

# 2016학년도 2학기 수업계획서

과목명	디지털통신
학점(시간)	3(4)
이수구분	전공선택
수강번호	01
강의시간	
강의실	
교수명	최권휴
소속	정보통신공학과
면담시간	월 오전 10:00~12:00

※동일과목:

디지털통신공학(ELT036), 디지털통신공학(ICE024)

※선수과목:

2004년 이후 입학자 해당  
통신시스템

## 1. 강의소개 :

수업개요 :

Chap 1. (Signal and Spectra) : Why digital?, signal categories, probability, bandwidth

Chap 2. (Formatting and Baseband Transmission) : baseband system, Formatting, sampling theorem, PCM, baseband transmission, AWGN, ISI

Chap 3. (Baseband Modulation and Demodulation) : Modulation, Detection, Error Performance

Chap 6. (Channel Coding part 1) : coding, error control methods, Block code, coding strength

Chap 9. (Modulation and Coding Trade-offs) : system design, Nyquist minimum bandwidth, Modulation and Coding trade-offs

## 2. 수업목표 :

- Understanding the basics of digital communication theory
- Based on the theory, understand the practical communication systems

## 3. 수업진행방법 :

- 2 hours lecture
- 2 hours lab (with MATLAB)
- Quiz at the end of every chapter

## 4. 교재 및 문헌 :

(MATLAB 실습으로 배우는)통신시스템 및 디지털통신 (2015 개정판 구입해야 함)

5. 수업의 효율성 제고를 위한 기타사항 :

- The lab class can be replaced with the lecture.

6. 학습평가 :

Evaluation

- Mid-term exam : 30%
- Final exam : 40%
- Homework, Quiz: 30%

7. 주별계획

주	학습목표 및 목차	주교재 및 참고자료	퀴즈/과제/토론 유무
1	Introduction of digital communication		
2	Formatting sampling theorem base band Modulation		
3	Base band demodulation/detection		
4	Band pass modulation		
5	Band pass demodulation / detection		
6	Performance analysis of modulation		
7	Introduction of channel coding		
8	Mid-term exam		
9	Linear block coding		
10	Convolutional coding		
11	Modulation and trade off (Nyquist minimum bandwidth)		
12	Modulation and trade off (Modulation and and coding trade off, Trellis Coded Modulation)		
13	Fading and diversity		
14	Fading and diversity		
15	Final exam		