Second Stage/ Geophysics G207

Course Description Form

The course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made maximum use of the available learning opportunities.

1.Educational Institution	College of Science/ University of Basrah
2. Department	Geology
3. Course name/Code 1. Programs included in it	Geophysics G207
4. Programs included in	Bachelor's
5. Attendance Form Available	Weekly
6. Semester/ Year	2020-2019
7. Total of study hours	30 hours + 60 practical hours
8. The course description was	prepared in 01/08/2020
9. Aims of the Course	
Develop the student's ability to identify the foundations and principles of geophysical methods. And linking these methods in identifying the underground and giving an idea of what is there and how to detect it.	

10.Course outcomes and methods of teaching, learning and assessment

a- Knowledge and Understanding goals

a.1. A preliminary idea about the interior of the earth and how we can identify what it contains.

A.2. Identify the types of geophysical methods.

A.3. To develop students' ability to derive basic principles and equations for each method

A.4. Study the physical properties of each method

.A-5. Some geophysical applications of these methods.

Learning Methods

1. Explanation and Discussion of the Lectures
2. It is boosting the student to conduct research and reports.
3. Urging the student to make PowerPoint presentations.

Evaluating Methods

1- Daily test and reports
2- Monthly exams
2- Final exams

C- Emotional and evolutional goals

1. The ability to recognize the importance of geophysical methods to study the subsurface of the earth.
2. Linking knowledge to environmental reality.

Learning Methods

1. Explanation and Discussion of the Lectures 2. Boosting the student to conduct research and reports. 3. The student PowerPoint presentations.
d- General qualification skills transferred (other skills related to employability and personality development) 1. Developing the mental abilities of the student 2. Developing the skills 3. Dealing with field and laboratory 4. Understand the applications of engineering geophysics and the environment.

This course description provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the student to achieve, demonstrating whether he has made the most of the available learning opportunities. It must be linked to the description of the program.

1. Sequencing of course content

Week	Hours	Unit name	Course Outcomes	Learning method	Evaluation method
1 st week, 2ed, 3ed weeks	**2 h. lect. 2h. lab.**	Theoretical: General introduction, definition of basic of geophysics, their, benefits, presence,. Practical: Studying the converting units and statistical methods and their interpretation	**Knowledge and understanding of lectures**	**Understand the evolving state of knowledge learn to carry out practical work, in the field and in the laboratory**	**Daily and monthly tests**
4 th week, 5 th and 6th weeks	**2 h. lect. 2h. lab.**	Theoretical: Learn about the first geophysical (gravity)methods, their principles and applications practical: Explain and solve the experimental equations for some gravity problems	**Knowledge and understanding of lectures**	**Understand the evolving state of knowledge learn to carry out practical work, in the field and in the laboratory**	**Daily and monthly tests**
7 th week, and 8th weeks	**2 h. lect. 2h. lab.**	Theoretical: Learn about the second geophysical (magnetic)methods, their principles and applications Practical: Explain and solve the experimental equations for some magnetic problems	**Knowledge and understanding of lectures**	**Understand the evolving state of knowledge learn to carry out practical work, in the field and in the laboratory**	**Daily and monthly tests**
9 th week, and 10th weeks	**2 h. lect. 2h. lab.**	Theoretical: Learn about the third geophysical (electric)methods, their principles and applications Practical: Explain and solve the experimental equations for some electric problems	**Knowledge and understanding of lectures**	**Understand the evolving state of knowledge learn to carry out practical work, in the field and in the laboratory**	**Daily and monthly tests**
11 th week, and 12th weeks	**2 h. lect. 2h. lab.**	Theoretical: Learn about the forth geophysical (seismic)methods, their principles and applications Practical:	**Knowledge and understanding of lectures**	**Understand the evolving state of knowledge learn to carry out practical work, in the**	**Daily and monthly tests**

		Explain equations to solve the experimental problems		**field and in the laboratory**	
13 th week,	**2 h. lect. 2h. lab.**	second semester exam	**Knowledge and understanding of lectures**	**Understand the evolving state of knowledge learn to carry out practical work, in the field and in the laboratory**	**Daily and monthly tests**
14 th week, and 15th weeks	**2 h. lect. 2h. lab.**	Theoretical: Hydrograph , flood controls methods Practical : Practical semester exam	**Knowledge and understanding of lectures**	**Understand the evolving state of knowledge learn to carry out practical work, in the field and in the laboratory**	**Daily and monthly tests**

11. Infrastructure	
1- Textbooks required for the courc	
2 References	**Buday, T. and Jassim, S.Z., 1987.** The Regional Geology of Iraq, Vol.2, Tectonism, Magmatism and Metamorphism., S.E.Geological Survey and Mineral Investigation, Baghdad, Iraq, 352 p -Sharma, P.V., 1986; Geophysical methods in geology, Elsevier Scientific publish. Amsterdam, 428P. -
Recommended readings	Sharma, P.V., 1986; Geophysical methods in geology, Elsevier Scientific publish. Amsterdam, 428P.
Electronic website	

12. Course Development Plan
Course development based on recent versions of books and references.. The adoption of modern interactive teaching methods. Activating alignment programs with international universities to learn about modern curricula and to exchange the experiences.