

SYLLABUS

Basic data of the subject			
Faculty:	Faculty of Engineering and Informatics		
Title of the subject:	Mathematics 2		
Level:	Bachelor		
Course Status:	Core		
Year of studies:	I		
Number of hours per week:	4		
Value of Credits - ECTS:	6		
Time / location:			
Course lecturer:	Prof. As. Dr. Valdete Loku		
Contact details:	valdete.loku@ushaf.net		
Course Description			
	<i>Mathematics II includes concepts of one-variable functions, limits, numerical strings, derivatives, and integrals.</i>		
Objectives of the course:			
	<i>The aim of this course is to provide students with the basic concepts of mathematics, especially mathematical analysis of one-variable function, numerical string, string limit and function. Then, familiarity with the concept of derivative and integral of the function and their application in engineering.</i>		
Expected learning outcomes:			
	<p><i>After successful completion of the course, students will be able to:</i></p> <ul style="list-style-type: none"> • <i>know the basic concepts from mathematical analysis.</i> • <i>solves mathematical problems of functions, numerical strings, limits, derivatives, integrals, series, differential equations, etc.</i> • <i>develop various engineering models through mathematical models</i> • <i>apply mathematical models to solving engineering problems.</i> 		
Contribution to the student load (which must correspond with learning outcomes)			
Activity	Hour	Day/Week	In total
Lectures	4	15	60
Internship			
Contacts with teacher / consultations	1	1	1
Field exercises			
Midterm, seminars and projects.			
Homework			
Self-learning time student (at the library or at home)	4	15	60
Final preparation for the exam	6	3	27
Time spent on evaluation (tests, quiz and final exam)	2		2
Projects and presentations			

Total			150
Teaching methodology:	<i>Lectures and exercises combined with case studies and classroom discussions.</i>		
Assessment methods:	<i>Final exam rated 100% of the grade. The exam consists of two parts, the written exam and the oral exam.</i>		
Literature			
Basic Literature:	<ol style="list-style-type: none"> 1. <i>Dr.sc.Razim Hoxha, Matematikë II, 2015, Prishtinë.</i> 2. <i>Dr.sc.Sadri Shkodra, Matematikë II. 2004, Prishtinë.</i> 		
Additional Literature:	<ol style="list-style-type: none"> 3. <i>Dr.sc. Ejup Hamiti: Matematika II, Prishtinë, 1983.</i> 4. <i>Dr.sc.Razim Hoxha, „PËRMBLEDHJE DETYRASH TË ZGJIDHURA NGA MATEMATIKA II”, Prishtinë, 2001</i> 5. <i>Dr.sc. Ismet Dehiri: Matematika I dhe II, Prishtinë, 1981.</i> 6. <i>G.M.Fihtengolc , Bazat e analizës matematike II, 1970, Prishtinë.</i> 		

Designed learning plan	
Week:	Lectures and exercises to be held
Week one:	<i>Basic concepts of the function of one variable, properties and some classes</i>
Week two:	<i>Elementary functions, such as exponentially function, logarithmic functions, trigonometric functions etc.</i>
Week three:	<i>Numerical sequences and their properties</i>
Week four:	<i>Limit of sequences and their properties, convergent sequences</i>
Week five:	<i>Limit of functions and their properties.</i>
Week six:	<i>Continuity of functions and their properties.</i>
Week seven:	<i>Differential of functions and their properties, such as derivative of the sum, difference, product, ration etc.</i>
Week eight:	<i>Derivative of the compound functions and their application.</i>
Week nine:	<i>Basic theorems od derivatives, such as Role Theorem, Lagrange theorem, etc and their applications.</i>
Week ten:	<i>Application of the derivatives in study of the functions and their graphs</i>
Week eleven:	<i>The concept of the indefinite integral and basic methods of integration</i>
Week twelve:	<i>Integration of some classes of functions, such as rational, irrational , trigonometric etc.</i>
Week thirteen:	<i>Concept of the definite integral, and their properties</i>
Week fourteen:	<i>Application of the definite integral in practice</i>
Week fifteen:	<i>Function with several variables</i>

Academic policies and rules of conduct

Regular attendance of lectures and exercises is necessary, as well as active participation with discussion and solution of tasks. Not impeding the progress required for learning using mobile phones turned off or in silent mode.