Communication Systems

Course Name	Course type (credit/hours)	Elective course(3/3)	Course code	C019
	Target students Division/major/grade	Electrical and Computer Engineering/Junior	Opening semester	2018 1ST SEMESTER
	Class time and classroom	Tue D(WH317-1)Thu C(WH317-1)	English Grade	A(100%English)
Reference to this course	Prerequisite courses	Communication Systems		
	Related basic courses			
	Recommended concurrent courses			
	Related advanced courses			

Instructor	Name (title/division)	Ran Rong(Assistant Professor, Electrical and Computer Engineering)				
	Office Room Number	Junghub hall 603	Office phone Number	2375	e-mail	
	Office hours		Homepage address			
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

1. Introduction

This subject aims at letting students understand the fundamental principles and theorems on the modern communication system. Beginning with valuable background material on signal and system and random process, the subject tries to guide students through the core topics including amplitude, frequency and pulse modulation and noise, and enables students to develop confidence in solving problems on their own.

2. Course Objectives

1. Enable students to understand the fundamental principles and theorems on Communication systems;
2. Enable students to know how concepts are applied to real-life communication scenarios and devices;
3. Enable students to know how to formulate the communication problems and solve the problems.

3. Class types and activities

1. Leture + discussion
2. Quiz+Homework
3. Mini projects (optional)

4. Teaching Method

- [ ] lecture
- [ ] discussion and debate
- [ ] team project(presentation and case studies)
- [ ] experiments(role-playing,etc)
- [ ] designing and production
- [ ] on-site learning(on-site training)
- [ ] others

5. Support Systems in Use

- [V] AjouBb
- [ ] automatic recording system
- [ ] web-based assignment
- [ ] cyber lecture
- [ ] online content
- [ ] class behavior analyazing system
- [ ] others

6. Teaching Tools

- [V] PBL(Problem Based Learning)
- [V] CBL(Case Based Learning)
- [ ] TBL(Team Based Learning)
- [ ] UR(Undergraduate Research)
- [ ] FL(Flipped Learning)
- [ ] DSAL(Data Science Active Learning)
- [ ] others

7. Knowledge and ability required for taking this course

1. Probablility and Random Variable
2. Signals and Systems

8. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance	32	10	
midterm exam	1	35	
final exam	1	35	
quiz	2	10	
presentation			
discussion			
homework	2	10	
etc			
study hours			

9. Textbook and supplementary material

Main/Sub	Title (Web-site)	Writer	Publisher	Publication year
	Principles of modern communication systems	samuel.o.agbo		

10. Class system and Class shedule

< Class Schedule >

* language : K-korean, E-English

Weeks	Topics	language	Instructor	Teaching Method	Evaluation Method	Matter to be prepared
1	Introducation	E	Ran Rong			
2	Signal and Systems overview	E	Ran Rong			
3	Amplitude modulation_part 1	E	Ran Rong			
4	Amplitude modulation_part 2	E	Ran Rong			
5	Amplitude modulation_part 3	E	Ran Rong			
6	Angle modulation_part 1	E	Ran Rong			

< Class Schedule >

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Weeks	Topics	language	Instructor	Teaching Method	Evaluation Method	Matter to be prepared
7	Angle modulation_part 2	E	Ran Rong			
8	Midterm	E	Ran Rong			
9	Pulse modulation_part_1	E	Ran Rong			
10	Pulse modulation_part_2	E	Ran Rong			
11	Pulse modulation_part_3	E	Ran Rong			
12	Probablity overview	E	Ran Rong			
13	Random access overview	E	Ran Rong			
14	Noise in analog communication systems	E	Ran Rong			
15	Noise in digital communication systems	E	Ran Rong			
16	Final exam	E	Ran Rong			

11. Other items of notification