



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
B.Tech (CSE)– IV-I Sem

L T P C
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(20A05703a) FULL STACK DEVELOPMENT
(Professional Elective Course– V)

Course Objectives:

Learn the core concepts of both the frontend and backend programming course, to get familiar with the latest web development technologies.

Course Outcomes:

After completion of the course, students will be able to

- Develop a fully functioning website and deploy on a web server.
- Gain Knowledge about the front end and back end tools
- Find and use of code packages based on their documentation to produce working results in a project.
- Create web pages that function using external data.

UNIT I Web Development Basics

Lecture 8Hrs

Web development Basics - HTML & Web servers Shell - UNIX CLI Version control –Git&Github
 HTML, CSS

UNIT II Frontend Development

Lecture 9Hrs

Javascript basics OOPS Aspects of JavaScript Memory usage and Functions in JS AJAX for data exchange with server jQuery Framework jQuery events, UI components etc. JSON data format.

UNIT III REACT JS

Lecture 9Hrs

Introduction to React Router and Single Page Applications React Forms, Flow Architecture and Introduction to Redux More Redux and Client-Server Communication

UNIT IV Java Web Development

Lecture 8Hrs

JAVA PROGRAMMING BASICS, Model View Controller (MVC)
 Pattern MVC Architecture using Spring RESTful API using Spring Framework Building an application using Maven

UNIT V Databases & Deployment

Lecture 8Hrs

Relational schemas and normalization Structured Query Language (SQL) Data persistence using Spring JDBC Agile development principles and deploying applications in Cloud

Textbooks:

1. Web Design with HTML, CSS, JavaScript and JQuery Set Book by Jon Duckett
 Professional JavaScript for Web Developers Book by Nicholas C. Zakas
2. Learning PHP, MySQL, JavaScript, CSS & HTML5: A Step-by-Step Guide to
 Creating Dynamic Websites by Robin Nixon
3. AZAT MARDAN,
 Full Stack JavaScript: Learn Backbone.js, Node.js and MongoDB. 2015

Reference Books:

1. Full-Stack JavaScript Development by Eric Bush.
2. Tomasz Dyl, Kamil Przecorski, Maciej Czarnecki, Mastering Full Stack React Web
 Development 2017

Online Learning Resources:

<https://ict.iitk.ac.in/product/full-stack-developer-html5-css3-js-bootstrap-php-4/>