

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"> Financial Mathematics and Statistics-obligatory
Study level	Graduate (master)
Course title	Financial and Actuarial Mathematics
Course code (if any)	M008
Language of instruction	English
Brief course description	<p>Syllabus.</p> <ol style="list-style-type: none"> 1. The idea of interest. Simple and compound interest. Accumulation factors. The effective and nominal rate of interests. The force of interest. Present values. Present values of cash flows. Valuing cash flows. 2. Interest income. The rate of discount. The equation of value and the yield on a transaction. Annuities-certain: present values and accumulations. Deferred, increasing and continuously payable annuities. The loan schedule for equal annuities. Interest payable more frequently than once a year. Annuities payable more frequently than once a year and annuities payable in intervals greater than year. Discounted cash flows and capital redemption policies. 3. Survival models. The force of mortality. Estimation of mortality. Some simple laws of mortality. Select and ultimate mortality tables. 4. Pure endowments. Life annuities (whole life, temporary and deferred). Present values and accumulation. Net and office premiums. Life annuities payable more frequently than once a

ERASMUS+

EU programme for education, training, youth and sport

	year. Policy values.
Form of teaching	
Form of assessment	Lectures and exercises are obligatory. The examination consists of a written and an oral part, and one takes the exam upon the completion of lectures and exercises. Acceptable mid-term exam scores replace the written examination. Students can influence their final grades by writing homework or making seminar during the semester.
Number of ECTS	5
Class hours per week	2+2+0
Minimum number of students	
Period of realization	Winter semester
Lecturer	Mirela Jukić Bokun