



BIO 4922, CHM 4922, or PHY 4922 Senior Projects 2

Spring 2015 Instructors:

BIO 4922: Dr. Jeffery Morrissette

CHM 4922: Dr. Shannon Timmons and Dr. Nicole Villeneuve

PHY 4922: Dr. Scott Schneider

Class Hours (January 12 – May 1, 2015): Students must contact their advisor prior to the beginning of the semester to find a mutually acceptable time to meet on a weekly basis to discuss their research progress. Students should plan to spend a minimum of 6 hours per week working on their senior project, which is commensurate with a 2 credit hour laboratory course. This may include time spent both inside and outside of the research laboratory, as some projects will be theoretical in nature, while others may involve significant data analysis.

Course Requirements:

1) Oral Presentation

An oral report in the form of a PowerPoint presentation must be delivered to Natural Sciences faculty and students at the end of the term. Oral presentations are scheduled either during the final week of classes or at the end of exam week at a time convenient for all participants. An evaluation rubric will be distributed to clarify oral presentation criteria.

2) Senior Thesis

A written report in the form of a senior thesis must be submitted to your advisor by the Friday of exam week (May 8, 2015). Suggested sections include: (1) Abstract, (2) Introduction, (3) Results and Discussion, (4) Experimental Procedures, and (5) Conclusion and Future Directions. The exact format of your thesis will vary depending on your discipline, so please consult your advisor for guidance. An evaluation rubric will be distributed to clarify thesis expectations.

3) Research Poster

A scientific poster summarizing your senior project research must be composed, printed, and presented at either a chemistry, physics, or life sciences advisory board meeting. These meetings are typically held in mid-late April. Please consult your advisor for exact dates. Advisory board members are accomplished professionals in your respective fields that have been asked to advise LTU regarding our academic programs. Students will informally present their senior project research to advisory board members during a poster session prior to the advisory board meeting. This is an excellent opportunity for students to network and solicit feedback from academic and industry leaders outside LTU. An evaluation rubric will be distributed to clarify poster requirements.

Grades: Course grades are determined by senior project advisors, as they have directly supervised you throughout the term and are therefore in the best position to judge your performance. Evaluation rubrics will be completed by all faculty attending your oral presentation, as well as advisory board members at your poster session. This feedback will aid your advisor in assigning a grade.

Textbook: There is no required textbook for this course. Students must work with their advisor to select a suitable laboratory notebook to record data. In cases of projects generating significant amounts of electronic data, storage and backup procedures must be discussed with your advisor.

Laboratory Safety: Many senior projects will involve the use of a research laboratory. Laboratory safety is of paramount importance. Please ensure that you identify the first aid kit, eye wash station, safety shower, fire blanket, and fire extinguisher in your research laboratory prior to beginning any experiments. Always discuss safety procedures and waste disposal with your advisor before beginning any experiment and never conduct an experiment if you are uncertain regarding the procedure or the safe use of instrumentation and equipment. Unauthorized experiments or use of the laboratories is prohibited. Students must check-in with their advisor every time they plan to work in the laboratory and must have their experimental plans for the day approved.

Academic Ethics: Violations of academic ethics will be treated seriously and handled according to current LTU policies as described by the University's Academic Honor Code: <http://www.ltu.edu/myltu/honor-code.asp>.

Withdrawal Date: The last day to withdraw from this courses is Friday, April 10th. Please speak to your advisor if you're concerned about your performance in this class.