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	2017/18
Subject	68528 - Discipline content for Geology in the speciality subjects of Biology and Geology at Secondary and VIth form level
Faculty / School	107 - Facultad de Educación
Degree	359 - University Master's in Secondary School Teaching: Biology and Geology 415 -
ECTS	4.0
Year	XX
Semester	Indeterminate
Subject Type	Compulsory
Module	---

1.General information

1.1.Introduction

The Disciplinary Contents of Geology is a four-month course, framed in the Module M4. It is optional and taught in the second semester. It has duration of 4 ECTS of theory.

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.

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

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.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

5.2.Learning tasks

5.3.Syllabus

The course will address the following topics:

1. Presentation
2. Basic concepts of Geology. Basic Disciplines. Principles of Geology. The "job" of the geologist. Geological time.
3. Basic types of rocks. The geological cycle. Sedimentary, volcanic, plutonic and metamorphic rocks. How to recognize the most common rock samples.
4. History of Geology. The geological knowledge has evolved since the foundations of Steno, Hutton, Lyell, Darwin. The History of Geology in Spain, Mallada, Hernández Pacheco. The theories of catastrophism and uniformitarism.
5. 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.
6. Principal geological events in the Earth History. The Cretaceous/Tertiary boundary. Palaeogeography.
7. Fossils. Types of Preservation of extinct organisms. Taphonomy: basic concepts. A basic knowledge about the Dinosaurs from Aragón.
8. Main events of life on Earth. The origin of life. The Cambrian explosion. Colonisation of land.
9. Quaternary Geology. Climate and Geomorphology. Modelling processes of the landscape. Quaternary glaciations. Climate change.
10. Human evolution, fossils from Africa and Europe. The first Europeans and the Sierra de Atapuerca (Spain) archaeological and paleontological localities.

5.4.Course planning and calendar

5.5.Bibliography and recommended resources