

1.	Title of the course	Advanced Signal Analysis and Processing Laboratory
2.	Course number	EE527P
3.	Structure of credits	0-0-3-2
4.	Offered to	PG
5.	New course/modification to	Modification To EE5191/12
6.	To be offered by	Department of Electrical Engineering
7.	To take effect from	July 2022
8.	Prerequisite	Nil
9.	<b>Course Objective(s):</b> To provide thorough understanding and implementation knowledge of concepts in digital signal processing (DSP). To experiment with real signals and develop the ability to handle practical aspects of DSP.	
10.	<b>Course Content:</b> Following are the set of experiments of this lab: 1. Deterministic and Random Signal Generation 2. Response of LTI Systems 3. Properties of Signals, Systems, Convolution, and Audio Processing 4. Discrete Fourier Transform - Properties 5. Z Transform and System Response 6. FIR Filter Design 7. IIR Filter Design and Comparison of Filter Design Techniques 8. Sampling and Multirate Signal Processing 9. Wavelet Transform 10. Adaptive Filter Implementation (Wiener and Kalman Filters)	
11.	<b>Textbook(s):</b> 1. Oppenheim A V, Schafer R W, <i>Discrete-time Signal Processing</i> , Prentice Hall (2010).	
12.	<b>Reference(s):</b> 1. Ingle V, and Proakis A J, <i>Digital Signal Processing using MATLAB</i> , Cengage Learning (2012).	