



## Faculty of Earth Sciences



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



The Geological Society  
*Accredited degree courses*

### ***MINING GEOLOGY***

<b>Course Name</b>	<b>Course ID</b>	<b>Prerequisite</b>
<b><i>MINING GEOLOGY</i></b>	<b><i>EMR 433</i></b>	<b><i>EMR 231</i></b>

### **Course Description**

Different definitions in this domain. Preparation of subsurface maps, cross-sections and composite maps. Surface mining methods including placer deposits, open pit, solution mining using water pressure. Subsurface mining methods including room and pillar, cut and fill, shrinkage stooing, block caving, mineralogical and structural bottoming of ore. Support, drilling, and ventilation in mines. Laboratory study of preparation and concentration of ores.

### **Course Objectives**

The main objective of the course is supplying students with the different mining activities and the main differences between mines and quarries.

1. The student is supposed to be informed with a collective idea about the aspects of mining from an economic prospective and its role in national incomes of different economic blocks and countries throughout the world.
2. The course also aims to furnish the students, who will be enrolled in the course, to understand the main tasks of geologists at the sites of mines, in addition to the separation between the tasks of geologists and those of mine engineers.
3. Students will be provided with technical information, concerning the mining activities, and the availability of each activity to the controlling geological factors and the surrounding environments.

**General References for the Course:** (Books/Journals...etc.)

Students in this course can read from:

1. *Environmental Effects of Mining*, Ripley, E.A., Redmann, R.E., and Crowder, A.A., 1995. St. Lucie Press, 356 p.
2. *Exploration and Mining Geology, 2nd Edition*, by Peters, W.C., 1987. John Wiley & Sons, Inc., New York, 685p.
3. *Introductory Mining Engineering, 2nd Edition*, by Hartman, H.L. and Mutmansky, J.M., 2002. John Wiley & Sons, Inc., New York.

### List of URLs for this Course

- <http://www.edumine.com/xutility/html>
- <http://www.emg.geoscienceworld.org>
- <http://www.cim.org>
- <http://www.infomine.com/technology/geomine>
- <http://www.amateurgeologist.com/content/glossary/mine/mining.html>

### Course Outcome

By the end of this course, the student will be able to do an overall account on the development of mining activities extending from exploration to production:

1. Student can know the tasks of mining geologists and mining engineers.
2. Student can different type of mines and quarries.
3. Student can know the use of mine support and safety explosives.
4. Student can handle the mine wastes and smelters environmentally.
5. Student can take the examples of ancient and current mining activities in Saudi Arabia.