

Tentative Schedule

GEOL 5606 Exploration for Magmatic Ore Deposits

Mineral Exploration Research Centre, Department of Earth Sciences, Goodman School of Mines, Laurentian University

Day 1 Sun 03 April 2016					
D1 L1	09:00	10:30	1:30	Classifications, host rocks, tectonic settings, genetic processes	Michael Lesher (MERC)
	10:30	11:00	0:30	Coffee	
D1 L2	11:00	12:30	1:30	Metal partitioning	Pedro Jugo (MERC)
	12:30	13:30	1:00	Lunch	
D1 L3	13:30	15:00	1:30	S solubility, oxide solubility, and partial melting	Pedro Jugo (MERC)
	15:00	15:30	0:30	Coffee	
D1 L4	15:30	17:00	1:30	Stable isotopes, S/Se ratios, and radiogenic isotopes	Michael Lesher (MERC)
Day 2 Mon 04 April 2016					
D2 L1	09:00	10:30	1:30	Mineralogy and phase equilibria in the Fe-Ni-Cu-S-O system	Michael Lesher (MERC)
	10:30	11:00	0:30	Coffee	
D2 L2	11:00	11:45	0:45	Mineralogy and phase equilibria in the PGE-S-As-Sb-Bi-Ta-Se system	Michael Lesher (MERC)
D2 L3	11:45	12:30	0:45	Mineralogy and phase equilibria in the Cr-Fe-O and Fe-Ti-V-O systems	Michael Lesher (MERC)
	12:30	13:30	1:00	Lunch	
D2 L4	13:30	15:00	1:30	Multi-component mass balances, R and R' factors in sulfide and oxide systems	Michael Lesher (MERC)
	15:00	15:30	0:30	Coffee	
Lab 1	15:30	17:00	1:30	R-factor modeling	Michael Lesher (MERC)
Day 3 Tues 05 April 2016					
D3 L1	09:00	10:30	1:30	Sulfide-oxide ore textures and deformation of Fe-Ni-Cu sulfides	Michael Lesher (MERC)
	10:30	11:00	0:30	Coffee	
D3 L2	11:00	12:30	1:30	Analytical methods, data recalculation, and plotting	Michael Lesher (MERC)
	12:30	13:30	1:00	Lunch	
Lab 2	13:30	15:00	1:30	100% sulfide recalculation	Michael Lesher (MERC)
	15:00	15:30	0:30	Coffee	
D3 L3	15:30	17:00	1:30	Introduction to Ni-Cu-PGE deposits	Michael Lesher (MERC)
Day 4 Wed 06 April 2016					
D4 L1	09:00	09:30	0:30	Introduction to Noril'sk – global context	Peter Lightfoot (Vale)
D4 L2	09:30	10:30	1:00	Geology of the Noril'sk Region and geochemistry of the silicate rocks	Peter Lightfoot (Vale)
	10:30	11:00	0:30	Coffee	
D4 L3	11:00	12:30	1:30	Discrimination between mineralized and non-mineralized intrusions and magma series	Peter Lightfoot (Vale)
	12:30	13:30	1:00	Lunch	
D4 L4	13:30	14:30	1:00	Noril'sk Ni-Cu-PGE ores	Peter Lightfoot (Vale)
	14:30	15:00	0:30	Coffee	
Lab 3	15:00	16:30	1:30	Noril'sk	Peter Lightfoot (Vale)
D4 L5	16:30	17:00	0:30	Structural controls on chonolith-hosted Ni-Cu-PGE deposits	Peter Lightfoot (Vale)
Day 5 Thurs 07 April 2016					
D5 L1a	09:00	09:30	0:30	Geology of the Sudbury Igneous Complex	Paul Golightly (MERC)
D5 L1b	09:30	10:00	0:30	Petrography of the Main Mass of the Sudbury Igneous Complex	Ed Pattison (MERC)
D5 L1c	10:00	10:30	0:30	Ni-Cu-PGE Deposits of the Sudbury Igneous Complex	Paul Golightly (MERC)
	10:30	11:00	0:30	Coffee	
D5 L2	11:00	12:30	1:30	Sudbury Regional Exploration	Lisa Gibson (Vale)
	12:30	13:30	1:00	Lunch	
D5 L3	13:30	15:00	1:30	Sudbury Mine Exploration	Dave Richardson (Glencore)
	15:00	15:30	0:30	Coffee	
Lab 4	15:30	17:00	1:30	Sudbury Ni-Cu-PGE ores	Michael Lesher (MERC)
Day 6 Fri 08 April 2016					
D6 L1	09:00	10:30	1:30	Ni-Cu-PGE Deposits in China	Michael Lesher and Yiguan Lu (MERC)
	10:30	11:00	0:30	Coffee	
D6 L2	11:00	12:30	1:30	Jinchuan Ni-Cu-PGE Deposit	Michael Lesher (MERC)
	12:30	13:30	1:00	Lunch	
D6 L3	13:30	15:00	1:30	Newly Discovered Ni-Cu-PGE Deposits	Michael Lesher (MERC)
	15:00	15:30	0:30	Coffee	
Lab 5	15:30	17:00	1:30	Jinchuan and Voisey's Bay Ni-Cu-PGE ores	Michael Lesher (MERC)
Day 7 Sat 09 April 2016					
D7 L1	09:00	10:30	1:30	Ni-Cu-PGE and oxide mineralization in the Duluth Complex	Ed Ripley (Indiana U)
	10:30	11:00	0:30	Coffee	
D7 L2	11:00	12:30	1:30	Ni-Cu-PGE mineralization in Alaskan-Uralian Complexes	Ed Ripley (Indiana U)
	12:30	13:30	1:00	Lunch	
Lab 6	13:30	15:00	1:30	Duluth and Duke Island petrography	Ed Ripley (Indiana U)
	15:00	15:30	0:30	Coffee	
D7 L3	15:30	17:00	1:30	Ni-Cu-PGE mineralization in magmatic conduits (including Voisey's Bay)	Ed Ripley (Indiana U)
Day 8 Sun 10 April 2016					
D8 L1	09:00	10:30	1:30	Overview of statiform PGE deposits: Merensky, UG-2, J-M, and MSZ	Sarah-Jane Barnes (UQAC)
	10:30	11:00	0:30	Coffee	
D8 L2	11:00	12:30	1:30	Models and exploration methods for PGE deposits	Sarah-Jane Barnes (UQAC)
	12:30	13:30	1:00	Lunch	
D8 L3	13:30	15:00	1:30	Other types of PGE-deposits: Platreef and Lac des Iles	Sarah-Jane Barnes (UQAC)
	15:00	15:30	0:30	Coffee	
Lab 7	15:30	17:00	1:30	Bushveld PGE and chromite	Sarah-Jane Barnes (UQAC)
Day 9 Mon 11 April 2016					
D9 L1	09:00	09:45	0:45	PGE and Ni-Cu-(PGE) Exploration Litho-geochemistry: Concepts	Rebecca Sproule (Newgenco)
D9 L2	09:45	10:30	0:45	PGE and Ni-Cu-(PGE) Exploration Litho-geochemistry: Case Studies	Rebecca Sproule (Newgenco)
	10:30	11:00	0:30	Coffee	
D9 L3	11:00	12:30	1:30	Canadian Royalties Nunavik Nickel Project	Martin Tuchscherer (Consultant)
	12:30	13:30	1:00	Lunch	
Lab 8	13:30	15:00	1:30	PGE and Ni-Cu-(PGE) exploration geochemistry	Rebecca Sproule (Newgenco)
	15:00	15:30	0:30	Coffee	
Lab 8	15:30	17:00	1:30	PGE and Ni-Cu-(PGE) exploration geochemistry	Rebecca Sproule (Newgenco)
Day 10 Tues 12 April 2015					
D10 L1	09:00	10:30	1:30	Introduction to Magmatic Cr and Fe-Ti-V Oxide Deposits	Michael Lesher (MERC)
	10:30	11:00	0:30	Coffee	
D10 L2	11:00	11:45	0:45	Stratiform Chromite Deposits in the Bushveld Complex	Michael Lesher (MERC)
	11:45	12:30	0:45	Stratiform Chromite Deposits in the Stillwater Complex	Michael Lesher (MERC)
	12:30	13:30	1:00	Lunch	
D10 L3	13:30	14:30	1:00	Stratiform Chromite Deposits in the Black Thor Igneous Complex	Heather Carson (MERC)
D10 L4	14:30	15:00	0:30	Magmatic Breccias in the Black Thor Igneous Complex	Charles Spath (MERC)
	15:00	15:30	0:30	Coffee	
Lab 9	15:30	17:00	1:30	Black Thor chromite	Heather Carson and Michael Lesher (MERC)
Day 11 Wed 13 April 2016					
D11 L1	09:00	10:30	1:30	Kambalda Ni-Cu-PGE	Michael Lesher (MERC)
	10:30	11:00	0:30	Coffee	
D11 L2	11:00	12:30	1:30	Komatiite-Associated Ni-Cu-PGE deposits in Canada (Abitibi, Raglan, Thompson)	Michel Houlié (GSC)
	12:30	13:30	1:00	Lunch	
D11 L3	13:30	15:00	1:30	Alexo Ni-Cu-(PGE) deposit, Dundonald Township, Ontario	Michel Houlié (GSC)
	15:00	15:30	0:30	Coffee	
Lab 10	15:30	17:00	1:30	Komatiite-associated Ni-Cu-PGE ores	Michel Houlié and Michael Lesher
Day 12 Thurs 14 April 2014					
D12 L1	09:00	10:30	1:30	Rare metal pegmatites	Dan Kontak (MERC)
	10:30	11:00	0:30	Coffee	
D12 L2	11:00	12:30	1:30	Rare metal pegmatites	Dan Kontak (MERC)
	12:30	13:30	1:00	Lunch	
Lab 11	13:30	17:00	3:30	Pegmatite Field Trip (weather permitting)	Dan Kontak (MERC)