

BCA (3rd Semester)

030010311: CC8 Advanced Web Design

Teaching Schedule

Objective: To provide knowledge of advanced features of hypertext mark-up language in conjunction with client side framework to make interactive website by using jQuery and eXtensible Markup Language.

Course Outcomes: Upon completion of the Course, students shall be able to

C01: Summarize and use advanced elements and attributes of HTML using document structure.

C02: Paraphrase the concept and uses of jQuery with client side framework.

C03: Use of jQuery to manipulate HTML elements, CSS properties, showing effects and handle events.

C04: Summarize XML document structure with its features and concept of entity, XML parser and namespaces.

C05: Validating XML document using XML Schema.

C06: Format and transform XML document using XSLT.

C07: Recognize concept of XPath, XLink and XPointer.

Unit	Sub Unit	No. of Lecture (s)	Topics	Reference Chapter/ Additional Reading	Teaching Methodology	Evaluation Parameters
Unit 1: Advanced Elements of Hypertext Markup Language						
	1.1	2	Overview of advanced features	BB #1 – Page no.- 8-20	Power Point Presentation	Quiz, Unit Test-1 (Theory & Practical), Unit Test-2 (Practical) DesignIT
	1.2		Document Structure: Overview of DOCTYPE element, charset attribute	BB #1 – Page no.- 20 -23, http://www.w3schools.com/html/html_charset.asp	Power Point Presentation	
	1.3	2	Semantic/Structural Elements: <article>, <aside>, <details>, <figcaption>, <figure>, <footer>, <header>, <mark>, <nav>, <section>, <summary> and <time>	BB #1 – Page no.- 8-9, 41-43, BB #2 – Page no.- 64,71 BB #3 – Page no.- 92-93, 110 BB #9 – Page no.- 234, 237,242 BB #10 – Page no.- 252, 263	Chalk and Talk, Demonstration	
	1.4	1	Graphics Elements: <canvas> and <svg>	BB #1 – Page no.- 9, 175, 187-188, http://www.w3schools.com/svg/default.asp	Chalk and Talk, Demonstration	
	1.5	1	Multimedia Elements: <audio>, <embed>, <source>, <track> and <video>	BB #1 – Page no.- 9,13-14, BB #10 – Page no.- 249-251, 253-259, http://www.w3schools.com/tags/tag_source.asp , http://www.w3schools.co		

				m/tags/tag_track.asp		
1.6	1	Form Elements: <datalist>, <keygen> and <output>		BB #1 – Page no.- 9, BB #8 – Page no.- 200 – 201, 224-229		
Unit 2: Advanced Attributes of Hypertext Markup Language						
2.1	1	Content editable and spelling mistake Attributes: contenteditable, spellcheck		BB #1 – Page no.- 10, BB #27 – Page no.- 714-715, 730-733	Chalk and Talk, Demonstration	Quiz, Unit Test-1 (Theory & Practical), Unit Test-2 (Practical) DesignIT
2.2	2	Microdata Attributes: itemid, itemprop, itemref, itemscope, itemtype		BB #1 – Page no.- 10-11, BB #27 – Page no.- 715-718		
2.3	1	<FORM> Element Attributes: autocomplete, novalidate		BB #1 – Page no.- 12, BB #8- Page no. 190-191, http://www.w3schools.com/html/html_form_attributes.asp		
2.4	3	<INPUT> Element Attributes: autocomplete, autofocus, form, formaction, formenctype, formmethod, formnovalidate, formtarget, height, width, list, min, max, step, multiple, pattern, placeholder and required		BB #1– Page no.- 12-13, http://www.w3schools.com/html/html_form_attributes.asp		
2.5	2	Types of the <INPUT> Element: datetime, datetime-local, date, month, week, time, number, range, file, email and url		BB #8– Page no.- 191-194		
2.6	1	Drag and Drop Attributes: draggable and dropzone		BB #1– Page no.- 19		
Unit 3: Fundamentals of jQuery						
3.1	1	Introduction		BB #39– Page no.- 1088-1090, RY #1- Page no.-3-8	PowerPoint Presentation	Unit Test-1 (Theory & Practical), Unit Test-2 (Practical), DesignIT
3.2		Common in JavaScript and jQuery		BB #39– Page no.- 1089		
3.3	1	Load and Use		BB #39– Page no.- 1091		
3.4		Library files		BB #39– Page no.- 1091-1092		
3.5	1	Selectors: Searching within the selectors using find()		BB #39– Page no.- 1093-1094, RY #2- Page no.-38-39		
3.6	2	Methods to access HTML Attributes: attr(), removeAttr(), addClass(), removeClass(), html() and text()		BB #39– Page no.- 1095-1096 RY #2 – Page No. - 95-114	Chalk and Talk, Demonstration	
3.7	2	Methods for traversing: Finding an element’s siblings using siblings(), Searching Ancestors Using the parent() and parents(BB #39– Page no.- 1097, RY #2- Page no.-39-49		

), Selecting children element			
Unit 4: jQuery Manipulator, Events and Effects						
4.1	2	Methods to manipulate HTML elements: after(), append(), before(), clone(), empty(), html() and hasClass()	BB #39- Page no.- 1097-1098, RY #4 - Page no. - 154-162	Power-Point Presentation, Chalk and Talk, Demonstration	Unit Test-1(Theory), Unit Test-2 (Practical), DesignIT	
4.2	2	Methods to manipulate CSS properties: css(), height(), position(), scrollLeft(), scrollTop() and width()	BB #39- Page no.- 1098-1099, RY #6 - Page No. - 207-208			
4.3	1	Form elements and web page events: blur, change, focus, load, resize, scroll, select, submit and unload	BB #39- Page no.- 1099-1101			
4.4	2	Mouse operation and Keyboard events: mousedown, mousemove, mouseout, mouseover, mouseup, click, dbclick, keydown, keypress and keyup	BB #39- Page no.- 1099-1101			
4.5	2	Overview of Effects	BB #39- Page no.-1101			
4.6		Methods to create effects: animate(), delay(), fadeIn(), fadeOut(), fadeTo(), hide(), show(), stop() and toggle()	BB #39- Page no.- 1101-1102, RY #8 Page No. - 277-283			
Unit 5: eXtensible Markup Language						
5.1	1	Introduction and Features	BB #28- Page no.- 762-764	Power-Point Presentation	Unit Test-2, Practical Internal-2	
5.2		Advantages and disadvantages	BB #28- Page no.- 764			
5.3	2	XML document: declaration, elements, attributes, tree and comments	BB #28- Page no.- 765-768, 774-778	Demonstration		
5.4	1	Entity References	BB #28- Page no.- 768, 779	Power-Point Presentation		
5.5	1	XML Parser	BB #28- Page no.- 768-769, 779-781			
5.6	2	Overview of XML namespaces	BB #29- Page no.- 762-788-790	Demonstration		
Unit 6: Validating and Transforming XML Document						
6.1	1	XML Schema Structure	BB #29- Page no.- 792-793	Power-Point Presentation	Practical Internal-2	
6.2	2	Simple type Element and Complex type Elements	BB #29- Page no.- 793-799			
6.3	1	XML Schema Data types	BB #29- Page no.- 799-801	Power-Point Presentation		
6.4	2	XSLT Elements: apply-templates, attributes, choose, for-each, if,	BB #31- Page no.- 848, 850-	Demonstration		

		number, sort, stylesheet, value-of and when	856, 863-865, 871-875	
6.5	2	Overview of XPath, XLink and XPointer	BB #32- Page no.- 880-881, 885-887	Power-Point Presentation

Textbook:

1. HTML5 covers CSS3 JavaScript XML XHTML AJAX PHP and jQuery – Black Book, Dreamtech Press [BB]

References :

1. Recharad Y., JavaScript and CSS Development using jQuery, Wrox [RY]

Note: # denotes chapter number.

Course objectives and Course outcomes mapping:

- To provide knowledge of advanced features of hypertext mark-up language : CO1
- To make interactive website by using jQuery: CO2, CO3
- To make interactive website by using eXtensible Markup Language: CO4,CO5, CO6, CO7

Course units and Course outcomes mapping:

Unit No.	Unit	Course Outcome						
		CO1	CO2	CO3	CO4	CO5	CO6	CO7
1	Advanced Elements of Hypertext Markup Language	✓						
2	Advanced Attributes of Hypertext Markup Language	✓						
3	Fundamental of jQuery		✓					
4	jQuery Manipulator, Events and Effects			✓				
5	eXtensible Markup Language				✓			
6	Validating and Transforming XML Document					✓	✓	✓

Programme Outcomes:

PO1: Proficiency in and ability to identify problems related to computer science as well as design and apply computational knowledge to solve them.

PO2: Ability to design, develop, test and maintain system, component, product or process as per needs and specification.

PO3: Understanding of professional and ethical role and responsibility.

PO4: Recognition of the need for and ability towards life-long learning.

PO5: Knowledge of programming languages, database systems, operating systems, software engineering, Web & Mobile technology and relevant modern issues.

PO6: Ability to demonstrate the use of modern tools, models and languages to solve problems related to software development

PO7: Ability to communicate and present knowledge effectively.

Course outcomes and Programme outcomes mapping:

Programme Outcomes	Course Outcomes						
	C01	C02	C03	C04	C05	C06	C07
PO1	✓	✓	✓	✓	✓	✓	✓
PO2	✓	✓	✓	✓	✓	✓	✓
PO3	✓	✓	✓	✓	✓	✓	✓
PO4							
PO5	✓	✓	✓	✓	✓	✓	✓
PO6	✓	✓	✓	✓	✓	✓	✓

Computing Environment:

A student must have any one of the following computing environment in laboratory and or on his/her laptop.

- Notepad/gedit editor
- NetBeans IDE version 8.2

Modes of Transaction (Delivery):

Unit No	Topic Detail	Teaching Approach	PO mapped
1 & 6	1.3 to 1.6, 2.4 to 2.6, 3.6 to 3.7, 4.1 to 4.6, 6.4	Students have to pick one chit on the spot and have to demonstrate element or property which is written on the chit.	PO1, PO2, PO3, PO5, PO6

Activities/Practicum:

The following activities shall be carried out by the students.

- Study of JavaScript scripting language.
- Study history of HTML5.

Learner	Activities to be done	PO mapped
For slow learners	Topic shall assigned by the course teacher and student shall explain in the class or submit explanation on paper within 2 days after assigning.	PO1, PO2, PO3, PO4, PO5, PO6
For advanced learners	Student shall demonstrate at least one advanced feature (out of syllabus) for attractive web designing.	PO1, PO2, PO3, PO4, PO5, PO6
For all	Student shall discuss previous lecture summary and current lecture summary in first 5 minutes and last 10 minutes of lecture respectively.	PO1, PO2, PO3, PO4, PO5, PO6

Number of Practical Problems in Journal: 15

Total sets to be developed for each division: 02

Unit Number	Number of Questions	Time required to implement and debug the question (in hours)	Minimum required of Journal Certification
Unit -1	3	10	3
Unit -2	2	6	2
Unit -3	2	6	2
Unit -4	3	10	3
Unit -5	2	6	1
Unit -6	3	10	2
TOTAL	15	48	13

Concept Linkage:

Unit/Sub Unit	Prior Concept Linkage	Post Concept Linkage
2.3, 2.4 & 2.5	060060208: Unit 4: 4.2	060060407: Unit 2: 2.1
3 & 4	-	060060508: Unit 6: 6.2