EE 4640 Communication Systems II (通訊系統 II)

Lecture times: **W3 W4 F4,** Classroom: **Room 209**, EECS Building
(Fall Semester 2008)
Instructor: 祁忠勇 (Chong-Yung Chi), Office: Room 723, EECS Building
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This is a core course for students who would like to understand or enter the field of communication engineering. As Analog Communication has been covered in the course "Communication System I", "Communication System II" introduces Digital Communication. This course covers Digital Transmissions, Spread-Spectrum Modulation, Multiuser Communications. This course is designed in parallel with "Communication System I". For students taking this course, the background of "Communication System I" is preferred, but not a must.

For the practicing engineer in the communications industry and those who (such as seniors and beginning graduate students) plan to have communications as major area, this course is necessary to build essential background on digital communications. For those who are to engage in signal processing and IC design for communications, this is also a course worth taking.

Background: Probability Theory, Signals and Systems

Course Outline:
1. Introduction to Random Processes (Review) (Chapter 1)
2. Signal-Space Analysis (Chapter 5)
3. Passband Digital Transmission (Chapter 6)
4. Spread-Spectrum Modulation (Chapter 7)
5. Multiuser Radio Communications (Chapter 8)

Textbook:
1. Simon Haykin, Communication Systems, 4th Edition, Wiley & Sons, 2001.

References:
1. Michael B. Pursley, Introduction to Digital Communications, Prentice-Hall, 2005.
2. John G. Proakis, and Masoud Salehi, Communication Systems Engineering, 2nd Edition, Prentice Hall, 2002.
3. John G. Proakis, "Digital Communications", 4th Ed., McGRAW-Hill, 2001.

Grading and Examination Dates:

Homework: **0%**

Midterm Exam. 1: **30%**,

Midterm Exam. 2: **30%**,

Final Exam.: **40%**

Teaching Assistants and Office Hours:

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