Syllabus

WEEK 1

Introduction to React

In this module we get a quick introduction to front-end JavaScript frameworks and libraries, followed by an introduction to React. We will also learn about React components and JSX.

21 videos, 23 readings

1. [**Video:**Welcome to Front-End Web Development with React](https://www.coursera.org/lecture/front-end-react/welcome-to-front-end-web-development-with-react-zHA5u)
2. **Video:**How to Use the Learning Resources
3. **Reading:**Welcome to Front-End Web Development with React: Additional Resources
4. **Reading:**Full-Stack Web Development: The Big Picture: Objectives and Outcomes
5. **Video:**What is Full-Stack Web Development?
6. **Reading:**Full Stack Web Development: Additional Resources
7. **Reading:**Setting up Your Development Environment: Git and Node: Objectives and Outcomes
8. **Reading:**Setting up your Development Environment
9. **Video:**Exercise (Video): Setting up Git
10. **Reading:**Exercise (Instructions): Setting up Git
11. **Video:**Exercise (Video): Basic Git Commands
12. **Reading:**Exercise (Instructions): Basic Git Commands
13. **Video:**Exercise (Video): Online Git Repositories
14. **Reading:**Exercise (Instructions): Online Git Repositories
15. **Video:**Node.js and NPM
16. **Video:**Exercise (Video): Setting up Node.js and NPM
17. **Reading:**Exercise (Instructions): Setting up Node.js and NPM
18. **Video:**Exercise (Video): Basics of Node.js and NPM
19. **Reading:**Exercise (Instructions): Basics of Node.js and NPM
20. **Reading:**Setting up your Development Environment: Git and Node: Additional Resources
21. **Reading:**Introduction to React: Objectives and Outcomes
22. **Video:**Front-end JavaScript Frameworks and Libraries Overview
23. **Video:**Introduction to React
24. **Video:**Exercise (Video): Getting Started with React
25. **Reading:**Exercise (Instructions): Getting Started with React
26. **Video:**React App Overview
27. **Video:**Introduction to JSX
28. **Video:**Exercise (Video): Configuring your React Application
29. **Reading:**Exercise (Instructions): Configuring your React Application
30. **Reading:**Introduction to React: Additional Resources
31. **Reading:**React Components: Objectives and Outcomes
32. **Video:**React Components
33. **Video:**Exercise (Video): React Components Part 1
34. **Reading:**Exercise (Instructions): React Components Part 1
35. **Video:**React Components: State and Props
36. **Video:**Exercise (Video): React Components Part 2
37. **Reading:**Exercise (Instructions): React Components Part 2
38. **Video:**React Components: Lifecycle Methods Part 1
39. **Reading:**React Components: Additional Resources
40. **Video:**Assignment 1 Requirements (Video): React Components
41. **Reading:**Assignment 1: React Components: Additional Resources
42. **Reading:**Ideation: Objectives and Outcomes
43. **Reading:**Ideation Report Template
44. **Reading:**Ideation: Additional Resources

WEEK 2

React Router and Single Page Applications

In this week, you will learn about various component types. You will learn about React router and its use in designing single page applications. You will also learn about single page applications and use React Router to design single page applications.

14 videos, 16 readings

1. **Reading:**React Component Types: Objectives and Outcomes
2. [**Video:**Presentational and Container Components](https://www.coursera.org/lecture/front-end-react/presentational-and-container-components-TZMPB)
3. **Video:**Exercise (Video): Presentational and Container Components
4. **Reading:**Exercise (Instructions): Presentational and Container Components
5. **Video:**React Components: Lifecycle Methods Part 2
6. **Video:**Functional Components
7. **Video:**Exercise (Video): Functional Components
8. **Reading:**Exercise (Instructions): Functional Components
9. **Reading:**React Component Types: Additional Resources
10. **Reading:**React Router: Objectives and Outcomes
11. **Video:**React Virtual DOM
12. **Video:**Exercise (Video): Header and Footer
13. **Reading:**Exercise (Instructions): Header and Footer
14. **Video:**React Router
15. **Video:**Exercise (Video): React Router
16. **Reading:**Exercise (Instructions): React Router
17. **Reading:**React Router: Additional Resources
18. **Reading:**Single Page Applications: Objectives and Outcomes
19. **Video:**Single Page Applications
20. **Video:**Exercise (Video): Single Page Applications Part 1
21. **Reading:**Exercise (Instructions): Single Page Applications Part 1
22. **Video:**React Router: Parameters
23. **Video:**Exercise (Video): Single Page Applications Part 2
24. **Reading:**Exercise (Instructions): Single Page Applications Part 2
25. **Reading:**Single Page Applications: Additional Resources
26. **Video:**Assignment 2: React Router and Single Page Applications
27. **Reading:**Assignment 2: React Router and Single Page Applications: Additional Resources
28. **Reading:**UI Design and Prototyping: Objectives and Outcomes
29. **Reading:**UI Design and Prototyping Report Template
30. **Reading:**UI Design and Prototyping: Additional Resources

WEEK 3

React Forms, Flow Architecture and Introduction to Redux

In this module you will be introduced to uncontrolled and controlled forms and briefly examine form validation in React applications. You will get an overview of the Flux architecture and introduced to Redux as a way of realizing the flux architecture

13 videos, 15 readings

1. **Reading:**Controlled Forms: Objectives and Oute
2. [**Video:**Controlled Forms](https://www.coursera.org/lecture/front-end-react/controlled-forms-RYDaq)
3. **Video:**Exercise (Video): Controlled Forms
4. **Reading:**Exercise (Instructions): Controlled Forms
5. **Video:**Exercise (Video): Controlled Form Validation
6. **Reading:**Exercise (Instructions): Controlled Form Validation
7. **Reading:**Controlled Forms: Additional Resources
8. **Reading:**Uncontrolled Forms: Objectives and Outcomes
9. **Video:**Uncontrolled Components
10. **Video:**Exercise (Video): Uncontrolled Forms
11. **Reading:**Exercise (Instructions): Uncontrolled Forms
12. **Reading:**Uncontrolled Forms: Additional Resources
13. **Reading:**Introduction to Redux: Objectives and Outcomes
14. **Video:**The Model-View-Controller Framework
15. **Video:**The Flux Architecture
16. **Video:**Introduction to Redux
17. **Video:**Exercise (Video): Introduction to Redux
18. **Reading:**Exercise (Instructions): Introduction to Redux
19. **Reading:**Introduction to Redux: Additional Resources
20. **Reading:**React Redux Form: Objectives and Outcomes
21. **Video:**React Redux Forms
22. **Video:**Exercise (Video): React Redux Form
23. **Reading:**Exercise (Instructions): React Redux Form
24. **Video:**Exercise (Video): React Redux Form Validation
25. **Reading:**Exercise (Instructions): React Redux Form Validation
26. **Reading:**React Redux Form: Additional Resources
27. **Video:**Assignment 3: React Forms and Redux
28. **Reading:**Assignment 3: React Forms and Redux: Additional Resources

WEEK 4

More Redux and Client-Server Communication

In this module you will explore Redux further including Redux action, combining reducers, and Redux thunk, client-server communication using Fetch and the REST API. You will get a brief introduction to animation in React. You will also learn about testing, building and deploying React applications.

20 videos, 26 readings

1. **Reading:**Redux Actions: Objectives and Outcomes
2. [**Video:**Redux Actions](https://www.coursera.org/lecture/front-end-react/redux-actions-hUr1y)
3. **Video:**Exercise (Video): Combining Reducers
4. **Reading:**Exercise (Instructions): Combining Reducers
5. **Video:**Exercise (Video): Redux Actions
6. **Reading:**Exercise (Instructions): Redux Actions
7. **Reading:**Redux Actions: Additional Resources
8. **Reading:**Redux Thunk: Objectives and Outcomes
9. **Video:**Redux Thunk
10. **Video:**Exercise (Video): Redux Thunk
11. **Reading:**Exercise (Instructions): Redux Thunk
12. **Video:**Exercise (Video): React-Redux-Form Revisited
13. **Reading:**Exercise (Instructions): React-Redux-Form Revisited
14. **Reading:**Redux Thunk: Additional Resources
15. **Reading:**Client-Server Communication: Objectives and Outcomes
16. **Video:**Networking Essentials
17. **Video:**Brief Representational State Transfer (REST)
18. **Video:**Exercise (Video): Setting up a Server using json-server
19. **Reading:**Exercise (Instructions): Setting up a Server using json-server
20. **Reading:**Client-Server Communication: Additional Resources
21. **Reading:**Fetch: Objectives and Outcomes
22. **Video:**Promises
23. **Video:**Fetch
24. **Video:**Exercise (Video): Fetch from Server
25. **Reading:**Exercise (Instructions): Fetch from Server
26. **Video:**Exercise (Video): Fetch Handling Errors
27. **Reading:**Exercise (Instructions): Fetch Handling Errors
28. **Video:**Exercise (Video): Fetch Post Comment
29. **Reading:**Exercise (Instructions): Fetch Post Comment
30. **Reading:**Fetch: Additional Resources
31. **Reading:**React Animations: Objectives and Outcomes
32. **Video:**React Animations
33. **Video:**Exercise (Video): React Animations
34. **Reading:**Exercise (Instructions): React Animations
35. **Video:**Exercise (Video): React Animation Components
36. **Reading:**Exercise (Instructions): React Animation Components
37. **Reading:**React Animations: Additional Resources
38. **Video:**Assignment 4: Redux, Client-Server Communication and Fetch
39. **Reading:**Assignment 4: Redux, Client-Server Communication and Fetch: Additional Resources
40. **Reading:**Building and Deployment: Objectives and Outcomes
41. **Video:**Introduction to Webpack
42. **Video:**Exercise (Video): Building and Deploying the React Application
43. **Reading:**Exercise (Instructions): Building and Deploying the React Application
44. **Reading:**Building and Deployment: Additional Resources
45. **Reading:**Project Implementation: Objectives and Outcomes
46. **Reading:**Final Report Template