Full Stack Web Development - Category 1

Course Introduction

This course offers comprehensive training in full stack web development. Students will learn both front-end and back-end technologies, providing them with the skills needed to develop and manage a fully functional website or application.

Duration

14 Weeks

Overview

Learn how to build dynamic websites and web applications. Students will explore technologies like Java, SpringBoot, Database, HTML, CSS, JavaScript, as well as mastering database integration, API development, and server management.

Modules:

1. **JAVA**
2. **SpringBoot**
3. **Database**
4. **Servers**
5. **HTML, CSS**
6. **JAVA SCRIPT (Angular/ React)**
7. **Version Control with Git & GitHub**
8. **APIs and Web Services**

Learning Outcomes

- Develop responsive web applications.
- Implement server-side scripting and database management.
- Deploy web applications and APIs.

Full Stack Web Development - Category 2

Course Introduction

This course offers comprehensive training in full stack web development. Students will learn both front-end and back-end technologies, providing them with the skills needed to develop and manage a fully functional website or application.

Duration

14 Weeks

Overview

Learn how to build dynamic websites and web applications. Students will explore technologies like HTML, CSS, JavaScript, Node.js, Express, and MongoDB, as well as mastering database integration, API development, and server management.

Modules:

9. **Introduction to Full Stack Development**
10. **Front-End Development: HTML, CSS, JavaScript**
11. **Back-End Development: Node.js and Express**
12. **Databases: MongoDB and SQL Integration**
13. **Version Control with Git & GitHub**
14. **APIs and Web Services**
15. **Authentication & Authorization**
16. **Deployment and Hosting**

Learning Outcomes

- Develop responsive web applications.
- Implement server-side scripting and database management.
- Deploy web applications and APIs

Software Manual and Automation Testing

Course Introduction

This course provides a comprehensive guide to manual and automated software testing. Students will gain an in-depth understanding of various testing techniques, tools, and practices that help ensure software quality.

Duration
10 Weeks

Overview

Focuses on both manual and automation testing, including test cases, test plans, and using tools like Selenium, JUnit, and Jenkins for automated testing.

Modules:

1. **Introduction to Software Testing**
2. **Manual Testing: Techniques and Best Practices**
3. **Automation Testing: Introduction & Tools**
4. **Selenium WebDriver**
5. **JUnit and TestNG Frameworks**
6. **CI/CD and Jenkins Integration**
7. **Bug Tracking and Reporting**

Learning Outcomes

- Create and execute test cases.
- Automate test scripts using Selenium.
- Utilize CI/CD pipelines for testing.

Java

Course Introduction

Java is a robust, object-oriented programming language widely used in web, mobile, and enterprise applications. This course teaches students the fundamentals and advanced concepts of Java programming.

Duration
6 Weeks

Overview

Gain mastery in Java by covering object-oriented principles, data structures, algorithms, and building Java applications with popular frameworks.

Modules:

1. **Java Basics: Variables, Data Types, and Control Structures**
2. **Object-Oriented Programming in Java**
3. **Java Collections Framework**
4. **Exception Handling in Java**
5. **Java File I/O**
6. **Java Multithreading and Concurrency**
7. **Introduction to Servers and Servlets**
8. **Building Java Applications**

Learning Outcomes

- Write and debug Java applications.
- Understand and implement OOP principles.
- Build applications using popular Java frameworks.

Spring Boot

Course Introduction

Spring Boot is a framework for building enterprise-level applications. It simplifies the development of Java-based applications with less configuration and a focus on microservices architecture.

Duration
4 Weeks

Overview

Learn how to build REST APIs, microservices, and web applications using Spring Boot. The course includes integration with databases and security features.

Modules:

1. **Introduction to SpringBoot Framework**
2. **Monolithic and Microservices Architecture**
3. **Spring Boot Setup and Configuration**
4. **Building REST APIs with Spring Boot**
5. **Working with Databases and JPA**
6. **Security with Spring Security**
7. **Logging and Actuators with Spring Boot**

Learning Outcomes

- Develop RESTful web services.
- Implement security in Spring Boot applications.
- Build scalable microservices.

Vetham Technologies
https://vethamtech.com/
Contact : +91 6380 623 044   **Mail :** contact@vethamtech.com

Front-End Development - HTML, CSS, JS (Angular/ React)

Course Introduction

This course will teach the fundamental and advanced techniques for building modern web applications using HTML, CSS, JavaScript, Angular, and React.

Duration
6 Weeks

Overview

Explore front-end development with a focus on building interactive and dynamic user interfaces using Angular, React, HTML, and CSS.

Modules:

1. **HTML5 Basics**
2. **CSS3 Styling and Responsive Design**
3. **JavaScript Fundamentals**
4. **Introduction to Angular**
5. **Working with Components and Services in Angular**
6. **React: Components and JSX**
7. **State Management with Redux**
8. **Building and Deploying Front-End Apps**

Learning Outcomes

- Develop responsive websites with HTML, CSS, and JavaScript.
- Build complex applications using Angular and React.
- Implement state management and routing.

UI/UX Design - Figma / WordPress

Course Introduction

This course focuses on UI/UX design principles using Figma and WordPress to create visually appealing and user-friendly websites.

Duration
4 Weeks

Overview

Students will learn how to design web interfaces in Figma/ WordPress, prototype user flows, and implement designs using Figma/ WordPress.

Modules:

1. **UI/UX Design Principles**
2. **Introduction to Figma/ WordPress: Tools and Features**
3. **Wireframing and Prototyping in Figma/ WordPress**
4. **User-Centered Design and Testing**
5. **Design Systems and Components in Figma/ WordPress**
6. **Figma/ WordPressThemes and Plugins**
7. **Building a Website**

Learning Outcomes

- Create user-friendly UI/UX designs.
- Use Figma/ WordPress for prototyping and collaboration.
- Implement designs into a Figma/ WordPress website.

Cloud Computing

Course Introduction

This course provides a solid foundation in cloud computing, focusing on platforms like AWS/ Azure/ Google Cloud to develop scalable and secure applications.

Duration
8 Weeks

Overview

Understand the fundamentals of cloud infrastructure, including services like virtual machines, storage, networking, and database management in the cloud.

Modules:

1. **Introduction to Cloud Computing**
2. **AWS/ Azure/ Google Cloud Basics**
3. **Cloud Computing Models**
4. **Cloud Networking and Security**
5. **Cloud Databases and Storage**
6. **DevOps and CI/CD in the Cloud**

Learning Outcomes

- Set up and manage cloud infrastructure.
- Implement cloud-based applications.
- Understand cloud security and compliance best practices.

Python

Course Introduction

Python is one of the most versatile programming languages. This course teaches Python programming from basic to advanced concepts, enabling students to create applications, web apps, and analyze data.

Duration
8 Weeks

Overview

Master Python and its libraries for building applications, automating tasks, and analyzing data with libraries like NumPy, Pandas, and Flask.

Modules:

1. **Python Basics: Syntax, Data Types, and Functions**
2. **Object-Oriented Programming in Python**
3. **File Handling and Regular Expressions**
4. **Data Analysis with Pandas and NumPy**
5. **Web Development with Flask**
6. **Working with APIs**
7. **Introduction to Data Science with Python**

Learning Outcomes

- Write efficient Python code.
- Build web applications with Flask.
- Analyze data using Python libraries.

Database - SQL

Course Introduction

SQL is essential for interacting with databases. This course focuses on mastering SQL to manage and manipulate data in relational databases.

Duration
4 Weeks

Overview

Learn how to design, query, and maintain relational databases using SQL. Students will work with tools like MySQL and PostgreSQL.

Modules:

1. **SQL Basics: SELECT, INSERT, UPDATE, DELETE**
2. **Database Design and Normalization**
3. **Joins and Subqueries**
4. **Stored Procedures and Functions**
5. **Indexing and Query Optimization**
6. **Database Security**

Learning Outcomes

- Design and manage relational databases.
- Write complex SQL queries.
- Optimize SQL queries for performance.

Machine Learning

Course Introduction

This course introduces machine learning concepts and algorithms to help students develop predictive models and apply ML to real-world problems.

Duration
8 Weeks

Overview

Covering supervised and unsupervised learning techniques, this course prepares students to implement algorithms using Python and ML libraries such as scikit-learn and TensorFlow.

Modules:

1. **Introduction to Machine Learning**
2. **Supervised Learning Algorithms**
3. **Unsupervised Learning: Clustering and PCA**
4. **Model Evaluation and Tuning**
5. **Deep Learning with Neural Networks**
6. **Deploying ML Models**

Learning Outcomes

- Build machine learning models.
- Apply machine learning techniques to real-world problems.
- Deploy machine learning solutions.

Technical Documentation

Course Introduction

This course teaches how to create clear, structured, and user-friendly technical documentation for software and systems.

Duration
4 Weeks

Overview

Learn to document software applications, API specifications, system architectures, and more. Emphasis on clarity, usability, and maintaining up-to-date documentation.

Modules:

1. **Introduction to Technical Writing**
2. **Documenting Software Systems**
3. **Creating API Documentation**
4. **Writing User Manuals and Guides**
5. **Tools for Documentation: Markdown, Confluence, etc.**

Learning Outcomes

- Produce high-quality technical documentation.
- Use documentation tools and formats.
- Write clear API and user guides.

Data Science

Course Introduction

Data Science involves analyzing large datasets to extract valuable insights. This course teaches you to use Python, R, and machine learning tools for data analysis and visualization.

Duration
8 Weeks

Overview

Covering data preprocessing, statistical analysis, machine learning, and data visualization, students will learn to apply data science to solve real-world business problems.

Modules:

1. **Introduction to Data Science**
2. **Data Wrangling and Preprocessing**
3. **Statistical Analysis and Hypothesis Testing**
4. **Data Visualization with Matplotlib and Seaborn**
5. **Machine Learning Algorithms in Data Science**
6. **Big Data Tools and Technologies**

Learning Outcomes

- Analyze and visualize data.
- Apply machine learning algorithms.
- Build data science solutions for business.