



Course Weekly Outline

Title	Digital Signal Processing
Name	
Course Objective	1- Understand the concepts of DSP subject. 2- Learn to use the main tools of DSP such as ZT and DFT.
CourseDescription	This course illustrates the basic principles of Digital Signal Processing and includes many important topics in the subject like the Z-transform and its properties, Fourier transforms.
Textbook	1- Introduction to Digital Signal processing and filter Design By B. A. SHENOI Wiley-Interscience2006
References	1-Digital Signal processing, A Computer-Based Approach. 2 nd Edition, By Sanjit K. MITRA. McGraw-Hill
General Notes	Theoretical 3 hours, 2 hours laboratory

Course Weekly Outline

Week	Topics Covered	Notes
1.	An introduction to DSP	
2.	Signal Sampling and Reconstruction	
3.	Basic Concepts of Digital Signal Processing	
4.	Discrete-Time Signal	
5.	Linear time-invariant (LTI) systems	
6.	Properties of DSP system	
7.	Convolution Methods	
8.	Correlation	
9.	Review & Exam 1	
10.	Z-transform I	
11.	Z-transform II	
12.	Inverse Z- Transform	
13.	Fourier Transform (FT)	
14.	Discrete Fourier Transform	
15.	Exam	