



Spring 2012 STEC 4500 Research Projects with Dr. Mai Yin Tsoi

Organic Chemistry (Orgo) is one of the more challenging science courses and we have partnered with ITEC students to develop mobile apps for the Apple iTouch/iPad to help Orgo students learn the content. Our first app, TsoiChem, was designed and developed by 3 semesters of ITEC 3870 students and is in its final stages of development. This research project has two parts:

PART A: Programming Project – The student researcher will work with Dr. Tsoi as content expert and Dr. Dekhane as programming/development expert to finalize and prepare TsoiChem for deployment onto iTunes. As well, the student will help develop an Android version of TsoiChem and prepare it for deployment. Usability testing on local students will be the basis of the student researcher's evaluation for this project. The goal of this project is to deliver working mobile apps to chemistry students while gaining valuable experience developing mobile apps. Maximum 2 students in Spring 2012, 1 student in Summer 2012.

PART B: Science Education Project – The student researcher will work with Dr. Tsoi to collect and analyze qualitative data on the effects of this interdisciplinary partnership on the beliefs and practices of the students enrolled in ITEC 3870. For almost all ITEC 3870 students, developing these mobile apps has been the largest application of Software Development theory to an actual team project and initial data indicates that this experience has prompted significant changes to student beliefs and views. The goal of this part of the project is to investigate why and how these changes occur.