

B. TECH THIRD YEAR			
Course Code	ACSE0505	L T P	Credits
Course Title	WEB TECHNOLOGY	3 0 0	3
<b>Course objective:</b> This course covers different aspect of web technology such as HTML, CSS, Java Script and provide fundamental concepts of Internet, Web Technology and Web Programming. Students will be able to build a proper responsive website.			
<b>Pre-requisites:</b> Basic Knowledge of any programming language like C/C++/Python/Java. Familiarity with basic concepts of Internet.			
Course Contents / Syllabus			
UNIT-I	Basics of Web Technology & Testing	8 Hours	
History of Web and Internet, connecting to Internet, Introduction to Internet services and tools, Client-Server Computing, Protocols Governing Web, Basic principles involved in developing a web site, Planning process, Types of Websites, Web Standards and W3C recommendations, Web Hosting Basics, Types of Hosting Packages, Introduction to Web testing, Functional Testing, Usability & Visual Testing, Performance & Load Testing.			
UNIT-II	Introduction to HTML & XML	8 Hours	
HTML, DOM- Introduction to Document Object Model, Basic structure of an HTML document, Mark up Tags, Heading-Paragraphs, Line Breaks, Understand the structure of HTML tables. Lists, working with Hyperlinks, Image Handling, Understanding Frames and their needs, HTML forms for User inputs. New form Elements- date, number, range, email, search and data list, Understanding audio, video and article tags XML Syntax, Elements, Attributes, Namespaces, Display, HTTP request, Parser, DOM, XPath, XSLT, XQuery, XLink, Validator, DTD and XML Schema.			
UNIT-III	Concepts of CSS3 & Bootstrap	8 Hours	
Creating Style Sheet, CSS Properties, CSS Styling (Background, Text Format, Controlling Fonts), Working with block elements and objects, Working with Lists and Tables, CSSIdandClass, BoxModel(Introduction, JavaScript Borderproperties,PaddingProperties, Marginproperties) CSS Advanced(Grouping, Dimension, Display, Positioning, Floating, Align,Pseudoclass,NavigationBar,ImageSprites,Attributesector),CSSColor,CreatingpageLayoutandSite. Bootstrap Features & Bootstrap grid system, Bootstrap Components, Bootstrap Plug-Ins.			
UNIT-IV	JavaScript and ES6	8 Hours	
Introduction to Java Script, JavascriptTypes, Var, Let and Const Keywords, Operators in JS, Conditional Statements, Java Script Loops, JS Popup Boxes JS Events, JS Arrays, Working with Arrays, JS Objects, JS Functions Validation of Forms, Arrow functions and default arguments, Template Strings, Strings methods, Callback functions, Object de-structuring, Spread and Rest Operator, Typescript fundamentals, Typescript OOPs- Classes, Interfaces, Constructor etc. Decorator and Spread Operator, Asynchronous Programming in ES6, Promise Constructor, Promise with Chain, Promise Race.			
UNIT-V	Introduction to PHP	8 Hours	
Basic Syntax of PHP, Variables & Constants, Data Type, Operator & Expressions, Control flow and Decision making statements, Functions, Strings, Arrays, Understanding file& directory, Opening and closing, a file, Copying, renaming and deleting a file, working with directories, Creating and deleting folder, File Uploading &Downloading. Introduction to Session Control, Session Functionality What is a Cookie, Setting Cookies with PHP. Using Cookies with Sessions, Deletng Cookies, Registering Session variables, Destroying the variables and Session.			

**Course outcome:** After completion of this course students will be able to

CO 1	Identify the basic facts and explaining the basic ideas of Web technology and internet.	K1, K2
CO 2	Applying and creating various HTML5 semantic elements and application with working on HTML forms for user input.	K3, K6
CO 3	Understanding and applying the concepts of Creating Style Sheet CSS3 and bootstrap.	K2, K3
CO 4	Analysing and implementing concept of JavaScript and its applications.	K4, K6
CO 5	Creating and evaluating dynamic web pages using the concept of PHP.	K5, K6

**Text books:**

1. C Xavier, “Web Technology and Design”, 1<sup>st</sup> Edition 2003, New Age International.
2. Raj Kamal, “Internet and Web Technologies”, 2<sup>nd</sup> Edition 2017, Mc Graw Hill Education.
3. Oluwafemi Alofe, “Beginning PHP Laravel”, 2<sup>nd</sup> Edition 2020, kindle Publication.

**Reference Books:**

1. Burdman, Jessica, “Collaborative Web Development” 5<sup>th</sup> Edition 1999, Addison Wesley Publication.
2. Randy Connolly, “Fundamentals of Web Development”, 3<sup>rd</sup> Edition 2016,
3. Ivan Bayross, “HTML, DHTML, Java Script, Perl & CGI”, 4<sup>th</sup> Edition 2010 BPB Publication

**NPTEL/ YouTube/Faculty Video Link:**

<b>Unit 1</b>	<a href="https://youtu.be/96xF9phMsWA">https://youtu.be/96xF9phMsWA</a> <a href="https://youtu.be/Zopo5C79m2k">https://youtu.be/Zopo5C79m2k</a> <a href="https://youtu.be/ZliIs7jHilS">https://youtu.be/ZliIs7jHilS</a> <a href="https://youtu.be/htbY9-yggB0">https://youtu.be/htbY9-yggB0</a>
<b>Unit 2</b>	<a href="https://youtu.be/vHmUVQKXIVo">https://youtu.be/vHmUVQKXIVo</a> <a href="https://youtu.be/qz0aGYrrlhU">https://youtu.be/qz0aGYrrlhU</a> <a href="https://youtu.be/BsDoLVMnmZs">https://youtu.be/BsDoLVMnmZs</a> <a href="https://youtu.be/a8W952NBZUE">https://youtu.be/a8W952NBZUE</a>
<b>Unit 3</b>	<a href="https://youtu.be/1Rs2ND1ryYc">https://youtu.be/1Rs2ND1ryYc</a> <a href="https://youtu.be/vpAJ0s5S2t0">https://youtu.be/vpAJ0s5S2t0</a> <a href="https://youtu.be/GBOK1-nvdU4">https://youtu.be/GBOK1-nvdU4</a> <a href="https://youtu.be/Eu7G0jV0ImY">https://youtu.be/Eu7G0jV0ImY</a>
<b>Unit 4</b>	<a href="https://youtu.be/-qfEOE4vtxE">https://youtu.be/-qfEOE4vtxE</a> <a href="https://youtu.be/PkZNo7MFNFg">https://youtu.be/PkZNo7MFNFg</a> <a href="https://youtu.be/W6NZfCO5SIk">https://youtu.be/W6NZfCO5SIk</a> <a href="https://youtu.be/DqaTKBU9TZk">https://youtu.be/DqaTKBU9TZk</a>
<b>Unit 5</b>	<a href="https://youtu.be/_GMEqhUyyFM">https://youtu.be/_GMEqhUyyFM</a> <a href="https://youtu.be/ImtZ5yENzgE">https://youtu.be/ImtZ5yENzgE</a> <a href="https://youtu.be/xIApzP4mWyA">https://youtu.be/xIApzP4mWyA</a> <a href="https://youtu.be/qKR5V9rdht0">https://youtu.be/qKR5V9rdht0</a>