Frontend Development Course Outline

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1. Introduction and Overview

Duration: 2 sessions
Topics:

- Introduction to frontend development and its significance.
- Overview of course structure, objectives, and expectations.
- Entry requirements and track graduation requirements.
- Fundamentals of the web: HTTP, server, and API basics.

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2. HTML & CSS Basics

Duration: 6 sessions
Topics:

- HTML5 Fundamentals:
    - Structure, elements, attributes, and forms.
    - Semantic HTML and accessibility principles.
- CSS3 Basics:
    - Selectors, properties, and styling text.
    - Introduction to the box model and layout techniques.
    - Basic responsiveness with percentages and units.
- Practical Project:
  Create a basic static webpage with structured content and styling.

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3. JavaScript Fundamentals

Duration: 4 sessions
Topics:

- JavaScript Basics:
  - Syntax, variables, data types, and functions.
  - Conditional statements, loops, and arrays.
- DOM Manipulation and Events:
  - Accessing and modifying DOM elements.
  - Event listeners and handling user interactions.
- JSON Basics:
  - Parsing and handling data in JSON format.
- Practical Project:
  Build an interactive webpage with JavaScript-enhanced elements.

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4. Advanced CSS and Responsive Design

Duration: 3 sessions
Topics:

- Advanced CSS Techniques:
  - Flexbox and CSS Grid for complex layouts.
  - CSS animations, transitions, and keyframes.
- Responsive Design Basics:
  - Media queries and breakpoints.
  - Adapting layouts for various screen sizes.
- Optional: Introduction to CSS preprocessors (SASS).
- Practical Project:
  Design a multi-page layout using Flexbox and Grid.

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5. Bootstrap and Framework Integration

Duration: 4 sessions
Topics:

- Bootstrap Basics:
    - Grid system for responsive layouts.
    - Core components: buttons, forms, cards, and modals.
    - Customizing Bootstrap with CSS overrides.
- Advanced Bootstrap:
    - Carousels, navigation bars, and utility classes.
    - Combining Bootstrap with custom animations and layouts.
- Practical Project:
  Develop a fully responsive website using Bootstrap and custom CSS.

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6. Advanced JavaScript and Frontend Frameworks

Duration: 6 sessions
Topics:

- Modern JavaScript (ES6+):
    - Modules, promises, and async/await.
    - Destructuring, arrow functions, and template literals.
- Introduction to a Frontend Framework (React):
    - Component-based design and state management.
    - Props, hooks, and lifecycle methods.
- Practical Project:
  Develop a single-page application (SPA) using React and Bootstrap.

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7. Group Projects and Collaboration

- **Duration**: 4 sessions
- **Guidelines**:
  - **Proposal Phase**: Teams create a project proposal detailing goals, responsibilities, timelines, and expected outcomes.
  - **Final Presentation**: Projects culminate in a well-organized presentation. Team members will explain their roles and discuss results.
  - Active collaboration through code reviews and peer feedback sessions.
  - **Project**: Real-world collaborative project using Bootstrap for styling and JavaScript/React for functionality.

8. Evaluation and Graduation Requirements

  - Complete all assigned projects with satisfactory feedback.
  - Actively participate in discussions, activities, and group projects.
  - Present a group project proposal and final project.
  - Attend at least 70% of sessions.
  - Share the final project and learning experience on LinkedIn.

9. Commitment and Course Completion

- **Emphasis on commitment as a prerequisite for success:**
  - Active Participation: Attending sessions, engaging with peers, and seeking feedback.
  - Completion of Projects and Activities: Diligent effort and quality in all assignments.
  - Respect for Process: Following the structured approach and roles.
  - Evaluation Awareness: Understanding benchmarks and aiming to exceed them.