



## Faculty of Earth Sciences



### Department of Mineral Resources & Rocks 3rd & 4th Years Program



The Geological Society  
*Accredited degree courses*

### *ORE MINERALOGY*

Course Name	Course ID	Prerequisite
<i>ORE MINERALOGY</i>	<i>EMR 331</i>	<i>EMR 231</i>

## Time Table for Course Lectures

### ORE MINERALOGY (EMR 331)

Week	Topic
1	<b>Introduction:</b> References, Grading, Educational Goals, Requirements Economic Uses of Minerals & Rocks Energy Resources, Ores, Gems, and Building Materials
2	<b>Some review of definitions:</b> Mineral, Ore and economic minerals, gangue minerals, etc. <b>Some review of definitions:</b> Distribution of Elements, Concentration factors, Obtaining metals from minerals Metallurgical classification of metals
3	<b>Quiz</b> <b>Basic Concepts of Mineral Resources</b> Definitions: Mineral deposits, Ore deposits, Grade, Tonnage, Cut-off grade, (G-T), Reserves, Resources
4	<b>Review of Crystal and Crystal Chemistry</b> Nature of Atoms: Atomic Structure Periodic Table, Bonding in Minerals
5	<b>Review of Mineral Chemistry</b> Chemical Variations in Mineral Composition (Substitution)
6	Classification of Minerals Ore Minerals Native Elements
7	Native Elements Sulfides & Sulfosalts

8	Sulfides & Sulfosalts <b>Exam</b>
9	Sulfides & Sulfosalts
10	Oxides & Hydroxides
11	Oxides & Hydroxides
12	<b>Exam</b> Mineralogical Calculations
13	Modern and Old Mineralizing Fluids
14	Final Exam

**References:**

*Mineral Resources, Economics, and the Environment*, by Kesler, S. E., 1994. [1]  
Macmillan, 391 p.

*Ore Geology and Industrial Minerals: An Introduction. 3rd ed.*, by Evans A.M., [2]  
1993.

*The Geology of Ore Deposits*, by Guilbert, J.M. and Park Jr., C.F., 1986. W.H. [3]  
Freeman New York.