工程數學
Engineering Mathematics
資訊工程系四進二A
課號 3580

Instructor：洪士程 副教授

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Room:理工大樓E726

Tel: 7801

Course Time & Office Hours

- Course Time
- Tuesday A,B,C (18:25 - 20:40)
- Classroom: T2-108
- Office Hours
- Tuesday 9:00-12:00

Credits

- Required or Elective

  Elective (選修)

- 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, 10th Ed., 2011.
- Erwin Kreyszig, ISBN:047007446-9
  - John Wiley & Sons, NY

Reference Books

- Reference:

Advanced Engineering Mathematics, 6th edition, 2009.

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 13,14,15)
- Chap 11 Fourier Series, Integrals, and Transforms

  (weeks 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%)