Incoming student mobility

UNIOS University Unit: SCHOOL OF APPLIED MATHEMATICS AND INFORMATICS

COURSES OFFERED IN FOREIGN LANGUAGE
FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS

Department or Chair within the UNIOS Unit	School of Applied Mathematics and Informatics

Study program	Graduate university study programme in mathematics (Master level) Branches: • Financial Mathematics and Statistics

Study level	Graduate (master)

Course title	Statistical Learning
Course code (if any)	M144
Language of instruction	English
Brief course description	Syllabus. 1. Introduction. Types of learning problems and illustrations on practical examples. 2. Theory of statistical learning. Formal learning models. PAC learning and the loss function. Consistency and convergence of the learning process. Vapnik-Chervonenkis dimension. 3. Introduction to methods. Model validation and selection. 4. Overview of linear methods. Selection. Ridge and lasso regression. Linear models for classification. Additive models. 5. Trees. Boosting and additive trees. Random forests. 6. Support vector machines for classification and regression. Generalized linear discriminant analysis. 7. Deep learning. Neural networks. Parameter estimation methods. 8. Unsupervised learning methods.
Form of teaching	
Form of assessment	Lectures and exercises are obligatory. The final exam is oral, taken after the completed lectures and exercises and achieved minimum number of credits at the midterm exams and homework.
Number of ECTS	7

Class hours per week	2+0+3
Minimum number of students	
Period of realization	Summer semester
Lecturer	Danijel Grahovac