

**Faculty Member Contact Information**

Name: **Robert P. Dixon**  
Department: **Chemistry**  
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**Description of the URCA Assistant Position(s)**

Number of students requested: **2**  
Number of students who will be funded: **1: Only one of the students for this position will be funded. The professor will determine which student receives funding.**  
Will the student(s) earn course credit? Yes **X** No    If yes, in which course? **Chem 296 or 496**  
Location of research/creative activities: **SL 2210**

Brief description of the nature of the research/creative activity:

**Research interests lie at the interface of chemistry and biology. He seeks insights into biological processes and macromolecular structure by employing probes at the molecular level. His modus operandi consists primarily of using the tools of chemistry to understand biochemical processes.**

Brief description of student responsibilities:

**Organic synthesis and analytical Chemistry**

URCA assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?

**See attached syllabus**

**Additional Requirements of Students**

If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours), please indicate all required days and times:

**None**

If the location of the research/creative activities is off campus, must students provide their own transportation? Yes \_\_\_ No \_\_\_ N/A

Must students have taken any prerequisite classes? Please list classes and preferred grades:

**Completion of a 2 semester Organic Chemistry course**

Other requirements:

**None**

Notes to applicants (i.e., any other information you'd like applicants to know about you or the position before applying):

**None**

# Syllabus for Research

**CHEM-296, -396, -496, -596, -597, -599**

**Fall 2009**

**Instructor: Dr. Robert P. Dixon**

**Lab: SL 2210**

- Those attempting research for the first time one must read and sign the Chemical Hygiene Plan, found within the Lab, prior to starting research.
- Those Students registered in Chem 496 must submit a research report at the end of their last semester of research.

## **General Goals For Research**

1. Accomplish **at least** one true experiment per day, and two if possible.
2. Contribute **new and novel** idea's/directions to your research.
3. I should be able to completely understand your project and your progress by reading your lab book.
4. Start the habit of keeping up with the current chemical literature.
5. Aid in the identification of potential funding sources.
6. Attend all group/literature meetings.

## **Group Meetings are Mandatory**

Group meetings are once a week and the topics will alternate between:

### **A. Journal Meeting**

1. Each student will take a turn and provide the group with an article. You will hand the article to me on Wednesday and I will provide a photocopy of the article to be discussed on Thursday prior to group meeting.
2. Every student will read the journal article and be prepared to discuss the article. Discussion of the article will be initiate and monitored by the student who chose the article and myself, but everyone's participation in the discussion is mandatory.

### **B. Research Meeting**

Be prepared to present and discuss your research results that have occurred over the prior 2 weeks.

## **Individual Meetings are Mandatory**

Once a week an individual meeting will be assigned with you and your colleagues within your sub-group. This will allow a more individualized/detailed discussion of the day by day progress of your projects.

## **Grading Policy For Undergrad and Grad Research**

1. You are required to put an average of 3-4 times the hours within the research lab per week than the number of credit hours you are registered. (If you are registered for 2 credit hours you must be in the lab an average of 6-8 hours a week)
2. All of these hours **MUST** be documented by either me or a graduate student.

3. You are required to submit a final research report after you have accomplished your research within my laboratory.
4. You must purchase a carbon-less laboratory notebook that will be left with me upon leaving the lab. (Available through Chem Club)

### **Your grade will be based on:**

- Unsatisfactory accomplishments of goals of proposed research project and less than the average number of documented hours a week of research will result in a D grade.
- Unsatisfactory accomplishments of goals of proposed research project and the average number of documented hours a week of research will result in a C grade.
- Satisfactory accomplishments of goals of proposed research project and a minimum of the average number of documented hours a week of research will result in a B grade.
- Exemplary accomplishments of goals of proposed research project and a minimum of the average number of documented hours a week of research will result in a B<sup>+</sup> or A<sup>-</sup> grade.
- Exemplary accomplishments of goals of proposed research project and greater than the average number of documented hours a week of research will result in an A grade.