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 Mathematics and Informatics Education Study Programme

Study level	Graduate (master)

Course title	Selected Topics on School Mathematics
Course code (if any)	M115
Language of instruction	English
Brief course description	Syllabus. 1. Real numbers. The field of complex numbers. Trigonometric form of a complex number. The exponential form of a complex number. Applications of complex numbers in algebra, analysis and geometry. 2. Equations and inequalities. Rational and irrational equations and inequalities. Equations and inequalities with absolute values. Exponential and logarithmic equations and inequalities. Trigonometric equations and inequalities. 3. Inequalities. The arithmetic, geometric, harmonic and quadratic mean, and associated inequalities. Jensen's inequality. Cauchy inequality. Holder inequality. Chebyshev inequality. Young inequality. 4. Financial mathematics. Interest. Monthly and yearly compounding. The present value of cash flows. Annuities. Repayment of the loan and the annual annuities. Repayment of the loan and interest rate.
Form of teaching	
Form of assessment	Lectures and exercises are Obligatory. The exam consists of written and oral part, which can be taken after the completion of lectures and exercises. During semester, students can take mid-terms which

	can replace the written examination.
Number of ECTS	5
Class hours per week	2+3+0
Minimum number of students	
Period of realization	Winter semester
Lecturer	Mihaela Ribičić Penava