

Calculus

CREDIT	3	INSTRUCTOR	Soojeong Kim
OFFICE	514 Libertas A (International Campus)	OFFICE HOURS	
TIME	11:00 ~ 12:40	CLASSROOM LOCATION	
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[COURSE INFORMATION]

COURSE DESCRIPTION & GOALS	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.
PREREQUISITE	High School mathematics such as basic algebra
COURSE REQUIREMENTS	Students have to attend classes and do weekly homework
GRADING POLICY	Attendance: 20 points Homework: 30 points Midterm: 100 points Final Exam: 100 points Total: 250 points
TEXTS & NOTES	Calculus. James Stewart, 7th edition
INSTRUCTOR'S PROFILE	Soojeong Kim received a PhD in applied mathematical and computational sciences from the University of Iowa in 2010. Currently she is an Associate Professor at Yonsei University in Seoul, South Korea.

[WEEKLY SCHEDULE]

WEEK (PERIOD)	WEEKLY TOPIC & CONTENTS	COURSE MATERIAL & ASSIGNMENTS	NOTES
1	<p>Chapter 1. Functions and models.</p> <p>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.</p>	<p>Lecture notes and assignments will be announced on the course webpage, 'LearnUs'. (h ttps://open.yonsei.ac.kr)</p>	
2	<p>Chapter 2. Limits Derivatives. (Limits and Continuity)</p> <p>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.</p>	<p>Lecture notes and assignments will be announced on the course webpage, 'LearnUs'. (h ttps://open.yonsei.ac.kr)</p>	
3	<p>Chapter 2. Limits Derivatives. (Derivatives)</p> <p>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.</p>	<p>Lecture notes and assignments will be announced on the course webpage, 'LearnUs'. (h ttps://open.yonsei.ac.kr)</p>	
4	<p>Chapter3. Differentiation rules.</p> <p>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.</p>	<p>Lecture notes and assignments will be announced on the course webpage, 'LearnUs'. (h ttps://open.yonsei.ac.kr)</p>	
5	<p>Chapter4. Applications of the differentiation.</p> <p>In this part of the class, we will study some applications of derivatives such as related rates and optimization.</p>	<p>Lecture notes and assignments will be announced on the course webpage, 'LearnUs'. (h ttps://open.yonsei.ac.kr)</p>	

WEEK (PERIOD)	WEEKLY TOPIC & CONTENTS	COURSE MATERIAL & ASSIGNMENTS	NOTES
6	<p>Chapter 4. Applications of the differentiation.</p> <p>(Applications of the derivative and Antiderivatives)</p> <p>In this last week of classes, we will continue to study applications of derivatives. Finally, we will introduce the concept of antiderivatives.</p>	<p>Lecture notes and assignments will be announced on the course webpage, 'LearnUs'. (h ttps://open.yonsei.ac.kr)</p>	