

# SYLLABUS

## HISTORY OF MATHEMATICS

University year 2005-2006

### 1. Information regarding the programme

1.1 Higher education institution	<b>Babes-Bolyai University Cluj-Napoca</b>
1.2 Faculty	<b>Faculty of Mathematics and Informatics</b>
1.3 Department	<b>Department of Mathematics</b>
1.4 Field of study	<b>Mathematics</b>
1.5 Study cycle	<b>Bachelor</b>
1.6 Study programme / Qualification	<b>Mathematics-Informatics</b>
1.7. Form of education	<b>with frequency</b>

### 2. Information regarding the discipline

2.1 Name of the discipline		Mathematics history		Discipline 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 evaluation	C	2.7 Type of discipline	Optional

### 3. Total estimated time (hours/semester of didactic activities)

3.1 Hours per week	<b>2</b>	Of which: 3.2 curs	<b>2</b>	3.3 seminar/laboratory	<b>0</b>
3.4 Total hours in the curriculum	<b>24</b>	Of which: 3.5 curs	<b>24</b>	3.6 seminar/labor.	<b>0</b>
Time allotment:					hours
Learning using manual, course support, bibliography, course notes					<b>40</b>
Additional documentation (in libraries, on electronic platforms, field documentation)					<b>40</b>
Preparation for seminars/labs, homework, papers, portfolios and essays					<b>30</b>
Tutorship					<b>10</b>
Evaluations					<b>6</b>
Other activities: .....					<b>-</b>
3.7 Total individual study hours	<b>126</b>				
3.8 Total hours per semester	<b>150</b>				
3.9 Number of ECTS credits	<b>6</b>				

### 4. Prerequisites (if necessary)

4.1 curriculum	•
4.2 competencies	•

### 5. Conditions (if necessary)

5.1. for the course	• The courses will be taught at the blackboard, sometimes th evideo
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	projector is needed
5.2. for the seminar /lab activities	<ul style="list-style-type: none"> <li>•</li> </ul>

### 6.1. Specific competencies acquired

Professional competencies	<p>C1.1 The identification of the informations, the description of the theories and the use of the specific language</p> <p>C2.4. The comparative analyze of the results obtained by solving the problems with the preexisting data</p> <p>C5.5 The developement of some / homeworks using different proof methods</p>
Transversal competencies	<p>CT3. The efficient use of some information sources and of some comunication resources and asisted resources of comunication and training, studied in romanian and in a professional comunication language also.</p>

### 6.2. Learning outcomes

Knowledge	The student knows: concepts and can describe using specific language details regarding the concepts taught.
Skills	The student is able to use existing resources for a favorable framing of the concepts and problems taught.
Responsibility and autonomy:	The student has the ability to work independently to study and develop the concepts taught regarding the history of mathematics, to present them in oral and electronic format.

### 7. Objectives of the discipline (outcome of the acquired competencies)

7.1 General objective of the discipline	<ul style="list-style-type: none"> <li>• Be able to understand the mathematical concepts dureing time</li> <li>• To understand methods of solving of different problems</li> </ul>
7.2 Specific objective of the discipline	<ul style="list-style-type: none"> <li>• To reach the perfect motivation needed for team work, to develop a professional attitude for the team work</li> </ul>

### 8. Content

8.1 Course	Teaching methods	Remarks
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

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

#### **9. Corroborating the content of the discipline with the expectations of the epistemic community, professional associations and representative employers within the field of the program**

- The course respects the IEEE and ACM Curricula Recommendations for Computer Science studies;
- The course exists in the studying program of all major universities in Romania and abroad;
- The content of the course: basic elements related of mathematical evolution in time

#### **10. Evaluation**

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the grade (%)
10.4 Course	To present in front of the class a paper containing the life or/and work of some important mathematician	Referat	60%
	- know the basic principle of the domain - apply the course concepts -to know the mathematics periods	Written exam	30%

#### 10.6 Minimum performance standards

- At least grade 6 (from a scale of 1 to 10) to the referat.

#### **11. Labels ODD (Sustainable Development Goals)**

*Not applicable.*


Date

29.04.2025.


Date of approval

30.04.2025.

Signature of course coordinator

Lect.dr. Veronica Ilea 

Signature of seminar coordinator

Lect.dr. Veronica Ilea 

Signature of the head of department

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