Indigenizing the Applied Science Curriculum at UBC's School of Engineering

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This poster presents the initial phase of a project to Indigenize the undergraduate Applied Science (APSC) engineering curriculum at UBC's School of Engineering (Okanagan campus). The presenter anticipates interest from (and possible collaboration with) attendees interested in similar initiatives, as well as feedback and suggestions on the project itself.

Project Summary

The project responds to The Truth and Reconciliation Commission's call for educators to "build student capacity for intercultural understanding, empathy and mutual respect" (*Calls to Action*, clause 63), specifically with regard to Aboriginal contexts and communities, by developing instructional modules based on case studies. As researchers have shown, case studies have many benefits: shifting emphasis to student-centred learning (Grant, 1997), exposing students to real-world issues (Raju and Sankar, 1999), and increasing student interest and motivation (Mustoe and Croft, 1999). Further, Davis and Wilcock (2005) find that case studies in Engineering classes can bridge theory and practice, and provide opportunities for active learning and development of lifelong learning skills. These findings suggest that case studies are an excellent vehicle for delivering Aboriginal-based content in the Engineering curriculum.

The project entails developing, delivering and evaluating course-based modules to incorporate Aboriginal perspectives and best practices for engagement with Aboriginal communities. These modules will include

case studies as well as guidelines, background, and contextual information for course instructors using the case studies. The modules will draw on existing resources at UBC as well as consultations with academic and community stakeholders. Faculty members will learn best practices for using the modules, including through cultural sensitivity training. The modules will be evaluated through surveys and focus groups, revised based on those evaluations, and eventually made available through open access to other academic units and institutions.

Project Outcomes

Providing Opportunities for Faculty Development (beginning May 2018)

Develop cultural sensitivity (specific to Aboriginal contexts and histories) and learn best practices for teaching about engagement with Aboriginal communities.

Developing Instructional Modules (beginning May 2018)

Create, test, and revise course-specific modules, with guidelines for instructors.

Delivering Content (beginning September 2018)

Deliver the modules in existing courses across the APSC curriculum.

Disseminating Findings and Resources (ongoing)

Share planning and strategies, modules and guidelines, successes and failures via open-access web sites, education conferences, and peer-reviewed journals.