68528 - Discipline content for Geology in the speciality subjects of Biology and Geology at Secondary and VIth form level

Información del Plan Docente

Academic Year	2016/17
Academic center	107 - Facultad de Educación
Degree	415 - Master's in Teacher Training for Obligatory Secondary Education, Sixth Form, Professional Training and Language, Arts and Sports Teaching 359 - University Master's in Secondary School Teaching: Biology and Geology
ECTS	4.0
Course	---
Period	Indeterminate
Subject Type	Optional, Compulsory
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

1. The student must explain and clearly relate concepts, models and theories of geology.

2. It is able to analyse and synthesize information on topics related to geology, and to present and defend in public presentations with this information.

3. It is able to integrate social and technological dimensions of geology, with the advantages and problems that geology may help to understand the environment, human beings and society.

4. It is capable of transmitting fluidly the basic geological knowledge to students of high school.

2.2.Introduction

The Disciplinary Contents of Geology is a fourth month's subject, framed in the Block Specific Training Module M4. It is optional and is given in the second semester. Has duration of 4 ECTS of theory.

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The main objective is that the student knows the basic principles of geology. These principles will be used as a fundamental tool for understanding texts necessary to teach geology to high school students and to have the ability to propose geological activities for their students. To do this, during the course, will be acquired the knowledge to understand plate tectonics, the history of life on earth, the main differences between the types of rocks, where and how rocks are formed and is produced modelling of the earth's crust.

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

0-Presentation

1- Fundaments of Geology. Basic Disciplines. Principles of Geology. The "job" of the geologist. Geological time.

2- Basic types of rocks. The geological cycle. Sedimentary, volcanic, plutonic and metamorphic rocks. How to recognize the most common rock samples.

3- History of Geology. The geological knowledge have evolved since the foundations of Steno, Hutton, Lyell, Darwin. The History of Geology in Spain, Mallada, Hernández Pacheco. The theories of catastrophism and uniformitarism.

4- Plate Tectonics. The Theory explains the Earth and its dynamics, the discipline is the Internal Geodynamics that deals with the internal structure of Earth and Paleomagnetism.

5- Principal geological events in the Earth History. The Cretaceous/Tertiary boundary. Palaeogeography.

6- Fossils. Types of Preservation of extinct organisms. Taphonomy: basic concepts. A basic knowledge about the

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Dinosaurs from Aragón.

7- Main events of life on Earth. The origin of life. The Cambrian explosion. Colonisation of land.

8- Quaternary Geology. Climate and Geomorphology. Modelling processes of the landscape. Quaternary glaciations. Climate change.

9- Human evolution, fossils from Africa and Europe. The first Europeans and the Sierra de Atapuerca (Spain) archaeological and paleontological localities.

5.4.Planning and scheduling

5.5.Bibliography and recomended resources