

Degree	Type	Year
Geology	OT	3
Geology	OT	4

Contact

Name: Joan Estalrich Lopez

Email: juan.estalrich@uab.cat

Teachers

Joan Estalrich Lopez

Teaching groups languages

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Prerequisites

No specials prerequisites

Objectives and Contextualisation

Relate environmental activities and processes

Competences

- Geology
- Display understanding of the size of the space and time dimensions of Earth processes, on different scales.
- Draw up and interpret geological maps and other means of depicting geological information (columns, correlation frames, geological cross-sections, etc.)
- Evaluate moral and ethical problems in research and acknowledge the need to follow professional codes of conduct.
- Identify and tackle environmental problems, plan land-use and know the principles of prevention and mitigation of geological risks.
- Plan the exploration and sustainable development of geological resources.

- Process, interpret and present field data using qualitative and quantitative techniques, and suitable computer programmes.
- Recognise geomorphological systems, interpret relief forms and evaluate the evolution of the landscape.
- Use geographical information systems applied to geology.

Learning Outcomes

1. Apply knowledge of geological processes to identifying and solving environmental problems, and to land-use planning and geological risk.
2. Assess changes to geological environments and their level of degradation resulting from direct anthropogenic action or climate change.
3. Create and manage databases and topologies to combine data and obtain 2D or 3D graphic results using GIS for environmental management, risk analysis and inventories of the geological heritage.
4. Draw up thematic geological maps for environmental management and remediation, and to provide non-technical information on the geological heritage.
5. Identify and process the value and the sources of field data with environmental implications.
6. Interpret relief dynamics on different time-space scales in terms of risk and land-use planning.
7. Plan the successive exploration stages for each type of project and the development stages from the perspective of sustainability, to avoid irreparable losses of resources and/or geological heritage.
8. Situate the evolution of geological environments and mitigation and/or remediation proposals within space-time scales.
9. Synthesise and select laboratory data, and process it qualitatively and quantitatively using computer programmes.
10. Undertake professional activity in the field of environmental geology, complying with moral and ethical principles.

Content

- 1.- Landscape: planning and management
- 2.- Basic mathematical tools
- 3.- Introduction to the physical media
- 4.- Management of water quality
- 5.- Management of water quantity
- 6.- Energy management
- 7.- Landscape conservation

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Case study	21	0.84	7, 10, 1, 3, 2, 5, 6, 8, 4
Lectures	112	4.48	7, 10, 1, 2, 5, 6, 8, 4

Type: Supervised

Tutorials	10	0.4	7, 1, 5, 6, 4
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Lectures and case study

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continuous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Case study	5	2	0.08	9, 2, 5, 8
Pop quiz	35%	4	0.16	7, 10, 9, 1, 3, 2, 5, 6, 8, 4
2 Mid-Terms	30	1	0.04	2, 6

Mid-term exams

Bibliography

Same as in catalan version

Software

LINGO

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this [link](#). To consult the language you will need to enter the CODE of the subject.