



**EEE3430-01 Communication  
Theory : Spring Semester 2024**

# **Course Information**

**Prof. Sooyong Choi, Ph.D.  
School of Electrical and Electronic  
Engineering**



**YONSEI UNIVERSITY**

# Outline

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## ■ Course Information

- Instructor
- Teaching Assistant
- Course material
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## ■ Class Policies

- Exam policies
- Homework policies
- Project policies

## ■ Course Schedule

# Course Information

## ■ Course Title : EEE3430-01 – Communication Theory

### ■ Professor : Sooyong Choi

- Office : C412, Engineering Building 3
- E-mail : csyong@yonsei.ac.kr
- Tel : 02-2123-5870
- 면담시간 : 월요일 오후 1시~4시

### ■ Teaching Assistant

- 이형섭 : gudtjq8307@yonsei.ac.kr
- 김태환 : kimth1217@yonsei.ac.kr
- 연구실 : Advanced Communication Lab. C404호
- Tel: 02-2123-7847

# Course Information

## ■ Class hours

- Class : Monday 0 (동 영상콘텐츠), Wednesday 6, 7 (PM 2:00-3:50)
- Classroom : 제4공학관 공D503
- Office hour : (Making an appointment!!!)
- Professor : Monday PM 4:00 – 6:00
- Teaching Assistant : 추후공지

## ■ Course homepage

- <https://ys.learnus.org/>
- After login using personal ID,
- 학부/ EEE3430-01 통신이론
- Course material : Posted on the web

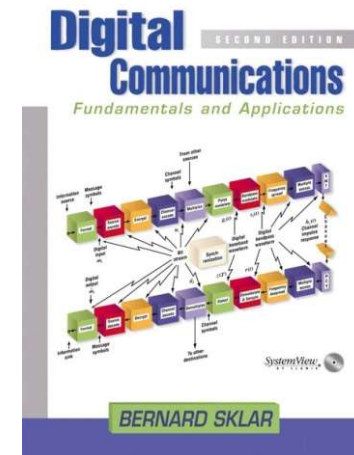
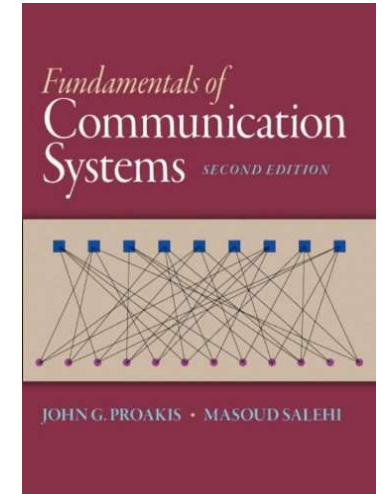
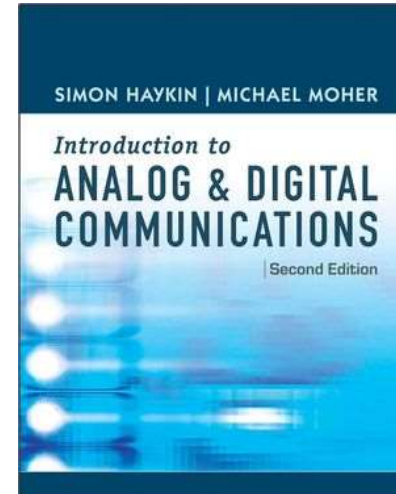
The screenshot shows the LearnUS (YONSEI) course homepage. The top navigation bar includes links for '학위과정', '비교과 강좌', '이용안내', and 'My Page'. The main header displays the course title '통신이론 (EEE3430.01-00)' and the professor's name '최수용'. A sidebar on the left contains a menu with options like '강의실 홈', '강의정보', '성적/출석관리', '수강생 알림', and '기타 관리'. The main content area is titled '강의 개요' and lists course materials: '과목공지', '질의응답', and '자료실'. Below this, a section titled '주차 별 학습 활동' shows a list of weekly activities: '1주차 [3월02일 - 3월08일]', '2주차 [3월09일 - 3월15일]', and '3주차 [3월16일 - 3월22일]'. A file icon and text 'Note 0 Course Information 524.6KB PDF 문서' are visible under the first week.

# Course Material

## ■ Lecture notes

## ■ Textbook

- “Introduction to Analog & Digital Communications,” 2nd edition, Simon Haykin and Michael Moher, Wiley, 2007
- “Fundamentals of Communication Systems,” 2nd edition, John G. Proakis and Masoud Salehi, Prentice Hall, Inc., 2013
- “Digital Communications Fundamental and Applications,” 2nd edition, Bernard Sklar, Prentice-Hall, Inc., 2001



# Grading

## ■ Total 100 Points

- Attendance, Homework and Project : 15%
- Monthly Test : 30%  $\Rightarrow$  Two monthly test :  $15\% \times 2 = 30\%$ 
  - 1st monthly test : 03/27 (Wednesday PM 2:00 – 3:50)
  - 2nd monthly test : 05/22 (Wednesday PM 2:00 – 3:50)
- Midterm Test – 20% : 중간고사 기간
- Final Test – 35% : 기말고사 기간

■ You can argue with me on your score only in a given period

■ No negotiation on grade after it is given

■ Under 40/100  $\rightarrow$  F!!!

■ Re-taking

# Class Policies

## ■ Exam Policy

- Exams **must** be taken at their scheduled times
- Exceptions only in very rare circumstances

## ■ Homework Policy

- Due : 1 week later
- **I will not accept after due date**

## ■ Project Policy

- Assignment : End of the class
- Due : 3 weeks later
- **I will not accept after due date**

## ■ 주의 사항

- **학교 LearnUs 및 포탈에 있는 연락처 등의 개인 정보 확인**

# Course Schedule

Introduction	Communication Systems, Channels and Mathematical models	1 Week
(AM) Amplitude Modulation	Modulator, Demodulator, Multiplexing, AM Radio	1 Week
Angle Modulation (FM & PM)	Frequency/Phase Modulation	1 Week
Analysis of Analog Communications	Noise Effect, Comparison of Analog Modulations, Transmission Losses & Noise	1 Weeks
Analog-To-Digital Conversion	Sampling, Quantization, Waveform Coding, Pulse modulation	1 Week
Intro. to Digital Com.	Formatting and Baseband Modulation	1 Week
Baseband modulation	Vector signal representation & constellation, Antipodal & orthogonal pulse signaling	2 Weeks
Digital Modulation	ASK, PSK, FSK	3 Week
Optimum Receiver Design in AWGN	Correlator & Matched Filter, MAP/ML rule, Optimum receiver for antipodal & orthogonal pulse signaling	3 Weeks