Lesson 1

Exploring the CEGC – Instructor Guide

Overview

Lesson 1 is an introduction to the Canadian Engineering Grand Challenges (CEGC) that provides students and an opportunity to orient to the concept complex sociotechnical challenges and identify with these challenges in the Canadian context.

Learning Objective

1. Develop awareness of sociotechnical engineering grand challenges in the context Canadian Engineering Grand Challenges (CEGC).

Timing

Expected lesson duration: 15 minutes.

Approach

* Lesson 1 is intended to provide the context for subsequent modules on engineering leadership.
* This lesson is intended to be delivered in class (either online or in person).
* The lesson can run as a stand-alone activity or as a follow up or an introduction to a larger discussion on contextualizing engineering solutions to complex challenges.

Resources

* Module 1 – Canadian Engineering Grand Challenges (CEGC)
* Lesson 1 – Exploring the CEGC - Presentation.pptx (PowerPoint)
* CEGC Orientation Video
* Lesson 1 – Exploring the CEGCs Activity Sheet (Word)

Deliverables

The lesson can be run as an in-class discussion as an orientation to the CEGC and can be approached as a think-pair-share exercise, or the instructor facilitate the depth of the discussion by asking individuals or groups to complete the Lesson 1 – Introduction to CEGC Activity Sheet.

Lesson Structure

The Lesson is structured to be run using the Exploring the CEGC Presentation.pptx and consist of the following steps. Total Duration (15 minutes)

1. Introductory Slides (3 min)
2. CEGC Orientation Video (8 min)
3. Reflection and takeaways (4 minutes)