russell
An open mind and a strong desire to learn how to do science!
- Lab Times:** By arrangement (6-8 hours per week per credit hour)
- Office Hours:** M 9:00 – 10:00 am; W 10:00 – 11:00 am; F 11:00 am – 12:00 pm
By appointment. I have an open door policy.
- Objectives:** The overall goal of your undergraduate research experience is for you to develop the skills necessary to become a highly professional research scientist, whether that is in graduate school or in an industrial setting. In order to achieve that goal you will need to meet the following objectives:
- 1) Have a mastery of your project. Understand what you are doing and why you are doing it. Understand the bigger picture.
 - 2) Search the literature for publications related to your research and critically review those papers.
 - 3) Develop skills in the synthesis of organic compounds, including isolation and characterization.
 - 4) Keep accurate and detailed records of your experiments and results in a laboratory notebook as well as an organized record of all spectral data.
 - 5) Be a good laboratory citizen. This means working with and watching out for others, following safety guidelines, taking care of your lab responsibilities and keeping your area and common areas clean.
 - 6) Learn to work and think independently.
 - 7) Present your work in the form of weekly reports, publication quality reports, Powerpoint, and poster presentations, with the goal of publication in a peer reviewed journal.
- For more information read *Research in the Russell Group* and the *Lab Policies Agreement*.
- Grading Policy:** Your grade for research will be based on how well you achieve the objectives stated above. Particular emphasis will be placed on your end of semester report, and the state in which you leave the lab for the semester. I will work with you on editing your report until it is of A quality. Your final report is due the Friday before grades are assigned, so get an early start. If you are not satisfied with your report you may receive a grade of incomplete upon request. This will provide you some more time so you can finish it properly and receive an A for the report. However, your lab area must be pristine by the day grades are recorded or it will cost you one letter grade (see *Leaving the Lab* in either the *Lab Policies Agreement* or *Research in the Russell Group* for details).