# Engineering Calculus (공학미적분학)

IE-15379–066, Fall 2022

Mon/Wed 10:30–11:45

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Office Hours: 12:00–13:00 (M/W); or by appointment.

**Textbook** 미분적분학 (저자: 수학교재편찬위원회). (주)한빛아카데미. (2022).
ISBN: 979-11-5664-595-5

**Web Page** https://AppliedStat.GitHub.io/teaching

**Software** *R Language* (http://www.r-project.org).

**Prerequisite** The expectation is that you have already been exposed to the basic high-school-level algebra.

## Description and Learning Objectives

– Engineering Calculus will focus on basic concepts and theories of calculus with engineering applications.

– Basic topics covered in this class include function, limit and continuity, derivative, integration, series, plain equations, vector-valued functions, etc.

– The popular R statistical language will be briefly handled in this class.

Upon successful completion of this course, a student will be able to:

- Understand basic concepts on differentiation and integration.
- Solve various engineering applications related to calculus.
- Solve problems related to series.
- Understand a basic concept of a vector and a vector-valued function.

## Grading

The final grade will be curved and calculated as follows.

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|---|---|
| Homework: | 5% |
| Attendance: | 5% |
| Midterms: | 45% |
| Final: | 45% |

Rough Grading Guide:

- A+: 95 ∼ 100 A: 90 ∼ 95-
- B+: 85 ∼ 90- B: 80 ∼ 85-
- C+: 70 ∼ 80- C: 60 ∼ 70-
- D+: 50 ∼ 60- D: 40 ∼ 50-
- F : below 40.

## Exams

Midterm: T.B.A. In class
Final: T.B.A. In class

- All the exams are in-class and closed-book. (시험은 강의실에서 실시하며 시험중에 교과서는 볼 수 없습니다.)
- The final exam will be comprehensive.
- During the exams, a basic calculator will be permitted but cannot be shared with others.
- Calculators in smart phones, tablet PC and laptops are **not** allowed.
- No early or late exams will be allowed without a written and legitimate excuse.

## Homework

- The students can collaborate on their homework problems, but they should submit their homeworks separately.
- Late homeworks will **not** be accepted.
- Up to 1 ∼ 3 problems, selected at random, will be graded in detail, on a scale of 0–5 each.
- To get full credit, you must show all work on the homework problems, which must be submitted in the same order as they are assigned.

## Misc.

- Because of serious COVID-19 pandemic, the above policies and schedules can be changed without further notice.