



Universidad de Jaén

FACULTY OF EXPERIMENTAL SCIENCES

Principles of geology for biologists

2024-2025
Grado en Biología



GRATIS



Acceso Mayores 40

Guías docentes UJA

Horarios de tutorías

Llamamientos PEvAU

Movilidad (Coordinador)

P.O.D.

Solicitud bilingüismo

Syllabus 2024-25 - 10211009 - Principles of Geology for Biologists (Principios de geología para biólogos)

Caption

- Level 1: Tutorial support sessions, materials and exams in this language
- Level 2: Tutorial support sessions, materials, exams and seminars in this language
- Level 3: Tutorial support sessions, materials, exams, seminars and regular lectures in this language

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DEGREE:

Grado en Biología

FACULTY:

FACULTY OF EXPERIMENTAL SCIENCES

ACADEMIC YEAR:

2024-25

COURSE:

Principles of Geology for Biologists

SYLLABUS

1. COURSE BASIC INFORMATION

NAME: Principles of Geology for Biologists

CODE: 10211009

ACADEMIC YEAR: 2024-25

LANGUAGE: English

LEVEL: 2

ECTS CREDITS: 6.0

YEAR: 1

SEMESTER: SC

2. LECTURER BASIC INFORMATION

NAME: MOLINA CÁMARA, JOSÉ MIGUEL

DEPARTMENT: U117 - GEOLOGÍA

FIELD OF STUDY: 280 - ESTRATIGRAFÍA

OFFICE NO.: B3 - B3-305

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P: 953 212295

WEBSITE: jmmolina@ujaen.esORCID: <https://orcid.org/0000-0003-0023-3720>

LANGUAGE: English

LEVEL: 2

3. CONTENT DESCRIPTION

Theoric classes

I. EARTH SYSTEM AND EARTH DYNAMIC

1. The Earth System. Geological Sciences.

2. The geological cycle. External and internal geological processes.

II. GEOLOGIC MATERIALS. ENVIRONMENTAL GEOLOGY. SEDIMENTARY ENVIRONMENTS. EDAPHOLOGY.

3. Geologic materials: minerals and rocks

4. Environmental Geology. Mineral, energetic and hydrological geological resources. External and internal geological hazards.

5. Sedimentary environments. Weathering. Soils: concepts components and features. Classification and main types.

III. HISTORY OF THE EARTH

6. Methods of analysis. The geological record.

7. Main events in the Precambrian, Paleozoic, Mesozoic and Cenozoic

IV. HISTORY OF LIFE

8. The fossils.

9. Life history and biodiversity in the Earth history.

Laboratory classes

1. Identification of minerals rocks and fossils
2. Geological maps

Field work

Field trip in the vicinity of Jaén with the following objectives: 1) To recognize geological materials and structures; 2) to use the geological compass; 3) to know the stratigraphy and tectonics of the visited area; 4) principles of geological mapping.

Seminars about specific subjects and grupal tutorials

Main subjects of the seminars and specific works: Paleontology, Geological maps, Geologic hazards, Sedimentary environments, Geodiversity, Geologic and biologic events, Quaternary Geology, Darwin and the Geology, Geobiology, Geology of Andalucía and Jaén.

4. COURSE DESCRIPTION AND TEACHING METHODOLOGY

A1. Classes in great groups.

M1. Magisterial classes

A2. Practical classes in groups

A3. Collective and individual tutorials

Students with special educational needs should contact the Student Attention Service (Servicio de Atención y Ayudas al Estudiante) in order to receive the appropriate academic support

5. ASSESSMENT METHODOLOGY

50% from the final theory exam, 45% from practical-seminar exams, 5 % from assistance and participation in classes. To obtain the final mark it is necessary a mark at least of 40% in the practical and theoretical exams.

6. BOOKLIST ([Access the bibliography in the Library catalog](#))

MAIN BOOKLIST:

- Dynamic earth : an introduction to physical geology. Edition: 5th ed. Author: Skinner, Brian J. Publisher: Hoboken, NJ : Wiley, cop. 2004 ([Library](#))
- The Dynamic earth: an introduction to physical geology. Edition: 4th ed. Author: Skinner, Brian J.. Publisher: New York: John Wiley & Sons, cop. 2000 ([Library](#))
- The key to earth history: an introduction to stratigraphy. Edition: 2nd. ed. Author: Doyle, Peter. Publisher: Chichester [etc.]: John Wiley, cop. 2001 ([Library](#))
- Evolution of the earth. Edition: 7th ed. Author: Prothero, Donald R.. Publisher: Boston: McGraw Hill, 2004 ([Library](#))
- A dictionary of geology and earth sciences [Recurso electrónico]. Edition: 4th ed. Author: -. Publisher: [Oxford] : Oxford University Press, 2013 ([Library](#))
- Introduction to environmental geology. Edition: 5th ed. Author: Keller, Edward A. Publisher: Boston : Prentice Hall, 2012 ([Library](#))
- Essentials of geology. Edition: 10th ed. illustrated by Dennis Tasa.. Author: Lutgens, Frederick K.. Publisher: Upper Saddle River, N.J. : Prentice Hall; London : Prentice-Hall International, cop. 2009 ([Library](#))

7. SUSTAINABLE DEVELOPMENT GOALS

Educación de calidad
 Agua limpia y saneamiento
 Acción por el clima

DETAILED INFORMATION

It is intended to develop the Sustainable Development Goals 04 Quality Education, 06 Clean Water and Sanitation, and 13 Climate Action

8. VIRTUAL / CLASSROOM TEACHING SCENARIO

1. TRAINING ACTIVITIES AND TEACHING METHODOLOGY

Training activities

26 sessions of master classes*Model:* In-person teaching*Teaching methodology. Description:* 26 sessions (1 hour each) of theoretical classes.Tutorials of theoretical classes*Model:* In-person12 practical classes and seminars in the laboratory*Model (in-person/online):* In-person*Teaching methodology. Description:* 7 sessions of practical classes and 5 seminars (2 hours each) in laboratories, in-personTutorials of the practical classes and seminars*Model:* In person

2. ASSESSMENT METHODOLOGY

Theoretical classes

Evaluation through a final theoretical exam in-person mode (written evaluation). The value of the final theory exam in the total score is 50 %. To be able to average the final score corresponding to the subject, it will be necessary to obtain at least a score of 4 in the theoretical exam.

Practical classes and seminars

In-person evaluation through practical exercises after each group of practical classes and seminars. Value in the final score: 50 %. To average the total final score corresponding to the matter, it will be necessary to have obtained at least a 4 in the average mark of these practical classes.

3. RESOURCES

Use of ILIAS and/or PLATEA platform, Google Forms and Google Meets to establish communication with students and conduct tutoring, presentations and exams.

9. VIRTUAL TEACHING SCENARIO

1. TRAINING ACTIVITIES AND TEACHING METHODOLOGY

Training activities26 sessions of master classes online*Character:* Online teaching*Teaching methodology, description:* 26 sessions (1 hour each) of theoretical classesTutorials*Character:* Online12 practical classes and seminars in the laboratory*Model (in-person/online):* Online.*Teaching methodology. Description:* 7 sessions of practical classes and 5 seminars (2 hours each). Online classes.Tutorials of the practical classes and seminars*Model:* Online

2. ASSESSMENT METHODOLOGY

Theoretical classes

Theoretical concepts of the subject evaluated through a final theoretical exam in an online mode (written evaluation of timed and randomized short answered questions) through test applications (ILIAS or Google Forms). The value of the final theory exam in the total score is 50%. To be able to average the final score corresponding to the subject, it will be necessary to have obtained at least a score of 4 in the theory exam.

Practical classes and seminars

Online evaluation through practical exercises after each group of practical classes and seminars. Value in the final score: 50 %. To average the total final score corresponding to the matter, it would be necessary to obtain at least a 4 in the mark of these practical classes.

3. RESOURCES

ILIAS platform, Google Forms and Google Meet to establish communication with the students, and to make presentations, tutorials and exams.

DATA PROTECTION CLAUSE (on line exams)

Institution in charge of data processing: Universidad de Jaén, Campus Las Lagunillas, s/n, 23071 Jaén

Data Protection Delegate: dpo@ujaen.es

Purpose: In accordance with the Universities Law and other national and regional regulations in force, carrying out exams and assessment tests corresponding to the courses students are registered in. In order to avoid frauds while sitting the exam, the exam will be answered using a videoconference system, being able the academic staff of the University of Jaén to compare and contrast the image of the person who is answering the exam with the student's photographic files. Likewise, in order to provide the exam with evidential content for revisions or claims, in accordance with current regulation frameworks, the exam will be recorded and stored.

Legitimacy: compliance with legal obligations (Universities Law) and other national and regional regulations currently in force.

Addressees: service providers who are the owners of the platforms where the exams are carried out and with whom the University of Jaén has signed the corresponding data access contracts.

Storage periods: those established in current in force regulations. In the specific case of exam videoconference recordings, not before the examination records and transcripts are closed or the exam can still be reviewed or challenged.

Rights: you can exercise your right of access, amendment, cancellation, opposition, suppression, limitation and portability by sending a letter to the postal or electronic address indicated above. In the event that you consider that your rights have been violated, you may submit a complaint to the Andalusian Council for Transparency and Data Protection www.ctpdandalucia.es

CLASS RECORDING CLAUSE PERSONAL DATA PROTECTION

Person in charge: Universidad de Jaén, Paraje Las Lagunillas, s/n; Tel.953 212121; www.ujaen.es

Data protection delegate (DPO): TELEFÓNICA, S.A.U. ; Email: dpo@ujaen.es

Procedure aim: To manage proper recordings of teaching sessions with the aim of facilitating learning process under a multimodal and/or online teaching

Period for record storage: Images will be kept during legal term according to regulations in force

Legitimacy: Data will be managed according to legal regulations (Organic Law 6/2001, December 21, on Universities) and given consent provided by selecting corresponding box in legal admission documents

Data recipients (transfers or assignments): Any person allowed to get access to every teaching modality

Rights: You may exercise your rights of access, rectification, cancellation, portability, limitation of processing, deletion or, where appropriate, opposition. To exercise these rights, you must submit a written request to the Information, Registration and Electronic Administration Service of the University of Jaen at the address above, or by e-mail to the address above. You must specify which of these rights you are requesting to be satisfied and, at the same time, you must attach a photocopy of your ID card or equivalent identification document. In case you act through a representative, legal or voluntary, you must also provide a document that proves this representation and identification. Likewise, if you consider that your right to personal data protection has been violated, you may file a complaint with the Andalusian Data Protection and Transparency Council www.ctpdandalucia.es