



## MEMORANDUM

**To:** Executive Committee of Faculty Council

**From:** Dr. Graeme Norval  
Chair, Undergraduate Curriculum Committee

**Date:** February 6, 2012 for March 7, 2012 Faculty Council Meeting

**Re:** **Proposed Undergraduate Academic Certificate: Mineral Resources**

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### REPORT CLASSIFICATION

This is a *Major Policy Matter* that will be considered by the Executive Committee for endorsing and forwarding to Faculty Council for vote as a regular motion (requiring a simple majority of members voting to carry).

### BACKGROUND

A Mineral Resources Undergraduate Certificate is proposed. It will require considerable academic commitment equivalent to three courses, or half a minor. Progress and achievement toward the Certificate will not appear on a student's official record, but will be maintained by the Cross-Disciplinary Programs Office and once achieved, can be claimed on a student's resume and CV.

The Lassonde Institute of Mining is an interdisciplinary research institute within the University of Toronto created to be at the forefront of leading edge research in the whole spectrum of mining activities, ranging from mineral resource identification, through mine planning and excavation, to extraction and processing. The Lassonde Mineral Engineering Program (LMEP) prepares students for a successful career in the Mineral Resources Industry. Toronto is a global mining cluster with a concentration of financial services and consulting companies servicing the mineral sector. There is a real demand for qualified professionals in all engineering sectors (electrical, mechanical, materials, chemical, civil, environmental, etc.) to be integrated into the mining sectors. The proposed Mineral Resources Certificate aims to provide an exposure to the mineral resources sector of interested candidates. It further aims to bring closer together Lassonde Mineral Engineering students with other students and provides a window to state of the art research in mining.

The mining industry accounts for approximately 1 of every 48 Canadian jobs. As defined by Statistics Canada and Natural Resources Canada, the mining and mineral processing industry directly employed 351,000 in 2008. This is comprised of 59,000 workers in mineral extraction; 69,000 in primary metal manufacturing; 53,000 in non-metallic mineral product manufacturing;

and 171,000 in fabricated metal product manufacturing. As noted earlier, there are also around 3,140 companies that supply goods and services to the industry—a recent taskforce report in BC estimated an indirect employment multiplier of 2.5 as applicable to the industry’s direct employment.\*

\* excerpt from “A Report on the State of the Canadian Industry, Fact and Figures 2009”

## **STRUCTURE / COURSES**

### **Certificate Requirements**

Students in the Mineral Resources Certificate must successfully complete a minimum of three (3) 1-semester courses as outlined below.

### **Mandatory Courses**

MIN225H1	Fall	Introduction to the Resource Industries
MIN250H1	Winter	Surface Mining (new course to be offered January 2013)
MIN351H1	Winter	Underground Mining (new course to be offered January 2013)

### **Special Consideration**

Some students undertake significant experiences, such as internships, and arguably learn more about mineral resource engineering during those placements than in a typical course. On a case-by-case basis, the LMEP office will permit such placements to replace a course in fulfilling the requirements of the Mineral Resources Certificate. In all cases when such an exception is to be made, a major report documenting the student’s activities, duties, learnings, and reflections during the placement will be required. The final decision for the acceptability of this experience requirement will be made through the LMEP Programs Office.

Students in all disciplines except the Lasonde Mineral Engineering Program are eligible to participate in this Certificate.

## **PROCESS**

The Undergraduate Curriculum Committee is composed of representatives from each program; the Vice-Dean, Undergraduate Studies; the Chair, First Year; the Associate Dean, Cross-Disciplinary Programs; and the Registrar’s Office. The Committee meets regularly, and reviews changes to the curriculum.

## **RECOMMENDATION AND MOTION for Faculty Council:**

“THAT the Faculty establishes a Mineral Resources Undergraduate Certificate.”