

Syllabus

1. Programme information

1.1. Institution	THE BUCHAREST UNIVERSITY OF ECONOMIC STUDIES
1.2. Faculty	Economic Cybernetics, Statistics and Informatics
1.3. Departments	Department of Applied Mathematics
1.4. Field of study	Cybernetics and statistics
1.5. Cycle of studies	Master Studies
1.6. Education type	Full-time
1.7. Study programme	Applied data analytics
1.8. Language of study	English
1.9. Academic year	2026-2027

2. Information on the discipline

2.1. Name	Optimization and Simulation Methods for Analytics								
2.2. Code	26.0318IF2.1-05.1								
2.3. Year of study	2	2.4. Semester	1	2.5. Type of assessment	Test	2.6. Status of the discipline	A	2.7. Number of ECTS credits	6
2.8. Leaders	C(C)	prof.univ.dr. GIUCLEA Marius					marius.giuclea@csie.ase.ro		
	S(S)	prof.univ.dr. GIUCLEA Marius					marius.giuclea@csie.ase.ro		

3. Estimated Total Time

3.1. Number of weeks	14.00
3.2. Number of hours per week	3.00 of which
	C(C) 2.00
	S(S) 1.00
3.3. Total hours from curriculum	42.00 of which
	C(C) 28.00
	S(S) 14.00
3.4. Total hours of study per semester (ECTS*25)	150.00
3.5. Total hours of individual study	108.00
<i>Distribution of time for individual study</i>	
Study by the textbook, lecture notes, bibliography and student's own notes	
Additional documentation in the library, on specialized online platforms and in the field	
Preparation of seminars, labs, assignments, portfolios and essays	
Tutorials	
Examinations	
Other activities	

4. Prerequisites

4.1. of curriculum	
4.2. of competences	

5. Conditions

for the C(C)	
for the S(S)	

6. Acquired specific competences

PREFESSIONAL	CC2	STEM (science, technology, engineering, mathematics) skills – understanding the mathematical foundations of AI, statistical methods of data analysis applied in AI techniques.
PREFESSIONAL	CO4	Conducts quantitative research
PREFESSIONAL	CP3	Performs data analysis
PREFESSIONAL	CT1	Demonstrates an understanding of mathematical terms and concepts and applies basic mathematical principles and processes for interpreting data and facts.
PREFESSIONAL	CT2	Thinks through the use of logic and reasoning for identifying the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.

7. Objectives of the discipline

7.1. General objective	
7.2. Specific objectives	

8. Contents

8.1. C(C)	Teaching/Work methods	Recommendations for students
0		
<i>Bibliography</i>		
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8.2. S(S)	Teaching/Work methods	Recommendations for students
0		
<i>Bibliography</i>		
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9. Corroboration of the contents of the discipline with the expectations of the representatives of the epistemic community, of the professional associations and representative employers in the field associated with the programme

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10. Assessment

Type of activity	Assessment criteria	Assessment methods	Percentage in the final grade
10.1. Final assessment			

10.2. Modality of grading	Whole notes 1-10
10.3. Minimum standard of performance	

Date of listing,
04/28/2026

Signature of the discipline leaders,

Date of approval in the
department

Signature of the Department Director,