

Course Outline

IT 3105: Signals and Systems



3rd year 1st Semester of B.Sc. in Information Technology (Session: 2016-17)
Institute of Information Technology
Jahangirnagar University

- Class Schedule
- Course Objective

This course is designed for students who are taking bachelor degree on technology such as information and communication. This course is prerequisite for courses like digital signal and image processing as well as different communication systems. After completing this course students will achieve knowledge about various types of signals and systems. They will also acquire knowledge about importance, limitations, modifications and different application areas of these signals and systems.

➤ Text & Reference

- Hwei P. Hsu , “SCHAUM'S OUTLINES OF Theory and Problems of Signals and Systems”.
- Simon Haykin, Barry Van Veen, “Signals and Systems”
- Signals & Systems tutorial, Tutorials point.

URL: https://www.tutorialspoint.com/signals_and_systems/index.htm

➤ Course Contents

Course contents will cover syllabus for b.sc (honors) in information technology (BIT) for session: 2013-2014 to 2015-2016. It is a theory course of 3.0 credits. Some important topics covered in the lectures as follows:

- i. Introduction to signals & systems
- ii. Basic types of signals and their applications
- iii. Signals and systems properties
- iv. Continuous-Time and Discrete-time Signals and Systems

- v. Fourier Analysis of Continuous-Time and Discrete-Time Signals and Systems
- vi. Application of Fourier Representation
- vii. Linear Time-Invariant Systems
- viii. Laplace Transform and Continuous-Time LTI Systems
- ix. The z-Transform and Discrete-Time LTI Systems
- x. Sampling
- xi. Application of Communication System
- xii. Digital Filters and application

➤ Class Test Schedule

- Class Test 01: After completion 4th topic
- Class Test 02: After Completing 7th topic
- Class Test 03: After completing all topics

➤ Course Teacher

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