

REGISTRATION DEADLINE September 2, 2026

Send registrations to: professionaldevelopment@cim.org

Online information: <https://www.cim.org/professional-development/mcgill-professional-development-seminars/>

For more information please contact:

Victoria Burnie
514.939.2710, ext. 1344
E-mail: professionaldevelopment@cim.org or
admcr.mining@mcgill.ca

CIM, SME, AusIMM, and SAIMM Members:
\$2,600 CAD (excluding taxes)
Non-members: \$3,000 CAD (excluding taxes)

Title: _____ Name: _____

CIM, SME, AusIMM or SAIMM Member #: _____

Job Title: _____

Employer: _____

Postal Address: _____

City: _____

Prov/State: _____ Postal/Zip Code: _____

Country: _____

Phone: _____

Fax: _____

Email: _____

I will bring a laptop: ☐ Yes ☐ No

Payment:
☐ Visa ☐ MasterCard ☐ Amex ☐ Cheque ☐ Wire Transfer

Card Number: _____

Expiry Date: MM/YY Amount: \$ _____

CCV Code (3 digit code on back of card): _____

Name on Card: _____

Signature: _____

Registration includes course notes, lunch, and morning and afternoon tea.

Participation in this course may be a valid activity towards continuing professional development with up to 26 contact hours. Participants receive a Certificate of Completion.

Notification of Cancellation received in writing up to September 2, 2026 (minimum of 10 working days before the course) will incur a 20% cancellation fee. No refund will be made after this time. An alternative participant may be nominated. If cancellation done by the organizer, travel expenses including penalties for booking cancellations will not be reimbursed to registered participants. Please ensure that all travel arrangements done can be cancelled as we will not be responsible.

INSTRUCTOR

Dr. Mustafa Kumral is currently a Full Professor in the Department of Mining and Materials Engineering at McGill University. He has over 20 years of experience in mining engineering research and teaching in Canada, the United Kingdom and Turkey. He obtained his PhD from the Department of Mining and Mineral Engineering at the University of Leeds in 2000. His research focuses on surface mining, mine systems optimization, reliability and maintenance analysis, and mine risk analysis. He has held many research grants individually and in collaboration with other researchers. Over the years, Dr. Kumral has published more than 100 papers in peer-reviewed journals and conference proceedings. He has also supervised over 20 master's and PhD students. He has taught several courses focusing on mineral economics, open pit mining, and mining reliability.

VENUE DETAILS

McGill University
Department of Mining and Materials Engineering
3450 University Street
Frank Dawson Adams Building, Room 105
Montreal, Quebec, Canada
H3A 0E8
admcr.mining@mcgill.ca

LOGISTICS

Lectures are given from 9 AM (refreshments at 8:30 AM) to 5 PM with two 15 minute coffee breaks and a one hour lunch break.

Professional Development Series 2026

STRATEGIC RISK QUANTIFICATION
AND MANAGEMENT
FOR ORE RESERVES AND
MINE PLANNING

Mining Industry Economics and Enterprise Management for Sustainable Returns



Mustafa Kumral
McGill University, Montreal, Canada

September 16-18, 2026
Montreal, Canada



cosmo.mcgill.ca

COSMO - Stochastic Mine Planning Laboratory, a global center for leading-edge research and graduate education in "orebody modelling and strategic mine planning with uncertainty", is supported by AngloGold Ashanti, Anglo American, Agnico Eagle, BHP, De Beers, IAMGOLD, Kinross Gold, Newmont, Vale SA and Vale Base Metals, the Canada Research Chairs Program, NSERC, and CFI.





CONTENT AND OBJECTIVES

This course aims to demonstrate how mineral economics and mine management add sustainable value to a mining project or corporation. In addition to addressing how mineral policy and investment timing affect asset value, the course will cover the following topics: the capital, commercial, investment, operational, and innovation strategies of a mining enterprise; valuing a mine asset; project and portfolio management techniques for mining corporations; capacity planning; conventional and alternative finance approaches for mining projects; mining accounting and taxation; equipment availability and maintenance; sustainability, standardization, and mining.

Please note: It is strongly recommended that participants bring a laptop. No previous exposure to statistics and geostatistics is required.

COURSE OUTLINE

INTRODUCTION – ESSENTIAL CONCEPTS

- Economics and management fundamentals in the mineral industries
- Externalities and market failure
- Mine and corporate management and strategy
- Management principles
- Planning, budgeting, and cost analysis
- Organizations and governance
- Legislative and regulatory frameworks
- Innovation and change management

ENGINEERING MANAGEMENT

- Project and operation management
- Project portfolio management
- Financial management
- Asset, quality and maintenance management
- Reliability analysis
- Environmental management
- Safety management and organization
- Inventory, material, and supply chain management
- Human resources management

HOW DO MANAGEMENT PRACTICES ADD VALUE TO MINING CORPORATIONS AND OPERATIONS?

- Mining taxation, allowances, and accounting
- Capital raising, mine finance, and green financing
- Mining policy, the Dutch disease, and investment timing
- Price mechanism, costing, cyclicity and innovation in the mineral industries;
- Sustainable and responsible mining; Social acceptance; Weak vs strong sustainability; Circular economy; Voluntary sustainability standards
- Mining laws, regulations, permitting, and standards
- Business models: Outsourcing and mine contractors
- Country and political risks
- Mine company and property valuation

QUANTITATIVE MANAGEMENT IN THE MINERAL INDUSTRIES

- The weighted average cost of capital, the capital asset pricing model, and the discount rate
- Decision-making techniques for mine management: Decision theory, decision trees, game theory, multi criteria decision making
- Risk analysis, Monte-Carlo simulations, Decision trees
- Capacity planning and economies of scale
- Project planning (Critical path method and Project Evaluation and Review Technique)

ONLINE INFORMATION

<https://www.cim.org/professional-development/mcgill-professional-development-seminars/>

WHO SHOULD ATTEND

This course is designed for mining engineers who are working in the mineral industries.

