National Tsing Hua University
11120EECS203002 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 216

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
- ☐ Operator methods
- ☐ Power series and special functions
- ☐ Laplace transform
- ☐ Fourier series and transform   … etc.

* 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:

1. Midterm I, Midterm II, and Final exam are main factors to determine the grades and will be equivalently treated.

2. Attendance, participation homework, and quiz will be used to adjust some points to finalize the grades.

** This may be slightly altered and adjusted in the end of the semester.