The Life on Earth

Code: 101030
ECTS Credits: 6

2024/2025

Degree	Type	Year
2500254 Geology	FB	1

Contact

Name: Marcos Furio Bruno

Email: marc.furio@uab.cat

Teachers

Enric Vicens Batet

Judit Marigo Cortes

Pedro Piñero García

Aixa Tosal Alcobé

Marcos Furio Bruno

Angel Hernandez Lujan

Teaching groups languages

You can view this information at the end of this document.

Prerequisites

Although there are no prerequisites, it is recommended the student to be skilled in basic knowledge of Biology.

Objectives and Contextualisation

Contextualization: This subject provides an essential introduction to the compulsory basic subject "Biology". It is taught in the first year of the Geology Degree.

Objectives: To provide a solid foundation in Biology. To understand the principles and concepts of evolution, ecology and biogeography. To be familiar with the organisational levels of living organisms and the characteristics of the main taxonomical groups. To provide the basic knowledge for the subsequent subjects Paleontology I and Paleontology II.

Competences

- Learn and apply the knowledge acquired, and use it to solve problems.
- Obtain information from texts written in other languages.
- 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 understand the levels of organisation of living beings, ecology, biogeography and evolution.
2. Learn and apply the knowledge acquired, and use it to solve problems.
3. Obtain information from texts written in other languages.
4. Suitably transmit information, verbally, graphically and in writing, using modern information and communication technologies.
5. Work independently.

Content

- Introduction. Life.

- The cell. Structure. Function. Energy flux.

- Reproduction. Heritage.

- Tissues. Organs. Systems. Organisms.

- Anatomy. Physiology. Morphology. Growing. Skeleton.

- Evolution. Diversity. Systematics. Taxonomy.

- Ecology. Environment. Populations. Communities. Ecosystems.

- Biogeography.

- Organisms: Bacteria. Archaebacteria. Eukaryotes.

- Organisms: Protists.

- Organisms: Plants. Fungi. Animals.

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Laboratory work	26	1.04	1, 2, 3, 4, 5
Lectures	26	1.04	1, 2, 3, 4, 5
Type: Supervised			
Exercises	15	0.6	1, 2, 3, 4, 5

Type: Autonomous			
Personal study and work	75	3	1, 2, 3, 4, 5

This model will combine class-based and e-learning activities, together with the student's independent learning.

Lectures: Students will acquire the necessary scientific-technical knowledge for the course in in-class and virtual lectures. Students will have access to study material (presentations, figures, schemes) to follow the course.

Laboratory classes: The practical classes are based on the observation of the different groups of organisms studied in the theory classes. Laboratory classes will take place in 2 hour sessions at the Palaeontology laboratory, in reduced groups. Some practical classes could be adapted to virtual (on-line) sessions.

Autonomous activities: The activities mentioned above must be complemented with the personal work and study from the student.

Exercises carried out in laboratory classes or as independent work will be submitted on the dates determined by the lecturers.

The organization of the lectures and practical classes will be published on the Campus Virtual (CV).

Approximately 15 minutes of one session along the academic year will be devoted to allow students to carry out the surveys for evaluating teaching performance and 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
Continuous assessment of exercises and practical classes	30 %	0	0	1, 2, 3, 4, 5
Exams	70 %	8	0.32	1, 2, 3, 4, 5

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

Assessment for this subject is continuous throughout the course and is based on the following elements:

1. Exams. Exams, representing-jointly-70% of the final grade. These exams will take place during the course and will include all content covered in lectures and practical classes.

A minimum grade of 4 in each exam is required to average with the other course grades. Students who have obtained a grade lower than 4 must present themselves for re-assessment of the exams

The students who pass all the exams may take the re-assessment to improve their final grade. The mark used to calculate the final grade will be that obtained in re-assessment.

2. Laboratory classes. The exercises/ tests carried out in laboratory classes represent 30% of the final grade. 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 zero (0) for this activity. There is no re-assessment for the practical exercises.

To pass the subject it will be necessary to obtain a minimum overall grade of 5 points.

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 inprogramming 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 to that 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, this 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, as well as the use of IA platforms;
- 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).

Unique assessment

- Students who request it will have the right to a single assessment. This will consist of a single final test that will contain a theory exam (30% mark), a problem test (40% mark) and the delivery of the practicals (30% mark). The latter cannot be recovered in the final exam.
- The date of the single assessment tests will coincide with the final exam that the rest of the students will take.
- The single evaluation must be requested using the specific form made available by the Gestió Acadèmica de la Facultat de Ciències [Academic Management of the Faculty of Sciences], and must be communicated by email to the coordinator of the subject before October 2024.
- With reference to the recovery and review of the final qualification, the same procedures will apply as for the continuous assessment.

Bibliography

Audesirk, T., Audesirk, G., Byers, B.E. 2008. Biología: La vida en la Tierra (8a ed.). Pearson Educación de México, México. 924 p. + apéndices. ISBN 978 970 26 1194 3 (573Aud).

Castro, P., Huber, M.E. 2007. Biología marina (6a ed.). McGraw-Hill-Interamericana de España, S.A.U., Madrid. 782 p. ISBN 978 84 481 5941 2 (574.5(26)Cas).

Cogneti, G., Sarà, M., Magazzù, G. 2001. Biología marina. Editorial Ariel S.A., Barcelona. 619 p. ISBN 84 344 8031 X (574.5(26)Cog).

Comissió Internacional de Nomenclatura Zoològica. 2003. Codi Internacional de Nomenclatura Zoològica (4a ed.). Institut d'Estudis Catalans. Barcelona. 166 p. ISBN 84 7283 700 9 ((083) 59Cod).

Comissió Internacional de Nomenclatura Zoològica. 2008. Codi Internacional de Nomenclatura Zoològica (4a ed.). Institut d'Estudis Catalans. Barcelona. Llibre electrònic, amb motor de cerca.

Díaz, T.E., Fernández-Carvajal, M.C., Fernández, J.A. 2004. Curso de Botànica. Ediciones Trea, S.L., Gijón. 574 p. ISBN 84 9704 113 5 (58Dia).

Folch i Guillen, R. (dir. gen). 1985-1992. Història natural dels Països Catalans. Enciclopèdia Catalana, Barcelona. 15 vols. ISBN 8485194527 (5(03)5His)

Fontdevila, A., Moya, A. 2003. Evolución: Origen, adaptación y divergencia de las especies. Editorial Síntesis S.A., Madrid. 591 p. ISBN 84 9756 121 X (578.8Fon).

Hickman, C.P., Roberts, L.S., Larson, A., l'Anson, H., Eisenhour, D.J. 2006. Principios integrales de Zoología (13a ed.). McGraw-Hill-Interamericana de España, S.A.U., Madrid. 1022 p. ISBN 84 481 4528 3 (59Hic). Llibre electrònic.

Izco, J., Barreno, E., Brugués, M., Costa, M., Devesa, J., Fernández, F., Gallardo, T., Llimona, X., Salvo, E., Talavera, S., Valdés, B. 1997. Botànica. McGraw-Hill-Interamericana de España, S.A.U., Madrid. 781 p. ISBN 84 486 0182 3 (58Bot).

Kardong, K.V. 2007. Vertebrados: Anatomía comparada, función y evolución (4a ed.). McGraw-Hill-Interamericana de España, S.A.U., Madrid. 782 p. ISBN 978 84 481 5021 1 (596Kar).

Lecointre, G., Le Guyader, H. 2001. Classification phylogénetique du vivant. Belin, Paris. 543 p. ISBN 2 7011 2137 X (575 Lec)

Margalef, R. 2005. Ecología (reimpr.). Ediciones Omega, S.A., Barcelona. 951 p. ISBN 84 282 0405 5 (574Mar).

Margulis, L., Schwartz, K.V. 1988. Five Kingdoms: an illustred guide to the phyla of life on earth (2a ed.).W. H. Freeman, New York. 376 p. ISBN 0716718855 (575.86Mar).

Margulis, L., Chapman, M. 2009. Kingdoms & domains: an illustred guide to the phyla of life on earth. Elsevier/Academic, Amsterdam, London. Llibre electrònic.

Molles, M.C. 2006. Ecología. Conceptos y aplicaciones (3a ed.). McGraw-Hill-Interamericana de España, S.A.U., Madrid. 782 p. ISBN 84 481 4595 X (574Mol).

Muñoz, A., Pérez, J.L., Da Silva, E. 2009. Manual de Zoología. Universidad de Extremadura. Servicio de Publicaciones, Cáceres. 445 p. ISBN 978 84 7723 865 2 (59Muñ).

Nabors, M.W. 2006. Introducción a la Botànica. Pearson Educación, S.A., Madrid. 744 p. ISBN 10 84 7829 073 7 (58Nab).

Odum, E.P., Barrett, G.W. 2006. Fundamentos de Ecología (5a ed.). Cenage Learning Editores, Mexico. 598 p. ISBN 970 686 470 9 (574Odu).

Ruppert, E.E., Barnes, R.D. 1996. Zoología de los invertebrados (5a ed.). McGraw-Hill-Interamericana de España, S.A.U., Madrid. 1114 p. ISBN 968 25 2452 0 (592Rup).

Samo, A.J., Garmendia, A., Delgado, J.A. 2008. Introducción práctica a la Ecología. Pearson Educación, S.A., Madrid. 248 p. ISBN 978 84 8322 445 8 (574Sam).

Smith, T.M., Smith, R.L. 2007. Ecología (6a ed.). Pearson Educación S.A., Madrid. 776 p. ISBN 978 84 7829 084 0 (574Smi).

Zunino, M., Zullini, A. 2003. Biogeografia: La dimensión espacial de la evolución. Fondo de Cultura Económica, Mexico. 359 p. ISBN 968 16 6721 2 (574.9 Zun)

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
(TE) Theory	1	Catalan	first semester	morning-mixed