



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

ASP.NET Core Full Stack Development Training Curriculum Online by Certified Consultant

Module 1: Introduction to Full Stack Development

- What is Full Stack Development?
- Client-Server Architecture
- Web Application Architecture
- Frontend vs Backend
- Static vs Dynamic Websites
- Monolithic vs Microservices
- HTTP & HTTPS
- REST Architecture
- Development Environment Setup
- Visual Studio 2022
- Visual Studio Code
- .NET SDK Installation
- Git Installation

Module 2: Programming with C#

C# Fundamentals

- Variables
- Data Types
- Operators
- Type Conversion
- Nullable Types
- String Handling
- Console Input & Output

Control Statements

- If
- Switch
- Loops
- Break
- Continue
- Return

Methods

- Functions
- Method Overloading
- Optional Parameters



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

➤ Named Parameters

➤ Recursive Methods

Object-Oriented Programming

➤ Classes

➤ Objects

➤ Constructors

➤ Encapsulation

➤ Inheritance

➤ Polymorphism

➤ Abstraction

➤ Interfaces

➤ Sealed Classes

➤ Static Classes

Advanced C#

➤ Delegates

➤ Events

➤ Lambda Expressions

➤ LINQ

➤ Extension Methods

➤ Async & Await

➤ Generics

➤ Reflection

➤ Exception Handling

➤ Collections

➤ File Handling

Module 3: HTML5

➤ HTML Structure

➤ Semantic Elements

➤ Forms

➤ Tables

➤ Lists

➤ Multimedia

➤ Accessibility

➤ SEO Basics

Module 4: CSS3

➤ Selectors

➤ Colors



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

- Typography
- Box Model
- Flexbox
- CSS Grid
- Responsive Design
- Media Queries
- Animations
- Transitions

Module 5: Bootstrap 5

- Grid System
- Layout
- Components
- Navbar
- Cards
- Forms
- Tables
- Modals
- Carousel
- Utilities
- Responsive UI

Module 6: JavaScript (ES6+)

- Variables
- Functions
- Arrays
- Objects
- DOM Manipulation
- Events
- Fetch API
- Promises
- Async/Await
- Modules
- Local Storage
- Session Storage

Module 7: TypeScript



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

- Types
- Interfaces
- Classes
- Enums
- Modules
- Generics
- Decorators
- Compilation

Module 8: Frontend Framework (Choose One)

React

- Components
- JSX
- Props
- State
- Hooks
- Routing
- Forms
- API Integration
- Context API
- Redux Toolkit
- React Query

OR

Angular

- Components
- Modules
- Routing
- Services
- RxJS
- Forms
- HTTP Client
- Guards
- Lazy Loading
- State Management

Module 9: ASP.NET Core Fundamentals

- .NET Runtime
- ASP.NET Core Architecture
- Middleware
- Dependency Injection



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

- Configuration
- Environment Variables
- Logging
- Minimal APIs
- MVC Architecture

Module 10: ASP.NET Core MVC

- Controllers
- Actions
- Routing
- Views
- Razor
- Layouts
- Partial Views
- View Components
- Model Binding
- Validation
- Filters

Module 11: Entity Framework Core

- ORM Concepts
- DbContext
- DbSet
- Code First
- Database First
- Migrations
- Relationships
- CRUD
- LINQ Queries
- Transactions
- Performance Optimization

Module 12: SQL Server

- Database Design
- ER Diagram
- Tables
- Constraints



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

- Indexes
- Views
- Stored Procedures
- Functions
- Triggers
- Transactions
- Normalization
- Backup & Restore

Module 13: ASP.NET Core Web API

- REST APIs
- HTTP Methods
- Routing
- CRUD APIs
- Model Validation
- Exception Handling
- Swagger/OpenAPI
- API Versioning
- Pagination
- Filtering
- Sorting

Module 14: Authentication & Authorization

- ASP.NET Core Identity
- Cookie Authentication
- JWT Authentication
- OAuth 2.0
- OpenID Connect
- Role-Based Authorization
- Policy-Based Authorization
- Claims
- Identity Management

Module 15: Security

- HTTPS
- CORS
- CSRF



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

- XSS
- SQL Injection Prevention
- Secure Password Storage
- Data Protection
- Secret Management

Module 16: File Management

- File Upload
- File Download
- Image Upload
- Azure Blob Storage
- Validation
- Compression

Module 17: Real-Time Applications

- SignalR
- Chat Application
- Notifications
- Live Dashboard

Module 18: Email & Notifications

- SMTP
- Email Templates
- SMS Integration
- Push Notifications

Module 19: Background Services

- Hosted Services
- Worker Services
- Hangfire
- Quartz.NET
- Scheduled Jobs



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

Module 20: Caching

- In-Memory Cache
- Distributed Cache
- Redis
- Response Caching
- Output Caching

Module 21: Logging & Monitoring

- ILogger
- Serilog
- NLog
- Health Checks
- Application Insights
- OpenTelemetry

Module 22: Testing

- Unit Testing
- xUnit
- NUnit
- MSTest
- Mocking
- Integration Testing
- API Testing
- Postman

Module 23: Design Patterns

- Repository Pattern
- Unit of Work
- Dependency Injection
- Factory Pattern
- Singleton
- Strategy Pattern
- CQRS
- Mediator Pattern (MediatR)



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

Module 24: Clean Architecture

- Layered Architecture
- Clean Architecture
- SOLID Principles
- Domain-Driven Design (DDD) Basics
- Onion Architecture
- Project Structure

Module 25: Microservices

- Microservices Concepts
- API Gateway
- Service Discovery
- Docker Basics
- Containerization
- Inter-Service Communication
- Event-Driven Architecture
- Messaging (RabbitMQ/Azure Service Bus)

Module 26: Cloud Deployment Microsoft Azure

- Azure App Service
- Azure SQL Database
- Azure Storage
- Azure Key Vault
- Azure Functions
- Azure Static Web Apps

Module 27: DevOps & CI/CD

- Git
- GitHub
- Branching Strategy
- Pull Requests
- GitHub Actions
- Azure DevOps Pipelines



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

- Continuous Integration
- Continuous Deployment

Module 28: Docker & Kubernetes

- Docker Installation
- Docker Images
- Docker Containers
- Docker Compose
- Kubernetes Basics
- AKS (Azure Kubernetes Service)

Module 29: AI Integration

- Azure AI Services
- OpenAI API Integration
- AI Chatbot
- Document Summarization
- Image Analysis
- Speech-to-Text
- Prompt Engineering Basics
- AI-Powered Search

Module 30: Performance Optimization

- Async Programming
- Response Compression
- Database Optimization
- Query Optimization
- Memory Management
- Load Testing
- Profiling

Module 31: Deployment

- IIS Deployment
- Kestrel
- Nginx Reverse Proxy
- Azure Deployment



info@kashatraining.com

Call: (IN) 8447799888
(US) +1 (515) 442-2418

- Linux Deployment
- Environment Configuration
- Production Checklist

Module 32: Agile & Project Management

- Agile Methodology
- Scrum
- User Stories
- Sprint Planning
- Jira Basics
- Azure Boards