

VICTORIA
C A M P U S



Foundation in Information Technology

Course Book

Table of Contents

1. Introduction to Information Technology (Code No: ICT1121)	3
2. Programming Fundamentals (Code No: ICT1123)	3
3. Database Management Systems (Code No: ICT1132)	3
4. Networking Essentials (Code No: ICT1142)	4
5. Web Development Basics (Code No: ICT1153)	4
6. Mathematics for IT (Code No: ICT1223)	4
7. Computer Hardware and Software (Code No: ICT1233)	5

Foundation Programme in Information Technology

Duration: 08 Months

1. Introduction to Information Technology (Code No: ICT1121)

- Basics of Computers and IT
- Operating Systems and Software Applications
- Digital Communication and the Internet
- IT in Business and Society
- Data Security and Privacy
- Practical Applications of IT

2. Programming Fundamentals (Code No: ICT1123)

- Introduction to Programming Concepts
- Variables & Data Types
- Control Structures (Conditionals & Loops)
- Functions and Modular Programming
- Arrays and Data Structures Basics
- Debugging and Error Handling
- Mini Project in Programming

3. Database Management Systems (Code No: ICT1132)

- Introduction to Databases
- Data Models and Schemas
- Entity-Relationship (ER) Diagrams
- Structured Query Language (SQL) Basics
- Database Relationships and Normalization
- Database Design and Implementation
- Practical Database Project

4. Networking Essentials (Code No: ICT1142)

- Introduction to Networking
- Network Devices and Topologies
- IP Addressing and Subnetting
- Networking Protocols
- LAN, WAN, and Internet Basics
- Network Security Fundamentals
- Networking Simulation Project

5. Web Development Basics (Code No: ICT1153)

- Web Design Principles
- HTML Basics
- Introduction to CSS
- Creating Web Forms
- Basic JavaScript Concepts
- Developing a Multi-Page Website
- Final Web Project

6. Mathematics for IT (Code No: ICT1223)

- Number Systems and Logic
- Algebra and Functions for IT
- Probability and Statistics Basics
- Boolean Algebra and Logic Gates
- Sets, Relations, and Matrices
- Applications of Mathematics in Computing

7. Computer Hardware and Software (Code No: ICT1233)

- Introduction to Computer Hardware Components
- Input, Output, and Storage Devices
- System Software vs. Application Software
- Operating System Fundamentals
- Troubleshooting and Maintenance
- Emerging Hardware Technologies