Principles of Ground Control in Underground Mines In-Person Short Course

July 7 - 10, 2026

Course Overview	
Purpose	This course introduces the key principles of ground control in underground hardrock mines. It involves structural mapping, field visual recognition and inspection, rock mass failure, ground support and reinforcement, ground control monitoring and mining-induced stress.
Target Audience	The course is intended for engineers, engineers-in-training (EITs), technologists and geologists who are new to ground control (a few years or less) in underground hardrock mines.
Presenter	Dr. Marty Hudyma
Details	**Tuesday, July 7** ▪ 8:00 am to 5:00 pm - Workplace Safety North and Ontario Mine Rescue Building, 235 Cedar Street, Sudbury, Ontario P3B 1M8 **Wednesday, July 8** ▪ Field workshop at NORCAT Underground Training Center (Fecunis Adit Mine), Strathcona Mine Rd, Onaping ON P0M 2R0 ▪ 7:00 11:30 am - Group 1 ▪ 12:30 to 5:00 pm - Group 2 **Thursday, July 9** ▪ 8:00 am to 5:00 pm - Workplace Safety North and Ontario Mine Rescue Building, 235 Cedar Street, Sudbury, Ontario P3B 1M8 **Friday, July 10** ▪ 8:00 am to 12:00 pm - Workplace Safety North and Ontario Mine Rescue Building, 235 Cedar Street, Sudbury, Ontario P3B 1M8
Cost	**Early Bird Special:** $1,500 + HST/participant until June 05, 2026. **June 06, 2026:** $1,800 + HST/participant. Lunch and refreshments provided.
Registration	Register through the Workplace Safety North (WSN) website or by phone. **Online registration:** https://www.workplacesafetynorth.ca/en/training-events/july-7-10-principles-ground-control-underground-mines **Phone:** Becky Hebert, WSN Health and Safety Services Assistant Client Engagement and Business Intelligence, 705-482-9733

Cancellation Policy

Registrants who provide a written notice of cancellation at least one week prior to the course start date will not incur any charges. Cancellations made less than one week before the course or failure to attend will incur the full cost of registration. Substitutions can be made at any time prior to the course start.

WSN reserves the right to cancel or reschedule a course. If the course is canceled, registrants will be notified at least one week in advance. WSN's liability is limited to the registration fee.

Topics

- Rock Masses - Intact rock properties; rock mass fractures; mapping and stereonets; rock mass classification
- Rock Mass Failure - How do rock masses fail? Falls of ground; rock mass damage mapping; rockbursting and strainbursting
- Underground Mapping and Classification - Rock mass mapping; rock mass classification
- Reading the Ground - Indicators of rock mass problems; precursors of rock mass failure
- Ground Support and Reinforcement - Surface support and rock reinforcement; commonly used rockbolts; cablebolts; shotcrete and fibrecrete; dynamic resistance support systems; ground support QA/QC
- Monitoring Rock Masses - Deformation monitoring instruments; stress monitoring instruments; new technologies
- Stresses in Mines - Origins of stress; mining-induced stress; stress failure; pillars and pillar failure; numerical modelling – applications; modelling – assumptions and limitations
- Operational Ground Control - Ground control responsibilities in Ontario; ground control logbook and communications; seismic risk management plans; workforce training

About the Presenter

Dr. Marty Hudyma is a registered professional engineer in the province of Ontario with 30 years of experience at mine sites, consultancies, and universities. Marty has worked in ground control in mines in Canada and Australia including Noranda Technology, Brunswick Mining, Mount Isa Mines, and Itasca Consulting Canada. Most recently, Marty Hudyma was an Associate Professor in Mining Engineering at Laurentian University from 2009 to 2023. He taught ground control at Laurentian University for fourteen years. Marty is a registered professional engineer in the province of Ontario.