

# Course Specifications

Programme(s) on which the course is given: Post-Graduate (Mineralogy & Petrology)  
Major or Minor element of programmes: Major  
Department offering the programme: Geology  
Department offering the course: Geology  
Academic year / Level: 00/ Post Graduated  
Date of specification approval:

## a- Basic Information

**Title:** Mining Geology

**Code:** G657

**Credit Hours:** 2 Credits  
Hours

**Lecture:** 2 Credit

**Tutorial:**  
Hours

**Practical:** -----

**Total:** 28 Credit

## b- Professional Information

### 1 – Overall Aims of Course

- a. To describe and identify the field expression of various ore and mineral forming processes and styles of mineralization.
- b. To recognize and use geological and production data presented on mine plans, sections and projections.
- c. To apply appropriate collection methods for such data and undertake its presentation and evaluation.

### 2 – Intended Learning Outcomes of Course (ILOs)

- a- Knowledge and Understanding:** By the end of this course, the student should be able to:
- a1-** Understand the basic principles of mineral economics, and the financial appraisal of mining operations.
  - a2-** Understand the common methods used in mine development, including familiarization with open pit and underground mining.
- b- Intellectual Skills:** By the end of this course, the student should be able to:
- b1-** Compare and contrast the various exploration techniques, mining methods and mineral processing routes available for exploiting a deposit depending on its physical and special characteristics.
  - b2-** Specify problems and finding solutions.
- c- Professional and Practical Skills:** By the end of this course, the student should be able to:
- c1-** Explain and apply a wide range of techniques for the acquisition, analysis, interpretation and presentation of geo-scientific data.
  - c2-** Use appropriate ICT based tools for evaluation of data (numeric and special).
  - c3-** Critically appraise the quality of data coming from analytical instrumentation
  - c4-** Work safely in the field, underground, and promote safe practice.
- d- General and Transferable Skills:** By the end of this course, the student should be able to:
- d1-** Communicate effectively and persuasively using the full range of currently available methods.
  - d2-** Work as a member of a team.

### 3. Contents

Topic	Credit hours	Lecture
-------	--------------	---------

Introduction: definition and historical review, styles of mineral deposits and mineral exploration	2	2
Lighting	2	2
Mine supports	2	2
Subsidence- shafts	2	2
Methods of breaking rocks	2	2
Mine atmosphere and ventilation	2	2
Drainage and pumping	2	2
Haulage and winding	2	2
Mining methods and their classification	2	2
Open cast mining or quarrying	2	2
Underground mining	2	2
Coal mining methods: long wall advancing, long wall retreating	2	2
Mining in Egypt, the biggest mines in the world	2	2
<b>Total</b>	<b>28</b>	<b>28</b>

#### 4 – Teaching and Learning Methods

4.1-Professional lectures

4.2- Class discussion.

4.3- Preparation of scientific reports during the semester.

#### 5- Student Assessment Methods

5.1- Regular written exam.

to assess a1, a2

5.2- Mid-term exam.

to assess a2, c1-c4

5.3- At the end of term exam.  
d1-d2

to assess a1-a2, b1-b2, c1-c4,

5.4- Reports and discussions

to assess d1-d2

##### Assessment Schedule

Assessment 1: Short exam (class activities)

every two weeks

Assessment 2: Mid-term exam (written)

week 7

Assessment 3: Final-term exam (written and verbal)

week 15-16

##### Weighting of Assessments

Semester Work and discussions:

20 %

Mid-Term Exam :

20%

Final-term Exam :

60%

Total:

100%

#### 6- List of References

6.1- All topics are given from international journals

6.2. Essential Books (Text Books):

6.3. Recommended Books:

6.4- Periodicals, Web Sites, ... etc

#### 7- Facilities Required for Teaching and Learning

Laptop, data show, computers, internet, funds for Journals reprints.

**Course Coordinator:** Prof. Maher Dawoud

**Head of Department:** Prof. Ahmed Al-Boghdady

**Date:** / /2012