

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: <ul style="list-style-type: none"> Mathematics and Computer Science
Study level	Graduate (master)
Course title	Model reduction and approximation methods
Course code (if any)	M132
Language of instruction	English
Brief course description	Syllabus. <ol style="list-style-type: none"> 1. Introduction. Motivation and basic concepts from linear system theory. 2. Methods that are based on eigenvalues: balanced truncation, dominant pole algorithm. 3. Approaches based on balancing. 4. Numerical methods for solution of large-scale matrix equations: ADI method, sign function method. 5. Interpolatory methods for reduction: moment matching, H2 optimal reduction. 6. Methods for parametric model reduction.
Form of teaching	
Form of assessment	Lectures and seminars are obligatory. Exam is held after completion of lectures and it includes a written and an oral part as well as the seminar assignment. Students can take mid-term exams during the semester. Acceptable mid-term exam scores replace the written examination. Exercises are partially done using mathematical software on computers. Seminar assignment also influences the final grade. In seminar assignment students need to implement studied methods and interpret obtained results.

ERASMUS+

EU programme for education, training, youth and sport

Number of ECTS	6
Class hours per week	2+1+1
Minimum number of students	
Period of realization	Winter semester
Lecturer	Zoran Tomljanović