



**Project Title:** Development of Multi-week Open-ended Inquiry Fourth-year Chemistry Projects – Year One

**Project Summary** (150 words maximum)

In an effort to better prepare UBC's Chemistry Undergraduates for research and industry demands, we propose to develop open-inquiry based laboratory projects for our 4<sup>th</sup> year students taking CHEM 445. These new laboratories will replace the current expository, or "cookbook", experiments which do not promote independent-learning. This is in clear contrast with the proposed open-inquiry laboratories. In a typical open-inquiry laboratory, students will choose a project and will be expected to outline and then execute a strategy to bring the project to fruition. Upon approval of the proposal by a teaching assistant and laboratory director, students will test their hypotheses and critically evaluate their results. These new laboratories will require a higher level of learning and understanding and will develop students' critical-thinking and independent-learning skills, paramount qualities in real world scenarios. Moreover, we believe that these laboratories will allow students to become active participants in their own learning process.