Course title: Selected Chapters of Numeric Mathematics -- didactical approach	
Lecturers: Dragoslav Herceg, Zorana Lužanin	
Status: obligatory/elective **elective**	
ECTS: 15	
Requirements:	

Learning objectives

Basics of teaching methods in numerical mathematics. Gaining basic knowledge of numerical mathematics, prepare students for their implementation, developing important elements of work culture in numerical mathematics: work habits, a sense of clarity, precision, control, etc.

Learning outcomes

Methodical processing of teaching topics in numerical mathematics. Students learn to use simple numerical methods; contraction algorithmic procedure in setting up, interpreting and solving tasks of numerical mathematics and its applications, linking knowledge of numerical mathematics with ostalmm branches of mathematics, computer science in computer science.

Syllabus

Theoretical study

And the approximate number of errors. Mechanical numbers and arithmetic. Calculation of the error function. Interpolation. Numerical differentiation. Diferencni quotients. Numerical integration. Primitive quadrature formula. Newton-Coates quadrature formula. Numerical solution of equations. General iterative procedure. Specific Iterative procedures.

Student research

Solving tasks and problems with a computer and *Mathematica*.

Suggested literature:

1. Herceg, D., Krejić, N., Numerička analiza, Univerzitet u Novom Sadu, Stylos, Novi Sad, 1997.

2. Herceg, D., Krejić, N., Numerička analiza. Zbirka zadataka I, Univerzitet u Novom Sadu, Institut za matematiku, Novi Sad, 1998.

3. Herceg, D., Krejić, N., Numerička analiza. Zbirka zadataka II, Univerzitet u Novom Sadu, Institut za matematiku, Novi Sad, 1998.

4. Herceg, D., Herceg, Đ., Numerička matematika, Stylos, Novi Sad, 2003.

5. Isaacson E., Keller, H.B., Analysis of Numerical Methods, Dover Publications; Revised ed. edition, (June 7, 1994), New York

Weekly teaching load				Other:
Lectures: 5	Exercises:	Other forms of teaching:	Student research: 5	

Teaching methods

Lectures, solving problems with and without the use of computers. Laboratory exercises and colloquiums in the computer laboratory.

Grading (maximal number of points 100)			
Pre-exam requirements	points	**Final exam**	points
Activities during lectures	**2**	Oral exam	**40**
Practical teaching	**8**		**20**
Colloquia	**30**		
Seminar papers			