

Course syllabus

1. Core data

Course code	Credits	Semester
MSOA032LMSB	6	2024/25/2
Course title in Hungarian		
Többváltozós statisztikai modellek		
Course title in English		
Multivariate Statistical Models		
Course title in other language		
Course leader	Institute	
Vékás Péter	Institute of Operations and Decision Sciences	
Language of instruction	Type of final assessment	
Hungarian	Exam	
Number of theoretical classes per week (full-time programmes)	Number of practical classes per week (full-time programmes)	
0	0	
Number of theoretical classes per semester (part-time programmes)	Number of practical classes per semester (part-time programmes)	
14	14	
Available for preferential study schedule		
No		

2. Main features

Course objectives
Developing data analysis skills applicable to economic, insurance, and financial data. Acquiring knowledge of multivariate mathematical-statistical models and preparing for selection among them. Creating methodologically sound applications. Interpreting results to draw professional actuarial conclusions.
Brief description of the course
Introduction to R, descriptive statistics, and data visualization. Correlation and regression. Generalized linear models. Decision trees. Cluster analysis. Survival models. Principal component analysis.
Relationship with other courses of the programme
The course builds on the knowledge acquired in the Probability Theory and Mathematical Statistics courses.

3. Learning outcomes

Skill	Knowledge	Attitude	Autonomy and Responsibility
Actuarial students will be capable of developing methodologically sound applications and conducting independent analyses, reports, and surveys in insurance mathematics. They will also be able to interpret results and draw professionally substantiated conclusions in economic, insurance, and financial topics. This will enable them to		They are receptive and open to problems arising in insurance mathematics, striving to analyze them and synthesize modern statistical results and relationships.	They will become actuarial professionals capable of conducting independent analyses, critically evaluating their results, and actively contributing to decision-making processes.

support decision-making processes effectively.			
------------------------------------------------	--	--	--

4. Mandatory readings

Required literature	URL
Kovács Erzsébet: Többváltozós adatelemzés, e-könyv, Typotex.	