

COURSE SYLLABUS

1. Data about the program

1.1 Higher education institution	Babeş-Bolyai University				
1.2 Faculty	Faculty of Biology and Geology				
1.3 Doctoral school	Theoretical and Applied Geology				
1.4 Field of study	Geology				
1.5 Study cycle	Doctorate				
1.6 Study program / Qualification	Doctoral training / Doctor of Geology				

2. Course data

2.1 Name of discipline	Mesozoic and Cenozoic palaeoenvironments						
2.2 Teacher responsible for lectures	Prof.dr. <i>habil.</i> Ioan Tanău						
2.3 Teacher responsible for seminars	Prof.dr. <i>habil.</i> Ioan Tanău						
2.4 Year of study	1	2.5 Semester	2	2.6. Type of evaluation	E	2.7 Course framework	O

3. Estimated total time of teaching activities (hours per semester)

3.1 Hours per week	4	Out of which: 3.2 Lectures	2	3.3 Seminars / Laboratory classes	2
3.4 Total hours in the curriculum	48	Out of which: 3.5 Lectures	24	3.6 Seminars / Laboratory classes	24
Allocation of study time:					
Study supported by textbooks, other course materials, recommended bibliography and personal student notes					30
Additional learning activities in the library, on specialized online platforms and in the field					20
Preparation of seminars / laboratory classes, topics, papers, portfolios and essays					15
Tutoring					2
Examinations					2
Other activities: -					
3.7 Individual study (total hours)					65
3.8 Total hours per semester					117
3.9 Number of credits					10

4. Preconditions (where applicable)

4.1 Curriculum	•
4.2 Competences	•

5. Conditions (where applicable)

5.1 Conducting lectures	•
5.2 Conducting seminars / laboratory classes	•

6. Specific competences acquired

Professional competences	<ul style="list-style-type: none"> • C1. Knowledge of paleoclimate and environmental change in Mesozoic and Cenozoic • C2. Learning modern, interdisciplinary principles and methods used in the study of Mesozoic and Cenozoic palaeoenvironments. • C3. Use of specialised equipment and software to obtain, process and interpret primary data;

Transversal competences	<p>CT1. The use of assimilated knowledge in new, interdisciplinary contexts</p> <p>CT2. Using theoretical notions in solving practical problems</p> <p>CT3. Ability to critically evaluate scientific information</p>
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7. Course objectives (based on the acquired competencies grid)

7.1 The general objective of the course	<ul style="list-style-type: none"> Understanding how palaeoenvironmental studies contribute to advancing our knowledge of Earth evolution
7.2 Specific objectives	<ul style="list-style-type: none"> Understanding the evolution of Mesozoic and Cenozoic palaeoenv. Learning the principles of dating and correlation of geological formations. Use of specific methods in paleoenvironment and paleoclimate reconstructions

8. Content

8.1 Lectures	Teaching methods	Comments
Introductory course. Generalities, applications, and importance. Terminology.	Presentation, discussions, case studies	
Chronostratigraphy and biostratigraphy of the Mesozoic and Cenozoic		
Modern methods used in the study of past paleoenvironments: principles, applications		
Mesozoic and Cenozoic marine ecosystems		
Meso/Cenoz. continental ecosystems: faunal evolution		
Mesozoic/Cenoz. continental ecosystems: evolution of vegetation and climate		
Paleogeography of Mesozoic and Cenozoic		
8.2 Seminars / laboratory classes	Teaching methods	Comments
Use of methods for processing paleontological samples in the laboratory processing.	Presentation, case studies, discussions, exercises	
Morphology and structure of microfossils: identification of some types of microfossils.		
Graphic processing of data, with the help of specialized software		
Case studies prepared together with doctoral students, based on individual doctoral research topics		
<p>References:</p> <p>The specific bibliography for each topic is established according to the research topic of each doctoral student.</p> <p>Bibliografia specifică fiecărei teme este stabilită în funcție de subiectul de cercetare al fiecărui doctorand</p> <p>Benton M. J. 2008. The history of life. A very short introduction. Oxford University Press.</p> <p>Dragastan, O., Petrescu, I., Olaru, L., 1980. Palinologie. Ed. Didactică și Pedagogică București.</p> <p>MacDonald, G., 2001. Space, Time and life: The Science of Biogeography. John Wiley & Sons</p> <p>Petrescu, I., 2003: Palinologia Tertiului. Ed. Carpatica, Cluj-Napoca.</p> <p>https://earthobservatory.nasa.gov/features/Paleoclimatology_Understanding</p> <p>- http://www.sci.sdsu.edu/plants/plantsystematics/pdfs/Punt_etal2006-PollenPalynology.pdf</p> <p>- http://www.colby.edu/info.tech/BI211/</p> <p>- https://climatic.inforef.be/cle_pollen/intro.htm</p>		

9. Aligning the contents of the discipline with the expectations of the epistemic community representatives, professional associations and standard employers operating in the program field

- The lectures and lab activities are designed and updated to give the students the necessary scientific knowledge and practical abilities required by the professional environment.

10. Examination

Activity type	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Weight in the final grade
10.4 Lectures	Assessment of knowledge	Written exam	50%
10.5 Seminars / laboratory classes	Activity during seminars	Discussions	20%
Assessment of knowledge			
10.6 Minimum performance standard			
<ul style="list-style-type: none">• 50% of the subjects required by the written exam• 50% of the practical test			

Date of issue
11.05.2025

Signature of the teacher
responsible for lectures

Signature of the teacher
responsible for seminars

Date of approval by the doctoral school council
16.05.2025

Signature of the doctoral school director