

**Palaeontology I**

Code: 101049  
ECTS Credits: 6

**2024/2025**

Degree	Type	Year
2500254 Geology	OB	2

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## Teaching groups languages

You can view this information at the [end](#) of this document.

## Prerequisites

This subject requires prior knowledge of:

- Geology

- Biology: fundamentals, taxonomy, microevolution, ecology, biogeography, organisational levels of the living organisms and characteristics of the different groups (knowledge obtained through the subject Life on Earth)

## Objectives and Contextualisation

Objectives: to know and understand the fossil record in order to use it properly for the resolution of geological problems, whilst also taking into account its contribution to fundamental aspects of biology.

Contextualization: The subject "Palaeontology" is subdivided into the units Palaeontology I and Palaeontology II, which are taught, respectively, in the first and second semester of the second year of the Degree in Geology.

General Palaeontology and certain groups of the fossil record are taught in Palaeontology I. Specifically, those that (1) are most useful for illustrating the concepts of general palaeontology and/or (2) are less complex and/or (3) are considered essential for the student to know but cannot be studied in fuller detail.

The fossil record of the groups that (1) are considered most complex and/or, (2) require a fuller treatment and/or, (3) have important geological applications will be taught in Palaeontology II.

## Competences

- Display knowledge of the techniques for identifying the principal fossil groups and use them to date and interpret ancient sedimentary environments, and relate them to the history of the Earth.
- Display understanding of the size of the space and time dimensions of Earth processes, on different scales.
- Obtain information from texts written in other languages.
- Process, interpret and present field data using qualitative and quantitative techniques, and suitable computer programmes.
- Recognise theories, paradigms, concepts and principles in the field of geology and use them in different areas of application, whether scientific or technical.
- Suitably transmit information, verbally, graphically and in writing, using modern information and communication technologies.
- Use concepts from biology when solving problems in geology.
- Work independently.

## Learning Outcomes

1. Apply concepts from biology to understanding of the fossil record.
2. Apply the principle of overlap and the evolution of species.
3. Discern and describe laboratory techniques for studying the different types of fossils and quantify the associated information.
4. Display knowledge of the techniques for identifying the principal fossil groups and use them to date and interpret ancient sedimentary environments, and relate them to the history of the Earth.
5. Identify and distinguish between the processes that give rise to the fossil record.
6. Obtain information from texts written in other languages.
7. Relate concepts and theories in palaeontology.
8. Suitably transmit information, verbally, graphically and in writing, using modern information and communication technologies.
9. Work independently.

## Content

### GENERAL PALAEOLOGY

- Palaeontology
- Taphonomy
- Morphology
- Palaeoecology
- Ichnology

- Macroevolution

## FOSSIL RECORD

- Porifera and Cnidaria

- Molluscs

- Echinoderms

- Vertebrates

Any changes / adaptations of these contents, as well as of the teaching methodology used, will be announced with a notice on the Campus Virtual.

## Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Laboratory work	23	0.92	1, 2, 3, 4, 5, 6, 7
Lectures	26	1.04	1, 2, 3, 4, 5, 6, 7
Seminar	3.5	0.14	1, 2, 3, 4, 5, 6, 7, 8, 9
Type: Supervised			
Exercises	15	0.6	1, 2, 3, 4, 6, 7, 8
Type: Autonomous			
Personal study and work	75	3	1, 2, 3, 4, 5, 6, 7

**Lectures:** Students will acquire the necessary scientific-technical knowledge for the course during lectures. The timing of the class-based theory classes will be posted on the Campus Virtual (CV)

**Laboratory classes:** Attendance is mandatory. These classes will take place in 2 hour-long sessions per week at the Palaeontology laboratory. Practical classes will consist of the observation of the distinct fossil groups previously presented in the theory classes. Microscopes will be used on small-sized fossils. Students will be introduced to the determination of fossils in section.

**Seminar:** analysis of a scientific paper related to one or more topics included in the content list of the subject. A presentation of the results will be made in front of the teacher and classmates (dates to be announced)

**Independent activities:** students must complement the above activities with personal work and study.

About 15 minutes from one of the sessions will be allocated to respond to the assessment surveys of teachers and the assessment surveys of the subject.

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

### Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Exams	70%	7.5	0.3	1, 2, 3, 4, 5, 6, 7, 8
Exercises in laboratory sessions	15%	0	0	1, 2, 3, 4, 5, 6, 7, 8, 9
Seminar	15%	0	0	1, 2, 3, 4, 5, 6, 7, 8

Continuous evaluation:

All students registered on this subject (whether for the first time or not) are required to carry out the same activities (lectures, laboratory classes and seminar) and will be subject to the same assessment criteria.

Assessment of this subject is based on the following elements:

- Exams will include theory and practical work, representing (in total) 70% of the final grade. At least, a four (4) is required in each exam to average with the other course grades. Students with a grade lower than 4 in any of the exams, must take re-assessment of these exams. The marks used to calculate the final grade will be those obtained in re-assessment.
- Laboratory-session exercises: 15%. Attending laboratory classes is mandatory. Students attending less than 80% of the practical sessions will not be eligible for assessment and will be awarded the grade of *Fail* (0) for laboratory classes. There is no re-assessment for the practical exercises.
- Evaluation of participation and presentation of papers in the seminar: 15%

A minimum overall grade of 5 is required to pass the subject.

Single evaluation:

Students who have accepted the single assessment will have to take a single exam coinciding with the final exam. The single assessment exam will include all the theoretical and practical contents of the subject and will weigh 70% of the final grade for the subject. The possibility of taking the exam in two parts may be considered, coinciding with the topics of the partial evaluations. No minimum attendance is established in the laboratory practices for those who have accepted the single evaluation, but attendance is recommended. The exercises that have not been carried out during the practical sessions will be counted with a zero in the final mark of the practical exercises. This evaluation activity will have a weight of 15% in the final mark of the subject. Participation and presentation of work in the session corresponding to the seminars is mandatory and will have a weight of 15% in the final grade for the subject.

Schedule of the assessment activities:

The dates of the assessment activities and the submission of exercises will be published in the Campus Virtual (CV). They may be subject to changes in programming due to unforeseen eventualities. Any modification will be announced through this platform.

Assessment activities will not be permitted for any student at different dates or times than the ones already established, unless for justified causes duly advised before the activity, and with the lecturer's previous consent. In all other cases, if an activity has not been carried out, it cannot be re-assessed.

Irregularities committed by the student, copy and plagiarism:

According to the UAB academic regulations, assessment activities will be qualified with a zero (0) whenever a student commits academic irregularities that may alter such assessment.

Irregularities contemplated in this procedure include, among others:

- the total or partial copying of a test, practical exercise, report, or any other evaluation activity;
- allowing others to copy;
- presenting group work that has not been done entirely by the members of the group;
- presenting any materials prepared by a third party as one's work, even if these materials are translations or adaptations, including work that is not original or exclusively that of the student;
- having communication devices (such as mobile phones, smartwatches, etc.) accessible during theoretical-practical assessment tests (individual exams).

## Bibliography

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\* basic bibliography

Other references for specific groups will be announced in theory or practical classes.

## WEBSITES

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RON BLAKE MAPS. Global Paleogeography. <https://deeptimemaps.com/>

## Software

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## Language list

Name	Group	Language	Semester	Turn
(PLAB) Practical laboratories	1	Catalan	first semester	morning-mixed
(PLAB) Practical laboratories	2	Catalan	first semester	morning-mixed
(SEM) Seminars	1	Catalan	first semester	morning-mixed
(SEM) Seminars	2	Catalan	first semester	morning-mixed
(TE) Theory	1	Catalan	first semester	morning-mixed