

Digital Signal Processing

Course Name	Course type (credit/hours)	Elective course(3/3)			Course code	C082
	Target students Division/major/grade	Electrical and Computer Engineering/Junior			Opening semester	2020 2ND SEMESTER
	Class time and classroom	Mon A(WH317-1)Wed A(WH317-1)			English Grade	
Reference to this course	Prerequisite courses	신호 및 시스템				
	Related basic courses					
	Recommended concurrent courses					
	Related advanced courses					
Instructor	Name (title/division)		HYUNG IL KOO(Associate Professor, Electrical and Computer Engineering)			
	Office Room Number		Office phone Number	2479	e-mail	
	Office hours		Homepage address			
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

1. Introduction

Digital signal processing is essential to digital system areas, and as a natural extension of continuous-time signals and systems to discrete-time signals and systems. It introduces representations of discrete-time signals and systems, their processing in the time and frequency domains, and applications to audio and image signals. Topics include description of discrete-time signals and systems, sampling of continuous-time signals, quantization, discrete-time Fourier transform and the z transform, discrete Fourier transform, fast Fourier transforms, and filter design techniques for IIR and FIR filters. Some software design projects using Python will be part of the course. Computational blocks in deep neural networks will be covered.

2. Course Objectives

3. Class types and activities

4. Teaching Method

<input type="checkbox"/> lecture	<input type="checkbox"/> discussion and debate
<input type="checkbox"/> team project(presentation and case studies)	<input type="checkbox"/> experiments(role-playing,etc)
<input type="checkbox"/> designing and production	<input type="checkbox"/> on-site learning(on-site training)
<input type="checkbox"/> others	

5. Support Systems in Use

<input type="checkbox"/> AjouBb	<input type="checkbox"/> automatic recording system	<input type="checkbox"/> web-based assignment
<input type="checkbox"/> cyber lecture	<input type="checkbox"/> online content	
<input type="checkbox"/> class behavior analyzing system	<input type="checkbox"/> others	

6. Teaching Tools

<input type="checkbox"/> PBL(Problem Based Learning)	<input type="checkbox"/> CBL(Case Based Learning)	<input type="checkbox"/> TBL(Team Based Learning)
<input type="checkbox"/> UR(Undergraduate Research)	<input type="checkbox"/> FL(Flipped Learning)	<input type="checkbox"/> DSAL(Data Science Active Learning)
<input type="checkbox"/> others		

7. Knowledge and ability required for taking this course

8. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance			
midterm exam			
final exam			
quiz			
presentation			
discussion			
homework			
etc			
study hours			

9. Textbook and supplementary material

Main/Sub	Title (Web-site)	Writer	Publisher	Publication year
No Data				

10. Class system and Class shedule

--

< Class Schedule >

* language : K-korean, E-English

Week s	Topics	lang uag e	Instructor	Teaching Method	Evaluation Method	Matter to be prepared
No Data						

11. Other items of notification

--