DETAILED SYLLABUS

Week	Content
Week 1	**Introduction to MERN Stack:** Overview of MERN Stack, Installation and setup of development environment, **MongoDB:** Basics of MongoDB, CRUD operations in MongoDB, Schema design and data modelling, Indexing and performance optimization
Week 2	**Express.js:** Introduction to Express.js, Setting up an Express.js application, Routing and middleware, Error handling, RESTful API development
Week 3	**Node.js:** Introduction to Node.js, Event-driven architecture, Asynchronous programming with callbacks, promises, and async/await, Node Package Manager (npm), File system operations
Week 4	**React.js Basics:** Introduction to React.js, Setting up a React.js application using create-react-app, Components and JSX, State and props
Week 5	**React.js Advanced:** Hooks (useState, useEffect, useContext, etc.), React Router, Working with HTTP requests using Axios or fetch API, State management with Redux or Context API
Week 6	**Full-stack Development with MERN:** Integrating Express.js and MongoDB for backend, Connecting React.js frontend with Express.js backend, Authentication and authorization (JWT, OAuth)
Weet 7 (O)	**Project Work and Deployment:** Real-world project development using MERN Stack, Deployment strategies for MERN applications, Best practices in MERN development, Project presentation and review **Project Title:** Online Learning Platform Description: The Online Learning Platform is a full-stack web application developed using the MERN stack (MongoDB, Express, React, Node.js) that provides a comprehensive platform for users to create, share, and enroll in online courses. The project includes various modules and features to facilitate seamless learning and collaboration between instructors and learners
Week 8 (O)	