**LPE BASED SYLLABUS :**

### Month 1: Foundations of Web Development

**Week 1: Introduction to Web Development**
- Overview of web development
- Understanding how the web works
- Setting up the development environment (VSCode, Git, GitHub)

**Week 2: HTML Basics**
- HTML syntax and structure
- Common HTML tags (headings, paragraphs, links, images, lists, tables)
- Forms and input types
- Semantic HTML

**Week 3: CSS Basics**
- CSS syntax and selectors
- Styling text, colors, and backgrounds
- Box model (margin, border, padding, and content)
- Layout techniques (flexbox, grid)

**Week 4: Advanced HTML and CSS**
- Responsive design and media queries
- CSS animations and transitions
- CSS preprocessors (Sass basics)
- HTML5 and CSS3 features

### Month 2: JavaScript Fundamentals

**Week 1: Introduction to JavaScript**
- JavaScript syntax and basics
- Variables, data types, and operators
- Functions and scope
- DOM manipulation

**Week 2: JavaScript Deep Dive**
- Event handling
- Arrays and objects
- Loops and conditionals
- ES6+ features (let/const, arrow functions, template literals, destructuring)

**Week 3: Working with APIs**
- Fetch API and AJAX
- Promises and async/await
- Working with JSON
- Building a simple API-driven project

**Week 4: JavaScript Libraries and Tools**
- Introduction to jQuery (basic usage)
- Introduction to a modern JavaScript framework/library (React basics)
- NPM and basic build tools (Webpack/Babel)

### Month 3: Backend Development with PHP or Node.js

**Week 1: Introduction to Backend Development**
- Overview of server-side programming
- Setting up a local server environment (XAMPP for PHP or Node.js)

**Week 2: PHP Basics (if choosing PHP)**
- PHP syntax and basics
- Variables, data types, and operators
- Control structures (if, switch, loops)
- Functions and arrays

**Week 2: Node.js Basics (if choosing Node.js)**
- Node.js syntax and basics
- Understanding npm and package.json
- Basic modules and file handling
- Building a simple server with Express.js

**Week 3: Working with Databases**
- Introduction to SQL and MySQL (or MongoDB for Node.js)

- Connecting to a database
- CRUD operations (Create, Read, Update, Delete)
- Building a simple database-driven application

**Week 4: Advanced Backend Concepts**
- User authentication (sessions and JWT)
- Data validation and sanitization
- Building RESTful APIs
- Basic security practices (SQL injection, XSS prevention)

### Month 4: Project Development and Deployment

**Week 1: Project Planning and Setup**
- Choosing a project (e.g., blog, e-commerce site, portfolio)
- Planning and wireframing
- Setting up the project repository

**Week 2: Frontend Development**
- Building the frontend using HTML, CSS, and JavaScript
- Ensuring responsive design
- Implementing interactivity and animations

**Week 3: Backend Development**
- Setting up the backend server
- Connecting the frontend with the backend (AJAX/Fetch for data handling)
- Implementing authentication and user management

**Week 4: Testing, Deployment, and Finalization**
- Testing the application (manual and automated tests)
- Debugging and performance optimization
- Deployment to a hosting service (e.g., Heroku, Vercel, Netlify)
- Final project presentation and review

### Additional Resources
- **HTML/CSS:** MDN Web Docs, freeCodeCamp
- **JavaScript:** Eloquent JavaScript, JavaScript.info
- **PHP:** PHP.net, W3Schools PHP Tutorial

- **Node.js:** Node.js documentation, Express.js documentation
- **General:** LPE BASED COURSE