

ADVANCED DIPLOMA IN SOFTWARE DEVELOPMENT

SEMESTER 1

CERTIFICATE COURSE IN INFORMATION TECHNOLOGY

- Introduction to IT and Word
- Presentation Development using PowerPoint
- Basic Excel
- Advanced Excel
- Algorithms & Programming Concepts
- Programming in C
- Functions and pointers
- Object-Oriented Programming with C++
- Variables, Conditional Statements
- Iterative Statement.
- Functions and Recursion Concept
- File Handling using C++
- STL Library in C++, Vector, Link list, Map

SEMESTER 2

CERTIFICATE COURSE IN FULL-STACK WEB DEVELOPMENT

- HTML5, CSS3 and Responsive Web Design
- Bootstrap, Tailwind CSS and jQuery
- JavaScript (ES6+) and DOM Manipulation
- Git & GitHub Version Control
- React.js Components, Hooks and Routing
- Node.js and Express.js Development
- REST API Development and Integration
- MySQL and MongoDB Database Management
- Authentication using JWT and OAuth
- Full-Stack Application Development
- Website Deployment and Hosting
- Search Engine Optimization (SEO)
- Digital Marketing and Website Indexing
- Live Project Development - Social Media Platform / E-Commerce Application

SEMESTER 3

CERTIFICATE COURSE IN JAVA PROGRAMMING

- Core Java Programming
- Variable & Conditional Statement
- Iterative Concept
- Concept of Array & array manipulations
- String Concept & string manipulation
- Functions concept and recursion
- Object-Oriented Programming Concepts
- Threads and multitasking
- Collections & Frameworks – arrays, linked list, hash map, list
- Exception Handling & File I/O
- MySQL database programming
- JDBC Database Connectivity
- Servlets, JSP & Java EE

SEMESTER 4

CERTIFICATE COURSE IN PYTHON WITH DATABASE PROGRAMMING

- Python Syntax, Data Types & Functions
- Variables & Conditional Statements
- Iterative Statements
- Lists, Tuples, Sets & Dictionaries
- Lambda functions
- Error Handling with Try, Except and Finally
- Object-Oriented Programming in Python
- Modules, Math, Dates, JSON
- Regular Expressions
- File Handling Using Python
- NumPy, Pandas & SciPy
- Data Visualization with Matplotlib
- MySQL & MongoDB Integration
- Graphics Programming & Final Project