

科號 Course Number: EE364000

學分 Credit: 3

中文名稱 Course Title: 通訊系統一

英文名稱 Course English Title: Communication Systems (I)

任課教師 Instructor: 馮開明 (Office: 台達館 921)

上課時間 Time: Tuesday 8:30 AM ~ 9:50 AM, Friday 8:30 AM ~ 9:50 AM,

上課教室 Room: 資電館 215

Office Hours: Tuesday 1:30 ~ 3:30 PM or by appointment

課程助教: TBD 辦公室: 資電館 604 室

一、課程說明 (Course Description)

This course covers the fundamentals of communication systems, including the random process, communication noise process, analog modulation/demodulation, sampling process, baseband digital modulation/demodulation, and equalization. Students can learn much about the basic concepts of communication systems, message/data transmission and receiving, and some important theorems for communications.

二、指定用書 (Text Books)

Simon Haykin, Communication Systems, 5th Edition, John Wiley & Sons, 2010.

三、參考書籍 (References)

1. Rodger E. Ziemer and William H. Tranter, Principles of Communications: Systems, Modulation, and Noise," 6th Ed., John Wiley & Sons, 2010.
2. John G. Proakis and Masoud Salehi, "Essentials of Communication Systems Engineering," Pearson Education, Inc., 2005.
3. Simon Haykin, Communication Systems, 4th Edition, John Wiley & Sons, 2001.

四、教學方式 (Teaching Method)

Lectures: In class

五、教學進度 (Syllabus)

1. Introduction to Communication Systems
2. Fourier Theory and Communication Signals
3. Amplitude Modulation
4. Phase and Frequency Modulation
- Midterm Exam 4/19 (Friday)**
5. Random Variables and Processes
6. Noise in Analog Modulation

- 7. Digital Representation of Analog Signals
- 8. Baseband Transmission of Digital Signals

Final Exam 6/18 (Tuesday)

六、成績考核 (Evaluation)

Homework: 20%

作業請勿抄襲。如經助教認定抄襲，被抄襲與抄襲者該次作業以-100計算！

Midterm Exam: 40%

Final Exam: 40%

七、可連結之網頁位址: <https://eeclass.nthu.edu.tw>

加簽順序：

1. 電機系與電資學士班三、四年級學生(含雙主修、但不包含輔系、第二專長)
2. 電資院高年級學生
3. 其他學院以電資院科系為輔系之同學
4. 其他學院以電資院科系為第二專長之同學
5. 其他學院學生(依年級高低排序)

PS. 雙主修、輔系、第二專長之認定以校務資訊系統之登載為基準