Course Title	Signals and Systems
Course Code	EE3302
No. of Credit Hrs (Lecture + Tutorial + Lab)	3 (2+0+1)
No. of Contact Hrs (Lecture + Tutorial + Lab)	4 (2+0+2)
Level-Year	5-3
Prerequisite (if any)	MATH 2302

1) Course Objectives:

This course provides students with the understanding of signals and systems, help the student to analyze signals in both time and frequency domain, and make the student able to relate system behavior to circuit time and frequency response.

2) Expected Learning Outcomes:

After completing this course, the students should be able to:

1. Analyze the characteristics of continuous-time and discrete-time signals and systems. PLO1 [1]
2. Evaluate the properties and behavior of Linear Time-Invariant (LTI) systems using convolution techniques. PLO2 [2]
3. Apply frequency domain techniques to analyze signals. PLO4
4. Recognize the fundamental concepts of Laplace and Z transforms and their applications in signal analysis. PLO5 [4]
5. Use frequency domain techniques to identify, formulate, and solve signals and systems PLO4
6. Compare different Fourier transform techniques and their applications in analyzing continuous and discrete-time signals. PLO9 [7]

3) Course Contents:

1. Description, Classification and Operation of Signals.
2. System Properties - Linearity, Time-Invariance, Causality, Etc.
3. Impulse Response, Convolution and Correlation.
4. Fourier Series and The Fourier Transform.
5. Frequency-Domain Analysis of Systems.
6. Differential Equations and Laplace Transforms.
7. The Sampling Theorem, Discrete Time Systems.

4) Teaching Methods:

- Lectures and Discussion
- Videos
- Self-learning
- Tutorial sheets

5) Mode of Evaluation:

Course Assessment Methods

- Quizzes and assignments
- Mid Exams
- Final Exam

Evaluation

- Quizzes , Assignment, Homeworks, Reports, Presentations etc.
- Mid Exam
- Final Exam

No	Assessment Activities *	Percentage
1.	Assignments/Quizzes/Mini-Projects/Presentations/Reports and Quizzes	15%
2.	Mid Exam	25%
3.	Tutorial work (Homework/Mini-project, Report, Long essay ….)	20%
4.	Final Exam	40%

6) Textbook(s):
- Signals & Systems. By A. V. Oppenheim, A. S. Willsky and S. H. Nawab, Prentice Hall, Latest Edition.

7) References:
- Signals & Systems, Barry Van Veen, Wiley, Latest Edition.