Program	Level	First cycle
	Name of the program	Applied Mathematics

COURSE				
Course title	**Financial Mathematics**			
Course code	Semester	Course status	ECTS	Contact hours (L+AE+LE)
AMAT290	IV	Mandatory course	5	2+2+0
Lecturer				
Course Goals	The goal is for students to master theoretical and practical knowledge from all processes based on systems of complex growth in financial and natural sets based on the principles of equivalence, which is achieved by methods of prolongation or discounting, and their combination.			
Learning Outcomes	An expert qualified to solve concrete cases based on individual and/or common characteristics of increasing or decreasing their growth on the basis of the algorithm of financial mathematics.			

COURSE CONTENT

- Characteristics of financial mathematics and its algorithms
- Simple and compound interest calculations and characteristics of the main inputs in the calculations
- Basic and derived forms of yield rates, i.e. interest rates
- Account linked to one principal as a unique set of n elements
- Periodic accumulation of funds on the basis of deposit accounts in financial mathematics
- Periodic payments based on annuity accounts in financial mathematics
- Models and methods of amortization of loans in the classic form
- Models and methods of amortization of loans divided into bonds
- Conversion of loans
- Forms of the principle of equivalence in financial mathematics

LITERATURE

[1] Branko Trklja: Finansijska matematika, Ekonomski fakultet u Sarajevu, bilo koje izdanje
[2] Branko Trklja, Finansijske i mortalitetne tablice, Veselin Masleša, Sarajevo, bilo koje izdanje
[3] Željko Šain: Formule iz finansijske matematike, Ekonomski fakultet u Sarajevu, bilo koje izdanje
[4] Milivoj Krčmar: Finansijska matematika i metode investicionog odlučivanja, Kemigrafika, Sarajevo, 2002.
[5] Rajko Ralević: finansijska i aktuarska matematika, Savremena administracija, Beograd, 1985.

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	