No	Information of - IT 51027	
1	Unit name:	Digital Signal Processing
2	Code:	IT 51027
3	Classification:	Engineering subject
4	Credit value:	3
5	Semester/ Year Offered:	1/2
6	Pre-requisite:	Digital Signal Processing
7	Mode of delivery:	Lecture, Practical, Assessment
8	Assessment system and breakdown of marks: Practical Assignment	 20% 10%
	Mid-term/ final Examination	70%
9	Academic staff teaching unit:	Department of Information Technology Engineering
10	Course outcome of unit: In this course, students will be able To describe the fundamentals of Digital Signal processing To determine the z-Transform of finite and infinite duration signals To get the concepts of frequency in continuous-time and discrete-time signals To difference analog-to-digital and digital-to-analog conversion To describe the properties of the z-transform	
11	Synopsis of unit: IT-51027,Digital Signal processing, The course covers the fundamental of Signals, Systems and Signal Processing, Classification of Signals, The Concept of Frequency in Continuous-time and Discrete-Time Signals, Analog-to-Digital and Digital-to-Analog Conversion, Discrete-Time Signals and Systems: Discrete-Time Signals, Discrete-Time Systems, Analysis of Discrete-Time Linear Time-Invariant Systems, Discrete-Time Systems Described by Difference equations, Correlation of Discrete-Time Signals. Several features of this text are designed to make it particularly easy for students to understand digital signal processing. There are review questions, exercises and research activities at the end of all chapters to enhance the book's usefulness in the classroom.	
12	Topic: 1.1 Course Introduction	

	1.2 Signals, Systems and Signal Processing 1.3 Classification of Signals 1.4 The Concept of Frequency in Continuous-Time and Discrete-Time Signals 1.5 Analog-to-Digital and Digital-to-Analog Conversion 1.6 Summary and References 2. Discrete-Time Signals and Systems 2.1 Discrete-Time Signals 2.2 Discrete-Time Systems 2.3 Analysis of Discrete-Time Linear Time-Invariant Systems 2.4 Discrete-Time Systems Described by Difference Equations 2.5 Correlation of Discrete-Time Signals 2.6 Summary and References 3. The z-Transform and Its Application to the Analysis of LTI System 3.1 The z-Transform 3.2 The Properties of z-Transform 3.3 Rational z-Transform 3.4 Inversion of the z-Transform 3.5 The One-Sided z-Transform 3.6 Analysis of Linear Time-Invariant Systems in the z-Domain Problems 4. Frequency Analysis of Signals 4.1 Frequency Analysis of Analog Signals 4.2 Frequency Analysis of Discrete-Time Signals 4.3 Properties of Fourier Transform for Discrete-Time Signals 4.4 Frequency-Domain Characterization of Signals and Time Frequency Dualities 4.5 Sampling of Signals in the Time and Frequency Domain
14	Main references: John G.Probkis and Dimi is G-Monolakis, Digital Signal Processing (3-0-2)
15	Additional references: - Sanjit K. Mitra, Digital Signal Processing, Second Edition. - Alexander Poularikas, applied Signal processing, 2004 by CRC Press LLC. - International Standard Book Number: 0-8493-1427-5. CRC Press Web site at www.crcpress.com.