

Course description	
Course	Regression Models, Regression Analysis in Research
Department	Department of Biomathematics and Informatics
Language	English
Nature	Optional
Year/semester	1st year, spring-term
Credits (ECTS)	3
Lectures (hour/semester)	
Plenary lectures (hour/semester)	24
Practicals (hour/semester)	
Responsible teacher	Dr. Reiczigel Jenő
Teacher(s)	Dr. Reiczigel Jenő, Dr. Harnos Andrea
Prerequisites	
Learning outcome (include skills and competencies, if any)	
The aim of the course is to get acquainted with the fit of the most commonly used regression models, from exploratory analyzes through the process of model selection to the evaluation and correct interpretation of the results.	
Outcome assessment	
Weekly schedule of lectures and practicals	
WEEK	Lecture topics
Week 1	Exploratory analysis, linear regression. Logistic and Poisson regression.
WEEK	Practical topics
Week 1	Same as above.
WEEK	Lecture topics
Week 1	Mixed linear models
WEEK	Practical topics
Week 1	Same as above.
WEEK	Lecture topics
Week 1	Survival analysis. Cox regression.
WEEK	Practical topics
Week 1	Same as above.
Recommended literature	

Faraway J. J. Extending the Linear Model with R: Generalized Linear, Mixed Effects and Wood,
S. N. (2017). Generalized additive models: an introduction with R. Chapman and Hall/CRC.