

Course Name : Mathematical Analysis II

Course Code	Course Type	Regular Semester	Lecture (hours/week)	Seminar (hours/week)	Lab. (hours/week)	Credits	ECTS
CMP 128	B	Spring	3.00	1.00	0.00	3.50	5.00

Lecturer	Sofokli Garo, PhD
Assistant	
Course language	Albanian
Course level	Bachelor
Description	This course provides concepts about indefinite and definite integrals and their implementations. An important part of this course is differential computation and solving differential equations. The course concludes with knowledge about series and their kinds.
Objectives	1. Indefinite integral concept 2. The fundamental formulas of the indefinite integral 3. Skills about definite integral 4. Solving simple differential equations 5. Understanding series and their convergence
Core Concepts	The fundamental concepts are the following: 1. Indefinite integral 2. Definite integral 3. The differential equation 4. Convergent and divergent series

Course Outline

Week	Topic
1	Indefinite integral
2	Fundamental elementary formulas
3	Implementation in exercises and problems
4	Definite integral
5	Computation of closed surfaces
6	Computation of volumes for solids revolved around x axis
7	Not proper integrals
8	Midterm test
9	Differential equations
10	Equations with separated variables
11	Differential homogeneous equations
12	The concept of arithmetic and geometric sequence
13	The convergent series
14	Divergent series. Types of divergent series
15	Review
16	Final Exam

Prerequisites	The student must attend the course at a minimum rate of 75%.		
Literature	• Muka. V. Analiza Matematike		
References	• Howard. V. Calculus. 6th edition		
Course Outcome			
1	At the end of this course students will be able to lay foundation for other professional disciplines		
2	At the end of this course students will be able to have the necessary mathematical skills for understanding other mathematical disciplines.		
Course Evaluation			
	In-term Studies	Quantity	Percentage
	Midterms	1	30
	Quizzes	0	0
	Projects	0	0
	Term Projects	0	0
	Laboratory	0	0
	Class Participation	1	20
	Total in-term evaluation percent		50
	Final exam percent		50
	Total		100
ECTS Workload (Based on Student Workload)			
	Activities	Quantity	Duration (hours)
	Course duration (Including the exam week: 16x Total hours of the course)	16	4
	Study hours outside the classroom (Preparation, Practice, etc.)	14	2
	Duties	0	0
	Midterms	1	0
	Final Exam	1	0
	Other	3	10
	Total Work Load		122
	Total Work Load / 25 (hours)		4.88
	ECTS		5.00