

INT252 Course Instruction Plan

Computer Organisation and Design (Lovely Professional University)



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Course Code: INT252 Course Title: WEB APP DEVELOPMENT WITH REACTJS

LTP: 202

Credits: 3

Course Weightage: ATT: 5 CA: 45 MTT: NA ETP: 50 Exam Category: X6 (Only End Term Practical)

Course Focus: EMPLOYBILITY

Text Book: ADVANCED WEB DEVELOPMENT WITH REACT by MEHUL MOHAN, BPB

PUBLICATIONS

Reference Book: REACT: THE COMPREHENSIVE GUIDE by SEBASTIAN SPRINGER,

SHROFF/O'REILLY

Software/Equipments/Databases: VS CODE

Course Link: https://www.coursera.org/programs/int252-web-app-development-with-react-js-batch-3-

jx9t8/

Course Outcomes: Through this course students should be able to

CO1 :: understand core concepts and apply principles in front-end frameworks, React, ES, TypeScript, JSX, and React components, integrating props and event handling.

CO2:: master using functional React components, project structure, JSX, state management, data flow, lifecycle, services integration, testing, and creating controlled forms.

CO3:: apply effective event handling, regulate data flow, leverage hooks, and govern component states within React frameworks

CO4 :: apply diverse navigation, create adaptive navigation bars, implement conditional rendering, manage assets efficiently, and integrate multimedia components within React environments.

CO5 :: use React hooks for state and effects, manage API data retrieval, and access DOM elements effectively in React development.

CO6:: use JSX, optimize software, compose components, manage dynamic content, use attributes, create utilities, employ testing, integrate Redux, handle async actions.

LTP week distribution: (LTP Weeks)		
Weeks before MTE	7	
Weeks After MTE	7	



Detailed Weekly Plan

Week	Tentative Duration	Broad Topic	Module	Coursera Link
Week 1	22/01/24-28/01/24	Building Rich Front-End Applications with React and ES6	Course Introduction	https://www.coursera.org/lecture/developing-frontend-apps-with-react/course-introduction-4WZWm
		Building Rich Front-End Applications with React and ES6	Introduction to Front-End Frameworks and React	https://www.coursera.org/lecture/developing-frontend-apps-with-react/course-introduction-4WZWm
		Building Rich Front-End Applications with React and ES6	Insiders Viewpoints: Front-end Frameworks	https://www.coursera.org/lecture/developing-frontend-apps-with-react/course-introduction-4WZWm
		Building Rich Front-End Applications with React and ES6	Introduction to ES6	https://www.coursera.org/lecture/developing-frontend-apps-with-react/course-introduction-4WZWm
		Building Rich Front-End Applications with React and	Introduction to JSX	https://www.coursera.org/lecture/developing- frontend-apps-with-react/course-introduction- 4WZWm

		ES6		
		Building Rich Front-End Applications with React and ES6	Introduction to Components	https://www.coursera.org/lecture/developing-frontend-apps-with-react/course-introduction-4WZWm
		Building Rich Front-End Applications with React and ES6	Working with React Components - Props and Event Handling	https://www.coursera.org/lecture/developing-frontend-apps-with-react/course-introduction-4WZWm
Week 2	29/01/24-04/02/24	React Components	Introduction to States	https://www.coursera.org/lecture/developing-frontend-apps-with-react/introduction-to-states-4Xofj
		React Components	Passing Data and States Between Components	https://www.coursera.org/lecture/developing- frontend-apps-with-react/introduction-to-states- 4Xofj
		React Components	Components Lifecycle	https://www.coursera.org/lecture/developing- frontend-apps-with-react/introduction-to-states- 4Xofj
		React Components	Connecting React to External Services	https://www.coursera.org/lecture/developing- frontend-apps-with-react/introduction-to-states- 4Xofj
		React Components	Testing React Components	https://www.coursera.org/lecture/developing- frontend-apps-with-react/introduction-to-states- 4Xofj

Week	05/02/24-11/02/24	Advanced React	Hooks	https://www.coursera.org/lecture/developing-
3				frontend-apps-with-react/hooks-YKJze
		Advanced React	Implementing Forms	https://www.coursera.org/lecture/developing-frontend-apps-with-react/hooks-YKJze
		Advanced React	Introduction to Redux	https://www.coursera.org/lecture/developing-frontend-apps-with-react/hooks-YKJze
		Advanced React	Essential Concepts of Redux - Stores, Procedures and Actions	https://www.coursera.org/lecture/developing-frontend-apps-with-react/hooks-YKJze
		Advanced React	Async with Redux	https://www.coursera.org/lecture/developing-frontend-apps-with-react/hooks-YKJze
		Advanced React	Binding Redux and Flow	https://www.coursera.org/lecture/developing-frontend-apps-with-react/hooks-YKJze
Week 4	12/02/24-18/02/24	React Components	Introduction to the course: React Basics	https://www.coursera.org/lecture/react-basics/introduction-to-the-course-react-basics-AStT3
		React Components	How is React used in the real world?	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3
		React Components	Why React?	https://www.coursera.org/lecture/react-basics/introduction-to-the-course-react-basics-AStT3
		React Components	React.js overview	https://www.coursera.org/lecture/react-basics/introduction-to-the-course-react-basics-AStT3
		React	Introduction to functional components	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3

	Components		
	React Components	Creating React components	https://www.coursera.org/lecture/react-basics/introduction-to-the-course-react-basics-AStT3
	React Components	The React project structure	https://www.coursera.org/lecture/react-basics/introduction-to-the-course-react-basics-AStT3
	React Components	Importing components	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3
	React Components	Principles of components: Props	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3
	React Components	Using props in components	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3
	React Components	Introducing JSX	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3
	React Components	Practical styling	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3
	React Components	Embedded JSX expressions	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3
	React	Embedding in attributes	https://www.coursera.org/lecture/react- basics/introduction-to-the-course-react-basics- AStT3

		Components		
		React Components	Module summary	https://www.coursera.org/lecture/react-basics/introduction-to-the-course-react-basics-AStT3
			Test-	Code Based (CA-1)
Week 5	19/02/24-25/02/24	Data and State	Types of events	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Data and State	Common event handling	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Data and State	Syntax for handlers	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Data and State	User events	https://www.coursera.org/lecture/react- basics/types-of-events-L71Z2
		Data and State	Parent-child data flow	https://www.coursera.org/lecture/react- basics/types-of-events-L71Z2
		Data and State	Children and data	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Data and State	What are hooks?	https://www.coursera.org/lecture/react- basics/types-of-events-L71Z2
		Data and State	What is state?	https://www.coursera.org/lecture/react- basics/types-of-events-L71Z2
		Data and State	Observing state	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Data and State	Managing state	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2

		Data and State	React state management	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Data and State	Stateful vs. stateless	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Data and State	Module summary	https://www.coursera.org/lecture/react-basics/types-of-events-L71Z2
		Allotment of Proje	ect (CA-3)	
Week 6	26/02/2024 To 03/03/2024	Navigation, Updating and Assets in React.js	Basic Types of navigation	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD
		Navigation, Updating and Assets in React.js	The navbar	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD
		Navigation, 65``Updating and Assets in React.js	Conditional rendering	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD
		Navigation, Updating and Assets in React.js	Single view conditional updates	https://www.coursera.org/lecture/react- basics/basic-types-of-navigation-vN7FD
		Navigation, Updating and Assets in	What is an asset and where does it live?	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD

R	eact.js		
U A	Tavigation, Ipdating and Assets in eact.js	Using embedded assets	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD
U A	Tavigation, Ipdating and Assets in eact.js	Audio and video	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD
U A	Tavigation, Ipdating and Assets in eact.js	Create an audio / video component	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD
U A	Tavigation, Todating and Assets in Beact.js	Module summary: navigation, updating and assets in React.js	https://www.coursera.org/lecture/react-basics/basic-types-of-navigation-vN7FD
С	components	What are controlled components?	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
С	Components	Creating a Form component in React	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
C	components	Create a Controlled Form Component	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn

Week 7	Sı				oill over/Mi	id term
Week 8	11/03/2024 to 17/03/2024	Your first React app	Exemplar: Build a calculator app Congratulations, you completed React Basics!		_	vw.coursera.org/lecture/react-basics/course- ct-basics-Cr55y
		Your first React app			_	ww.coursera.org/lecture/react-basics/course- ct-basics-Cr55y
		Your first React app				vw.coursera.org/lecture/react-basics/course- ct-basics-Cr55y
Week 9	18/03/2024 24/03/2024	to	Components		oduction ne course	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
			Components	your	ct and r career ortunities	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
			Components	Components Setti code (Opt		https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
			ŗ	Test-C	Code Based	d 2 (CA-2)
Week 10	25/03/2024- 31/03/2024		Components	Grid	l layouts	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
			Components	lists	nsforming in Script	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
			Components	simp	der a ple list ponent	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn

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	Components	What are Keys in React?	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
	Components	Using Keys Within List Components	https://www.coursera.org/lecture/advanced- react/introduction-to-the-course-9sOxn
	Components	What are controlled components?	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
	Components	Creating a Form component in React	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
	Components	Create a Controlled Form Component	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
	Components	What you know about Props and State	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
	Components	What is Context, and why is it used?	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
	Components	Module summary: Components	https://www.coursera.org/lecture/advanced-react/introduction-to-the-course-9sOxn
	React Hooks and Custom Hooks	Working with React hooks	https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
	React Hooks and Custom Hooks	Revising useState hook	https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U

	React Hooks and Co	ustom Hooks	Using the useState hook	reac	s://www.coursera.org/lecture/advanced- t/working-with-react-hooks-7Fb8U
Week 11	01/04/2024- 07/04/2024	React Hooks and Custom Hooks	What are side effects?		https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		React Hooks and Custom Hooks	Using the useEffect hook		https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		React Hooks and Custom Hooks	What are the rules of hooks? What you need to know before fetching data Putting it all together APIs What is use ,Reducer and how it differs from useState		https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		React Hooks and Custom Hooks			https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		React Hooks and Custom Hooks			https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		React Hooks and Custom Hooks			https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		React Hooks and Custom Hooks			https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U

		React Hooks and Custom Hooks	useRef to access underlying DOM	https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		React Hooks and Custom Hooks	Module summary: React Hooks and Custom Hooks	https://www.coursera.org/lecture/advanced-react/working-with-react-hooks-7Fb8U
		JSX and testing	JSX, Components and Elements	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
JS		JSX and testing	The importance of performance to software development	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Component composition with children	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
Week 12		S	Submission of Pro	oject(CA-3)
Week 12	08/04/2024- 14/04/2024	JSX and testing	Manipulating children dynamically in JSX	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Spread Attributes	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Cross-cutting concerns in React	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Create a HOC for cursor position	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Render props	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik

		JSX and testing	Why React Testing Library	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Writing the first test for your form	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Style guides	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		JSX and testing	Module summary: JSX and Testing	https://www.coursera.org/lecture/advanced-react/jsx-components-and-elements-LcYik
		Final project	Course recap: Advanced React	https://www.coursera.org/lecture/advanced-react/course-recap-advanced-react-ktSG7
		Final project	Course recap: Advanced React	https://www.coursera.org/lecture/advanced-react/course-recap-advanced-react-ktSG7
		Final project	Course recap: Advanced React	https://www.coursera.org/lecture/advanced-react/course-recap-advanced-react-ktSG7
Week 13	15/04/2024- 21/04/2024		Spill Over	
Week 14	21/04/2024- 28/04/2024			,

It is mandatory to complete the number of courses for being eligible for End Term Examination along with the attendance criteria of the university. The links of the courses as shared in the IP should be completed on/before the last teaching day as per the academic calendar of the university.

Scheme for CA:

CA Category of this Course Code is: **C010102** (Total 3 tasks, 1 best out of 2,Project to be made Mandatory)



Component	Is Compulsory	Weightage	Description
Test (Code Based)	No	50%	Code based test based on Unit 1, Unit 2,
			Unit 3
Test (Code Based)	No	50%	Code based test based on Unit 4, Unit 5,
			Unit 6
Test (Project Based	YES	50%	Develop website using React JS
CA)			