Program	Level		First cycle		
	Name of the program		Applied Mathematics		

COURSE

Course title	**Actuarial Mathematics**				
Course code	Semester	Course status		ECTS	Contact hours (L+AE+LE)
AMAT320	V	Mandatory course		5	2+2+0
Lecturer					
Course Goals	The goal is for students to master theoretical and practical knowledge from stochastic processes based on the principles of equivalence related to life insurance of single and multiple payments based on single or multiple premium payments				
Learning Outcomes	A qualified expert who can calculate all important quantities related to one-time payments or multiple payments in life insurance in a fixed and/or variable amount based on algorithms of actuarial mathematics.				

COURSE CONTENT

- Characteristics of actuarial mathematics and its algorithms
- Probability theory and the law of large numbers in actuarial mathematics
- Demographic and actuarial tables, quantitative relations of commutative numbers
- Single payments and multiple payment models
- One-time payments and models of one-time payments
- Multiple payments and multiple payment models
- Multiple payments and one-time payments
- Gross and net premiums
- Mathematical or premium reserve
- Forms of the principle of equivalence in actuarial mathematics

LITERATURE

[1] Željko Šain: Aktuarski modeli životnih osiguranja, I dio, Ekonomski fakultet u Sarajevu, 2009.

[2] Krčmar Milivoj: Modeli životnog osiguranja na bazi uplate jednokratne premije, Ekonomski fakultet u Sarajevu, 1987.

[3] Rajko Ralević: Finansijska i aktuarska matematika, Savremena administracija, Beograd, 1985.

[4] Jelena Kočović: Aktuarske osnove formiranja tarifa u osiguranju lica, Ekonomski fakultet Beograd, 2006.

[5] Jelena Kočović i Tatjana Rakonjac Antić: Zbirka rešenih zadataka iz finansijske i aktuarske matematike, Ekonomski fakultet Beograd, 2005.

STUDENT WORKLOAD (hours in a semester)

Lectures	30	Tutorial	30	Individual work	65	T o t a l	125

GRADING			REMARKS	
Criterion	Maximum points	Minimum points		
Midterm exams	2x20=40	11+11		
Homework assignments	10	5		
Seminar	10	6		
Final exam	40	22		
T o t a l	100	55		