

COURSE DESCRIPTION

Etică și integritate academică. / Academic ethics and integrity
Academic year 2026-2027

1. Programme-related data

1.1. Higher Education Institution	Babes-Bolyai University
1.2. Faculty	Mathematics and Computer Science
1.3. Doctoral School	Mathematics and Computer Science
1.4. Field of study	Mathematics
1.5. Level of study	doctoral

2. Course-related data

2.1. Course title	Etică și integritate academică. / Academic ethics and integrity	Course code	MDE3135
2.2. Course coordinator	Cătinaș Teodora Maria		
2.3. Seminar coordinator	Cătinaș Teodora Maria		
2.4. Year of study	2.5. Semester	1	2.6. Type of assessment
2.7. Course status	Compulsory	2.8. Course type	Core subject

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

3.1. Number of hours per week	3	of which: 3.2. course	2	3.3. seminar/ laboratory/ project	1
3.4. Total of hours in the curriculum	36	of which: 3.5. course	24	3.6. seminar/ laboratory	12
Time allocation for individual study (IS) and self-taught activities (ST)					hours
Learning from textbooks, course materials, bibliography, and notes (IS)					60
Additional research in the library, on subject-specific electronic platforms, and on-site					60
Preparing seminars/ laboratories/ projects, assignments, reports, portfolios, and essays					52
Tutoring (professional guidance)					24
Examinations					4
Other activities					14
3.7. Total hours of individual study (IS) and self-taught activities (ST)				214	
3.8. Total hours per semester				250	
3.9. Number of credits				10	

4. Prerequisites (where applicable)

4.1. curriculum-related	
4.2. skills-related	

5. Specific conditions (where applicable)

5.1. course-related	
5.2. seminar/laboratory-related	

6. Subject-specific learning outcomes

Knowledge
CP1 1. Knows advanced concepts, theories, and models in the field. 2. Identifies frontier literature in the field.
CP2 1. Knows methods and techniques for identifying and formulating problems. 2. Understands the criteria for relevance and originality of scientific problems.
CP3 1. Knows advanced research methods and techniques, both theoretical and experimental. 2. Understands the scientific methodology applied to their field.
CP4 1. Knows the stages and procedures of project planning. 2. Understands monitoring and reporting tools.
CP10 1. Knows research ethics codes and regulations. 2. Understands the ethical implications of the methodology and results.
CT1 1. Knows the rules of oral and written scientific communication. 2. Understands the structure of scientific presentations and articles.
CT2 1. Knows international academic terminology. 2. Understands complex scientific documents in foreign languages.
Skills
1. Applies knowledge to the analysis of complex problems. 2. Integrates theoretical and practical concepts for innovative solutions.
1. Formulates original problems and proposes creative solutions. 2. Applies innovative methods to solve identified problems.
1. Designs and applies sophisticated methods for investigating problems. 2. Uses data processing and interpretation techniques.
1. Plans and manages resources, deadlines, and objectives. 2. Applies risk assessment and performance optimization techniques.
1. Applies ethical principles in all stages of research. 2. Evaluates ethical risks and proposes solutions for compliance.
1. Drafts and presents scientific information coherently. 2. Adjusts communication according to the audience.
1. Drafts and formulates complex ideas in international contexts. 2. Participates in multicultural collaborations.
Responsibility and autonomy
1. Works autonomously in investigating and expanding knowledge. 2. Assumes responsibility for the validity of the conclusions.
1. Assumes responsibility for the quality and impact of the solutions. 2. Works autonomously in defining research directions.
1. Takes autonomous decisions regarding the choice and adaptation of methods. 2. Assumes responsibility for the correctness of the applied procedures.
1. Assumes responsibility for the success of the project. 2. Coordinates team activities autonomously.
1. Assumes responsibility for respecting ethical principles. 2. Works autonomously to prevent and manage ethical issues.
1. Assumes responsibility for the clarity and accuracy of the communication. 2. Works autonomously in preparing the materials.
1. Works autonomously in international academic communication. 2. Assumes responsibility for the accuracy of the transmitted message.

7. Contents

7.1. Course	Teaching and learning methods	Remarks ¹
1. Documentation for being able of writing a research paper or a thesis. Presentation of the most important international publishing houses (Elsevier, Springer, SIAM, etc.). Presentation of the most important mathematical journals from Romania and abroad.	Exposure, description, explanation, dialogue.	
2. Presentation of the most important mathematical databases (Zentralblatt für Mathematik (zbMATH) (https://zbmath.org/), Web of Science (Clarivate) (https://webofknowledge.com/), etc.	Exposure, description, explanation, dialogue.	
3. Mathematics Subject Classification. The major mathematical reviewing databases: Mathematical Reviews and Zentralblatt MATH. Presentation of Scholar Google, ResearchGate, ArXiv, JSTOR, ORCID, ResearcherID.	Exposure, description, explanation, dialogue.	
4. Mathematical writing – general rules. What is the theorem, the lemma, the proposition? Which are the differences between them? What is the corollary, the hypothesis, the conjecture, the proof, etc. Mathematical expressions, symbols and their use.	Exposure, description, explanation, dialogue.	
5. What is allowed in mathematical writing (do-s and don't-s of mathematical writing).	Exposure, description, explanation, examples.	
6. Writing a research paper: the audience, the structure, the right title, the abstract, the keywords. Writing a research paper: the introduction, the tables, the citations, the conclusions, the numerical examples, the acknowledgements, the appendix, the bibliography.	Exposure, description, explanation, examples, dialogue.	
7. Writing a thesis: the main rules, the aim and scope of the thesis, the criteria that should be fulfilled, the content, the audience, the structure, the right title, the abstract, the presentation, the references.	Exposure, description, explanation, examples, dialogue.	
8. How to Cite References in a research paper and in a thesis. Writing an oral presentation of a thesis. Defending a thesis.	Exposure, description, explanation, examples, dialogue.	
9. What is a conference, congress, symposia, colloquia and workshops. The differences between them.	Exposure, description, explanation, examples, dialogue.	
10. Writing an oral presentation/poster for scientific meetings.	Exposure, description, explanation, examples, dialogue.	

¹ For example, organisational aspects, recommendations for students, specific aspects relating to the course/seminar, such as inviting experts in the field, etc.

11. Ethics and integrity approach of writing a mathematical research paper. Ethics and integrity aspects in scientific research (1): definitions, general ethics problems. Ethics and integrity aspects in scientific research (2): The General Ethic Code in Scientific Research. Legal approach. Ethics and integrity aspects in scientific research (3): general and specific objectives (Strategia Națională de Cercetare, Dezvoltare și Inovare 2014-2020).	Exposure, description, explanation, examples, dialogue.	
12. Ethic and integrity aspects in scientific research: (4): ethics and integrity in fundamental research. Ethics and integrity aspects in scientific research: (5): aspects from European community. Documents of the European Commission.	Exposure, description, explanation, examples, dialogue.	

Bibliography

1. Borja, *11 steps to structuring a science paper editors will take seriously*, Elsevier, 2014.
2. Buchberger, *Thinking, Speaking, Writing*, http://www.risc.jku.at/people/buchberger/thinking_course.html
3. R. A. Day, *How to Write and Publish a Scientific Paper*, Cambridge, 1994.
4. M. Derntl, *Basics of research paper writing and publishing*, Int. J. Technology Enhanced Learning, Vol. 6, No. 2, 2014.
5. P. Edwards: *How to give an academic talk*, <http://pne.people.si.umich.edu/PDF/howtotalk.pdf>
6. N. J. Higham, *Handbook of Writing for the Mathematical Sciences*, SIAM, Philadelphia, 1998.
7. J. Hoogenboom, R. C. Manske, *How to write a scientific article*, Int J Sports Phys Ther., 2012 7(5), pp. 512-517.
8. R. Kitchin, & D. Fuller, *The Academic's Guide to Publishing*, SAGE Publications, London, 2005.
9. Mathematics Subject Classification (MSC) <https://mathscinet.ams.org/mathscinet/msc/msc2010.html>
10. B. Spillman, I. Parberry, *How to Present a Paper: A Speaker's Guide*, <http://www.sfu.ca/~jeffpell/Ling480/ParberryMembrane.pdf>
11. *The Clarivate Analytics Impact Factor*, <https://clarivate.com/essays/impact-factor/>
12. *University ranking*, <http://www.topuniversities.com/university-ranking-articles/>
13. *Codul etic al UBB*, http://www.ubbcluj.ro/ro/despre/organizare/files/etica/Codul_Etic_al_UBB.pdf

7.2. Seminar/ laboratory	Teaching and learning methods	Remarks
1. Searching for scientific papers in the research field of the dissertation thesis on the websites of the most important international publishing houses.	Explanation, dialogue, examples.	
2. Using of Scholar Google (https://scholar.google.ro), ResearchGate, ArXiv, JSTOR. Presentation of the first project.	Explanation, dialogue, examples.	
3. Searching for scientific papers in Web of Science (Clarivate) (https://webofknowledge.com/).	Explanation, dialogue, examples.	
4. Writing mathematical expressions using LaTeX. Presentation of the second project: presentation of a scientific article in your research area.	Explanation, dialogue, examples.	
5. Writing research papers, talks and posters using Overleaf.	Explanation, dialogue, examples.	
6. Presentation of the third research project in the field of the PH.D. thesis.	Explanation, dialogue, examples.	

Bibliography

1. R. A. Day, *How to Write and Publish a Scientific Paper*, Cambridge, 1994.
2. M. Derntl, *Basics of research paper writing and publishing*, Int. J. Technology Enhanced Learning, Vol. 6, No. 2, 2014.

3. P. Edwards: *How to give an academic talk* <http://pne.people.si.umich.edu/PDF/howtotalk.pdf>
4. N. J. Higham, *Handbook of Writing for the Mathematical Sciences*, SIAM, Philadelphia, 1998.
5. B. J. Hoogenboom, R. C. Manske, *How to write a scientific article*, Int J Sports Phys Ther., 2012 7(5), pp. 512–517.
6. Mathematics Subject **Classification** (MSC) <https://mathscinet.ams.org/mathscinet/msc/msc2010.html>
7. *The Clarivate Analytics*, <https://clarivate.com>
8. *Zentralblatt Mathematics* <https://zbmath.org/>

8. Evaluation

Type of activity	8.1 Evaluation criteria ²	8.2 Evaluation methods ³	8.3 Percentage in the final grade
8.4. Course	To know the main principles in research and in writing a research paper/thesis in Mathematics.	Written exam	20%
	To know the main aspects of Ethics and Integrity in scientific research.		
8.5. Seminar/ laboratory	To be able to write a scientific paper/thesis using LaTeX and Overleaf.	Accomplishment of given tasks.	20%
	Presentation of the three research projects.	Oral presentation.	60%
8.6 Minimum standard for passing			
<ul style="list-style-type: none"> • At least 5 grade. • The student should be able to: <ul style="list-style-type: none"> - review a scientific paper - write and present a scientific paper. - present a scientific work • Presentation of the three research projects. 			

9. SDG labels (Sustainable Development Goals)⁴

	<input type="radio"/>	Sustainable Development Generic Label						
								
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>					

² 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.

³ Both final evaluation methods and ongoing evaluation strategies should be established.

⁴ 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.”

								No label applies
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>						

Date of entry:
13.02.2026

Signature of course coordinator

Assoc. Prof. Teodora Căținaș



Signature of seminar coordinator

Assoc. Prof. Teodora Căținaș



Date of approval in the department:

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Signature of the head of department

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