Syllabus (year-semester)

Course Title	Engineering Mathematics 2	Course No.	TBA
Department/ Major	Electronic and Electrical Engineering	Credit/Hours	3/3
Class Time/ Classroom	TBA		
Instructor	Name: Jeehyeon Seo	Department: Electronic and Electrical Engineering	
	E-mail:meshgrid80@gmail.com	Telephone:	
Office Hours/ Office Location	Anytime, but by appointment only(email)		

Ⅰ. Course Overview

1. Course Description

Mathematics plays a fundamental role in understanding the working of engineering systems. This course provides basic mathematical concepts for engineering students. Topics include   linear algebra, complex variables and vector differential and integral calculus

2. Prerequisites

Calculus

3. Course Format

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

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

Explanation of course format:

4. Course Objectives

a.Basic understanding of topics related to engineering mathematics like linear algebra, complex variables and vector differential and integral calculus;

b. Skills and techniques for solving these problems

5. Evaluation System

Midterm Exam	Final Exam	Quizzes	Presentation	Projects	Assignments	Participation	Other
40%	40%	15%	%	%	%	5%	%

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

＊ Evaluation of group projects may include peer evaluations.

  Explanation of evaluation system:

Ⅱ. Course Materials and Additional Readings

1. Required Materials

Kreyszig Erwin, Herbert Kreyszig, and Nominton E J, Advanced Engineering Mathematics, 10th Edition, John Wiley, 2011. (QA401.K92 2011)

2. Supplementary Materials

DeGranza and Gagliardi, Introduction to Linear Algebra with Applications, McGraw-Hill, 2009 (QA184.2.D316)

David C. Lay, Steven R. Lay, and Judi J. McDonald, Linear Algebra and its Applications, 5th Ed. Person, 2015.

3. Optional Additional Readings

Ⅲ. Course Policies

* For laboratory courses, all students are required to complete lab safety training.

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

Week	Date	Topics & Class Materials, Assignments
Week 1	(mm/dd)	Matrices and vetors (Ch.7)
	(mm/dd)	matrix multiplication
Week 2	(mm/dd)	Linear systems of equations:Gauss elimination (Ch.7)
	(mm/dd)	rank of matrices, linear independence
Week 3	(mm/dd)	Determinants: Crammer's rule, inverse matrix
	(mm/dd)	Vector space(Ch.7)
Week 4	(mm/dd)	QUIZ(1), vectors in n-space(Ch.9)
	(mm/dd)	Inner products vector products, vector field.
Week 5	(mm/dd)	arc length, calculus reviws(Ch.9)
	(mm/dd)	Gradient of a scalar field, Directional derivative
Week 6	(mm/dd)	Divergence and Curl of a vector field(Ch. 9)
	(mm/dd)	Line integrals of vector field(Ch.10) path independent of line integrals
Week 7	(mm/dd)	Calculus review: double integral, volume integral Surface integral (Ch. 10)
	(mm/dd)	Green's theorem
Week 8	(mm/dd)	Midterm Exam
	(mm/dd)	(Ch. 7, 9, and part of 10)
Week 9	(mm/dd)	Stokes' theorem (Ch. 10)
	(mm/dd)	Divergence theorem
Week 10	(mm/dd)	QIUZ(2)
	(mm/dd)	Complex numbers, complex plane Polar form, Derivative of analytic function. C-R equations (Ch.13)
Week 11	(mm/dd)	Exponential functions, Trigonometric functions(Ch.13)
	(mm/dd)	Logarithm, General Power
Week 12	(mm/dd)	QUIZ(3), Line integral in the complex plane(Ch.14)
	(mm/dd)	Cauchy's integral theorem

Week	Date	Topics & Class Materials, Assignments
Week 13	(mm/dd)	Cauchy's integral formula(Ch.14)
	(mm/dd)	Cauchy's integral formula
Week 14	(mm/dd)	Derivatives of analytic functions (Ch.14)
	(mm/dd)	
Week 15	(mm/dd)	Fianl exam
	(mm/dd)	
Makeup Class	(mm/dd)	

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
· 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	· 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.