FR. Conceicao Rodrigues College Of Engineering

Father Agnel Ashram, Bandstand, Bandra-west, Mumbai-50

Department of Information Technology

B.E. (IT) (semester V) (2019-2020)

Lesson Plan:

Subject: Internet Programming (ITC502)   **Credit-4**

Course Code	Course Name	Theory	Practical	Tutorial	Theory	Oral & Practical	Tutorial	Total
ITC502	Internet Programming	04	--	--	04	--	--	04

Course Code	Course Name	Examination Scheme							
		Theory Marks				Term Work	Oral & Practical	Oral	Total
		Internal assessment			End Sem. Exam				
		Test1	Test2	Avg. of two Tests					
ITC502	Internet Programming	20	20	20	80	--	--	--	100

Course Objectives: Students will try to learn:

1 To get familiar with basics of the Internet Programming.
2. To acquire knowledge and skills for creation of web site considering both client and server side programming
3. To gain ability to develop responsive web applications
4. To explore different web extensions and web services standards
5. To learn characteristics of RIA –Web Mashup EcoSystem
6. To be familiarized with Python web framework-Django.

Course Outcomes: Students will be able to:

1. Implement interactive web page(s) using HTML,CSS and JavaScript.
2. Design a responsive web site using HTML5 and CSS3.
3. Demonstrate Rich Internet Application .
4. Build Dynamic web site using server side PHP Programming and Database connectivity.
5. Describe and differentiate different Web Extensions and Web Services.
6. Demonstrate web application using Python web Framework-Django

Prerequisite: Basic Java Programming and Python Programming.

Detailed syllabus:

Sr. No.	Module	Detailed Content	Hours	CO Mapping
0	Prerequisite	**Introduction to web technologies**: Introduction to OSI layers,	02	---
I	Client Side Programming :HTML, CSS and JavaScript	**Basic of HTML:** Web System architecture-1,2,3 and n tier architecture, URL, domain name system, overview of HTTP and FTP, Cross browser compatibility issues, W3C Validators. Formatting and Fonts, Anchors, images, lists, tables, frames and forms. **Introduction to CSS**: Evolution of CSS, Syntax of CSS, Exploring CSS Selectors, Inserting CSS in an HTML Document, Defining Inheritance in CSS. **Introduction to JavaScript:** JavaScript language constructs, Objects in JavaScript- Built in, Browser objects and DOM objects, event handling, form validation and cookies.	09	CO1
II	HTML5 and Responsive Web Design with CSS3	**HTML 5 :** Fundamental Syntax and Semantics, Native Audio and Video, Micro data and Custom data, Accessibility, Geo-location, Canvas **CSS3 and Responsive Web Design** Media Queries: Supporting Differing Viewports, Embracing Fluid Layout. CSS3: Selectors, Typography and color Modes, Stunning Aesthetics with CSS3, CSS3 Transitions, Transformations and Animations, Conquer Forms HTML5 and CSS3	12	CO1 CO2
III	Rich Internet Application(RIA)	Characteristics of RIA, **Introduction to AJAX** :AJAX design basics, AJAX vs Traditional Approach, , Rich User Interface using Ajax. **Working with JavaScript Object Notation(JSON)**: Create data in JSON format, JSON Parser .	09	CO3

		Web Mashup Eco Systems –Mashup Techniques: Mashing on the Web Server, Mashing with JSON		
IV	Server Side Programming: PHP	Introduction to PHP- Data types, control structures, built in functions, Building web applications using PHP- tracking users, PHP and Mysql database connectivity with example. Introduction to PHP Framework.	08	CO4
V	Web Extensions and Web Services	**Web Extensions**: Introduction to XML, Introducing XSL. Web services: Evolution and differences with Distributed computing, WSDL, SOAP, UDDI. REST-ful web services, Resource Oriented Architecture	07	CO5
VI	Python Web Framework: Django	Introduction, Web Frameworks, Introduction to Django ,Projects and Apps, "Hello World" Application.	05	CO6

Text Books:

1. HTML 5 Black Book: Kogent Learning solutions
2. "Learning PHP 5", David Sklar, O'Reilly Publication
3. Rich Internet Application AJAX and Beyond WROX press
4. Responsive Web Design with HTML5 and CSS3, Ben Frain, PACKT Publication

References:

1. "Web Technologies: Black Book", Dreamtech publication
2. HTML5 Cookbook, By Christopher Schmitt, Kyle Simpson, O'Reilly Media
3. Core Python Applications Programming by Wesley J Chun Third edition Pearson Publication
4. Advanced Internet Technologies (includes practicals), Deven Shah, Dreamtech publication

Assessment:

Internal Assessment for 20 marks:

Consisting of **Two Compulsory Class Tests**

Approximately 40% to 50% of syllabus content must be covered in First test and remaining 40% to 50% of syllabus contents must be covered in second test.

End Semester Examination: Some guidelines for setting the question papers are as:

- Weightage of each module in end semester examination is expected to be/will be proportional to number of respective lecture hours mentioned in the syllabus.
- Question paper will comprise of total **six questions**, **each carrying 20 marks.**
- **Q.1** will be **compulsory** and should **cover maximum contents of the syllabus**.
- **Remaining question will be mixed in nature** (for example if Q.2 has part (a) from module 3 then part (b) will be from any other module. (Randomly selected from all the modules.)
- Total **four questions** need to be solved.

2. Course Outcome Statement

Sr.No.	Course Outcome Statement
ITC502.1	Implement interactive web page(s) using HTML,CSS and JavaScript.
ITC502.2	Design a responsive web site using HTML5 and CSS3.
ITC502.3	Develop Rich Internet Application .
ITC502.4	Build Dynamic web site using server side PHP Programming and Database connectivity.
ITC502.5	Describe and differentiate different Web Extensions and Web Services.
ITC502.6	Demonstrate web application using Python web Framework-Django

3.CO-PO and CO-PSO Mapping

Course Name	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
ITC502.1			3		2								3	2
ITC502.2			3		2								3	2
ITC502.3			3		2								3	2
ITC502.4			3		2								3	2
ITC502.5					1								2	2
ITC502.6			2		3								3	2

4. CO Assessment Tools

CO number	Direct Measurement						Indirect Measurement
	UT1	UT2	Quiz	Assignment	MiniProject	Univ. Theory	Course Exit Survey
ITC502.1	20%		30%		20%	30%	100%
ITC502.2	20%				50%	30%	100%
ITC502.3		30%		20%	20%	30%	100%
ITC502.4		30%			40%	30%	100%
ITC502.5		70%				30%	100%
ITC502.6		50%		20%		30%	100%

5. Course Outcomes Target:

Upon Completion of this course, students will be able to :

ITC502.1: Implement interactive web page(s) using HTML,CSS and JavaScript..[B2:Application]

Target level: 2.0

ITC502.2: Design a responsive web site using HTML5 and CSS3 [B3:Application]

Target level: 2.0

ITC502.3:. Develop Rich Internet Application [B3:Application]

Target level: 2.0

ITC502.4: Build Dynamic web site using server side PHP Programming and Database connectivity. [B3:Application]

Target level: 2.0

ITC502.5: Describe and differentiate different Web Extensions and Web Services. [B1:Knowledge]

Target level: 2.0

ITC502.6: Build Demonstrate web application using Python web Framework-Django [B3:Application]

Target level: 2.0

6.Content Beyond Curriculum

1. Suggested online courses beyond syllabus

7.Lesson Plan

No of classes available:	43	1. No of Classes taken: 2.Total Remedial Lectures		
Sr. No.	Topic Planned with CO	Planned Date	Actual Date	Delivery Mechanisms
	Don't forget to include CO dissemination			
1.	Prerequisite	01-07-2019		Blackboard, ppt, notes
2.	Client side Programming: HTML, CSS, Javascript (ITC502.1)	29-07-2019		Blackboard, ppt, notes, blended mini MOOC
3.	HTML 5 and responsive web design with CSS3(ITC502.2)	09-09-2019		Blackboard, ppt, notes, blended mini MOOC
4.	Rich Internet Application(ITC502.3)	19-09-2019		Blackboard, ppt
5.	Server Side Programming: PHP (ITC502.4)	27-09-2019		Blackboard, notes
6.	Web extensions and web services (ITC502.5)	07-10-2019		Blackboard, notes
7.	Python web framework: Django (ITC502.6)	11-10-2019		Blackboard, Demonstration

Date wise lecture plan

Date	Topic Taught	Date	Topic Taught
01-07-19	Introduction to course, CO and Introduction to OSI layers, URL	03-07-19	Web system architecture, DNS, Cross browser compatibility issues
04-07-19	Overview of HTTP, FTP and W3C validators	08-07-19	HTML formatting and fonts, images
09-07-19	Anchors, Lists	10-07-19	Tables and frames
11-07-19	Forms	15-07-19	CSS syntax, CSS selectors, inserting CSS in HTML document
16-07-19	Inheritance in CSS, positioning in CSS	17-07-19	Javascript language constructs
22-07-19	Objects in javascript, DOM	25-07-19	Event handling and form validation
29-07-19	Form validation and cookies	30-07-19	Semantic tags of HTML5
31-07-19	Native audio and video	01-08-19	Micro data and custom data, accessibility
19-08-19	Geo location	20-08-19	Canvas
21-08-19	Media Queries	22-08-19	Fluid layouts
26-08-19	CSS3 selectors	27-08-19	CSS 3 typography and color modes
28-08-19	Stunning aesthetics with CSS3	29-08-19	CSS 3 transitions and transformations
09-09-19	CSS3 animations	11-09-19	Characteristics of RIA
16-09-19	AJAX vs. traditional approach, Rich UI using AJAX	17-09-19	Creating data in JSON format, JSON parser
18-09-19	Web mashup ecosystem	19-09-19	Mashing up with JSON
23-09-19	Introduction to PHP and data types, control structures	24-09-19	Built-in functions of PHP
25-09-19	PHP session tracking	28-09-19	PHP and MySQL database connectivity
28-09-19	PHP and MySQL database connectivity, introduction to PHP frameworks	28-09-19	Introduction to XML, DTD
30-09-19	Introduction to XSL and XSLT	01-10-19	Evolution and differences with distributed computing, WSDL, SOAP, UDDI
	REST-ful web services, Resource Oriented Architecture		Introduction to Django, Features of Django
	Demonstration of Hello World Application in Django		

8.Lab Plan

		Batch	Planned Dates	Actual Dates	Relevant CO
1	Problem selection and group formation	A	15/7/19	15/7/19	-
		B	16/7/19	16/7/19	-
		C	19/7/19	19/7/19	-
		D	18/7/19	18/7/19	-
2	Front end design of the website	A	22/7/19	22/7/19	ITL501.2
		B	24/7/19	24/7/19	ITL501.2
		C	2/8/19	2/8/19	ITL501.2
		D	25/7/19	25/7/19	ITL501.2
3	Front end design of the website	A	29/7/19	29/7/19	ITL501.2
		B	31/7/19	31/7/19	ITL501.2
		C	23/8/19	23/8/19	ITL501.2
		D	1/8/19	1/8/19	ITL501.2
4	Responsive website design	A	19/8/19	19/8/19	ITL501.1
		B	21/8/19	21/8/19	ITL501.1
		C	13/9/19	13/9/19	ITL501.1
		D	23/8/19	23/8/19	ITL501.1
5	RIA design	A	26/8/19	26/8/19	ITL501.3
		B	28/8/19	28/8/19	ITL501.3
		C	20/9/19	20/9/19	ITL501.3
		D	30/8/19	30/8/19	ITL501.3
6	Database Connectivity	A	16/9/19	16/9/19	ITL501.4
		B	18/9/19	18/9/19	ITL501.4
		C	27/9/19	27/9/19	ITL501.4
		D	19/9/19	19/9/19	ITL501.4
7	Project Demonstration and report writing	A	07/10/19		-
		B	24/9/18		-
		C	11/10/19		-
		D	10/10/19		-

9.Assignment Plan

Assignment No.	Date	Topics with CO
1	30-09-2019	RIA(ITL501.3)
2	03-10-2019	Django (ITL501.5)