المعايير الأكاديمية المرجعية لبرنامج الجيوفيزياء
ARS

Knowledge & understanding

1.1. The related basic scientific facts, concepts, principles and techniques.

1.2. The relevant theories and their applications.

1.3. The processes and mechanisms supporting the structure and function of the specific topics.

1.4. The related terminology, nomenclature and classification systems.

1.5. The theories and methods applied for interpreting and analyzing data related to discipline.

1.6. The developmental progress of the program-related knowledge.

1.7. The relation between the studied topics and the environment.

a1- The principles and basics of geophysical exploration methods and manual and computerized interpretations of geological and geophysical filed data.

a2- Different geophysical methods and geological and other information used in interpretation and solving environmental problems.

a3- The bases of subsurface geology and basin analyses.

a4- The relationship between geology, physics and mathematics to understand geophysics.

a5- The theory, principles and techniques in the geophysical field and the use of the geophysical data in solving the problems in oil and mineral exploration.

a6- The theoretical bases, procedures and techniques used for geological field studies and related laboratory analysis.

Intellectual skills

2.1. Differentiate between subject-related theories and assess their concepts and principles.

2.2. Analyze, synthesize, assess and interpret qualitatively and quantitatively science relevant data.

2.3. Develop lines of argument and appropriate judgments in accordance with scientific theories and concepts.

2.4. Postulate and deduce mechanisms and procedures to handle scientific problems.

2.5. Construct several related and integrated information to confirm, make evidence and test hypotheses.

b1- Predict geological and geophysical problems and analyze the data to solve these problems by suitable ways.

b2- Analyze the geophysical data using different computer software, integrate and evaluate information and data from different geophysical sources in order to gain a coherent understanding of theory and practice.

b3- Test, display and interpret geophysical data.

Professional and Practical skills

3.1. Plan, design, process and report on the investigated data, using appropriate techniques and considering scientific guidance.

3.2. Apply techniques and tools considering scientific ethics.

3.3. Solve problems using a range of formats and approaches.

3.4. Identify and criticize the different methods used in addressing subject related issues.

c1- Use geophysical tools in the filed surveys, choose and classify the investigation targets and select the reliable geophysical methods.

c2- Perform experimental and computer software in interpretation of the geophysical field data.

c3- Apply different techniques of field and laboratory work in order to achieve the geophysical information and use computational tools, computer software and statistics.

c4- Interpret data derived from field survey and laboratory techniques in terms of their significance and the theory underlying them.

Transferable Skills

1. Use information and communication e technology effectively.

2. Identify roles and responsibilities, and their performing manner.

3. Think independently, set tasks and solve problems on scientific basis.

4. Work in groups effectively; manage time, collaborate and communicate with others positively.

5. Consider community linked problems, ethics and traditions.

6. Acquire self- and long life-learning.

7. Apply scientific models, systems, and tools effectively.

8. Deal with scientific patents considering property right.

9. Exhibit the sense of beauty and neatness