

18VAC66-REACT JS FOR APP DEVELOPMENT

| L | T | P | Credit |
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| 2 | 0 | 2 | 2 |

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| Preamble | This course enables the students to learn various features of React and helps them to build applications using React JS. | | |
| Unit - I | Introduction to React | | 6 |
| Introduction to React - React Environment and Installation - Creating a project, Running the project - React Basics: View - Text - Image - TextInput – Touchable opacity. React with CSS: Inline styles – style sheets. React Components: what are components – Interface of Components. | | | |
| Unit - II | Building Websites | | 8 |
| React Props and state: Creating state - Using state - Changing the state - Passing data - Props in constructor. React Lifecycle: Lifecycle of components - Mount - Unmount - Update. React Events: Event Handlers - Bind. React Form: Create simple form – validation. Integrate Plugin: Using plugin - solving issue - Customize the plugin. API Integration - Integrating the API - fetching data from API - rendering data into UI. | | | |
| Unit - III | Advanced React components | | 6 |
| Class based and functional components, React Higher order components (HoC), React hooks, React Router, React refs, React context API, React redux – React redux example – React state management – React state vs. props. | | | |

List of Exercises / Experiments:

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|-----|--|
| 1. | Develop a simple application to display text using React. |
| 2. | Create a simple Page with Image, Button and Scrollview. |
| 3. | Display Current date with running time. |
| 4. | Create simple card view with CSS styling. |
| 5. | Create an application to make a simple calculator. |
| 6. | Display content using toggle button. |
| 7. | Create reusable components and a simple form validator. |
| 8. | Display static data using props. |
| 9. | Develop an application using Rest API Service. |
| 10. | Create a single-page app Using React router |
| 11. | Develop App using Redux React |
| 12. | Develop a real time application using advanced react components. |

Lecture:20, Practical:30, Total:50

REFERENCES:

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| 1. | Banks, Alex, and Porcello, Eve, "Learning React: Functional Web Development with React and Redux", United States, O'Reilly Media, 2017. |
| 2. | Wieruch, Robin, "The Road to Learn React: Your Journey to Master Plain Yet Pragmatic React. Js.", Germany, Independently Published, 2017. |

| COURSE OUTCOMES: | | BT Mapped (Highest Level) |
|---|---|----------------------------------|
| On completion of the course, the students will be able to | | |
| CO1 | use various features in React | Applying (K3), Precision (S3) |
| CO2 | implement simple applications using various components in React | Applying (K3), Precision (S3) |
| CO3 | build applications using React | Applying (K3), Precision (S3) |

Mapping of COs with POs and PSOs

| COs/POs | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
| CO1 | 1 | 1 | 2 | 3 | 3 | | | | | | | | | |
| CO2 | 1 | 1 | 2 | 3 | 3 | | | | | | | | | |
| CO3 | 1 | 1 | 2 | 3 | 3 | | | | | | | | | |

1 – Slight, 2 – Moderate, 3 – Substantial, BT- Bloom's Taxonomy

ASSESSMENT PATTERN

| Test / Bloom's Category* | Remembering (K1) % | Understanding (K2) % | Applying (K3) % | Analyzing (K4) % | Evaluating (K5) % | Creating (K6) % | Total % |
|------------------------------------|--------------------|----------------------|-----------------|------------------|-------------------|-----------------|---------|
| Written Test-MCQ (25 marks) | 40 | 40 | 20 | | | | 100 |
| Application Development (75 marks) | - | - | 100 | | | | 100 |