Course title: Mathematics II

Course Basic Information	
Academic Unit:	Faculty of Civil Engineering
Course Name:	Mathematics II
Level:	Bachelor (BA)
Course Status:	Mandatory
Year of Study:	I (first)
Number of Hours per Week:	2+2
ECTS Credits:	6
Time /Venue:	Faculty of Civil Engineering
Course Teacher:	Fevzi Berisha
Contact Details:	tel. 044-126-989, e-mail: fevzi.berisha@uni-pr.edu
Course Description	The subject concentrates on the achievement of knowledge from the field of Mathematics which can be used to facilitate the knowledge from other subjects and can be applied in solving problems from the field of environmental engineering. It introduces topics from the numerical sequences, limit of the number sequence, arithmetic and geometric sequences and their application in solving different problems. Plotting the graph of elementary function. Limit and continuity of the function. Derivative of elementary functions, properties of the derivative and the derivative of any function. Graphing functions. Indefinite integral. Application of definite integral in solving problems from geometry and mechanics.
Course Goals:	Introduction with the mathematical knowledge applicable in the engineering sciences.
Expected Learning Outcomes:	At the end of this course students will be able to use and to understand concepts of higher Mathematics with the aim to use this knowledge as an aide in other subjects which use mathematical apparatus. Upon completion of this course students will be able to: - To create sequences given their general formula - to apply arithmetic and geometric sequences in solving various problems - to find the graphs of elementary functions - to apply the limit of the function in order to determine the continuity of the function - to find the derivative of elementary functions and based on the properties of derivative to find the derivative of other functions, - to plot the graph of a function by using the derivatives - to find the indefinite integral for some classes of functions - to apply definite integral in solving some problems of geometry and mechanics.

Student Workload (Consistent with the Learning Outcomes)			
Activity	**Hours**	**Day/ Week**	**Total**
Lectures	2	1 - 15	30
Theory/ Lab Work	2	1 - 15	30
Practical Work			
Consultations with the teacher	1	1 - 15	15
Field Work			
Test, seminar paper	4	2 - 2	8
Homework			
Self-study (library or home)	2	2 - 15	60
Preparation for final exam	4	2 - 2	8
Assessment time (test, quiz, final exam)	2	1 - 1	2
Projects, Presentations, etc.			
Total	17	15	153

Teaching Methods:	Lectures, exercises during class using different materials, one project work in group of 2-3 students (independent work), individual homework
Evaluation Methods:	First assessment 20% Second Assessment 20% Activity during exercises 10% Attendance 10% Final Exam 40% Total 100%
Literature	
Primary Literature:	1. Fevzi Berisha-Abdullah Zejnullahu: Matematika- për arkitekturë , 1996, Prishtinë. 2. Fevzi Berisha: Përmbledhje detyrash të provimit nga matematika1,2, Prishtinë 2006. 3. Alexs Himonas , Alan Howard- Calculus Ideas and applications,2003 USA 4. Robert T. Smith , Roland B. Minton -CALCULLUS Single Variable, 2002 USA.
Additional Literature:	1. Ejup Hamiti – Matematika I, II. Elektro – Prishtinë 2. Isak Hoxha – Matematika I,I Ndërtimtari, Prishtinë 3. Ismet Dehiri – Matematika I,II Fakultet Teknik, Prishtinë 4. Përmbledhje të ndryshme të detyrave 5. Internet

Course Plan:		
Week	Title of the Lecture	exercises
Week 1:	Numerical sequences	Solving tasks related to the unit being discussed
Week 2:	Limit of sequence	

Week 3:	Progressions	
Week 4:	Numerical functions	
Week 5:	Compositions of functions	
Week 6:	Some distinct class of functions	
Week 7:	Limit and continuity of a function	
Week 8:	Derivative of function	
Week 9:	Derivative of elementary functions	
Week 10:	Elementary theorems on differential calculus	
Week 11:	Extreme values of a function	
Week 12:	Plotting the graph of any function	
Week 13:	Indefinite integral	
Week 14:	Definite integral	
Week 15:	Application of definite integral	

Academic Policies and Rules of Civility:

We start and finish class on time.
Tools used during class must be cleaned and stored away at the end of class.
Mobile/smart phones, and other electronic devices (e.g. iPods) must be turned off (or on vibrate) and hidden from view during class time.
Laptop and tablet computers are allowed for quiet use only; other activities such as checking personal e-mail or browsing the Internet are prohibited.