250323 - ESTRATIG - Stratigraphy

Coordinating unit: 250 - ETSECCPB - Barcelona School of Civil Engineering
Teaching unit: 1004 - UB - (ENG)Universitat de Barcelona
Academic year: 2017
Degree: BACHELOR'S DEGREE IN GEOLOGICAL ENGINEERING (Syllabus 2010). (Teaching unit Compulsory)
ECTS credits: 6

Teaching languages: Catalan, Spanish, English

Teaching staff
Coordinator: FERRAN COLOMBO PIÑOL
Others: FERRAN COLOMBO PIÑOL

Opening hours
Timetable: Mondays from 16 to 17 hours.

Degree competences to which the subject contributes

Specific:
4040. Hydrological, hydrogeological, stratigraphic and palaeontological studies.
4041. (ENG)Capacitat pel desenvolupament i selecció d'eines per l'anàlisi de problemes hidrogeològics i estratigràfics.

Transversal:
592. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 2. Using strategies for preparing and giving oral presentations. Writing texts and documents whose content is coherent, well structured and free of spelling and grammatical errors.
595. TEAMWORK - Level 2. Contributing to the consolidation of a team by planning targets and working efficiently to favor communication, task assignment and cohesion.
599. EFFECTIVE USE OF INFORMATION RESOURCES - Level 3. Planning and using the information necessary for an academic assignment (a final thesis, for example) based on a critical appraisal of the information resources used.
602. SELF-DIRECTED LEARNING - Level 3. Applying the knowledge gained in completing a task according to its relevance and importance. Deciding how to carry out a task, the amount of time to be devoted to it and the most suitable information sources.
584. THIRD LANGUAGE. Learning a third language, preferably English, to a degree of oral and written fluency that fits in with the future needs of the graduates of each course.

Teaching methodology
The course consists of 4 hours per week of classroom activity (large size group).

The 2 hours in the large size groups are devoted to theoretical lectures, in which the teacher presents the basic concepts and topics of the subject. The 2 hours/week of practical classes at the laboratory, shows examples and solves exercises.

Support material in the form of a detailed teaching plan is provided using the virtual campus ATENEA: content, program of learning and assessment activities conducted and literature.

Learning objectives of the subject
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Students will acquire an understanding of stratigraphy and learn how this discipline applies to technological scientific problems and applied technological problems.

Upon completion of the course, students will be able to: 1. Recognise and characterise the principal sedimentary structures; 2. Correlate stratigraphic levels in three dimensions and in time; 3. Draw on information from subjects related to stratigraphy.

Stratigraphy: Fundamentals and aims; Stratified rocks; Stratigraphic units; Sediment transport; Facies and facies associations; Sedimentary basins; Sequential stratigraphy; Sedimentary environments and systems: Continental sedimentary environments, transitional sedimentary environments and marine sedimentary environments.


**Study load**

<table>
<thead>
<tr>
<th>Total learning time: 150h</th>
<th>Hours large group: 26h</th>
<th>17.33%</th>
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<tbody>
<tr>
<td></td>
<td>Hours medium group: 20h</td>
<td>13.33%</td>
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<tr>
<td></td>
<td>Hours small group: 14h</td>
<td>9.33%</td>
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<td></td>
<td>Guided activities: 6h</td>
<td>4.00%</td>
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<td></td>
<td>Self study: 84h</td>
<td>56.00%</td>
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Content

<table>
<thead>
<tr>
<th>Theoretical subjects</th>
<th>Learning time: 105h 36m</th>
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<tbody>
<tr>
<td></td>
<td>Theory classes: 22h</td>
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<tr>
<td></td>
<td>Laboratory classes: 22h</td>
</tr>
<tr>
<td></td>
<td>Self study: 61h 36m</td>
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</tbody>
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Description:
1. Block 1: Introduction to Stratigraphy
2. Block 2: Continental environments
3. Block 3: Marine environments
   1. Block 1. Sedimentary structures
   2. Block 2. Stratigraphic profiles
   4. Block 4. Stratigraphic Maps

Field course

<table>
<thead>
<tr>
<th>Learning time: 38h 24m</th>
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<tbody>
<tr>
<td>Laboratory classes: 16h</td>
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<tr>
<td>Self study: 22h 24m</td>
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</tbody>
</table>

Description:
Field course

Qualification system

The mark of the course is obtained from the ratings of continuous assessment and their corresponding laboratories and/or classroom computers.

Continuous assessment consist in several activities, both individually and in group, of additive and training characteristics, carried out during the year (both in and out of the classroom).

The teachings of the laboratory grade is the average in such activities.

The evaluation tests consist of a part with questions about concepts associated with the learning objectives of the course with regard to knowledge or understanding, and a part with a set of application exercises.

Criteria for re-evaluation qualification and eligibility: Students that failed the ordinary evaluation and have regularly attended all evaluation tests will have the opportunity of carrying out a re-evaluation test during the period specified in the academic calendar. Students who have already passed the test or were qualified as non-attending will not be admitted to the re-evaluation test. The maximum mark for the re-evaluation exam will be five over ten (5.0). The non-attendance of a student to the re-evaluation test, in the date specified will not grant access to further re-evaluation tests. Students unable to attend any of the continuous assessment tests due to certifiable force majeure will be ensured extraordinary evaluation periods.

These tests must be authorized by the corresponding Head of Studies, at the request of the professor responsible for the course, and will be carried out within the corresponding academic period.
Failure to perform a laboratory or continuous assessment activity in the scheduled period will result in a mark of zero in that activity.
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Bibliography

Basic:


Complementary: