연세대학교 YONSEI UNIVERSITY

IEE1130-01 CALCULUS (1)

COURSE TITLE	CALCULUS(1)	**COURSE CODE-SECTION**	IEE1130-01
CREDIT	3	**CLASS PERIOD**	P2(11:00-12:40)
OFFICE		**OFFICE HOURS**	
INSTRUCTOR	Jose Manuel Gomez	**EMAIL**	jmgomez0@unal.edu.co

[COURSE INFORMATION]

COURSE DESCRIPTION & BRIEF INTRODUCTION OF THE COURSE	This is a first course in differential calculus. The main objective of this course is to study the concepts of limits and derivatives and their applications.					
COURSE GOALS	1.					
	2.					
	3.					
	4.					
COURSE METHODS (100% TOTAL)	LECTURE	PRACTICE TRAINING	PRESENTATION	DEBATE	TEAM PROJECT	
GRADING POLICY (100% TOTAL)	MIDTERM	FINAL EXAM	QUIZ	INDIVIDUAL ASSIGNMENT	TEAM ASSIGNMENT	ATTENDANCE	OTHERS
	40%	50%		10%			
PREREQUISITE	High School mathematics such as basic algebra. Without this knowledge you can not take this course.						
COURSE REQUIREMENTS	Students have to attend classes and do weekly homework.						
TEXTS & REFERENCES	Calculus. James Stewart, 8th edition (you can use other editions)						

[WEEKLY SCHEDULE]

WEEK	DAILY TOPIC & CONTENTS	COURSE MATERIAL & ASSIGNMENTS	REFERENCE
WEEK1 (June 30 to July 3, 2025)	Functions and models. In this part of the class, we will do a survey of the elementary properties of functions. In particular, we will study the concept of composition of functions and their domains, inverse functions and logarithms as well as some other elementary functions.		Chapter 1 Textbook Calculus. James Stewart, 8th edition.
WEEK 2 (July 7 to July 10, 2025)	Limits and Continuity. In this part of the class, we will study the concept of limits. We will discuss this concept numerically, graphically and symbolically. After that, definitions of continuity and discontinuity both at single points and on intervals will be presented.		Chapter 2 Textbook Calculus. James Stewart, 8th edition.
WEEK3 (July 14 to July 17, 2025)	Derivatives. In this part of the class, we will introduce the concept of derivative and see how you can think a derivative as a rate of change.		Chapter 2 Textbook Calculus. James Stewart, 8th edition.
WEEK4 (July 21 to July 23, 2025)	Differentiation rules. In this part of the class, we will study a set of rules for the computation of the derivative of a function. In particular, we will study the product and quotient rules, the chain rule and the derivative of trigonometric functions.		Chapter 3 Textbook Calculus. James Stewart, 8h edition.
WEEK5 (July 28 to July 31, 2025)	Applications of the derivative. In this part of the class, we will study some applications of derivatives such as related rates and optimization.		Chapter 4 Textbook Calculus. James Stewart, 8th edition,
WEEK6 (August 4 to August 6, 2025)	Applications of the derivative and		Chapter 4 Textbook Calculus. James Stewart,

WEEK	DAILY TOPIC & CONTENTS	COURSE MATERIAL & ASSIGNMENTS	REFERENCE
	antiderivatives. In this last week of class, we will continue to study applications of derivatives. Finally, we will introduce the concept of antiderivatives.		8th edition.