



# JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA

KAKINADA – 533 003, Andhra Pradesh, India

## DEPARTMENT OF INFORMATION TECHNOLOGY

III Year – II Semester		L	T	P	C
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<b>WEB TECHNOLOGIES</b>					

### Course Objectives:

From the course the student will learn

- Translate user requirements into the overall architecture and implementation of new systems and Manage Project and coordinate with the Client
- Write backend code in PHP language and Writing optimized front end code HTML and JavaScript
- Understand, create and debug database related queries and Create test code to validate the applications against client requirement
- Monitor the performance of web applications & infrastructure and Troubleshooting web application with a fast and accurate a resolution

### Course Outcomes:

- Illustrate the basic concepts of HTML and CSS & apply those concepts to design static web pages.
- Identify and understand various concepts related to dynamic web pages and validate them using JavaScript
- Outline the concepts of Extensible markup language & AJAX
- Develop web Applications using Scripting Languages & Frameworks
- Create and deploy secure, usable database driven web applications using PHP and RUBY

### UNIT I

HTML: Basic Syntax, Standard HTML Document Structure, Basic Text Markup, Html styles, Elements, Attributes, Heading, Layouts, Html media, Iframes Images, Hypertext Links, Lists, Tables, Forms, GET and POST method, HTML 5, Dynamic HTML.

CSS: Cascading style sheets, Levels of Style Sheets, Style Specification Formats, Selector Forms, The Box Model, Conflict Resolution, CSS3.

### UNIT II

Javascript - Introduction to Javascript, Objects, Primitives Operations and Expressions, Control Statements, Arrays, Functions, Constructors, Pattern Matching using Regular Expressions, Fundamentals of Angular JS and NODE JS Angular Java Script- Introduction to Angular JS Expressions: ARRAY, Objects, Strings, Angular JS Form Validation & Form Submission.

Node.js- Introduction, Advantages, Node.js Process Model, Node JS Modules, Node JS File system, Node JS URL module, Node JS Events.

### UNIT III

Working with XML: Document type Definition (DTD), XML schemas, XSLT, Document object model, Parsers - DOM and SAX.

AJAX A New Approach: Introduction to AJAX, Basics of AJAX, XML Http Request Object, AJAX UI tags, Integrating PHP and AJAX.



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#### UNIT IV

PHP Programming: Introduction to PHP, Creating PHP script, Running PHP script. Working with variables and constants: Using variables, Using constants, Data types, Operators. Controlling program flow: Conditional statements, Control statements, Arrays, functions.

#### UNIT V

Web Servers- IIS (XAMPP, LAMP) and Tomcat Servers. Java Web Technologies-Introduction to Servlet, Life cycle of Servlet, Servlet methods, Java Server Pages.

Database connectivity – Servlets, JSP, PHP, Practice of SQL Queries.

Introduction to Mongo DB and JQuery.

Web development frameworks – Introduction to Ruby, Ruby Scripting, Ruby on rails, Design, Implementation and Maintenance aspects.

#### Text Books:

- 1) Programming the World Wide Web, 7th Edition, Robert W Sebesta, Pearson, 2013.
- 2) Web Technologies, 1st Edition 7th impression, Uttam K Roy, Oxford, 2012.
- 3) Pro Mean Stack Development, 1st Edition, ELad Elrom, Apress O'Reilly, 2016
- 4) Java Script & jQuery the missing manual, 2nd Edition, David sawyer mcfarland, O'Reilly, 2011.
- 5) Web Hosting for Dummies, 1st Edition, Peter Pollock, John Wiley & Sons, 2013
- 6) RESTful web services, 1st Edition, Leonard Richardson, Ruby, O'Reilly, 2007

#### Reference Books:

- 1) Ruby on Rails Up and Running, Lightning fast Web development, 1st Edition, Bruce Tate, Curt Hibbs, Oreilly, 2006.
- 2) Programming Perl, 4th Edition, Tom Christiansen, Jonathan Orwant, O'Reilly, 2012.
- 3) Web Technologies, HTML, JavaScript, PHP, Java, JSP, XML and AJAX, Black book, 1st Edition, Dream Tech, 2009.
- 4) An Introduction to Web Design, Programming, 1st Edition, Paul S Wang, Sanda S Katila, Cengage Learning, 2003.