



Syllabus (2021-2)

Course Title	공학수학	Course No.	36341-04
Department/ Major	Electronic and Electric Engineering	Credit/Hours	3/3
Class Time/ Classroom	화 5-5, 목 6-6 온라인 강의		
Instructor	Name: Kahyun Lee	전자전기공학과	
	E-mail: kh.lee@ewha.ac.kr		
Office Hours/ Office Location	Zoom meeting anytime (Please make an appointment by email in advance)		

I. Course Overview

1. Course Description

This course provides basic mathematical concepts for engineering students. Topics include differential equations of the first order and degree, linear differential equations of higher order, Laplace transform and vector calculus

2. Prerequisites

미분적분학 필수

3. Course Format

Lecture	Discussion/Presentation	Experiment/Practicum	Field Study	Other
100 %	0 %	0 %	0 %	0 %

(Instructor can change to match the actual format of the class.)

학교 운영 방침에 준하여 50명 이상시 온라인 강의 진행

중간고사 기말고사는 오프라인으로 진행



4. Course Objectives

Learn how to express physical phenomena in terms of differential equations
 Learn how to find solutions to various forms and orders of differential equations
 Learn Laplace transform

5. Evaluation System

Relative evaluation Absolute evaluation ☐ Others : 점수분포별 기타방식

— Explanation of evaluation system:

Midterm Exam	Final Exam	Quizzes	Presentation	Projects	Assignments	출석및태도	Other
40%	50%	0%	0%	%	%	10%	%

*

II. Course Materials and Additional Readings

1. Required Materials

Advanced Engineering Mathematics (10th Ed), Erwin Kreyszig, Wiley(교재필수)

2. Supplementary Materials

Dennis G Zill, Advanced engineering mathematics

3. Optional Additional Readings

III. Course Policies

1. 학교규정에 의거하여 1/3결석시 F 처리
2. 시험 미 응시시 F 처리
3. 강의자료 및 공지사항 등은 사이버캠퍼스에서 확인



IV. Course Schedule (15 credit hours must be completed.)

Week	Topics & Class Materials, Assignments
Week 1	course orientation, 1st order ODEs (Ch.1)
	Ch.1 1st order ODEs (Ch.1)
Week 2	Ch.1 1st order ODEs (Ch.1)
	2nd order linear ODEs (Ch.2)
Week 3	2nd order linear ODEs (Ch.2)
	2nd order linear ODEs (Ch.2)
Week 4	2nd order linear ODEs (Ch.2)
	2nd order linear ODEs (Ch.2)
Week 5	Higher order linear ODEs (Ch.3)
	Higher order linear ODEs (Ch.3)
Week 6	Series Solutions of ODEs (Ch.5)
	Series Solutions of ODEs (Ch.5)
Week 7	Series Solutions of ODEs (Ch.5)
	Laplace Transforms (Ch. 6)
Week 8	Review (1, 2, 3, 5)
	중간고사
Week 9	Laplace Transforms (Ch. 6)
	Laplace Transforms (Ch. 6)
Week 10	Laplace Transforms (Ch. 6)
	Vector Differential Calculus. Grad, Div, Curl (Ch. 9)
Week 11	Vector Differential Calculus. Grad, Div, Curl (Ch. 9)
	Vector Differential Calculus. Grad, Div, Curl (Ch. 9)
Week 12	Vector Differential Calculus. Grad, Div, Curl (Ch. 9)
	Vector Differential Calculus. Grad, Div, Curl (Ch. 9)
Week 13	Vector Integral Calculus. Integral Theorems (Ch. 10)
	Vector Integral Calculus. Integral Theorems (Ch. 10)
Week 14	Vector Integral Calculus. Integral Theorems (Ch. 10)
	Vector Integral Calculus. Integral Theorems (Ch. 10)
Week 15	Review (6, 9, 10)
	기말고사



Week	Topics & Class Materials, Assignments
Makeup Class	

V. Special Accommodations

* According to the University regulation section #57-3, students with disabilities can request for special accommodations related to attendance, lectures, assignments, or tests by contacting the course professor at the beginning of semester. Based on the nature of the students' request, students can receive support for such accommodations from the course professor or from the Support Center for Students with Disabilities (SCSD). Please refer to the below examples of the types of support available in the lectures, assignments, and evaluations.

Lecture	Assignments	Evaluation
<ul style="list-style-type: none"> Visual impairment : braille, enlarged reading materials Hearing impairment : note-taking assistant Physical impairment : access to classroom, note-taking assistant 	Extra days for submission, alternative assignments	<ul style="list-style-type: none"> Visual impairment : braille examination paper, examination with voice support, longer examination hours, note-taking assistant Hearing impairment : written examination instead of oral Physical impairment : longer examination hours, note-taking assistant

– Actual support may vary depending on the course.

* The contents of this syllabus are not final—they may be updated