

\*Red latter is possible to modify and blue letter is a guideline.

Regular Training Course on ‘**Exploration and Evaluation of Mineral Resources**’  
Week 1

<b>(Module 1) – Ore and Mineral Deposits Genesis</b>		<b>(Venue : Ara room)</b>
<b>Date/Time</b>	<b>Program Description</b>	<b>Remarks</b>
<b>3.2 (Mon)</b>	<b>Registration and orientation</b>	<b>IS-Geo (Nuri Hall)</b>
09:20-09:50		
<b>3.2 (Mon)</b>	<b>Magmatic mineral systems</b>	
10:00-11:00	Introduction and historical notes	Dr. Franco Pirajno
11:10-12:10	Ni-Cu-PGE deposits of layered intrusions and Alaskan-type intrusions	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Komatiites	
14:40-15:40	Anorogenic alkaline complexes and carbonatites, rare earths mineralisation)	
15:50-16:50	Diamondiferous kimberlites, lamproites	
17:00-18:00	Large Igneous Provinces and mantle-lithosphere interactions	
<b>3.3 (Tue)</b>	<b>Magmatic-hydrothermal mineral systems</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introduction; hydrothermal processes, wall rock alteration, hyperspectral mapping and remote sensing	Dr. Franco Pirajno
11:10-12:10	Intrusion-related and Cu-Au porphyry systems	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Intraplate Mo porphyry systems	
14:40-15:40	Epithermal precious metals ore systems	
15:50-16:50	Carlin-type and skarn deposits	
17:00-18:00	Iron Oxide-Copper-Gold (IOCG) deposits	
<b>3.4 (Wed)</b>	<b>Mineral deposits of the ocean floor; mineral systems in volcano-sedimentary basins</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introduction; ocean floor, ophiolites and related hydrothermal processes	Dr. Franco Pirajno
11:10-12:10	Deep ocean floor Fe-Mn and rare earths mineralization	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Volcanogenic massive sulphide deposits, besshi-type massive sulphide deposits	
14:40-15:40	Sedimentary exhalative massive sulphides (SEDEX); red sea brines; copperbelt Cu-Co deposits	
15:50-16:50	Breccia pipes	
17:00-18:00	Continental rift systems and associated ore deposits	
<b>3.5 (Thu)</b>	<b>Non-magmatic mineral systems</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introduction; orogenic and anorogenic Au and base metals lodes	Dr. Franco Pirajno
11:10-12:10	Laterite-supergene mineral deposits	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Non-sulphide supergene mineral deposits	
14:40-15:40	Mississippi valley-type ore deposits	
15:50-16:50	Black shales, high-heat producing granites	
17:00-18:00	Hydrothermal systems and the biosphere; gas hydrates	
<b>3.6 (Fri)</b>	<b>Iron (and Mn) banded iron formations, phosphorites and uranium mineral deposits</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introduction; iron formations	Dr. Franco Pirajno
11:10-12:10	Sedimentary phosphate deposits	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Uranium mineralization, the Witwatersrand basin	
14:40-15:40	Mineral systems associated with asteroid impacts	
15:50-16:50	Extraterrestrial hydrothermal processes and terrestrial analogues	
17:00-18:00	Lessons from the past and conclusions	

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## Regular Training Course on ‘Exploration and Evaluation of Mineral Resources’ Week 2

<b>(Module 2) – Exploration Models and Techniques for Sediment-hosted Mineral Deposits</b>		<b>(Venue : Ara room)</b>
<b>Date/Time</b>	<b>Program Description</b>	<b>Remarks</b>
<b>3.9 (Mon)</b>	<b>Registration and orientation</b>	<b>IS-Geo</b>
09:50-10:00		
<b>3.9 (Mon)</b>	<b>From optical mineralogy to capturing digital data in the field</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Capturing digital data in sedimentary lithologies - a solution to the E & E issue (economic geology vs. environmental geology)	Dr. Harald G. dill
11:10-12:10	Sequence stratigraphic principles for mineral exploration - Introduction	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Heavy mineral analysis and placer deposits (I)	
14:40-15:40	Heavy mineral analysis and placer deposits (II)	
15:50-16:50	Heavy mineral analysis and placer deposits (III)	
17:00-18:00	Optical mineralogy (I) – practical heavy mineral analysis	
<b>3.10 (Tue)</b>	<b>Iron, aluminum, refining and precious metals</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Cr-Ni-Co concentration in regolith, placer and shale-hosted deposits	Dr. Harald G. dill
11:10-12:10	Ti-V-Al concentration in regolith, placer, coal, carbonate- and shale-hosted deposits	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	PGE-Au- Ag concentration in continental and marine depositional environments	
14:40-15:40	Fe concentration in continental and marine depositional environments	
15:50-16:50	Mn concentration in continental and marine depositional environments	
17:00-18:00	Optical mineralogy (II) – practical heavy mineral analysis	
<b>3.11 (Wed)</b>	<b>Light and base metals</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Mo-Sn-W concentration in placer and shale-hosted deposits	Dr. Harald G. dill
11:10-12:10	Be-Li-Cs-Nb-Ta-Sc in continental and marine depositional environments	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Cu-Se-Te in continental and marine depositional environments	
14:40-15:40	Pb-Zn-Ge-In-Cd concentration in continental and marine depositional environments	
15:50-16:50	Pb-Zn-Ge-In-Cd concentration in continental and marine depositional environments	
17:00-18:00	Optical mineralogy (III) – practical heavy mineral analysis	
<b>3.12 (Thu)</b>	<b>Fossil fuels, REE, spar minerals and evaporites</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Th-REE-Zr concentration in continental and marine depositional environments	Dr. Harald G. dill
11:10-12:10	U concentration in continental and marine depositional environments (I)	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	U concentration in continental and marine depositional environments (II)	
14:40-15:40	Na-K-Br-Cl-I-N concentration in continental and marine evaporites	
15:50-16:50	F-Ba-Sr concentration in continental and marine depositional environments	
17:00-18:00	Optical mineralogy (IV) – practical heavy mineral analysis	
<b>3.13 (Fri)</b>	<b>Fertilizer, siliceous, calcareous and argillaceous industrial minerals and rocks</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Phosphate concentration in continental and marine depositional environments	Dr. Harald G. dill
11:10-12:10	Clay deposits in continental and marine depositional environments (I)	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Clay deposits in continental and marine depositional environments (II)	
14:40-15:40	Silica deposits in continental and marine depositional environments	
15:50-16:50	Carbonate deposits in continental and marine depositional environments	
17:00-18:00	Conclusions – geodynamic settings and sediment-hosted deposits	

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Regular Training Course on ‘**Exploration and Evaluation of Mineral Resources**’  
Week 3

<b>(Module 3) – Fluid and Melt Inclusions in Ore-forming Systems</b>		<b>(Venue : Ara room)</b>
<b>Date/Time</b>	<b>Program Description</b>	<b>Remarks</b>
<b>3.16 (Mon)</b>	<b>Registration and orientation</b>	<b>IS-Geo</b>
09:50-10:00		
<b>3.16 (Mon)</b>	<b>Introduction to Fluids</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	What is a fluid?	Dr. Robert Bodnar
11:10-12:10	Distribution of water in the Earth	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Compositions of fluids in different geologic environments	
14:40-15:40	Methods for determining fluid sources (geochemical tracers)	
15:50-16:50	Introduction to fluid inclusions	
17:00-18:00	Introduction to fluid inclusions	
<b>3.17 (Tue)</b>	<b>Phase equilibrium Properties of Common Geologic Fluids</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	PVTX properties of H <sub>2</sub> O	Dr. Robert Bodnar
11:10-12:10	PVTX properties of CO <sub>2</sub>	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	PVTX properties of H <sub>2</sub> O-NaCl	
14:40-15:40	PVTX properties of H <sub>2</sub> O-NaCl	
15:50-16:50	PVTX properties of H <sub>2</sub> O-CO <sub>2</sub>	
17:00-18:00	PVTX properties of H <sub>2</sub> O-NaCl-CO <sub>2</sub> and other systems	
<b>3.18 (Wed)</b>	<b>Melt-Volatile Equilibria</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Phase equilibria in melt-volatile systems	Dr. Robert Bodnar
11:10-12:10	Phase equilibria in melt-volatile systems	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	H <sub>2</sub> O and CO <sub>2</sub> solubility in silicate melts	
14:40-15:40	Partitioning of elements between melts and magmatic fluids	
15:50-16:50	Partitioning of elements between melts and magmatic fluids	
17:00-18:00	Melt inclusions in magmatic-hydrothermal ore systems	
<b>3.19 (Thu)</b>	<b>Fluid and Melt Inclusions in Ore Systems</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Mississippi Valley-Type Deposits	Dr. Robert Bodnar
11:10-12:10	Epithermal Au-Ag deposits	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Porphyry and skarn deposits	
14:40-15:40	Porphyry and skarn deposits	
15:50-16:50	Porphyry and skarn deposits	
17:00-18:00	Porphyry and skarn deposits	
<b>3.20 (Fri)</b>	<b>Fluid and Melt Inclusions in Ore Systems (continued) and Practical aspects of conducting a fluid inclusion study and applications to exploration</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Orogenic (lode) gold deposits	Dr. Robert Bodnar
11:10-12:10	Volcanogenic massive sulfide deposits	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Practical aspects of fluid inclusion research	
14:40-15:40	Practical aspects of fluid inclusion research	
15:50-16:50	Applications of fluid inclusions in mineral exploration	
17:00-18:00	Applications of fluid inclusions in mineral exploration	

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Regular Training Course on ‘**Exploration and Evaluation of Mineral Resources**’  
Week 4

<b>(Module 4) –Exploration Methods for Mineral Resources</b>		<b>(Venue : Ara room)</b>
<b>Date/Time</b>	<b>Program Description</b>	<b>Remarks</b>
<b>3.23 (Mon)</b>	<b>Registration and orientation</b>	<b>IS-Geo</b>
09:50-10:00		
<b>3.23 (Mon)</b>	<b>Introduction to electrical and electromagnetic methods for mineral resources</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introduction to geophysical prospection	Dr, Myeong-Jong Yi
11:10-12:10	Electrical methods for mineral exploration (I)	
12:10-13:00	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:00-14:00	Electrical methods for mineral exploration (II)	Dr, Myeong-Jong Yi
14:15-15:15	Electrical methods for mineral exploration (III)	
15:30-16:30	Electromagnetic methods for mineral exploration (I)	Dr. Seong Kon Lee
16:45-17:45	Electromagnetic methods for mineral exploration (II)	
<b>3.24 (Tue)</b>	<b>Potential methods for mineral exploration and field practice of geophysical surveys</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Gravity and magnetic methods for geologic investigation (I)	Dr. Hyoungrea Rim
11:10-12:10	Gravity and magnetic methods for geologic investigation (II)	
12:10-13:00	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:00-14:00	Field demonstration (Gravity and Magnetic) (I)	Dr. Hyoungrea Rim
14:15-15:15	Field demonstration (Gravity and Magnetic) (II)	
15:30-16:30	Field demonstration (Electric and EM) (I)	Dr. Jeong-Sul Son
16:45-17:45	Field demonstration (Electric and EM) (II)	
<b>3.25 (Wed)</b>	<b>Introduction of mineral potential mapping using GIS</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introduction of GIS	Dr. Saro Lee
11:10-12:10	Overview of mineral potential analysis	
12:10-13:00	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:00-14:00	Mineral potential analysis technique using GIS	
14:15-15:15	Mineral potential analysis using probability and statistic methods.	
15:30-16:30	Mineral potential analysis case study (I)	
16:45-17:45	Mineral potential analysis case study (II)	
<b>3.26 (Thu)</b>	<b>Practical exercise of mineral potential mapping using GIS</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introduction of GIS S/W and data processing	Dr. Saro Lee
11:10-12:10	Practical exercise of GIS S/W	
12:10-13:00	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:00-14:00	Construction of spatial data for mineral potential mapping	
14:15-15:15	Practical exercise of mineral potential mapping using GIS and frequency Ratio (I)	
15:30-16:30	Practical exercise of mineral potential mapping using GIS and frequency Ratio (II)	
16:45-17:45	Practical exercise of mineral potential analysis using GIS and logistic regression	
<b>3.27 (Fri)</b>	<b>Meeting in Ministry of Foreign Affairs and Culture trip to Seoul</b>	<b>IS-Geo</b>
	In Seoul	IS-Geo

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## Regular Training Course on ‘Exploration and Evaluation of Mineral Resources’ Week 5

<b>(Module 5) – Exploration Management and Targeting</b>		<b>(Venue : Ara room)</b>
<b>Date/Time</b>	<b>Program Description</b>	<b>Remarks</b>
<b>3.30 (Mon)</b> 09:50-10:00	<b>Registration and orientation</b>	<b>IS-Geo</b>
<b>3.30 (Mon)</b> 09:00-09:50	<b>Exploration and organization at a strategic level</b> Korean language class	Mirinae Room
10:00-11:00	Relating exploration strategy to the broader goals of the organization	Dr. Allan Trench
11:10-12:10	The business of exploration	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-15:30	The value-add of exploration outcomes (concave and convex minerals)	
16:00-18:00	Group work session – corporate level exploration: minerals and assets exercise	
<b>3.31 (Tue)</b> 09:00-09:50	<b>Exploration and organization at a tactical level</b> Korean language class	Mirinae Room
10:00-11:00	Student group presentations – corporate level exploration exercise	Dr. Allan Trench
11:10-12:10	The role and value of exploration in mining	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-15:15	Exploration value and risk – perspectives	
15:30-16:45	Managing greenfields and grownfields exploration	
17:00-18:00	Group work session – corporate level exploration strategy formulation	
<b>4.1 (Wed)</b> 09:00-09:50	<b>Key practical aspects of mineral exploration targeting</b> Korean language class	Mirinae Room
10:00-11:00	Student group presentations – corporate level exploration strategy formulation	Dr. Allan Trench
11:10-12:10	Exploration strategy synthesis for a major mining company	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-17:00	Mineral exploration targeting (I)	
17:30-18:00	Group work session – sequencing of exploration techniques	
<b>4.2 (Thu)</b> 09:00-09:50	<b>Mineral deposits, origins and economic issues</b> Korean language class	Mirinae Room
10:00-11:00	Student group presentations – sequencing of exploration techniques	Dr. Allan Trench
11:10-12:10	Mineral exploration targeting (II)	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-15:15	Equity raisings to fund exploration	
15:30-16:45	Mineral exploration tactics	
17:00-18:00	Group work session – exploration capital raisings	
<b>4.3 (Fri)</b> 09:00-09:50	<b>Exploration risk capital: equity financing for exploration</b> Korean language class	Mirinae Room
10:00-11:00	Student group presentations – exploration capital raisings	Dr. Allan Trench
11:10-12:10	Exploration reporting – mineral industry standards	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-17:00	Student exam – class discussion and revision session	
17:30-18:00	Student exam	

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## Regular Training Course on ‘Exploration and Evaluation of Mineral Resources’ Week 6

(Module 6) – Structural Geology		(Venue : Ara room)
Date/Time	Program Description	Remarks
<b>4.6 (Mon)</b>	<b>Registration and orientation</b>	<b>IS-Geo</b>
9:50-10:00		
<b>4.6 (Mon)</b>	<b>Applied structural geology: fundamentals 1</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-11:00	Introductions and exploration demand in the 21 <sup>st</sup> century	Dr. Paul Duuring
11:10-12:10	Why structure?: lecture and exercises	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-16:50	Fabric: lecture and exercises	
17:00-18:00	Discussion and feedback: interactive session	
<b>4.7 (Tue)</b>	<b>Applied structural geology: fundamentals 2</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	Folds: lecture and exercises	Dr. Paul Duuring
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Folds: lecture and exercises	
14:30-16:50	Shear zones, faults, veins: lecture and exercises	
17:00-18:00	Discussion and feedback: interactive session	
<b>4.8 (Wed)</b>	<b>Applied structural geology: fundamentals 3</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	Putting it together: thinking in 3D, case studies + exercises	Dr. Paul Duuring
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-16:50	Putting it together: thinking in 3D, case studies + exercises	
17:00-18:00	Discussion and feedback: interactive session	
<b>4.9 (Thu)</b>	<b>Practical – basic description and interpretations from outcrop</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-10:15	Field work preparation – clothes, cameras, drinks and snacks, notebooks etc.	Dr. Paul Duuring
10:15-11:00	Field work – introduction to group exercise (location - KIGAM)	
11:00-12:00	Field work in small teams – field observations and photographs	
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-14:30	Field work in small teams – field observations and photographs	
14:30-15:50	Preparation for group presentations	
16:00-18:00	Group presentations	
<b>4.10 (Fri)</b>	<b>Advanced concepts</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	Driving forces and seismogenic processes: discussion, lecture, exercises	Dr. Paul Duuring
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-15:50	Oreshoot targeting and self-organisation: discussion, lecture, exercises	
16:00-17:00	Discussion and feedback: interactive session	

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## Regular Training Course on ‘Exploration and Evaluation of Mineral Resources’ Week 7

### (Module 7) – Economic Evaluation of Mineral Projects

(Venue : Ara room)

Date/Time	Program Description	Remarks
<b>4.13 (Mon)</b>	<b>Registration and orientation for newcomers</b>	<b>IS-Geo</b>
09:50-10:00		
<b>4.13 (Mon)</b>	<b>Financial objectives, accounting and basic Discounted Cash Flow (DCF) concepts</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	<b>Financial accounting reports as a source of information for cash flow modelling of mining projects</b> <ul style="list-style-type: none"> <li>Corporate financial objectives</li> <li>Differences between financial accounting on an accrual basis and cash (Management) accounting</li> <li>Understanding financial accounting statements</li> <li>Assets, asset lives and depreciation of mining assets</li> <li>Elements of mining taxation: mineral royalties, corporate income tax and capital gain tax</li> <li>Converting the profit and loss statement into the corresponding net cash flow for the period</li> </ul>	Dr. Pietro Guj
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-18:00	<b>Practical exercise</b> Capturing the effect of common transactions on the balance sheet of a mining company and on its cash balance  <b>Discounted Cash Flow (DCF) analysis – general concepts</b> <ul style="list-style-type: none"> <li>Cash in-flows and out-flows: capital expenditure, and recurrent revenue and expenses</li> <li>Inflation – real and nominal dollars terms</li> <li>Time value of money, discounting rates and periods</li> <li>DCF criteria of value: Net Present Value (NPV), Internal Rate of Return (IRR), payback etc</li> </ul>	
<b>4.14 (Tue)</b>	<b>Financial modelling and evaluation of a mining project</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	<b>Discounted Cash Flow (DCF) analysis – general concepts continues</b>  <b>Practical exercise: building a simple mining project model under assumption of certainty and 100% equity</b> <ul style="list-style-type: none"> <li>“Whole-of-life” Cash Flow (CF) model structure</li> <li>Single-point, “expected value” of inputs</li> <li>Correct handling of depreciation, salvage value and working capital</li> <li>Completing the base case mine model</li> <li>Interpreting the results</li> </ul>	Dr. Pietro Guj
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-18:00	<b>Practical exercise: building a simple mining project model under assumption of certainty and 100% equity continues</b>	
<b>4.15 (Wed)</b>	<b>Principles of risk analysis</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	<b>Practical exercise: estimating the net smelter return of a base metal mine</b> <ul style="list-style-type: none"> <li>Resources and reserves: dilution and recovery</li> <li>Determining an optimal mine life</li> </ul> Concentrates transport, smelting and refining charges and Net Smelter Returns (NSR)  <b>Funding a mineral project: the role of equity and debt</b> <ul style="list-style-type: none"> <li>Sources of equity funds</li> <li>Estimating the cost of equity with the Capital Asset Pricing Model (CAPM)</li> <li>Debt, leasing, project finance, financial leverage and financial risk</li> <li>The Weighted Average Cost of Capital (WACC)</li> <li>Determining an optimal debt: equity ratio</li> </ul>	Dr. Pietro Guj
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-18:00	<b>Funding a mineral project: the role of equity and debt (continues)</b>  <b>Practical exercise: how to introduce borrowing and interest expenses in the simple gold mine DCF model</b>	
<b>4.16 (Thu)</b>	<b>Risk aversion, utility (preference) theory and certainty equivalents</b>	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	<b>Risk analysis – general concepts</b> <ul style="list-style-type: none"> <li>Uncertainty, expected value (EV) and risk</li> <li>Risk-neutral decisions and risk of Gambler’s ruin</li> </ul>	Dr. Pietro Guj

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12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-18:00	<b>Practical exercise: determination of EVs using decision trees</b> <ul style="list-style-type: none"><li>Sensitivity and scenario analysis</li><li>The nature of probabilities and probability distributions</li><li>Monte Carlo simulation</li></ul>	
4.17 (Fri)	Monte Carlo simulation and introduction to Real Option Valuation (ROV)	
09:00-09:50	Korean language class	Mirinae Room
10:00-12:10	<b>Practical exercise: identifying and assessing the project and financial risk of the simple gold mine</b> <b>Decisions under uncertainty</b> <ul style="list-style-type: none"><li>Preferences (utilities) and risk attitudes</li><li>Certainty Equivalents (CE), the price of risky investments and risk-averse decisions</li></ul>	Dr. Pietro Guj
12:10-13:30	Lunch (KIGAM cafeteria is available after 12:10 PM)	
13:30-18:00	<b>Practical exercise</b> Choosing between two projects with the same EV and Determining optimal joint venture participation given a specific risk attitude and tolerance	

※ The working language is English