

TECNIA INSTITUTE OF ADVANCED STUDIES
GRADE 'A' INSTITUTE
 Department of Information Communication & Technology
COURSE PLAN

ACADEMIC SESSION 2024-25

As per Scheme & Syllabus (w.e.f. Academic Session 2024-2025 onwards); As per UGC Curriculum & Credit Framework for Undergraduate Programme (CCFUP) (Dec 2022) Guru Gobind Singh Indraprastha

PROGRAMME CODE:	D20	PROGRAMME:	Bachelor of Computer Applications (BCA)	SHIFT:	1st	L	4	T/P	0	Credits	4
COURSE CODE:	BCA-105T	COURSE NAME:	Web Technologies	SECTION:	A						
		COURSE TYPE:	Core Course Theory (CCT)	FACULTY:	Ms. Mansi Jaiswal						

LEARNING OBJECTIVES:

1. Knowledge about the semantic structure of HTML, Javascript, CSS, XML and bootstrap.
2. Ability to compose forms and tables using HTML, Javascript, CSS and Bootstrap.
3. Expertise to design static web pages.
4. Skills to create dynamic user interface and perform Client-Side validations using JavaScript.

PREREQUISITE: None

COURSE OUTCOME & MAPPING, COURSE ARTICULATION

		DISCIPLINARY KNOWLEDGE: Disciplinary Knowledge Apply the knowledge of computer application concepts and domain knowledge to solve the problems in IT domain/IT industry	PROBLEM ANALYSIS: Identify, formulate, research literature, and analyse complex computer application problem at their workplace and for the society.	DESIGN /DEVELOPMENT OF SOLUTIONS: Design and evaluate solutions for computer applications problems, and design the processes that meet specified needs with appropriate consideration for the public health, safety, cultural, societal, and environmental considerations.	MODERN TOOL USAGE: Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to complex computer application activities, with an understanding of the limitations	PROFESSIONAL ETHICS: Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practices.	LIFE-LONG LEARNING: Recognize the need, and have the ability, to engage in independent learning for continual development as a computing professional	PROJECT MANAGEMENT AND FINANCE: Demonstrate knowledge and understanding of the computing and manage projects and in multidisciplinary environments	COMMUNICATION EFFICACY WITH COOPERATION/TEAMWORK: Communicate effectively with the computing community, and with society at large, about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions. Function effectively as an individual and as a member or a leader.	SOCIETAL AND ENVIRONMENTAL CONCERN: Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practices.	INNOVATION AND ENTREPRENEURSHIP: Identify a timely opportunity and using innovation to pursue that opportunity to create value and wealth for the individual and society at large.
CO - PO MAPPING		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	Develop static web pages through HTML, JavaScript, CSS and Bootstrap.	3	-	3	2	1	2	1	-	-	3
CO2	Implement different constructs and programming techniques provided by JavaScript.	3	-	3	2	1	2	1	-	-	3
CO3	Adapt HTML, Javascript, CSS and Bootstrap syntax and semantics to build web pages.	3	-	3	3	1	3	2	-	-	2
CO4	Develop Client-Side Scripts using JavaScript to display the contents dynamically	3	-	3	3	1	2	2	-	-	2
Course Articulation (Average)		3	-	3	2.5	1	2.25	1.5	-	-	2.5

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S. No.	Lecture No.	Unit-No	Topic	Sessional Outcome	Experiential Learning	Participative Learning	Problem Solving Methodologies	ICT Tools & E-Resources Utilization	Mapping with CO	Class Material (PPT Faculty+ Students)	Additional Material (Links/ Journals/ Articles/ NEWS)	Mode of Assessment	Status
1	L1	Unit-1	Introduction Web Technology - Web Page, Home Page : Basic Terminology	Students would be able to understand concept of web technology		Lecture Through PPT		https://www.youtube.com/watch?v=Tj9t9BHlmbL0&list=PL0Zyfu4Ym88b-B3sriHAJLK21kVDe&index=1	CO1	PPTs	https://www.youtube.com/watch?v=6kyePB7RMnY	Questions from Assignment	
2	L2	Unit-1	Web site, Static and Dynamic website, Client Server computing concepts, Web Client and Web Server, Web Browser	Define the concept of static and dynamic website		Lecture Through PPT	Brainstorming		CO1, CO2	PPTs	https://www.youtube.com/watch?v=mbObLvXyv0E	Questions from Assignment	
3	L3	Unit-1	HTML Overview : Introduction to HTML	Learn about HTML file		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=lxjvkLoH8cg&list=PLBJ4X48yC1kgJhQ T-YyvkFqnsCywLDU	CO2	PPTs	https://www.youtube.com/watch?v=6kyePB7RMnY	Questions from Assignment	
4	L4	Unit-1	HTML Document structure with basic tags and HTML comments	Learn about HTML file structure		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=lxjvkLoH8cg&list=PLBJ4X48yC1kgJhQ T-YyvkFqnsCywLDU	CO2	PPTs			
5	L5	Unit-1	Text formatting and inserting special characters	Define basic formatting tags in HTML		Discussion	Practical	https://www.youtube.com/watch?v=cVjPK8oaFRg&list=PLBJ4X48yC1kgJhQ T-YyvkFqnsCywLDU&index=2	CO3	PPTs		PPT by Student	
6	L6	Unit-1	Anchor tag	Apply anchor tags		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=cVjPK8oaFRg&list=PLBJ4X48yC1kgJhQ T-YyvkFqnsCywLDU&index=2	CO 1, CO2	PPTs	https://www.youtube.com/watch?v=fq21zDQhpRE	PPT by Student	
7	L7	Unit-1	Adding images and Sound	Add images and sound in HTML documents		Lecture Through PPT			CO2, CO3	PPTs		PPT by Student	
8	L8	Unit-1	lists types of lists	Create Ordered and Unordered lists		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=rVHQ8ap3c	CO2, CO4	PPTs	https://www.youtube.com/watch?v=rVHQ8ap3c		
9	L9	Unit-1	Creating tables using HTML	Create tables with customized settings using table attributes		Lecture Through PPT		https://www.youtube.com/watch?v=oa1ZgWQyt-o	CO2, CO5	PPTs	https://www.youtube.com/watch?v=oa1ZgWQyt-o	Viva-1	

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	L10	Unit-1	Creating tables using HTML	Create tables with customized settings using table attributes		Lecture Through PPT		https://www.youtube.com/watch?v=eatZgWQyt-o	CO 1	PPTs	https://www.youtube.com/watch?v=eatZgWQyt-o	Viva-1	
11	L11	Unit-1	Frames and floating frames	Create a frame in a webpage	Demonstration	Lecture Through PPT	Practical	https://www.youtube.com/watch?v=HV4JElpOgto&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=4	CO1	PPTs	https://www.tutorialspoint.com/How-to-create-tables-in-HTML	Viva-1	
12	L12	Unit-1	Developing Forms	Apply different attributes and their values with form elements		Lecture Through PPT	Practical		CO1, CO2	PPTs	https://www.tutorialspoint.com/html/html_frames.htm		
13	L13	Unit-1	Image maps	Able to create static form		Lecture Through PPT	Brainstorming	https://www.youtube.com/watch?v=F5FCrStpi8E&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=5	CO1	PPTs	https://www.javajpoint.com/how-to-create-a-form-in-html	Questions from Assignment	
14	L14	Unit-2	Cascading Style Sheet: Types of Style Sheets - Internal, inline	Learn the concept of CSS and type of CSS		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=F5FCrStpi8E&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=5	CO 1, CO3	PPTs		Questions from Assignment	
15	L15	Unit-2	External style sheets	Learn the concept of CSS and type of CSS		Lecture Through PPT	Practical		CO 1, CO3	PPTs		PPT by Student	
16	L16	Unit-2	Creating styles & using link tag	Apply different styles in webpage using style sheets		Discussion		https://www.youtube.com/watch?v=jQbgwRrhp4&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=10	CO2, CO3	PPTs	https://www.dcphevpm.org/E-Content/BCA/BCA-II/Web%20Technology/the-complete-reference-html-css-fifth-edition.pdf		
17	L17	Unit-2	Creating styles & using link tag	Apply different styles in webpage using style sheets		Discussion		https://www.youtube.com/watch?v=hleZhJNg1Dw&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=12	CO2, CO4	PPTs		Questions from Assignment	
18	L18	Unit-2	CSS Properties, CSS Styling - background, Border & Font	Understand css style and properties		Lecture Through PPT	Practical		CO3	PPTs	https://www.dcphevpm.org/E-Content/BCA/BCA-II/Web%20Technology/the-complete-reference-html-css-fifth-edition.pdf	Questions from Assignment	
19	L19	Unit-2	Style Selector- Id, class name	Define different types of CSS selector		Lecture Through PPT	Practical		CO4	PPTs		Questions from Assignment	

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20	L20	Unit-2	Pseudo Class	understand working of pseudo class		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=OJ304xp-PY&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=16	CO3	PPTs	https://www.dcpshom.org/E-Content/BCA/BCA-II/Web%20Technology/the-complete-reference-html-css-fifth-edition.pdf		
21	L21	Unit-2	BootStrap Basics : Introduction to Bootstrap and Responsive web design	Understand the concept of bootstrap and responsive web pages		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=4mW6AmSTbuA&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=11	CO2	PPTs	https://www.researchgate.net/publication/301548189_An_overview_on_various_ways_of_bootstrap_methods	Viva-2	
22	L22	Unit-2	Linking with Bootstrap	Apply bootstrap for designing web pages		Discussion	Practical		CO3	PPTs	https://www.researchgate.net/publication/301548189_An_overview_on_various_ways_of_bootstrap_methods	Viva-2	
23	L23	Unit-2	Container class	Understanding container class		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=4mW6AmSTbuA&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=11	CO3	PPTs		Viva-2	
24	L24	Unit-2	Container class	Understanding container class		Lecture Through PPT	Practical		CO3	PPTs	https://www.youtube.com/watch?v=uUXDSYNNY_I		
25	L25	Unit-2	Grids and tables	Create grids, tables and insert images in a web page		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=HV4JEIpOgto&list=PLfU4X48yC1kgIhfQT-YyvKFqnsCywLDU&index=4	CO1	PPTs	https://www.tutorialspoint.com/How-to-create-tables-in-HTML	Class Test	
26	L26	Unit-2	Images, Buttons	Create button and classes to design web page		Lecture Through PPT	Practical		CO3	PPTs		Viva-3	
27	L27	Unit-2	typography classes, jumbotron, glyphicons	Understand the concept of typography classes		Lecture Through PPT	Practical		CO3	PPTs		Viva-3	
28	L28	Unit-2	Introduction to Java Script	Understand the concept of Java Script	Demonstration	Lecture Through PPT	Practical	https://www.youtube.com/watch?v=V8bygek5wI&list=PLQZyfu4Ym88b-B3sgjHAJLK21kVDe-&index=13	CO2	PPTs	https://www.researchgate.net/publication/224132834_It's_a_bout_Time_to_Take_JavaScript_More_Seriously	Viva-3	
29	L29	Unit-3	Data Types, Variables & operators in Javascript	Learn different type of data type		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=SLg-15WjXDE&list=PLQZyfu4Ym88b-B3sgjHAJLK21kVDe-&index=14	CO2	PPTs	http://www.cs.unc.edu/~jasleen/Courses/Fall11/docs/PractiseExercisesSolutions.pdf	PPT by Student	

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30	L30	Unit-3	Control Statements	Learn how to use control statements		Lecture Through PPT	Practical		CO 2 , CO 3	PPTs	http://www.cs.unc.edu/~jsteele/Courses/Fall11/docs/PracticalExercisesSolutions.pdf	PPT by Student
31	L31	Unit-3	Control Statements	Learn how to use control statements		Lecture Through PPT	Practical		CO 2 , CO 4	PPTs		PPT by Student
32	L32	Unit-3	Loops in javascript	Understanding loops in javascript		Discussion	Practical		CO 2 , CO 3	PPTs		
33	L33	Unit-3	Operators, dialog boxes	Understand the concept of operators In Java Script		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=m-SkpKPyPgI&list=PLQZyfU41Ym88b-B3sgIHAIK121kVDa-&index=16	CO1	PPTs	https://www.tutorialspoint.com/javascript/javascript_mock_test.htm	Viva
34	L34	Unit-3	Built in and User Defined Functions	Define arrays and its methods		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=w7ey5DCOhA&list=PLQZyfU41Ym88b-B3sgIHAIK121kVDa-&index=20	CO 2 , CO 3	PPTs	https://www.researchgate.net/publication/351853213_A_Basis_for_Event-Driven_Programming	Viva
35	L35	Unit-3	Objects use	Understand use of objects	Demonstration	Lecture Through PPT	Practical		CO 2 , CO 3	PPTs	https://www.researchgate.net/publication/351853213_A_Basis_for_Event-Driven_Programming	Viva
36	L36	Unit-3	Objects in Java Script	Understand mechanism of objects in javascript		Lecture Through PPT	Practical		CO 2 , CO 4	PPTs		
37	L37	Unit-3	Handling Events	Define methods of events		Lecture Through PPT		https://www.youtube.com/watch?v=m-SkpKPyPgI&list=PLQZyfU41Ym88b-B3sgIHAIK121kVDa-&index=16	CO1, CO2	PPTs	https://www.cs.tut.ac.za/mit/notes/web_programming/pdfs/chp14.pdf	Viva
38	L38	Unit-3	Basic validations	understand validations		Lecture Through PPT	Practical		CO 2 , CO 3	PPTs	https://www.cs.tut.ac.za/mit/notes/web_programming/pdfs/chp14.pdf	PPT by Student
39	L39	Unit-3	Document Object Model	Understanding Dom		Lecture Through PPT		https://www.google.com/search?q=Introduction+to+XML+%2Bhtml&rlz=1C1CHBD_enIN927IN927&oeq=Introduction+to+XML+%2Bhtml&ags=chrome_69i57.195360j15&sourceid=chrome&ie=UTF-8#fpstate=iv&vld=cid:c21875d9,vil:itRkLa2kq6w	CO 1, CO4	PPTS	https://www.w3schools.com/xml/xml_dtd_building.asp	PPT by Student
40	L40	Unit-3	Browser Object Model	Understanding Bom		Lecture Through PPT		https://www.youtube.com/watch?v=olHhAOL2y-s	CO 1, CO4	PPTS	https://www.w3schools.com/xml/xml_dtd_building.asp	
41	L41	Unit-3	XML: Introduction, Features	Define XML and its use		Lecture Through PPT			CO 1, CO4	PPTS	https://www.w3schools.blog/dtd-xml-building-blocks	Viva

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42	L42	Unit-3	XML Naming rules, Building block of XML Document	Understand XML DTD		Discussion	Practical		CO 1, CO5	PPTs		Viva
43	L43	Unit-3	Difference between HTML & XML	Explain the concept and working of XML DTD		Debate	Practical	https://www.youtube.com/watch?v=-oLHA0Uy-s	CO 1	PPTs	https://www.w3schools.blog/dtd-xml-building-blocks	Viva
44	L44	Unit-4	XML Parser	XML parsing concept		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=aTOZeHrzSJY&t=1612s	CO 2, CO 3	PPTs	https://www.tutorialspoint.com/internet_technologies/web-site_hosting.htm	
45	L45	Unit-4	DTD's Using XML with HTML	Able to differentiate HTML & XML		Lecture Through PPT	Practical		CO 2, CO3	PPTs	https://www.tutorialspoint.com/internet_technologies/web-site_hosting.htm	
46	L46	Unit-4	XML	Understand the concept of XML		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=aTOZeHrzSJY&t=1612s	CO 2, CO 3	PPTs	https://www.tutorialspoint.com/internet_technologies/web-site_hosting.htm	
47	L47	Unit-4	Web Hosting Concepts	Understanding meaning of web hosting		Lecture Through PPT	Practical		CO 4	PPTs	https://lawbhooni.com/procedure-of-registration-of-domain-name-in-india-an-analysis/	Viva
48	L48	Unit-4	Concept of domain	Understand the concept of Physical domain, virtual domain		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=aTOZeHrzSJY&t=1612s	CO4	PPTs	https://www.tutorialspoint.com/internet_technologies/web-site_hosting.htm	
49	L49	Unit-4	Physical domain,	Understand the concept of Physical domain, virtual domain		Lecture Through PPT	Practical		CO 2, CO 3, CO4	PPTs	https://lawbhooni.com/procedure-of-registration-of-domain-name-in-india-an-analysis/	PPT by Student
50	L50	Unit-4	Registering a domain	Learn to register a domain		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=_V8bygek5wI&list=PL0Zyf41Ym88b-B3sgjHAILK121kVDa-&index=13	CO2	PPTs	https://www.researchgate.net/publication/224132834_It's_a_bour_Time_to_Take_JavaScript_More_Seriously	PPT by Student
51	L51	Unit-4	virtual domain	Understand the server requirements for web hosting		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=SLg-15WjXDE&list=PL0Zyf41Ym88b-B3sgjHAILK121kVDa-&index=14	CO2	PPTs	http://www.cs.unc.edu/~jaslee/Courses/Fall11/docs/PracticeExercisesSolutions.pdf	
52	L52	Unit-4	Physical domain,	Understand the concept of Physical domain, virtual domain		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=hbRARt11jc	CO 2 , CO 3	PPTs	http://www.cs.unc.edu/~jaslee/Courses/Fall11/docs/PracticeExercisesSolutions.pdf	PPT by Student
53	L53	Unit-4	Registering a domain	Learn to register a domain		Group Discussion	Practical	https://www.youtube.com/watch?v=SLg-15WjXDE&list=PL0Zyf41Ym88b-B3sgjHAILK121kVDa-&index=14	CO2	PPTs	http://www.cs.unc.edu/~jaslee/Courses/Fall11/docs/PracticeExercisesSolutions.pdf	

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54	L54	Unit-4	virtual domain	Understand the concept of Physical domain, virtual domain		Lecture Through PPT		https://www.youtube.com/watch?v=SaqbnB1YELI	CO2	PPTs	http://www.cs.bmc.edu/~jnsler/n/Courses/Fall11/docs/PracticgExercisesSolutions.pdf		
55	L55	Unit-4	Types of IP	Understand the Types of IP		Lecture Through PPT		https://www.youtube.com/watch?v=m-SkpKPyPgI&list=PLOZyf u4Ym88b-B3sgIHAIK121kVDa-&index=16	CO1	PPTs	https://www.tutorialspoint.com/javascript/javascript_mock_test.htm	PPT by Student	
56	L56	Unit-4	IP Addressing	Understand the IP Addressing		Lecture Through PPT		https://www.youtube.com/watch?v=w7ejySDCOhA&list=PLOZyf u4Ym88b-B3sgIHAIK121kVDa-&index=20	CO 2 , CO 3	PPTs	https://www.researchgate.net/publication/351853213_A_Basis_for_Event-Driven_Programming	PPT by Student	
57	L57	Unit-4	Need of IP addressing	Understand the server requirements for web hosting		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=HAsQ4-ndWic	CO 2 , CO 3	PPTs	https://www.researchgate.net/publication/351853213_A_Basis_for_Event-Driven_Programming	Viva	
58	L58	Unit-4	Web Hosting	Understand theWeb Hosting		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=HAsQ4-ndWic	CO 2 , CO 4	PPTs	https://www.researchgate.net/publication/351853213_A_Basis_for_Event-Driven_Programming	Viva	
59	L59	Unit-4	Web Hosting	Understand the server requirements for web hosting		Lecture Through PPT		https://www.youtube.com/watch?v=m-SkpKPyPgI&list=PLOZyf u4Ym88b-B3sgIHAIK121kVDa-&index=16	CO1, CO2	PPTs	https://www.cs.uct.ac.za/mit/notes/web_programming/pdfs/chp14.pdf	PPT by Student	
60	L60	Unit-4	Publishing Concepts	Understand thePublishing Concepts		Lecture Through PPT	Practical	https://www.youtube.com/watch?v=D9k13H1rcMs	CO 2 , CO 3	PPTs	https://www.cs.uct.ac.za/mit/notes/web_programming/pdfs/chp14.pdf	PPT by Student	

Note : 1 Credit (Theory) =15 Hrs. in a Semester; 1 Credit (Practical) =

Suggested Readings :(Latest Edition)

TEXTBOOKS:

1. The complete reference HTML and CSS, by Thomas A nowell, TMH publication
2. Jeffrey C. Jackson, "Web Technologies: A Computer Science Perspective", Pearson
3. Internet and World Wide Web (Dorf) HM (Dorf) Ginzberg, Third Edition

REFERENCE BOOKS:

- RB1.** 1. HTML Black Book , Stephen Holzner, Wiley Dreamtech.
RB2. 2. Rajkamal, "Web Technology", Tata McGraw-Hill, 2001.
RB3. 3.3. Jeffrey C. Jackson, "Web Technologies : A Complete guide, 2015

JOURNALS

1. International Journal of Web Engineering and Technology
2. Journal of Web Semantics
3. World Wide Web Journal
4. ACM Transactions on the Web (TWEB)
5. International Journal of Computer Science and Information Technology (IJCSIT)
6. Web Intelligence and Agent Systems
7. Journal of Computer Science Education
8. Journal of Internet Technology (JIT)
9. IEEE Internet Computing
10. Journal of Digital Information Management

Name of Faculty:  Ms. Mansi Jainwal

Head of Department:  Dr. Rajesh Kumar

Date:

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