工程數學
Engineering Mathematics
資訊工程系四日二B
課號 2822

Instructor：洪士程
E-Mail: schong@cyut.edu.tw
Room:理工大樓E726
Tel: 7801

Course Time & Office Hours

- Course Time
- Tuesday 2 (9:10 - 10:00)
- Classroom: T1-402
- Wednesday 6,7 (14:30 - 16:20)
- Classroom: T1-402
- Office Hours
- Wednesday 9:00-12:00

Credits

Required or Elective

Required (必修)

Credits

3 Credits (三學分)

Goal

- Impart a knowledge of core areas of Engineering Math.
- Develop a skill in applying mathematics.
- Give an introduction to:
  - Basic content of Engineering Math.
  - The teaching goal is to increase the ability of math analysis.
  - Content: One/High-order Differential equation, Laplace transform, Fourier series and Transform.

Text Book

- Advanced Engineering Mathematics, 9th Ed., 2008.
- Erwin Kreyszig, ISBN:047007446-9
  - John Wiley & Sons, NY

Reference Books

Reference:

Advanced Engineering Mathematics, 5th edition, 2003.

Peter V. O'Neil

Publisher: Baker & Taylor

ISBN: 0534400779

Schedule of Progress (1/2)

- Introduction to course (week 1)
- Chap 1 First Order ODE's
  (weeks 2,3)
- Chap 2 Second Order Linear ODE's.
  (weeks 4,5)
- Chap 3 Higher Order Linear ODE's.
  (weeks 6,7)
- Chap 4 Systems of ODE's Phase Plane, Qualitative Methods.
  (week 8)
- Midterm exam (week 9)

Schedule of Progress (2/2)

- Chap 4 Systems of ODE's Phase Plane, Qualitative Methods.

  (weeks 10)
- Chap 5 Series Solutions of ODE's Special Functions (weeks 11,12)
- Chap 6 Laplace Transforms

  (weeks 13,14)
- Chap 11 Fourier Series, Integrals, and Transforms

  (weeks 15,16,17)
- Final exam (week 18)

Resources

- Text Book
- Handout

http://lms.ctl.cyut.edu.tw/

LMS-數位學習系統

Evaluation

- Quiz (30%)
- Participation (10%)
- Mid exam (30%)
- Final exam (30%)