

Full Stack Web Development

course



Call us : 03278877511  +923278877511

 OFFICE # 68/2 MULTAN ROAD MOR
SAMNABAD LAHORE

www.fmeci.com



ABOUT US

At our institute, we believe in the boundless potential of every individual. We are not just an educational institution; we are a platform for dreams to take flight. Our mission is to inspire, educate, and empower you to reach new heights of success and personal growth.

 **Certification**  **LMS SUPPORT**

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AFTER COMPLETING THIS COURSE, A TRAINEE WILL LEARN:

After Completion of the subject student should able to

- Building more complex applications using software development techniques and showcasing how your creations are easily accessible via the Web
- Web Development from Scratch - Frontend & Backend
(Beginner to Advanced)
Clearly understanding of software engineering fundamentals and their applications
Learning various data-exchange mechanisms (ex: HTTP) to get complete perspective of Full Stack
- Training on live projects to enhance your development abilities.
- Paid Internship + one year job Experience Letter

MODULE TOPICS:

1. FRONT-END (HTML5, CSS3, BOOTSTRAP (BOOTSTRAP STUDIO TAILWIND OPTIONAL, MATERIAL UI OPTIONAL), JAVASCRIPT, JQUERY, PHP (BASIC), MYSQL (BASIC),
2. PHP + MYSQL + LARAVEL
3. MERN (MONGODB, EXPRESSJS, REACTJS, NODEJS) + NEXTJS + TAILWIND CSS

1: HTML

- INTRODUCTION
- HTML BASICS
- PARAGRAPH
- HEADINGS
- IMAGES
- LISTS
- FORMS
- TABLES
- DIV ELEMENTS
- BLOCK ELEMENTS
- INLINE ELEMENTS

2: CSS

- INTRODUCTION CSS3
- CSS3 COLORS
- CSS3 BACKGROUNDS
- CSS3 BORDERS
- CSS3 PADDING
- CSS3 MARGIN
- CSS3 FONTS
- CSS3 TEXT
- CSS3 SHADOW
- CSS3 LINKS
- CSS3 LISTS
- CSS3 BOX MODEL
- CSS3 POSITIONS

- CSS3 PSEUDO ELEMENTS CSS3 FORMS
- CSS3 BUTTONS
- CSS3 FLEXBOX
- CSS3 RESPONSIVENESS

3: BOOTSTRAP

- INTRODUCTION TO BOOTSTRAP
- BOOTSTRAP BASICS
- BOOTSTRAP GRIDS
- BOOTSTRAP BREAKPOINTS
- BOOTSTRAP MARGIN
- BOOTSTRAP PADDINGS
- BOOTSTRAP COLORS
- BOOTSTRAP CSS
- BOOTSTRAP JAVASCRIPT

4: BOOTSTRAP STUDIO

- INTRODUCTION TO BOOTSTRAP

5: TAILWIND CSS

- INTRO & SETUP.
- HTML TEMPLATE.
- FONTS & COLORS.
- MARGIN, PADDING & BORDERS.
- TAILWIND CONFIG.
- CUSTOM FONTS. USING FLEXBOX.
- RESPONSIVE CLASSES.
- CARDS.
- BADGES.
- APPLY DIRECTIVE.
- GRIDS.
- BUTTONS.

- ICONS.
- HOVER EFFECTS.
- RESPONSIVE NAV (PART 1).
- RESPONSIVE NAV (PART 2).
- WRAP UP

6: JAVASCRIPT PROGRAMMING

- FUNDAMENTALS OF JAVASCRIPT PROGRAMMING FROM THE GROUND UP
- VARIABLES,
- CONDITIONAL LOGIC (IF-ELSE),
- ARRAYS, OBJECTS, & LOOPS
- NEWEST ES6 AND ES7 FEATURES, INCLUDING ARROW FUNCTIONS, LET AND CONST
- FUNCTIONS, PARAMETERS-ARGUMENTS, AND RETURN VALUES
- HIGHER LEVEL FUNCTIONS AND CALLBACKS
- ARRAY AND STRING METHODS
- ASYNCHRONOUS JAVASCRIPT WITH PROMISES AND ASYNC-AWAIT
- APIS (APPLICATION PROGRAMMING INTERFACES)
- PARSING AND WORKING WITH JSON
- CODING INTERVIEW CHALLENGE PREP PROJECTS AND
- PORTFOLIO DEVELOPMENT JS LIBRARIES, INCLUDING 3D IN

- THE BROWSER
- WITH D3, THREE.JS, P5

7: JQUERY

- JQUERY SYNTAX
- JQUERY SELECTORS
- JQUERY EVENTS
- JQUERY EFFECTS
- JQUERY HTML
- JQUERY TRAVERSING
- JQUERY AJAX & MISC OOPS
- DESIGN PATTERNS OBJECT ORIENTED DESIGN
- JSON
- DOM
- AJAX

8: PHP

- Escaping in PHP
- Comments in PHP
- Output in PHP
- Variables in PHP
- Conditions statements
- Switches
- Loops
- Arrays
- Object Oriented Programming in PHP
- PHP built-In functions
- Database Connection in PHP
- Design patterns in PHP
- PHP Form Handling
- PHP File Handling
- Traits in PHP

- PHP include & Required statements
- PHP Email configuration
- Command-Line PHP
- Sessions in PHP
- Project in PHP

Introduction of Laravel PHP Framework

- Installing Laravel
- Artisan CLI
- Laravel Structure
- Laravel Configuration

Architecture & Basics

- Routing
- Controller
- Views

- CSRF Protection
- Validations
- Error Handling
- Request
- Response
- Session

Laravel Blade Template

- Master Layouts
- Extending layouts
- Include statements
- Displaying variables
- Blade conditional statements
- Loops
- Function in Blade
- Loading view

- Adding assests
- Integration Bootstrap

Security & Session

- Authentication
- Authorization
- Encryption
- Hashing
- Using Security
- Sessions Effective

Database

- Query Builder
- Migrations
- Seeding



Eloquent ORM

- Eloquent ORM Models
- Naming conventions
- Table name and primary keys
- Timestamps
- Eloquent ORM
(INSERT, READ, UPDATE, DELETE)
- Using models in controllers
- Displaying data from models in views
- Ajax and jQuery
- Introduction
- Getting data from another page
- Setup a controller to return JSON data



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Auth scaffolding

- Introduction to Starter Kits (Breeze, Jetstream, auth
- Fortify, Sanctum, Passport
- Guards and User providers

Error handling, Logging, and Debugging

- Exception Handler
- Rendering exceptions
- Reporting exceptions
- Custom HTTP Error Pages

- Logging
- Debugging tools and techniques

Access Control

- Guard vs. Gate vs. Policy
- Role, permission management

RESTful API development

- Intro RESTful API
- Intro API clients
- Eloquent API resources
- Error handling in API
- API Authentication
- Mail
- Mailing Basics
- Mail Drivers



- Email and Local Development
- Email Sending
- Marketing email

Notifications

- Intro to notifications
- Creating and Sending Notifications

- **Livewire in Laravel**
- **Filament in Laravel**
- **Resource in Laravel**
- **Helper Function**
- **Import and Export**

- **Project in Laravel**



COURSE OUTLINE MERN COURSE + NEXTJS

1: MODERN JAVASCRIPT / ES6

- LET, VAR, CONST
- FUNCTIONS VS. ARROW FUNCTIONS
- DEFAULT PARAMETER FUNCTIONS
- SPREAD OPERATORS
- REST OPERATES
- OBJECT LITERALS
- TEMPLATE / STRING LITERALS
- DESTRUCTURING O ARRAY
- CALLBACK FUNCTIONS
- PROMISES
- ASYNC AWAIT
- OBJECT
- MAP
- FILTER , SET

- REDUCE
- ARRAY
- ARRAYS METHODS

2: REACT JS (MODERN WEB LIBRARY)

- INTRODUCTION TO REACTJS
- UNDERSTAND REACTJS LIBRARY & DIRECTORY
- REACT COMPONENTS
- TYPES OF COMPONENTS
- BUILD A SIMPLE REACT COMPONENT
- COMPONENT COMPOSITION
- COMPONENT STYLING
- ADD STYLES TO YOUR COMPONENTS
- COMPONENT INTER COMMUNICATION
- HOW TO PASS DATA FROM ONE COMPONENT TO ANOTHER
- ROUTING
- USING ROUTING TO CREATE SINGLE PAGE APP

- HOOKS
- STATES
- HOOKS VS STATES
- TYPES OF HOOKS
- REDUX
- COURSE OUTLINE
- USING REDUX AS STATE CONTAINER FOR REACT APPS
- REACT BOOTSTRAP
- HOW TO DEPLOY REACTJS APP

3: NEXT JS (MODERN FRAMEWORK OF REACT JS)

- NEXT JS BASICS O NEXTJS INTRODUCTION
- NEXTJS INSTALLATION
- HOW TO START NEXT JS SERVER?
- **NEXT JS PAGES**
- WHAT IS PAGE IN NEXT JS?

- WHAT IS A LINK COMPONENT IN NEXT JS
- LINKING BETWEEN PAGES IN NEXT JS
- SERVING STATIC FILES
- SERVING DYNAMIC FILES
- **NEXT JS CSS/STYLING**
- HOW TO ADD LAYOUT IN NEXTJS
- NEXTJS IMAGE OPTIMIZATION
- HOW TO ADD CUSTOM LOCAL FONTS IN NEXTJS
- DIFFERENT FORMS OF PRE-RENDERING IN NEXTJS
- NEXTJS DATA FETCHING METHODS
- **WHAT IS SSR IN NEXTJS**
- NEXTJS - DYNAMIC ROUTES SEGMENTS
- NEXTJS - DYNAMIC IMPORT
- **NEXTJS ROUTING 0 NEXTJS ROUTING**
- NEXTJS NESTED ROUTING
- NEXTJS INJECTING THE ROUTER
- HOW TO CATCH ALL ROUTES IN NEXTJS?

- NEXTJS CUSTOM
- NEXTJS CUSTOM SERVER
- NEXTJS CUSTOM DOCUMENT
- NEXTJS CUSTOM ERROR PAGE
- NEXTJS ENVIRONMENT VARIABLES
- HOW TO DEPLOY NEXTJS APPLICATION TO VERCEL PROJECT IN NEXTJS

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BACKEND DEVELOPMENT AND APIS MAKING USING NODEJS, EXPRESSJS AND MONGODB

1: NODE JS

- INTRODUCTION TO NODEJS
- ARCHITECTURE OF NODEJS
- APPLICATION SYNCHRONOUS AND ASYNCHRONOUS PROGRAMMING
- CALL BACK FUNCTION IN NODEJS
- PROMISES IN NODEJS
- MONGODB WITH NODEJS
- DESIGN THE SCHEMA IN NODEJS
- DESIGN THE REST API'S
- GET METHOD
- POST METHOD O PUT METHOD
- DELETE METHOD
- JSON WEB TOKEN AUTHENTICATION IN NODEJS

- REATE THE AUTH APP IN NODEJS
- CREATE THE E-COMMERCE BACKEND
- INTEGRATED PAYMENT GATEWAY

2: EXPRESS JS

- BUILDING RESTFUL API'S USING EXPRESS EXPRESS
- RESTFUL SERVICES
- INTRODUCING EXPRESS
- BUILDING YOUR FIRST WEB SERVER
- NODEMON
- ENVIRONMENT VARIABLES
- ROUTE PARAMETERS
- HANDLING HTTP GET REQUEST
- HANDLING HTTP POST REQUEST
- CALLING ENDPOINTS USING POSTMAN
- INPUT VALIDATIONS
- HANDLING HTTP PUT REQUEST , DELETE REQUEST

- 
- PROJECT- BUILD THE GENRES API
 - EXPRESS-ADVANCED TOPICS
 - MIDDLEWARE
 - CREATING A CUSTOM MIDDLEWARE
 - BUILT-IN MIDDLEWARE
 - ENVIRONMENTS
 - CONFIGURATION
 - DEBUGGING
 - TEMPLATING ENGINE
 - DATABASE ENGINES
 - DATABASE INTEGRATION
 - AUTHENTICATION
 - STRUCTURING EXPRESS APPLICATIONS

3: MONGO DB

INTRODUCTION TO MONGODB (NO-SQL)
CRUD OPERATIONS

- 1: CREATE
- 2: UPDATE
- 3: DELETE
- 4: UPDATE

- COLLECTIONS IN MONGODB
- DOCUMENTS IN MONGODB
- DIFFERENCE BETWEEN MYSQL AND NOSQL
- INSERTING DATA INTO DATABASE
- FILTER QUERIES IN MONGODB DATABASE
- SCHEMA VALIDATION IN MONGODB DATABASE
- INDEXING IN COLLECTIONS
- AGGREGATION IN MONGODB
- EMBEDDED DOCUMENT IN MONGODB



THANK YOU!

✔ Certification ✔ LMS SUPPORT

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