

Diploma in Computer Science (9-Month Program)

This 9-month Diploma in Computer Science program is designed to provide students with a strong foundation in computer science concepts, practical skills in software development, web technologies, networking, programming, and graphics. The program combines online learning through an LMS (Learning Management System) with occasional in-person workshops for hands-on experience.

Program Overview

- **Program Name:** Diploma in Computer Science
- **Duration:** 9 months (3 semesters of 3 months each)
- **Mode:** Online with optional in-person workshops
- **Eligibility:** Open to anyone aged 18+ with basic computer literacy and access to a computer/laptop with an internet connection.
- **Language:** English

Program Objectives

1. Equip students with theoretical and practical knowledge of computer science.
2. Teach web development, programming languages, networking concepts, and computer graphics.
3. Prepare students for careers in IT or further studies in computer science.

Program Structure

Learning Methodology

- **Online Learning:**
 - Live sessions via Zoom/Google Meet.
 - Weekly assignments and quizzes submitted through LMS.
- **Assessment:**
 - Combination of assignments, projects, tests, and a final capstone project.

Semester Breakdown

Semester 1: Web Development & Networking Basics

- **Web Development Topics:**
 - Structure of web pages using HTML5.
 - Coding with Notepad++.
 - HTML elements, attributes, tables, forms, audio/video tags.
 - Introduction to CSS and responsive design techniques.
 - Media queries and creating a basic website using HTML/CSS.
- **Networking Topics:**
 - Basics of networks (LAN, MAN, WAN).
 - Network devices (Hub, Switch, Router).
 - Network topologies and diagram creation using Cisco Packet Tracer.
- **Activities:**
 - Build a responsive website as a project.
 - Create network diagrams using simulation tools.

Semester 2: Computer Mathematics & Programming

- **Computer Mathematics Topics:**
 - Number systems: Decimal, Binary, Octal, Hexadecimal.
 - Conversion techniques between number systems.
 - Basics of Boolean Algebra.
- **Programming Topics:**
 - Introduction to programming languages (C++ focus).
 - System development life cycle and flowcharts.
 - Basics of data structures and algorithms.
 - C++ concepts: Functions, arrays, pointers, classes.

- **Activities:**
 - Solve numerical problems related to number systems and Boolean Algebra.
 - Develop small programs in C++ as assignments.

Semester 3: Graphics & Capstone Project

- **Graphics Topics:**
 - Principles of graphic design.
 - Introduction to Photoshop for image editing.
 - CorelDRAW for vector graphics creation.
 - Illustrator for advanced graphic design techniques.
- **Capstone Project:**
 - Students will choose one of the following areas for their final project:
 - Develop a fully functional website using HTML/CSS/JavaScript.
 - Create a network simulation diagram using Cisco Packet Tracer.
 - Build a small software application using C++ or Python.
 - Design a portfolio using Photoshop/CorelDRAW/Illustrator tools.

Evaluation & Certification

1. Weekly assignments and quizzes submitted via LMS to test understanding of each module.
2. Final assessment includes:
 - A capstone project evaluated by instructors.
 - Online test covering all topics learned during the program.
3. Successful candidates will receive a Diploma in Computer Science.

Additional Features

1. Flexible learning schedule with recorded lectures available anytime on LMS.
2. Access to downloadable study materials including notes, templates, tutorials, and coding exercises.