CERTIFICATE IN FULL-STACK DEVELOPMENT- MERN

DURATION: 240 Hours

TOTAL CREDITS: 8

COURSE SYLLABUS

Objective

Certificate in Full-Stack Development- MERN teaches the student core concepts of both the frontend and backend programming, to get familiar with the latest web development technologies like Express JS, React JS, Node Js, learn all about non-SQL databases and learn the complete web development process.

Exit Profile

- Complete Knowledge in Web Designing & Development

- Front -End Development

- Back End-Development

- Database Programming

Career Path

- Full-Stack Web Developer - MERN

- Frontend developer

- Back-End Developer

- UI Designer

- Non-SQL Database Programmer

Course Outline

Course Name:	CERTIFICATE IN FULL-STACK DEVELOPMENT- MERN	Duration:	240 H
Module	Topic	Dur.	Total Dur.
MODULE -1	Introduction to UI/UX designing	6	120 H
	HTML	18	
	CSS	18	
	JavaScript	30	
	J Query	30	
	Bootstrap	18	
MODULE-2	Introduction to Non-SQL Databases and Mongo DB	30	120 H
	Server-side scripting using Node JS	30	
	Introduction to back-end Frameworks and Express JS	24	
	Introduction to front-end Frameworks and React JS	24	
	Introduction to Cloud Computing, Git & GitHub	12	

Course in Detail

MODULE-1

INTRODUCTION TO UI/UX DESIGNING

- HTML

- CSS

- JavaScript

- JQuery

- Bootstrap

- Core Java Programming

- RDBMS -My SQL Server

- JDBC

- Servlets

- JSP

- Spring Frameworks

- Hibernate

- Introduction to Cloud Computing, GIT & GITHUB

HTML

- Introduction

- Building Blocks of Web Frontend

- Introduction To HTML

- Basic HTML TAGS

- Advanced HTML Tags & concepts.

CSS

- Introduction to CSS

- CSS Basics

- CSS Advanced

JAVASCRIPT

- Introduction to DHTML

- Javascript Basics

- Javascript Advanced

- Document Object Model

- Manipulating DOM using JS

- DOM Events

JQUERY

- JQuery Basics

  - What is JQuery?

  - Adding JQuery to a web page

  - JQuery Syntax

  - JQuery Selector

  - JQuery Events

- JQuery Advanced

  - HTML Manipulations

  - Effects

  - Traversing

  - Plugins

BOOTSTRAP

- What is Bootstrap?

- Adding bootstrap to your projects.

- Different predefined Element styles

- The Grid System

- Forms

- Templates

MODULE-2

INTRODUCTION TO NON-SQL DATABASES AND MONGO DB

- Introduction to Non-SQL Databases

- Introduction to Mongodb

- Data Modelling & Basic Operations

- Collections And Basic Operations on Collections

- Inserting Data into Tables

- Query Document

- Update Document

- Delete Document

- Sharding

- Backup And Restore

- Deployment

SERVER-SIDE SCRIPTING USING NODE JS

- Introduction

- Environment Setup

- Starting Applications

- REPL Terminal

- Command Line Options

- Package Manager (Npm)

- Callbacks Concept

- Upload Files

- Events & Event Loops

- Event Emitter & Debugger

- Global Objects

- Console

- Process

- Scaling Application

- Packaging

- Streams

- File Systems

INTRODUCTION TO BACK-END FRAMEWORKS AND EXPRESS JS

- Overview

- Environment

- Routing

- HTTP Methods

- Url Building

- Middleware

- Templating

- Static Files

- Form Data

- Database

- Cookies

- Sessions

- Authentication

- Restful Apis

- Scaffolding

- Error Handling

- Debugging

INTRODUCTION TO FRONT-END FRAMEWORKS AND REACT JS

- Introduction

- Installation

- Features

- Advantages & Disadvantages

- Architecture

- Creating A React Application

- JSX

- Components

- Styling

- Properties (Props)

- Component Life Cycle

- Event Management

- State Management

- Pagination

- Material Ui

- Http Client Programming

- Form Programming

- Conditional Rendering

- Lists & Keys

- Routing

- Redux

- Animation & Bootstrap

- Maps & Tables

- Managing State Using Flux

- Testing, Building and Deployment

INTRODUCTION TO CLOUD COMPUTING, GIT & GITHUB

- What is cloud computing?

- Working of cloud Computing

- Advantages of Cloud Computing

- What is Git and Gitlab?

- Installing Git

- Git File Management

- Branching

- Pull Requests

- Common Workflows