Subject: 數位通訊(**Digital Communications)**

Instructor: **Cheng-Ying Yang, Ph.D.**

Meeting hours: Tuesday 15:20-18:10 (**C3307)**

Textbook: John G. Proakis and Masoud Salehi, Essentials of Communication Systems Engineering, Prentice Hall, 2005

Contents:

1. Introduction to Communication Systems
2. Probability and Random Processes
3. Analog-to-Digital Conversion
4. Digital Modulation
5. Digital Transmission
6. Spread Spectrum Communications
7. Digital Cellular Systems

Grading:

| | |
|---|---|
| Midterm | 40% |
| Final | 40% |
| Participation; Quiz | 10% |
| Homework | 10% |

Reference:


1. John G. Proakis, Masoud Salehi, *Contemporary Communication Systems using Matlab*, Books/Cole, 2000.
2. S. Benedetto, E. Biglieri and V. Castellani, *Digital Transmission Theory*, Prentice-Hall, 1987.
3. Simon Haykin, *Digital Communications*, Wiley, 1988.
4. William C.Y. Lee, *Mobile Communications Engineering*, 2nd ed., McGraw Hill, 1998.
5. Theodore S. Rappaport, *Wireless Communications Principles and Practice*, Prentice Hall, 1996.
6. Van Trees, Detection, Estimation and Modulation Theory, Wiley, 1968.
7. Stephen G. Wilson, *Digital Modulation and Coding*, Prentice Hall, 1996.
8. Shu Lin and Daniel J. Costello,Jr., *Error Control Coding: Fundamentals and Applications*, Prentice Hall, 1983.
9. George R. Cooper, Clare D. McGillem, *Modern Communications and Spread Spectrum*, McGraw Hill, 1986.