

Korea Advanced Institute of Science and Technology
Division of Electrical Engineering School of Electrical Engineering & Computer Science
EE202 Signals and Systems
Spring 2010

Issued: Feb. 1 2010

Course Information

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Text: Signals and Systems (2nd Edition)
Alan V. Oppenheim, Alan S. Willsky, and S. Hamid Nawab
Prentice-Hall

Web: http://mmp.kaist.ac.kr/ee202_2010_spring/

	Day	Time	Room
Lecture:	M, W, F	09:00-10:00	Create Lecture BLDG.:202

Course Description

This course covers the fundamentals of signal and system analysis. Topics includes linear time invariant systems, Fourier series and transforms, Sampling, Laplace and z- transforms, and feedback systems.

Course Organization and Grading Policy

There will be three 1-hour *lectures* per week. To facilitate the coverage of a large quantity of material, lecture notes will be available on the course website. There will be approximately fourteen *homework assignments* some of which will involve matlab programming. The assignments will be given out every Wednesday and due the following Wednesday. Performance on these will weigh 20% towards the final grade. There will be a deduction of 25 points per day for turning in late homework.

In addition to homeworks, there will also be one 1.5-hour *midterm* and one 3-hour *final examination*. The midterm will be weighted 20% towards the final grade while the final will be weighted 40%. To help students with the material of the course, *recitation* will be offered every week on Friday 7-p.m. in the lecture room. An 1-hour "pico-course" in matlab will be given.

Midterm	Final	Homework	Class Participation	Recitation Participation	Total
20	40	20	10	10	100

Syllabus

Lect.	Date	Topic	Reading
L1	2/1, Mon	Registration	
L2	2/3, Wed	Signals and Systems	Chapt. 1
L3	2/5, Fri	Signals and Systems	Chapt. 1
L4	2/8, Mon	Linear Time-Invariant Systems	Chapt. 2
L5	2/10, Wed	Linear Time-Invariant Systems	Chapt. 2
L6	2/12, Fri	Linear Time-Invariant Systems	Chapt. 2
	2/15, Mon	No Class - Holiday	
L7	2/17, Wed	Fourier Series	Chapt. 3
L8	2/19, Fri	Fourier Series	Chapt. 3
L9	2/22, Mon	Fourier Series	Chapt. 3
L10	2/24, Wed	Continuous-Time Fourier Transform	Chapt. 4
L11	2/26, Fri	Continuous-Time Fourier Transform	Chapt. 4
	3/1, Mon	No Class - Holiday	
L12	3/3, Wed	Continuous-Time Fourier Transform	Chapt. 4
L13	3/5, Fri	Discrete-Time Fourier Transform	Chapt. 5
L14	3/8, Mon	Discrete-Time Fourier Transform	Chapt. 5
L15	3/10, Wed	Discrete-Time Fourier Transform	Chapt. 5
L16	3/12, Fri	Discrete-Time Fourier Transform	Chapt. 5
	3/15, 17, 19	No Class - Business Trip	
	3/22, 24, 26	Midterm Week	
L17	3/29, Mon	Time and Frequency Characterization	Chapt. 6
L18	3/31, Wed	Time and Frequency Characterization	Chapt. 6
L19	4/2, Fri	Time and Frequency Characterization	Chapt. 6
L20	4/5, Mon	Sampling	Chapt. 7
L21	4/7, Wed	Sampling	Chapt. 7
L22	4/9, Fri	Sampling	Chapt. 7
L23	4/12, Mon	Sampling	Chapt. 7
L24	4/14, Wed	Laplace Transform	Chapt. 9
L25	4/16, Fri	Laplace Transform	Chapt. 9
L26	4/19, Mon	Laplace Transform	Chapt. 9
L27	4/21, Wed	Laplace Transform	Chapt. 9
L28	4/23, Fri	z-Transform	Chapt. 10
L29	4/26, Mon	z-Transform	Chapt. 10
L30	4/28, Wed	z-Transform	Chapt. 10
L21	4/30, Fri	Linear Feedback Systems	Chapt. 11
L32	5/3, Mon	Linear Feedback Systems	Chapt. 11
	5/5, Wed	No Class - Holiday	
L33	5/7, Fri	Linear Feedback Systems	Chapt. 11
L34	5/10, Mon	Communication Systems	Chapt. 8
L35	5/12, Wed	Communication Systems	Chapt. 8
L36	5/14, Fri	Communication Systems	Chapt. 8
	5/21, 19, 21	Final Week	

References

1. Edward W. Kamen and Bonnie S. Heck, *Fundamentals of Signals and Systems using the Web and MATLAB (2nd Edition)*, Prentice Hall.
2. Michael J. Roberts, *Fundamentals of Signals and Systems*, Mc-Graw Hill.
3. Simon Haykin and Barry Van Veen, *Signals & Systems*, John Wiley & Sons.
4. Edward A. Lee and Pravin Varaiya, *Structure and Interpretation of Signals and Systems*, Addison-Wesley.
5. Mrinal Mandal and Amir Asif, *Continuous and Discrete Time Signals and Systems*, Cambridge Univ. Press.
6. Chi-Tsong Chen, *Signals and Systems (3rd Edition)*, Oxford Univ. Press.
7. Rodger E. Ziemer, William H. Tranter, and D. Ronald Fannin, *Signals & Systems Continuous and Discrete*, Prentice Hall.
8. Charles L. Philips and John M. Parr, *Signals, Systems, and Transforms*, Prentice Hall, 1995
9. Leslie Balmer, *Signals & Systems (An Introduction, 2nd Edition)*, Prentice Hall, 1997
10. Douglas K. Lindner, *An Introduction to Signals & Systems*, Mc-Graw Hill, 1999
11. A. V. Oppenheim and R.W. Schaffer, *Discrete-Time Signal Processing*, Prentice Hall, 1989.