

## CHEMISTRY DEPARTMENT EXPERIENTIAL LEARNING ACTIVITIES

Course and # EL Credits	Brief description: 1) work that students will do; 2) how the student's work meets the definition of experiential learning (Experience, Reflect, Conceptualize, Apply); 3) expected number of work hours associated with this EL experience
CHEM 1210  1 EL credit	<p>1) Student will complete a self-assessment of approaches to learning and will select strategies to improve deep learning. Student will submit an overview of careers in chemistry and will complete a 4-year career plan and their future goals in mind. Students will attend presentations by Academic Support Center advisors, librarian, senior chemistry students, and other guest speakers and complete assignments about how they can apply the tools learned. Students will attend senior seminar presentations. Students will participate in outreach or professional science events as available.</p> <p>2) Student will participate in activities and complete assignments to learn, apply, and reflect about skills needed to pursue a career in chemistry.</p> <p>3) Student will dedicate about 16 hrs for in-class presentations, group work, and workshops. Student will also dedicate about 9 hrs to complete take-home assignments and to attend speaker's presentations or events.</p>
CHEM 1211L  1 EL credit	<p>1) Student will complete 12 laboratory activities. Student will complete two reflection assignments in Blazeview, one at mid-term and one at the end- of the semester.</p> <p>2) Student will observe, collect, and analyze data; student will compare to expected results, draw conclusions, and apply method or knowledge to different situations.</p> <p>3) Student will dedicate about 36 hrs of hands-on in-laboratory to the course and about 16 hrs to reading and studying material.</p>
CHEM 1212L  1 EL credit	<p>1) Student will complete 12 laboratory activities. Student will complete two reflection assignments in Blazeview, one at mid-term and one at the end- of the semester.</p> <p>2) Student will observe, collect, and analyze data; student will compare to expected results, draw conclusions, and apply method or knowledge to different situations.</p> <p>3) Student will dedicate about 36 hrs of hands-on in-laboratory to the course and about 16 hrs to reading and studying material.</p>
CHEM 2310  1 EL credit	<p>1) Student will complete 12 laboratory activities; student will work with peers writing a report on analytical techniques and will give an oral presentation on the findings of the bibliographic research. Student will submit monthly reflections.</p> <p>2) Student will observe, collect, and analyze data; student will compare to expected results, draw conclusions, and apply method or knowledge to different situations.</p> <p>3) Student will dedicate about 36 hrs of hands-on in-laboratory to the course, and about 20 hrs to write formal reports on the assignments. Student will also dedicate about 16 hrs reading current scientific publications on analytical techniques and preparing a written report and oral presentation.</p>

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CHEM 4210 1 EL credit	<p>1) Student will write an abstract for the oral presentation and provide references on the topic. Student will prepare a short (5 min) practice and receive feedback from instructor and classmates prior to the seminar presentation. Student will prepare, practice, and present an oral presentation discussing an advanced chemistry topic. Student will complete two reflection assignments in Blazeview, one at mid-term and one at the end- of the semester.</p> <p>2) Student will participate in activities and complete assignments to learn, apply, and reflect about skills needed to pursue a career in chemistry.</p> <p>3) Student will dedicate about 16 hrs for in-class activities, practice presentation, seminar presentation, and attendance to peer-presentations. Student will also dedicate about 32 hrs to bibliographic research and to prepare slides and an abstract for the seminar presentation. Student will also dedicate about 1 hr to practice the presentation with the instructor and about 2 hrs to complete the diagnostic test for senior chemistry students.</p>
CHEM 4910 1, 2, or 3 EL credits	<p>1) Student will develop and perform laboratory experiments; student will write a formal research report and participate in the UR symposium or regional meeting if possible. Student will submit monthly reflections.</p> <p>2) Student will observe, collect, and analyze data; student will compare to expected results, draw conclusions, and apply method or knowledge to different situations.</p> <p>3) Student will dedicate about 36 hrs (1 credit), 72 hrs (2 credits), or 108 hrs (3 credits) of hands-on in-laboratory to the course, and about 20 hrs to write a formal report on the research. Student will also dedicate about 16 hrs on reading current scientific publications on the research topic and preparing a written report and poster or other materials needed for participation in a symposium or regional meeting.</p>