

Incoming student mobility

UNIOS University Unit: DEPARTMENT OF MATHEMATICS

COURSES OFFERED IN FOREIGN LANGUAGE
FOR ERASMUS+ INDIVIDUAL INCOMING STUDENTS

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| Department or Chair within the UNIOS Unit | Department of Mathematics |
| 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 | <p>Syllabus.</p> <ol style="list-style-type: none"> 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 | Consultative 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 |

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EU programme for education, training, youth and sport

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| | 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 |