



Faculty: of Civil and Environmental engineering and Architecture .
Depart : of Civil and Environmental engineering and Architecture

Course Plan

Course Code: MAT 124
Credit Hours: 3 Hours

Course Name: Math 2
Semester: Fall 2025
Practical: None

Course Description:

This course considers: Functions of a single variable (graphs, limits, continuity and differentiability). Techniques of differentiation. Applications of derivatives. Indefinite and definite integral. Techniques of integration. Trigonometric substitutions Partial fractions. Applications of the definite integrals to area, volume, arc length and surface of revolution. Transcendental functions.

Textbook: CALCULUS, Early Transcendental Functions

Author: Smith& Minton Year: 2007

International Edition, ISBN-10: 0-07-110751-7

Suggested References:

- CALCULUS, ONE AND SEVERAL VARIABLES, Sals, Hille & Etgen
- THOMA'S CALCULUS, Weir, Hass & Giordano
- MATHEMATICS FOR ENGINEERING, Croft & Davison

Course Outline:

Week	Topic	Textbook Chapter
01	Polynomials and Rational Functions	Ch 0
02	Inverse Functions; Trigonometric and Inverse Trigonometric F.	Ch 0
03	Exponential and Logarithmic.	Ch 0
04	Functions Transformations of F.	Ch 0
05	Limits and Continuity	Ch 1
06	The Derivative; Computation of Derivatives; The Chain Rule	Ch 1

07	Implicit Differentiation and Inverse; The mean Value Theorem	Ch 2
08	Applications of derivatives; Indeterminate Forms and L'Hopital's Rule	Ch 3
09	Mid -Term Exam	
10	Antiderivatives ; The Definite Integral	Ch 4
11	Applications of the Integral	Ch 5
12	Integration Techniques	Ch 6
13	Integration of Rational Functions Using Partial Fractions	Ch 6
14	Improper Integrals	Ch 6
15	Review	
16	Final Exam	

Grading Policy:

Quizzes, Homework, and Projects:	30%
Laboratory:	None
Mid-Term Exam:	30%
Final Exam:	40%

Instructor's Information:

Name: *Dr. khalil yahya*

Signatures: