COURSE SYLLABUS

1. Data about the program

1.1 Higher education institution	Babeș-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	Geochronology						
2.2 Teacher responsible for lectures	Prof.dr. Sorin Filipescu						
2.3 Teacher responsible for seminars	Prof.dr. Sorin Filipescu						
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	• Stratigraphy
4.2 Competences	• Use of reference databases

5. Conditions (where applicable)

5.1 Conducting lectures	• Video support
5.2 Conducting seminars / laboratory classes	• Case studies • Following of 80% of the lab activities

6. Specific competences acquired

Professional competences	• Identification and interpretation of the time sequences of geological processes • Ability to observe and interpret the natural processes at different scales • Application of theoretical knowledge in lab and field activities, use of references in the professional activities • Age determination and correlation of the sedimentary geological structures based on biotic events and physical methods

Transversal competences	• Ability to analyze and synthetize phenomena and processes by rigorously scientific methods • Ability to carry a responsible individual activity by planning the activities and perseverently following the purpose • Using the equipments and specialized software for processing and interpretation of the primary geological data • Preparation of general and specific documents • Ability to present coherently and well argumented the results of their own activity and of the synthetized data from the professional environment

7. Course objectives (based on the acquired competencies grid)

7.1 The general objective of the course	• Learning the general principles of age determination, identification and interpretation of the geological processes in space and time
7.2 Specific objectives	• Learning the stratigraphic principles of age determination and correlation of rock units (Geochronology, Chronostratigraphy, Biostratigraphy, Magnetostratigraphy, Chemostratigraphy, Cyclostratigraphy etc.)

8. Content

8.1 Lectures	Teaching methods	Comments
Space and time in stratigraphy. Principles of stratigraphic classification	Presentation, discussions, case studies	
Chronostratigraphy, chronostratigraphic scales, classical and modern methods of chronocorrelation		
Case studies for age determination and correlation of the geological formations		
References Doyle, P.; Benett, M.R.; Baxter, A.N.; 2001. *The key to Earth History. An introduction to Stratigraphy* (second edition). 293 p. John Willey & Sons. Gradstein, F.; Ogg, J.; Schmitz, M.D, Ogg, G.M. (eds.); 2020. *The Geologic Time Scale 2020*. 2 vol., 1357p. Elsevier. Salvador, A.; 1994. *International Stratigraphic Guide – A Guide to Stratigraphic Classification, Terminology and Procedure* (second edition). 214p. The Geological Society of America.		
8.2 Seminars / laboratory classes	Teaching methods	Comments
Case studies prepared together with the PhD students, based on their individual research subjects	Presentation, case studies, discussions, exercises	
References: Speciffic to each subject		

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	10%
	Assessment of knowledge	Practical tests	40%

10.6 Minimum performance standard
• 50% of the subjects required by the written exam • 50% of the practical test and contributions to the discussions.

Date of issue	Signature of the teacher responsible for lectures	Signature of the teacher responsible for seminars
22.02.2023		

Date of approval by the doctoral school council	Signature of the doctoral school director
24.02.2023	