Course Specifications

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

a- Basic Information

Title: Ore Mineralogy **Code:** G611

Credit Hours: 3 Credits Hours **Lecture:** 3 Credit

Tutorial: **Practical:** ------ **Total:** 3 Credit Hours

b- Professional Information

1 – Overall Aims of Course:

- To introduce the post-graduate student to the mean of using ore microscope.
- To introduce the students to the different identification methods of ore mineralogy using the ore microscope.
- To introduce the students to the textures, paragenesis of ore minerals

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding: By the end of this course, the student should be able to:

a1- Recognize the textures, paragenesis, and origin of ore minerals..
a2- Know the terminology used in ore mineralogy.
a3- Identify collection of ore minerals and their paragenentic sequence.

b- Intellectual Skills: By the end of this course, the student should be able to:

b1- Classify ore minerals.
b2- Determine paragentic sequence and mode of formation of ore minerals
b3- Conclude behavior of elements through ore minerals formation.

c- Professional and Practical Skills: By the end of this course, the student should be able to:

c1- Read scientific data in ore mineralogy**.**.
c2- Use reflected light microscopes to identify ore minerals, ore textures, ore fluid inclusions and ores paragenetic sequences

d- General and Transferable Skills: By the end of this course, the student should be able to:

d1- Use the internet for searching on course topics.
d2- Work as a member of a team.
d3- Write and present the ore mineralogy subjects in a potentiality published way.

3. Contents

Topic	**Credit hours**	**Lecture**
Qualitative methods of ore minerals identification	6	6
Quantitative reflectance methods for ore minerals identification	6	6
Quantitative micro-indentation hardness methods of ore minerals identification	6	6
Micro-identification of ore textures	9	9
Ores fluid inclusions microscopy	6	6

Paragenesis of ore minerals and ores beneficiation	9	9
Total	**42**	**42**

4 – Teaching and Learning Methods

4.1- Professional lecture, class discussion, preparing essays on the different topics of ore mineralogy

5- Student Assessment Methods

5.1- Regular written exam.	to assess a1, a2
5.2- Mid-term exam.	to assess a2, c1
5.3- At the end of term exam.	to assess a1-a2, b1-b2, c1-c2, d1-d2
5.4- Reports and discussions	to assess d2-d3

Assessment Schedule

Assessment 1: short exam (class activities)	every two weeks
Assessment 2: mid-term exam (written and practical)	week 7
Assessment 3: final-term exam (written, practical and verbal)	week 15-16

Weighting of Assessments

Written

Mid-Term Exam:	20%
Written Final-term Exam:	60%
Semester Work (including reports, oral and discussion):	20%
Total:	100%

6- List of References

6.1- Course Notes:

6.2- Essential Books (Text Books):

Ore microscopy and ore petrology, J.R. Craig & D.J. Vaughan (1981) Ore Microscopy and Ore Petrography. John Wiley & Sons Press, New York, 406 p

6.3- Recommended Books

Ixer, R.A. (1992). Atlas of opaque and ore minerals in their associations, Springer, 1st edition, 208p

Ramdohr, P. (1969). The ore minerals and their intergrowths, Pergmon Press, NY, USA, 1174p

6.4- Periodicals, Web Sites, … etc

7- Facilities Required for Teaching and Learning

Chemical analysis lab.

Course Coordinator: Prof. Ahmed Bishady

Head of Department: Prof. Ahmed Al-Boghdady

Date: / / 2012