

Course Syllabus

Class time: W5W6R8 ([R9: make-up/TA/HW check](#)) Location: EECS 207

Instructor: Chen-Bin Huang (robin@ee.nthu.edu.tw) Delta 859 Tel: 62180

Feel free to arrange office hour via e-mail.

TA: Pearl Wu (pearlwu0310@gmail.com) EECS 311 Ext. 34926

Anand Hegde (hegdeanand93@gmail.com)

John Lin (a86091390@gmail.com)

Course Description:

This is a mandatory course intended to consolidate the **mathematical** foundations to various fields of electrical engineering, such as signal processing, communications, optics, and control. In this course, we will introduce various analysis methods along with some practical examples. We will focus on continuous-time/discrete-time deterministic signals and linear time-invariant systems. We will cover the convolution, Fourier series, Fourier transform, Laplace transform, and z-transform operations.

Textbook:

Oppenheim, Willsky, with Nawab, *Signals and Systems*, 2nd Ed., Pearson (2014).

Class notes: Course materials available on <https://elearn.nthu.edu.tw/>

Teaching Method:

Lectures in English. Questions are welcome both in English or Chinese.

Course Content:

- Fundamentals of Signals and Systems
- Linear Time-Invariant Systems
- Fourier Series Representation of Periodic Signals
- The Continuous-Time Fourier Transform
- The Discrete-Time Fourier Transform
- Time and Frequency Characterization of LTI Systems
- Sampling
- The Laplace Transform
- The z-Transform

National Tsing Hua University
11020 EECS 202001 Signals and Systems

Grading:

Homework—*Matlab* oriented (20%)

Quizzes (20%)

Examination 1 (20%)

Examination 2 (20%)

Examination 3 (20%)

Ethics policy:

As a student of NTHU, you are here to learn.

1. You should always bear honor and confidence in your mind. You should be responsible for your own grade and in a longer term, your future. You can start by finishing your own class assignments.
2. Plagiarism in any form is unacceptable. The plagiarist will receive a (-100)% for that assignment. I do, however, encourage discussions among classmates.
3. Misconducts during examinations will result in failure of this course.
4. Overly active club participation makes no excuse for late homework and/or missing exams.