Study program:	Civil Engineering
Level of study:	Undergraduate academic studies
Course title:	**MATHEMATICS 2**
Teacher:	Hajnalka Peić
Course Status:	Compulsory
Credits (ECTS):	7
Prerequisite:	Mathematics 1

Course objective(s):
The purpose and goals of the course is to develop students' mathematical thinking and enable them to obtain a basic level of knowledge in the mathematical terms and their properties with the aim that they can later apply them in practice.

Course outcome(s):
The realization of the planned objectives.

Course Content:

1st week	*Theory:* Basic properties of the one-real valued real functions *Practice:* Repeating
2nd week	*Theory:* Continuity of functions *Practice:* Elementary functions and their transformation
3rd week	*Theory:* Limits of functions *Practice:* properties of the one-real valued real functions
4th week	*Theory:* Elementary functions *Practice:* Limits of functions
5th week	*Theory:* The concept of derivatives of functions and the derivative rules *Practice:* Derivatives of functions and the derivative rules
6th week	*Theory:* Differential of functions and applications of the derivatives *Practice:* Applications of the derivative of functions
7th week	*Theory:* Indefinite integral *Practice:* Investigation of the properties of functions and drawing the curve of the function
8th week	*Theory:* Definite integral *Practice:* Indefinite integral
9th week	*Theory:* Application of definite integrals *Practice:* Definite integral and its applications
10th week	*Theory:* Improper integrals *Practice:* Indefinite integral
11th week	*Theory:* First order differential equations *Practice:* Solving the first order differential equations
12th week	*Theory:* First order differential equations *Practice:* Solving the first order differential equations
13th week	*Theory:* Second order linear differential equations *Practice:* Solving the second order linear differential equations
14th week	*Theory:* Two-real valued real functionsand the concept of the partial derivatives *Practice:* Basic properties of the two-valued functionsand their partial derivatives
15th week	*Theory:* Taylor polynomialand the extreme values of two-valued functions. *Practice:* Taylor polynomialand the extreme values of two-valued functions

Literature:

1. J. Detki, F. Ferenci: *Matematika 1*, UniverzitetuNovomSadu, GrađevinskifakultetSubotica, Subotica, 1982.
2. M. P. Ušćumlić, P.M. Miličić: *Zbirkazadatakaizvišematematike 1*, Naučnaknjiga, Beograd, 1986.
3. H. Peić, L. Sarapka: *100 rešenihispitnihzadataka*, UniverzitetuNovomSadu, GrađevinskifakultetSubotica, 1996.
4. O. Hadžić, Đ. Takači: *Matematičkemetodezastudenteprirodnihnauka*, UniverzitetuNovomSadu, Prirodno-matematičkifakultet, NoviSad, 2000.
5. H. Peić, *Matematika1*, UniverzitetuNovomSadu, GrađevinskifakultetSubotica, Subotica, 2006.
6. H. Peić, A. Rožnjik, *Mađarsko-srpsko-engleskimatematičkirečnik,*Vojvođanskicentarzametodiku, Subotica, 2007

Number of hours:				Other
Lectures: 3	Exercises: 3	Other forms of teaching: 0	Individual research work: 0	classes: 0

Teaching methods: Lectures, exercises, colloquia, consultations

Evaluation of knowledge (maximum 100 points)

Pre-exam activities	**points**	**Final exam**	**points**
Activity during the lectures	**5**	Written exam	**60**
Activity during the exercises	**5**		
Colloquia	**30**		