Program	Level	First cycle
	Name of the program	Applied Mathematics

COURSE

Course title	**Numerical Analysis**			
Course code	Semester	Course status	ECTS	Contact hours (L+AE+LE)
AMAT 280	IV	Mandatory course	5	2+0+2
Lecturer				
Course Goals	Goal of this course is to teach a student to analyze a problem of numerical nature and to apply methods studied during semester.			
Learning Outcomes	After finishing this course succesfully, student will be able to apply everything containing the content od this course.			

COURSE CONTENT

- Solving systems of linear equations. Eigenvalue methods. QR algorithm. SVD method.
- Splines. Splines of first and second order. Natural cubic splines.
- Random numbers and their generation.
- Ordinary differential equations. Method of Taylor series. Runge-Kutta method.
- Least squares method.
- Numercal integration.
- Linear programming.

LITERATURE

[1] W. Cheney, D. Kincaid, Numerical mathematics and computing, Thomson Brooks/Cole, 2004.
[2] R. L. Burden, J. D. Faires, Numerical analysis, Pacific Grove, California: Brooks/Cole, 2001.

STUDENT WORKLOAD (hours in semester)

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

GRADING			**REMARKS**
Criterion	Maximum points	Minimum points	
Midterm exams	80	45	
Final exam	20	10	
T o t a l	100	55	