

# Earth Sciences

## Colloquium Series

**Dr. Carolyn Hill-Svehla**

Surface Science Western, Western University

## From Rock to Recovery: Analytical Instrumentation in Mineral Processing



**Date:** Friday, February 6, 2026

**Time:** 1:30 pm

**Location:** BGS 0153

Mining and mineral processing operations increasingly rely on advanced analytical instrumentation to gain a better understanding of their ores and process stream samples in order to make faster, more informed, and sustainable decisions. This talk will cover the basics of mineral processing, as well as provide an overview of several analytical techniques used for characterizing ore samples, with emphasis on how these tools can be applied across the mining chain. By focusing on process optimization in the plant, we will examine how mineralogical studies help improve metal recovery, sustainability, and manage variability in ore feed.

These applications are closely tied to geometallurgy, which is the integration of geology, mineralogy, and metallurgy to predict how an ore will behave during processing. Examples from industrial work and research conducted at Surface Science Western will be provided to demonstrate how mineralogical information is translated into measurable parameters that guide processing strategies and operational decisions.

*Coffee and Timbits will be served.*