Fr. Conceicao Rodrigues College Of Engineering
Department of Artificial Intelligence and Data Science Engineering

T.E. (AI DS) (semester VI) (2022-2023)
Course Outcomes & Assessment Plan

Subject: Web Computing and Networking Lab(CSL502)   **Credits-1**

Lab Objectives:

1. To orient students to HTML for making webpages
2. To expose students to CSS for formatting web pages
3. To expose students to developing responsive layout
4. To expose students to JavaScript to make web pages interactive
5. To orient students to React for developing front end applications
6. To orient students to Node.js for developing backend applications

Teaching Scheme

Course Code	Course Name	Teaching Scheme			Credits Assigned			
		Theory	Practical	Tutorial	Theory	Practical/Oral	Tut	Credits
CSC502	Web Computing	03	--	--	03	--	---	03
CSL502	Web Computing and Networking Lab	--	02	--	--	01	--	01

Examination Scheme

Course Code	Course Name	Theory Marks				Term Work	Practical & Oral	Total
		Internal Assessment			End Sem Exam			
		Test1	Test2	Avg				
CSC502	Web Computing	20	20	20	80 (3hr)	--	---	100
CSL502	Web Computing and Networking Lab					25	25	50

Course Outcomes: [Target 2.5]

After successful completion of the course students will be able to:

CSL502.1: Identify and apply the appropriate HTML tags to develop a webpage

CSL502.2: Identify and apply the appropriate CSS tags to format data on webpage

CSL502.3: Construct responsive websites using Bootstrap

CSL502.4: Use JavaScript to develop interactive web pages.

CSL502.5: Construct front end applications using React and back end using Node.js/express

CSL502.6: Use simulator for CISCO Packet Tracer/GNS3.

Mapping of CO and PO/PSO

Relationship of course outcomes with program outcomes: Indicate 1 (low importance), 2 (Moderate Importance) or 3 (High Importance) in respective mapping cell.

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12		PSO1
CSL502.1	3				3									3
CSL502.2	3	3	3	2	3				2	2	2	2		3
CSL502.3	3	3	3	2	3				2	2	2	2		3
CSL502.4	3	3	3	2	3				2					3
CSL502.5														
CSL502.6														
TOTAL	12	9	9	6	12				6	4	4	4		12
CO-PO MATRIX	3	3	3	2	3				2	2	2	2		3

CO ASSESSMENT TOOLS

	Direct Methods (80%)					Indirect Methods (20%)
CSL502.1	Lab 1 (40%)	Assign 1 (20%)	UE –TH (20%)	UE-O (20%)		(100%)
CSL502.2	Lab 2 (30%)	MP (30%)	UE –TH (20%)	UE-O (20%)		(100%)
CSL502.3	Lab 3 (50%)	MP (20%)	UE –TH (10%)	UE-O (20%)		(100%)
CSL502.4	Lab 4 (30%)	MP (30%)	UE –TH (20%)	UE-O (20%)		(100%)
CSL502.5	MP (50%)	Quiz 1-2-3 (10%)	UE –TH (20%)	UE-O (20%)		
CSL502.6	Lab 7-8 (30%)	Lab 9-10 (30%)	UE –TH (20%)	UE-O (20%)		

Content Beyond Syllabus:

1. Research Paper study/implementation in Mini Project in groups

Syllabus/Lab Plan : SEM VII-ML-Lab CSL604

Prerequisite: Operating System, Basics of Java and Python Programming

Term : 18th July – 30 Oct 2022   (UT1 : 05 Sept - 07 Sept) (UT2 : 17Oct -19 Oct)

Expt No.	Date (week)	CO Map	Title/aim
01	27 July	CO1	Develop web page using HTML5 tags. (USE- IMAGE, LINKS, TABLE, FORM, LIST, SEMANTIC ELEMENTS, HTML5 FEATURES- audio, video, drag-drop, geolocation, canvas)
02	2 Aug	CO2	Apply the styles (CSS3- inline, internal and external) to web page (APPLY COLOR, BACKGROUND-COLOUR/IMAGE, FONT STYLES, TABLE STYLES, LIST STYLES)
03	9 Aug	CO3	Use Bootstrap to make the webpage dynamic (BootstrapGrid system, Forms, Button, Navbar, Breadcrumb, Jumbotron)
04	23 Aug	CO2	Use JavaScript to make the webpage interactive (Loops, Functions, Events, Classes and Objects, Error handling, Form Validation, Arrays, String, Date, Map, Set)
05	30 Aug	CO3	Design a web page REACT JS (JSX, Components, Props, State, Forms, Events, Router) – **Mini Project**
06	06 Sept	CO4	Server side Programming with NODE JS (Callbacks, Event loops, Creating express app) - **Mini Project**
07	13 Sept	CO6	Dynamic routing using Cisco packet TRACER/GNS3
08	20 Sept	CO6	Design and Simulate VLANs on the switch/router using Cisco packet tracer/ GNS3
09	27 Sept	CO6	Design and Simulate NAT on the router using Cisco packet tracer/ GNS3
10	04 Oct	CO6	Simulation of Software Defined Network using Mininet
11	**2 Aug**	CO3 CO4 CO5 CO6	**Mini Project:** One real life Web Application using (ReactJs/NodeJs/Express/Flux) (Group of 1/2/3/4).
	13 Aug		**Topic Submission**
	15 Sept		**Progress review**
	3 Oct		**Presentation and Demo**
	10 Oct		**Mini Project Report submission**

Assignments Plan

01	20 Sept 2022	CO2	Prepare a diagrammatic view of listing of all in-built and DOM objects of JavaScript. Highlight/Mention few Important functions that are frequently used. Explain with real world example how to Create user defined Object using JavaScript?
02	5 Oct	CO4	How does Node.js Works? What are the advantages and limitations of using Express with Node.js
03	15 Sept onwards	All	Topic of Study

Useful Links:
1. www.leetcode.com
2. www.hackerrank.com
3. www.cs.usfca.edu/~galles/visualization/Algorithms.html
4. www.codechef.com

Term Work:

Term work should consist of 10 experiments.

Journal must include at least 2 assignments.

The final certification and acceptance of term work ensures that satisfactory performance of laboratory work and minimum passing marks in term work.

Total 25 Marks (Experiments: 15-marks, Attendance Theory & Practical: 05-marks, Assignments: 05-marks)

Oral & Practical exam Based on the entire syllabus of CSL502 and CSC502