

## Incoming student mobility

UNIOS University Unit: DEPARTMENT OF MATHEMATICS

COURSES OFFERED IN FOREIGN LANGUAGE  
FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS

Department or Chair within the UNIOS Unit	Department of Mathematics
Study program	Graduate university study programme in mathematics (Master level) Branch: <ul style="list-style-type: none"> <li>Financial Mathematics and Statistics-obligatory</li> </ul>
Study level	Graduate (master)
Course title	Statistics
Course code (if any)	M120
Language of instruction	English
Brief course description	<p>Syllabus.</p> <ol style="list-style-type: none"> <li>1. Statistical model. (Definition and examples of statistical model, parametric statistical model, identifiability, sample distributions.)</li> <li>2. The estimator and its properties. (Optimality in estimation (minimax and Bayesian approach), sufficient and complete statistics, results on unbiased estimators of minimum variance, asymptotic properties of estimators.)</li> <li>3. Parameter estimation methods. (Substitution Principle, Method of Moments, Maximum Likelihood Method).</li> <li>4. Confidence intervals.</li> <li>5. Testing statistical hypotheses. (Neyman-Pearson approach, generalized likelihood ratio test, duality of confidence interval and statistical test.)</li> <li>6. Systematization and application of procedures for statistical inference of a single variable, for comparisons of variables and for analysis of relationships between variables.</li> </ol>
Form of teaching	Consultative teaching.
Form of assessment	Lectures and seminars are obligatory. During the course, statistical

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	software will be used (e.g. R). The final exam is oral, and it is taken after the lectures have been completed, the exercises completed, the minimum number of credits at the midterm examinations, and the completed and defended seminar work. Student may write homework during the course to improve their final grade.
Number of ECTS	7
Class hours per week	2+2+1
Minimum number of students	
Period of realization	Summer semester
Lecturer	Mirta Benšić