National Tsing Hua University
11020EECS203001 常微分方程 Ordinary Differential Equations

Course syllabus

Basic Information:

Course title (中文): 常微分方程

Course title (English): **Ordinary Differential Equations**

Instructor: **大江昌人 (Oh-e, Masahito)** (oh-e@ee.nthu.edu.tw)　@台達館#838

Language for teaching: English

Class time: T5T6R5R6　　*Location:* DELTA 台達 215

Class website: https://eeclass.nthu.edu.tw/

Course Description:

This course aims to provide sufficient mathematic training for students whose majors are in engineering and physics. This course is the mathematic foundation of electromagnetics, modern physics, solid-state physics and so on. We value the connection with problems in physics and engineering, showing examples. The contents include:

- ☐ Introduction
- ☐ First-order ODEs
- ☐ Second-order ODEs
- ☐ Power series and special functions
- ☐ Laplace transform
- ☐ Numerical solutions

* The course is offered in English.

Textbook:

- ☐ D. G. Zill, M. R. Cullen, *Differential Equations with Boundary-Value Problems*, 9th Edition, Cengage Learning.

References:

- ☐ W. E. Boyce, R. C. DiPrima, *Elementary Differential Equations and Boundary Value Problems*, Wiley.
- ☐ E. Kreyszig, *Advanced Engineering Mathematics*, 10th Edition, Wiley Plus.

Teaching Method:

Combination of blackboard teaching with power point viewgraphs.

Grading:

Attendance, participation homework and quiz (20 %), Midterm I (25 %), Midterm II (25 %), Final exam (30 %)

** This may be adjusted in the end of the semester.