

UNDERGRADUATE RESEARCH COURSES CHEM 2P98 AND 3P98

TITLE: UNDERGRADUATE RESEARCH PROJECT

The intent of these two courses is to provide research experience to undergraduate students for credit. A student may enroll in one of these courses during one of the D2 or D3 academic sessions or during the spring/summer sessions.

The choice of project and supervision is completely under the control of the supervisor. At the end of the term the student shall prepare a brief report (~10-12 pages) on their activities and results. On completion of the lab work, the student shall also give a ~30 minute presentation that is attended by at least one additional faculty member and any others (students or faculty) who wish to attend †.

It is the supervisor's responsibility to identify any 2P98 and/or 3P98 students to the coordinator at the onset of each term by filling out a form (available in the Chemistry Office) for each student, to be stored in the Chemistry Office.

MARKING SCHEME

The supervisor will assign a numerical grade with input from at least one other faculty member who has read the report and attended the seminar. **It is the supervisor's responsibility to arrange for the participation of this faculty member.** The final grade will be determined using the following mark breakdown:

- * 30% **Written report** (organization, clarity and quality/interpretation of results)
- *† 30% **Oral presentation** (organization, clarity and flow)
- 20% **Lab performance** (use of time, productivity, quality of lab book and/or other record keeping, lab attendance). **This mark will be assigned to the student by the supervisor prior to deadline for withdraw from course without academic penalty**
- *20% **Demonstrated scientific understanding and handling of questions** following the oral presentation (questions will be drawn from both the oral presentation and written report)

COMMITTEE

*The grade for the written document and the oral presentation needs to be determined by the student's supervisor and one other faculty member. The mark breakdown, overall grade and date of the oral presentation should be indicated on the Assessment Form, to be handed in with the Final Report to the 2P98/3P98 Coordinator.

†**NOTE:** At the discretion of the supervisor, students who are enrolled in 2P98 or 3P98 during the spring/summer sessions maybe asked to prepare and present a poster for the Chemistry Department's Annual Undergraduate Research Day instead of giving an oral presentation.

TIME-COMMITMENT GUIDELINES

In order for the course to be approximately equivalent to a half-credit course with a laboratory component, which entails 78 hours of contact time, the student is expected to spend a minimum of **nine hours per week for 12 weeks in the laboratory** (for a total of ~ 108 hours). It is expected that this amount of time will be required to make any significant progress at a research project. **Students should be made fully aware of the time-commitment involved at the commencement of the course.** Students are encouraged to spend more time on the course than the minimum required, but they will not be penalized if they are unable to do so.

SPRING/SUMMER SESSIONS

CHEM 2P98 and 3P98 are given over a 12 week interval during the spring/summer sessions. Students may not receive academic credit for CHEM 2P98/3P98 for research they have been paid for either by their research supervisor, or through funding programs such as USRA, BUSRA, Experience Works etc. This is does not preclude students taking CHEM 2P98/3P98 while doing a paid or voluntary summer research assistantship. However, the research topics and hours devoted to each must be well-defined and clearly separate.