

ADSE (Advance Diploma in Software Engineering) Course

Non-IT Background Students – 100% Job assistance Program

This course is designed for non-IT students who want to become Software Developers or Website Developers. The program starts from fundamentals and gradually moves to advanced web and software development skills. The focus is on hands-on learning, industry-relevant projects, and job preparation.

Course Duration: 12 Months Class Duration: 2 to 4hrs (Mon to Fry)

Course Modules

Module 1: Introduction to Software & Web Development

- Basics of Software & Web Development, Understanding Websites vs. Web Apps vs. Mobile Apps
- Career Paths: Frontend Developer, Backend Developer, Full-Stack Developer
- Tools & Technologies Overview

Module 2: Basics of Programming & Logic Building

- Introduction to Programming (What is Code?), Flowcharts, Algorithms, & Pseudocode, Flow Chart and Algorithm, Programming Fundamentals: Variables, Data Types, Loops, Functions, Introduction of **Object-Oriented Programming (OOP) Concepts** in Details with Real life Example.
- Intro of Popular **IDE (Integrated Development Environment)** used in Project Development: VS Code, CodeBlock, DevC++, TurboC++, NetBeans, Eclipse, MS Visual Studio, Etc.
- Hands-on Coding with C, C++, Java, Python & JavaScript

Module 3: Programming & Data Structures

- **Programming Basics** (C / C++, Java, Python, C#.NET, JavaScript)
- **Data Structures & Algorithms (DSA)**
 - Arrays, Linked Lists, Stacks, Queues, Trees, Graphs, Sorting & Searching Algorithms, Recursion & Dynamic Programming
- **Coding Challenges** (LeetCode, HackerRank, CodeChef)
- **C Sharp .NET Programming Language** with Project Work.
- **Python Programming Language, GUI for tkinter and MySQL** with Project Work
- **Java Programming Language, GUI for swing and MySQL** with Project Work.

Module 4: Website Designing (Frontend)

- **HTML & CSS:** Structure & Styling Web Pages, Responsive Design (**Bootstrap, Tailwind CSS**)

- **JavaScript** Basics: DOM Manipulation, Event Handling, Introduction to **React.js** for Modern Web Development

Module 5: Backend Development:

- Introduction to Databases (DBMS, RDBMS, SQL, NoSQL, MySQL, MongoDB),
- **Choosing the Right backend Specialization Based on Interests** (Node.js, Express.js /Python, Django / Java, Spring Boot / PHP, Laravel / Core ASP .NET)
- API Development: REST APIs & How They Work
- User Authentication & Security (JWT, OAuth)

Module 6: Full-Stack Development

- Building a Full-Stack Application, Connecting Frontend & Backend, Deployment (Firebase, Netlify, Vercel, AWS), Version Control (**Git & GitHub Basics**)
- Learn about **Domain Registration, SSL Certificate and Web Hosting** (Share, VPS and Dedicated Servers)

Module 7: Software Development Fundamentals

- Software Development Life Cycle (SDLC), Introduction to Agile & Scrum
- Debugging & Code Optimization, Testing Basics (Unit Testing & Debugging Tools)

Module 8: DevOps & Cloud Basics

- Introduction to Cloud Computing (AWS, Google Cloud, Azure), Containerization Basics (Docker, Kubernetes)

Module 9: Resume Building & LinkedIn Optimization

- Writing a Job-Ready Resume (ATS-Friendly Format), Optimizing LinkedIn Profile & GitHub Portfolio, How to showcase projects to attract recruiters

Module 10: Interview Preparation:

- Understanding the Technical & HR Interview Process, Mock Interviews (Live Coding + Problem Solving), Common Interview Questions & Best Answers, Job Search Strategies & Applying for Jobs

Final Outcome

By the end of this program, students will be:

- ✓ Skilled in web & software development
- ✓ Confident in coding & technical problem-solving
- ✓ Ready for job interviews & industry placements
- ✓ Able to build & deploy real-world applications

Preparation for test and interview will be done every week and month.