

## **SEMESTER - I**

# St. Xavier's College (Autonomous), Ahmedabad

Syllabus of Semester – I of the following departments under Faculty of Computer Science based on Undergraduate Curriculum Framework to be implemented from the Academic Year 2024-25.

## DEPARTMENT OF COMPUTER SCIENCE

### BCS CS (Hons.) Category – IV

#### Skill Enhancement Course – Digital Computing(SEC-1650)

#### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credit Distribution of The Course			Eligibility Criteria	Pre-requisite(s) of the Course (if any)
	Lecture	Tutorial	Practical / Practice		
Digital Computing CS-1650	2	0	0	10 + 2 from a recognized board in any stream	Nil

#### Learning Objectives

This Skill Enhancement Course aims to provide a comprehensive understanding of the evolution, classifications, and generations of computers, while introducing key computing concepts. Students will explore the fundamental components of computer systems, gaining insights into application software, including MS-DOS and office tools like MS Word, Excel, and PowerPoint. They will also become proficient in identifying and using various input and output devices, such as keyboards, pointing devices, scanners, printers, and display monitors.

Additionally, the course delves into computer number systems, teaching students about different codes, decimal, binary, hexadecimal, and octal systems, enabling them to perform conversions between number bases and grasp the concept of fixed and fractional numbers.

## Learning Outcomes

Upon completing this course students will,

- emerge with a comprehensive grasp of the evolution and classification of computers, including an understanding of various generations.
- be well-versed in the components that constitute a computer system, becoming proficient in employing application software like MS Word, Excel, and PowerPoint.
- gain the ability to effectively interact with input devices such as keyboards, pointing devices, and scanners, while also understanding the capabilities of output devices like display monitors and printers.
- acquire competence in converting numbers between different bases and comprehend the significance of fixed and fractional numbers within a digital context.

## Syllabus of CS-1650 Digital Computing

### Unit 1: Basic of Computer System

- Evolution of Computers
- Generations of Computers
- Classification of Computers
- Computing Concepts
- The computer System
- Application Software Introduction
- MS-DOS (DIR, DIR/P, CD, MD, DATE, TIME, CLS & EXIT)
- Introduction to Office Tools (Uses & Advantages):
  - MS Word System
  - MS Excel System
  - MS PowerPoint System
- Introduction to Input Devices
  - Keyboard
  - Pointing Devices
  - Scanning Devices
  - Optical Recognition Devices
  - Data Acquisition Sensors
- Introduction to Output Devices
  - Display Monitors
  - Introduction to Printers
  - Impact Printers
  - Non-impact Printers
  - Plotters
- Computer Memories

## **Unit 2: Computer Number System**

- Introduction to Computer Codes
- Decimal System
- Binary System
- Hexadecimal System
- Octal System
- 4-Bit BCD Systems
- 8-bit BCD System (6.7.1, 6.7.2)
- Conversion of Numbers (includes fixed and fractional number)

### **Essential / Recommended Readings:**

- Fundamentals of Computers – E Balagurusamy – McGraw Hill Education-2016

### **Suggestive Readings:**

- Computer Fundamentals - P.K Sinha