COURSE DESCRIPTION

History of Mathematics

Academic year 2026-2027

1. Programme-related data

1.1. Higher Education Institution	**Babes-Bolyai University Cluj-Napoca**
1.2. Faculty	**Faculty of Matematics and Informatics**
1.3. Department	**Department of Mathematics**
1.4. Field	**Mathematics**
1.5. Level of study	**Bachelor**
1.6. Degree programme / Qualification	**Mathematics-Informatics**
1.7. Form of education	**with frequency**

2. Course-related data

2.1. Course title	**Mathematics history**			Course code	**MLR2006**
2.2. Course coordinator	Lect. Dr. Veronica Ilea				
2.3. Seminar coordinator	-				
2.4. Year of study	3	2.5. Semester	6	2.6. Type of assessment	Viva voce
2.7. Course status	Optional			2.8. Course type	Complementary subject

3. Total estimated time (hours per semester of teaching activities)

3.1. Number of hours per week	2	of which: 3.2. course	**2**	3.3. seminar/ laboratory/ project	0
3.4. Total of hours in the curriculum	**24**	of which: 3.5. course	**24**	3.6. seminar/ laboratory	0
Time allocation for individual study (IS) and self-taught activities (ST)					**hours**
Learning from textbooks, course materials, bibliography, and notes (IS)					**20**
Additional research in the library, on subject-specific electronic platforms, and on-site					**11**
Preparing seminars/ laboratories/ projects, assignments, reports, portfolios, and essays					**10**
Tutoring (professional guidance)					**6**
Examinations					**4**
Other activities					**-**
3.7. Total hours of individual study (IS) and self-taught activities (ST)				**51**	
3.8. Total hours per semester				**75**	
3.9. Number of credits				**3**	

4. Prerequisites (where applicable)

4.1. curriculum-related	In-depth knowledge of the history of mathematics at undergraduate level, in particular the following topics: • Periodization • The classification of the development of mathematics into eras and periods
4.2 skills-related	•The ability to recognize mathematicians and periods of development • Working with abstract concepts • The ability to make logical deductions

5. Specific conditions (where applicable)

5.1. course-related	blackboard, chalk, projector
5.2. seminar/laboratory-related	-

6.1. Competencies resulting from the completion of the degree programme *(as referred to in the curriculum)*[1]

Professional competencies	
Competency code	**Competency**
CP3	conduct quantitative research
CP5	synthesize information
CP6	think abstractly
Transversal competencies	
Competency code	**Competency**
CT2	Use digital devices and applications
CT3	Work independently

6.2. Learning outcomes relevant to the degree programme (as referred to in the curriculum)[2]

Learning outcomes targeted by the subject		
Competency code	**Knowledge and comprehension**	**Specific academic skills**
CP2 CP3	17. The student/graduate indicates and recognizes the concepts involved in the requirements of exercises and problems formulated in the curriculum disciplines.	17. The student/graduate uses independent information and documentation methods, which provide openness to continuous learning, prepares scientific communications or scientific reports, and provides complete bibliographic references while respecting ethical standards for citing documentation sources used. The student/graduate approaches problem-solving from different angles and directions, including through non-traditional methodologies, to use them in computer science and other applications of mathematics.
CT6	19. The student/graduate identifies and describes the concepts studied in mathematics and computer science and correlates them with concepts from the English language.	26. The student/graduate communicates fluently in English, both in written and oral form, conveying both scientific information and information from everyday life.

7. Subject-specific learning outcomes

Knowledge and comprehension
The student is familiar with concepts and can describe, using specific terminology, details related to the taught notions.
Specific academic skills
The student is able to use existing resources to appropriately frame the concepts and problems that have been taught.

[1] The professional and/or transversal skills targeted by the subject for which the course description is prepared will be copied from the curriculum of the degree programme. For each competency, the complete entry, including the competency code, will be copied with the exact wording that appears in the curriculum, without any changes. If no competency is copied from either of the two categories, the row corresponding to that category is deleted from the table.

[2] The learning outcomes relevant for the degree programme and targeted by the subject for which the course description is prepared will be listed. The entries, copied without any changes from the Curriculum by subject type (Core Subject/Specialisation Subject/Complementary Subject), are listed under the corresponding competency.

8. Contents

8.1. Course	**Teaching and learning methods**	**Remarks[3]**
1. Preliminary.Mathematics hystory sources. Specific time for mathematics evolution	Exposure: description, explanation, examples, discussion of case studies	
2.Matematics in antient Greec. Famouse problems of the greecs.	Exposure: description, explanation, examples, discussion of case studies	
3.Mathematics in Middle Age.	Exposure: description, explanation, examples, debate, dialogue	
4.Modern calcul: Newton and Leibniz. Riemann integral	Exposure: description, explanation, examples, discussion of case studies	
5.Geometry and axioms. Solving algebric equations.	Exposure: description, explanation, examples, proofs	
6.The fundamental problem. The theory oof sets or working with the infinit.	Exposure: description, explanation, examples, proofs, debate, dialogue	
7.Cathegories theory. Computer and algoritms.	Exposure: description, explanation, examples, discussion of case studies	

Bibliografy
1. Both, Nicolae: Istoria matemaicii. Editura ALC Media Group, Cluj-Napoca, 1999.
2. Mihaileanu, N.: Istoria matematicii – Antichitatea; Evul mediu; Renasterea si secolul al 17-lea. Editura Enciclopedica Româna, Bucuresti, 1974.
3. Mihaileanu, N.: Istoria matematicii -- Secolul al 18-lea; Prima jumatate a secolului a 19-lea; Dezvoltarea ulterioara a matematicii. Editura Stiintifica si Enciclopedica, Bucuresti, 1981.
4. Toth Alexandru: Istoria matematicii, Univ. "Babes-Bolyai" Cluj, Facultatea de Matematica si Informatica, Cluj-Napoca, 1971

9. Evaluation

Type of activity	9.1 Evaluation criteria[4]	9.2 Evaluation methods[5]	9.3 Percentage in the final grade
9.4. Course	To present in front of the class a paper containing the life or/and work of some important mathematician	Oral paper	30%
	To prepare a paper containing a synthesis or comparison regarding a period in the history of mathematics	Submitted paper	30%
	Test paper - final	Written paper	40%
9.5. Seminar/ laboratory	-	-	-
	-	-	-
9.6 Minimum standard for passing			
At least grade 6 (from a scale of 1 to 10) to the referat. At least 20% obtained at the final test.			

[3] For example, organisational aspects, recommendations for students, specific aspects relating to the course/seminar, such as inviting experts in the field, etc.

[4] The evaluation criteria must directly reflect the learning outcomes targeted at the level of the degree programme respectively at the level of the subject. More specifically, the learning outcomes set out in the expected learning outcomes are assessed.

[5] Both final evaluation methods and ongoing evaluation strategies should be established.

10. SDG labels (Sustainable Development Goals)[6]

	○	Sustainable Development Generic Label						
1	2	3	4	5	6	7	8	9
○	○	○	○	○	○	○	○	○
10	11	12	13	14	15	16	17	No label applies
○	○	○	○	○	○	○	○	◉

Date of entry:
15.04.2026

Signature of course coordinator

Lect.dr. Veronica Ilea

Signature of seminar coordinator

Lect.dr. Veronica Ilea

Date of approval in the department:
24.04.2026

Signature of the head of department

Prof. dr. Andrei Mărcuș

[6] Select a single label which, according to the *Implementation of SDG labels in the academic process*, best matches the subject. If the subject addresses sustainable development in a generic manner (i.e. by presenting/introducing the general framework of sustainable development, etc.), then the Sustainable Development generic label may be applied. If none of the labels describe the subject, select the last option: *"No label applies."*