

Course Title: **Computer Fundamentals and Applications (4 Cr.)**

Course Code: **CACS101**

Year/Semester: **II**

Class Load: **8 Hrs. / Week (Theory: 4 Hrs., Practical: 4 Hrs.)**

Course Description

This course offers fundamental concepts of computer and computing which includes introduction to computer system, computer software & database management system, operating system, data communication & computer network and contemporary technologies. It also aims at helping students convert theoretical concept into practical skill through the use of different application packages including word processor, spreadsheet package, presentation package and photo editing graphical package.

Course Objectives

The general objectives of this course are to provide fundamental concepts of information and communication technology and to make students capable of using different application packages in their personal as well as professional life.

Course Contents

Unit 1 Introduction to Computer System

16 Hrs.

Introduction to Computer, Characteristics of Computer, Applications of Computer, Classification of Computer, Mobile Computing, Anatomy of a Digital Computer, Computer Architecture, Memory & Its Classification, Input devices, Output Devices, Interfaces.

Unit 2 Computer Software

3 Hrs.

Introduction to Software, Types of Software, Program vs. Software, Computer Virus and Antivirus.

Unit 3 Operating System

4 Hrs.

Introduction to Operating System, Function of Operating System, Types of Operating System, Open Source Operating System.

Unit 4 Database Management System

8 Hrs.

Introduction to DBMS, Database Models, SQL, Database Design and Data Security, Data Warehouse, Data Mining, Database Administrator

Unit 5 Data Communication and Computer Network

10 Hrs.

Introduction to communication system, Mode of Communication, Introduction to Computer Network, Types of Computer Network, LAN Topologies, Transmission Media, Network Devices, OSI Reference Model, Communication Protocols, Centralized vs. Distributed System.