KECE232 (01) Engineering Mathematics 2

Course Overview

Chang-Su Kim

Course Information

- Pre-requisites: High school mathematics

- Course Homepage: http://mcl.korea.ac.kr

- Questions
  - Ask questions anytime, but preferably during lectures
  - Tel: 02-3290-3217
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- Tutor: 우승균
  - Tel: 02-3290-4717
  - Email: sgwoo@mcl.korea.ac.kr

Course Information

- Assessment Methods
  - Assignment: 15%
    - Solving problems in textbook
  - Attendance & Quizzes: 15%
  - Mid-term Exam: 30%
  - Final Exam: 40%

- Textbooks
  - E. Kreyszig, Advanced Engineering Mathematics, 10th edition, Wiley, 2011
  - G. Strang, Linear Algebra and Its Applications, 4th edition, 2006

- References
  - R. V. Churchill and J. W. Brown, Complex Variables and Applications, McGraw-Hill, 1990.

Course Outline

- Tentative schedule

Week	Topics	Events
1	Complex Numbers	
2	Complex Numbers and Integration	
3	Complex Integration	
4	Power Series and Taylor Series	Autumn Festival
5	Power Series and Taylor Series	
6	Laurent Series and Residue Integration	
7		**12 OCT 2021** Mid exam 14 OCT 2021 No class
8	Linear Algebra	
9	Linear Algebra	
10	Linear Algebra	
11	Linear Algebra	
12	Linear Algebra	
13	Linear Algebra	
14	Linear Algebra	
15	Linear Algebra	
16		**14 DEC 2021** Final Exam

What are taught?

- Complex Analysis
  - Complex numbers
  - Complex functions
    - Limit, continuity, differentiation, integration

- Linear Algebra
  - Vectors, matrices
  - Linear equations
  - Inner product and orthogonality
  - Eigenvalues and eigenvectors

What are taught?

- Skills
  - Apply theorems
- Logics
  - Understand, prove, and conjecture theorems
- Skills are less important than logics