

## COURSE PLAN & COURSE DATA SHEET

PROGRAM: B. Tech	DEGREE:
COURSE: Web & Internet Technology	SEMESTER: IV CREDITS:
COURSE CODE: CS-210 REGULATION:	COURSE TYPE: CORE /ELECTIVE / BREADTH/ S&H
COURSE AREA/DOMAIN:	CONTACT HOURS: 3+1 (Tutorial) hours/Week.
CORRESPONDING LAB COURSE CODE (IF ANY): CS-260	LAB COURSE NAME (IF ANY):

### PROGRAM EDUCATIONAL OBJECTIVES:

### SYLLABUS:

UNIT	DETAILS	HOURS
I	<b>INTRODUCTION TO WWW:</b> Introduction to Computer networks - Internet Standards - Introduction to WWW - WWW Architecture - SMTP - POP3 - File Transfer Protocol - Overview of HTTP, HTTP request - response -- Generation of dynamic web pages	7
II	<b>UI DESIGN: HTML5:</b> What is HTML5 - Features of HTML5 - Semantic Tags - New Input Elements and tags - Media tags (audio and video tags) - Designing Graphics using Canvas API - Drag and Drop features - Geolocation API - Web storage (Session and local storage). <b>CSS3:</b> What is CSS3 - Features of CSS3 - Implementation of border radius, box shadow, image border, custom web font, backgrounds - Advanced text effects(shadow) - 2D and 3D Transformations - Transitions to elements - Animations to text and elements	12
III	<b>RESPONSIVE WEB DESIGN (RWD):</b> Responsive Design: What is RWD - Introduction to RWD Techniques - Fluid Layout, Fluid Images and Media queries - Introduction to RWD Framework. <b>TWITTER BOOTSTRAP</b> - Bootstrap Background and Features - Getting Started with Bootstrap - Demystifying Grids - Off Canvas - Bootstrap Components - JS Plugins - Customization.	9
IV	<b>INTRODUCTION TO JAVASCRIPT:</b> Introduction - Core features - Data types and Variables - Operators, Expressions and Statements - Functions & Scope - Objects - Array, Date and Math related Objects - Document Object Model - Event Handling - Browser Object Model - Windows and Documents - Form handling and validations. <b>OBJECT-ORIENTED TECHNIQUES IN JAVASCRIPT</b> - Classes - Constructors and Prototyping (Sub classes and Super classes) - JSON - Introduction to AJAX.	9
V	<b>INTRODUCTION TO JQUERY:</b> Introduction - jQuery Selectors - jQuery HTML - Animations - Effects - Event Handling - DOM - jQuery DOM Traversing, DOM Manipulation - jQuery AJAX	5
TOTAL HOURS		42

## DETAILED SESSION PLAN

Lecture session/ Number	Topics to be covered	CO addressed	Teacher Centric Approach	Learner Centric Approach	References	Relevance with POs and PSOs
1.	Introduction to Computer		TC1	LC1,LC3	T1/T2/R1/W1	
2.	Internet Standards		TC1	LC1,LC3	T1/T2/R1/W1	
3.	Introduction to WWW – WWW Architecture		TC1,TC2	LC1,LC3	T1/T2/R1/W1	
4.	SMTP – POP3		TC1,TC2	LC1,LC3	T1/T2/R1/W1	
5.	File Transfer Protocol		TC1,TC2	LC1,LC3	T1/T2/R1/W1	
6.	Overview of HTTP, HTTP request – response		TC1	LC1,LC3	T1/T2/R1/W1	
7.	Generation of dynamic web pages.		TC1	LC1,LC3	T1/T2/R1/W1	
8.	UI DESIGN: HTML5 Features of HTML5 Semantic Tags		TC1,TC2	LC1,LC3	T1/T2/R1/W1	
9.			TC1	LC1,LC3	T1/T2/R1/W1	
10.	New Input Elements and tags		TC1	LC1,LC3	T1/T2/R1/W1	
11.	Media tags (audio and video tags)		TC1	LC1,LC3	T1/T2/R1/W1	
12.	Designing Graphics using Canvas API		TC1	LC1,LC3	T1/T2/R1/W1	
13.	Drag and Drop features		TC1	LC1,LC3	T1/T2/R1/W1	
14.	Geolocation API - Web storage (Session and local storage).		TC1	LC1,LC3	T1/T2/R1/W1	
15.	What is CSS3 – Features of CSS3		TC1,TC2	LC1,LC3	T1/T2/R1/W1	

16.	Implementation of border radius, box shadow,	TC1	LC1,LC3	T1/T2/R1/W1
17.	image border, custom web font, backgrounds	TC1	LC1,LC3	T1/T2/R1/W1
18.	Advanced text effects(shadow) - 2D and 3D	TC1	LC1,LC3	T1/T2/R1/W1
19.	Transitions to elements - Animations to text and elements	TC1,TC2	LC1,LC3	T1/T2/R1/W1
20.	Assignment-1	TC1,TC2	LC1,LC3	T1/T2/R1/W1
21.	Responsive Design: What is RWD - Introduction to RWD Techniques			
22.	Fluid Layout, Fluid Images and Media queries	TC1,TC2	LC1,LC3	T1/T2/R1/W1
23.	Introduction to RWD Framework	TC1	LC1,LC3	T1/T2/R1/W1
24.	Bootstrap Background and Features -	TC1,TC2	LC1,LC3	T1/T2/R1/W1
25.	Getting Started with Bootstrap - Demystifying Grids	TC1	LC1,LC3	T1/T2/R1/W1
26.	- Off Canvas - Bootstrap Components	TC1	LC1,LC3	T1/T2/R1/W1
27.	- JS Plugins - Customization	TC1,TC2	LC1,LC3	T1/T2/R1/W1
28.	INTRODUCTION TO JAVASCRIPT	TC1	LC1,LC3	T1/T2/R1/W1
29.	Core features - Data types and Variables - Operators, Expressions and	TC1	LC1,LC3	T1/T2/R1/W1

30.	Expressions and Statements - Functions & Scope		TC1,TC2	LC1,LC3	T1/T2/R1/W1
31.	Objects - Array		TC1,TC2	LC1,LC3	T1/T2/R1/W1
32.	Date and Math related Objects				
33.	Document Object Model		TC1,TC2	LC1,LC3	T1/T2/R1/W1
34.	Event Handling		TC1,TC2	LC1,LC3	T1/T2/R1/W1
35.	Browser Object Model		TC1	LC1,LC3	T1/T2/R1/W1
36.	Windows and Documents - Form handling and validations.		TC1	LC1,LC3	T1/T2/R1/W1
37.	OBJECT-ORIENTED TECHNIQUES IN JAVASCRIPT -		TC1,TC2	LC1,LC3	T1/T2/R1/W1
38.	Classes		TC1	LC1,LC3	T1/T2/R1/W1
39.	Constructors		TC1	LC1,LC3	T1/T2/R1/W1
40.	Prototyping (Sub classes and Super classes)		TC1	LC1,LC3	T1/T2/R1/W1
41.	JSON - Introduction to AJAX		TC1,TC2	LC1,LC3	T1/T2/R1/W1
42.	Assignment-2		TC1,TC2	LC1,LC3	T1/T2/R1/W1
43.	Introduction - jQuery Selectors		TC1,TC2	LC1,LC3	T1/T2/R1/W1
44.	- jQuery HTML		TC1	LC1,LC3	T1/T2/R1/W1
45.	Animations - Effects - Event Handling		TC1	LC1,LC3	T1/T2/R1/W1
46.	DOM - jQuery DOM Traversing,		TC1,TC2	LC1,LC3	T1/T2/R1/W1
47.	DOM Manipulation		TC1	LC1,LC3	T1/T2/R1/W1
48.	jQuery AJAX		TC1	LC1,LC3	T1/T2/R1/W1

## TEXT/REFERENCE BOOKS:

T/R	BOOK TITLE/AUTHORS/PUBLICATION
1	Harvey & Paul Deitel & Associates, Harvey Deitel and Abbey Deitel, "Internet and World Wide Web - How To Program", Fifth Edition, Pearson Education, 2011
2	Achyut S Godbole and Atul Kahate, "Web Technologies", Second Edition, Tata McGraw Hill, 2012.

## # WEB SOURCE REFERENCES (W):

1	Thomas A Powell, Fritz Schneider, "JavaScript: The Complete Reference", Third Edition, Tata McGraw Hill, 2013.
2	David Flanagan, "JavaScript: The Definitive Guide, Sixth Edition", O'Reilly Media, 2011
3	Bear Bibeault and Yehuda Katz, "jQuery in Action", January 2008
4	Web link for Responsive Web Design - <a href="https://bradfrost.github.io/this-is-responsive/">https://bradfrost.github.io/this-is-responsive/</a>
5	Ebook link for JavaScript - <a href="https://github.com/jasonzhuang/tech_books/tree/master/js">https://github.com/jasonzhuang/tech_books/tree/master/js</a>

## COURSE PRE-REQUISITES:

C.CODE	COURSE NAME	DESCRIPTION	SEM
CS-201	Web & Internet Technologies	3 0 0	4

## COURSE OBJECTIVES:

1	To understand the concepts and architecture of the World Wide Web.
2	To understand and practice Markup Language.
3	To understand and practice Embedded Dynamic Scripting on Client-side Internet Programming.
4	To understand and practice Web Development Techniques on client-side.

## COURSE OUTCOMES:

S.NO	DESCRIPTION	PO(1..12) MAPPING	PSO(1..3) MAPPING
Cxxx.1	Illustrate the Semantic Structure of HTML and CSS.	PO1, PO2, PO5, PO9	PSO1
Cxxx.2	Demonstrate forms and tables using HTML and CSS.	PO3, PO4, PO5, PO6	PSO3
Cxxx.3	Develop Client-Side programs using JavaScript and Server-Side programs using JavaScript.	PO3, PO4, PO5, PO6	PSO3
Cxxx.4	Outline Object Oriented Programming capabilities of JavaScript	PO10,	PSO2,

		PO11	PSO3
Cxxx.5	Use web application development software tools i.e. Ajax, jQuery and XML etc. and identify the environments currently available on the market to design web sites.	PO5, PO10, PO11	PSO2
COURSE OVERALL PO/PSO MAPPING:			

### COURSE OUTCOMES VS POs MAPPING (DETAILED; HIGH:3; MEDIUM:2; LOW:1):

S.NO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO.1	1	-	1	-	-	-	-	-	-	-	-	2	2	-	-
CO.2	1	-	1	-	-	-	-	-	-	-	-	2	2	-	-
CO.3	1	-	1	-	-	-	-	-	-	-	-	2	2	-	-
CO.4	1	-	1	-	-	-	-	-	-	-	-	2	2	-	-
CO.5	1	-	1	-	-	-	-	-	-	-	-	2	2	-	-
CO*	1.0	-	2.0	-	-	-	-	-	-	-	-	2.0	2.0	-	-

\* For Entire Course, PO & PSO Mapping

### POs & PSO REFERENCE:

PO1	Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	PO7	Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental context, and demonstrate the knowledge of, and need for sustainable development.	PSO 1	Foundation of mathematical concepts: To use mathematical methodologies to crack problem using suitable mathematical analysis, data structure and suitable algorithm.
PO2	Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	PO8	Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	PSO 2	Foundation of Computer Science: The ability to interpret the fundamental concepts and methodology of computer systems. Students can understand the functionality of hardware and software aspects of computer systems.
PO3	Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with	PO9	Individual and team network: Function effectively as an individual, and as a member or leader in diverse teams, and in	PSO 3	Foundation of Software development: The ability to grasp the software development lifecycle and

	appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.		multidisciplinary settings.		methodologies of software systems. Possess competent skills and knowledge of software design process.
PO4	Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	PO1 0	Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.		
PO5	Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations. students need the knowledge of basic HTML and CSS syntax and semantics to build web pages	PO1 1	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.		
PO6	The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	PO1 2	Life-Long learning: Recognize the need for, and have the preparation and able to engage in independent and life-long learning in the broadest context of technological change.		

### COs VS POs MAPPING JUSTIFICATION:

S.NO	PO/PSO MAPPED	LEVEL OF MAPPING	JUSTIFICATION
Cxxx.1		LOW	Have strong technical foundation for successful professional careers and to evolve as key-players/ entrepreneurs in the field of information technology.

# Lingaya's Vidyapeeth

Deemed-to-be-University u/s 3 of UGC Act 1956, Government of India

**NAAC ACCREDITED**

Approved by MHRD / AICTE / PCI / BCI / COA / NCTE

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Cxxx.2		MEDIUM	Excel in analyzing, formulating, and solving engineering problems to promote life-long learning, to develop applications, resulting in the betterment of the society.
Cxxx.3		MEDIUM	Have leadership skills and awareness on professional ethics and codes.
Cxxx.4		HIGH	Understanding the concept of cellular wireless networks and how the different protocols work in mobile environment
Cxxx.5		LOW	Understanding the Network layer and Transport layer protocols in mobile computing environment
Cxxx*			

## GAPS IN THE SYLLABUS - TO MEET INDUSTRY/PROFESSION REQUIREMENTS, POs & PSOs:

SNO	DESCRIPTION	PROPOSED ACTIONS
1		
2		
3		
4		
5		

*PROPOSED ACTIONS: TOPICS BEYOND SYLLABUS/ASSIGNMENT/INDUSTRY VISIT/GUEST LECTURER/NPTEL ETC*

## # TOPICS BEYOND SYLLABUS/ADVANCED TOPICS/DESIGN:

1	
2	
3	
4	
5	
6	
7	

## DELIVERY/INSTRUCTIONAL METHODOLOGIES:

<input type="checkbox"/> CHALK & TALK	<input type="checkbox"/> STUD. ASSIGNMENT	<input type="checkbox"/> WEB RESOURCES	<input type="checkbox"/> NPTEL/OTHERS
<input type="checkbox"/> LCD/SMART BOARDS	<input type="checkbox"/> STUD. SEMINARS	<input type="checkbox"/> ADD-ON COURSES	<input type="checkbox"/> WEBNIARS

## ASSESSMENT METHODOLOGIES-DIRECT

<input type="checkbox"/> ASSIGNMENTS	<input type="checkbox"/> STUD. SEMINARS	<input type="checkbox"/> TESTS/MODEL EXAMS	<input type="checkbox"/> UNIV. EXAMINATION
<input type="checkbox"/> STUD. LAB PRACTICES	<input type="checkbox"/> STUD. VIVA	<input type="checkbox"/> MINI/MAJOR PROJECTS	<input type="checkbox"/> CERTIFICATIONS
<input type="checkbox"/> ADD-ON COURSES	<input type="checkbox"/> OTHERS		

## ASSESSMENT METHODOLOGIES-INDIRECT

<input type="checkbox"/> ASSESSMENT OF COURSE OUTCOMES (BY FEEDBACK, ONCE)	<input type="checkbox"/> STUDENT FEEDBACK ON FACULTY (TWICE)
<input type="checkbox"/> ASSESSMENT OF MINI/MAJOR PROJECTS BY EXT. EXPERTS	<input type="checkbox"/> OTHERS

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## # INNOVATIONS IN TEACHING/LEARNING/EVALUATION PROCESSES:

1. Learning Through Interactivity
2. The Shift from Physical to eTextbooks
3. Focus on Accessible Education
4. Higher Measurability of Learning Effectiveness
5. Leverage a Single, Unified Platform

**Prepared by**  
**(Ms. Shivani Bansal)**

**Approved by**  
**(HOD)**

*# Additionally, the details to be compiled separately by the Departmental Coordinator for the entire Department.*