INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad -500 043

COMPUTER SCIENCE AND ENGINEERING

COURSE DESCRIPTOR

Course Title	**WEB TECHNOLOGIES LABORATORY**				
Course Code	ACS105				
Programme	B.Tech				
Semester	IV	CSE			
Course Type	Core				
Regulation	IARE - R16				
Course Structure	**Theory**			**Practical**	
	Lectures	**Tutorials**	**Credits**	**Laboratory**	**Credits**
	-	-	-	3	2
Chief Coordinator	Ms. B Ramya Sree, Assistant Professor				
Course Faculty	Ms. G Geeta Reddy, Assistant Professor Ms .Ch Srividya, Assistant professor Mr. Santhosh patil				

I. COURSE OVERVIEW:

The World Wide Web continues to provide a foundation for the development of a broad range of increasingly influential and strategic technologies, supporting a large variety of applications and services, both in the private and public sectors. There is a growing need for management and decision makers to gain a clearer understanding of the application development process, from planning through to deployment and maintenance. This module will give you an insight into architectures, protocols, standards, languages, tools and techniques; an understanding of approaches to more dynamic and mobile content; and demonstrate how you can analyze requirements, plan, design, implement and test arrange of web applications.

II. COURSE PRE-REQUISITES:

Level	Course Code	Semester	Prerequisites	Credits
UG	ACS001	I	Computer Programming	4
UG	ACS003	III	Object Oriented Programming Through Java	4

III. MARKS DISTRIBUTION:

Subject	SEE Examination	CIA Examination	Total Marks
Web Technologies Laboratory	70 Marks	30 Marks	100

IV. DELIVERY / INSTRUCTIONAL METHODOLOGIES:

✔	Chalk & Talk	✘	Quiz	✘	Assignments	✘	MOOCs
✔	LCD / PPT	✘	Seminars	✔	Mini Project	✔	Videos
✔	Open Ended Experiments						

V. EVALUATION METHODOLOGY:

Each laboratory will be evaluated for a total of 100 marks consisting of 30 marks for internal assessment and 70 marks for semester end lab examination. Out of 30 marks of internal assessment, continuous lab assessment will be done for 20 marks for the day to day performance and 10 marks for the final internal lab assessment.

Semester End Examination (SEE): The semester end lab examination for 70 marks shall be conducted by two examiners, one of them being Internal Examiner and the other being External Examiner, both nominated by the Principal from the panel of experts recommended by Chairman, BOS.

The emphasis on the experiments is broadly based on the following criteria:

20 %	To test the preparedness for the experiment.
20 %	To test the performance in the laboratory.
20 %	To test the calculations and graphs related to the concern experiment.
20 %	To test the results and the error analysis of the experiment.
20 %	To test the subject knowledge through viva – voice.

Continuous Internal Assessment (CIA):
CIA is conducted for a total of 30 marks (Table 1), with 20 marks for continuous lab assessment during day to day performance, 10 marks for final internal lab assessment.

Table 1: Assessment pattern for CIA

Component	**Laboratory**		**Total Marks**
Type of Assessment	Day to day performance	Final internal lab assessment	
CIA Marks	20	10	30

Continuous Internal Examination (CIE):
One CIE exams shall be conducted at the end of the 16th week of the semester. The CIE exam is conducted for 10 marks of 3 hours duration.

Preparation	**Performance**	**Algorithm**	**Results and Error Analysis**	**Viva**	**Total**
2	2	2	2	2	10

VI. HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes (POs)		Strength	Proficiency assessed by
PO 1	**Engineering knowledge**: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.	1	Experiments and Viva voice
PO 2	**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.	2	Experiments and Viva voice
PO 3	**Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.	3	Mini Project
PO 5	**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.	2	Mini Project

3 = High; 2 = Medium; 1 = Low

VII. HOW PROGRAM SPECIFIC OUTCOMES ARE ASSESSED:

Program Specific Outcomes (PSOs)		Strength	Proficiency assessed by
PSO 1	**Professional Skills:** The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient analysis and design of computer - based systems of varying complexity.	2	Videos
PSO 2	**Problem solving skills:** The ability to apply standard practices and strategies in software project development using open-ended programming environments to deliver a quality product for business success.	1	Mini Project
PSO 3	**Successful career and Entrepreneurship:** The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.	-	-

3 = High; 2 = Medium; 1 = Low

VIII. COURSE OBJECTIVES (COs):

The course should enable the students to:	
I	Demonstrate the ability to retrieve data from a database and present it in a web page.
II	Use FTP to transfer web pages to a server.
III	Construct pages that meet, guidelines for efficient download and cater to the needs of an identified audience.
IV	Evaluate the functions of specific types of web pages in relationship to an entire web site

IX. COURSE LEARNING OUTCOMES (CLOs):

CLO Code	CLO's	At the end of the course, the student will have the ability to:	PO's Mapped	Strength of Mapping
ACS105.01	CLO 1	Understand the basic HTML tags	PO1,PO3	2
ACS105.02	CLO 2	Understand and apply the design principles of HTML and Java Script to create static and dynamic web pages.	PO1,PO3	3
ACS105.03	CLO 3	Understand the difference between HTML and XML scripting languages.	PO2	2
ACS105.04	CLO 4	Analyze the client side validation procedure in web applications.	PO2,PO3,PO5	3
ACS105.05	CLO 5	Identify the difference between the JSP and Servlet.	PO2	2
ACS105.06	CLO 6	Able to use web server and data base servers using specific vendor related software's.	PO3,PO5	3
ACS105.07	CLO 7	Create web applications by using the concepts like JSP and Servlet.	PO2,PO5	2
ACS105.08	CLO 8	Identify and perform requesting and response generation process in web servers.	PO1,PO2	2
ACS105.09	CLO 9	Understand the PHP downloading, installation and configuring PHP process	PO1	2
ACS105.10	CLO 10	Understand branching statements, loop statements and use them in problem solving.	PO1,PO2	2
ACS105.11	CLO 11	Identify the methods to read data from web pages using PHP.	PO2	2
ACS105.12	CLO 12	Understand how MYSQL server is connected with PHP	PO1,PO5	2
ACS105.13	CLO 13	Able to perform crude operations in data base servers, operations in PHP.	PO5	3
ACS105.14	CLO 14	Familiar with basic HTML, XML, JSP and PHP techniques: Creation of web pages, that includes verification and validation of web pages.	PO1,PO2	2

3 = High; 2 = Medium; 1 = Low

X. MAPPING COURSE LEARNING OUTCOMES LEADING TO THE ACHIEVEMENT OF PROGRAM OUTCOMES AND PROGRAM SPECIFIC OUTCOMES:

Course Learning Outcomes (CLOs)	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CLO 1	1		3										2		
CLO 2	2		3										2	1	
CLO 3		2													
CLO 4		2	2		2								2	2	

Course Learning Outcomes (CLOs)	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CLO 5		2													
CLO 6			2		3								1	1	
CLO 7		2			1								1	2	
CLO 8	2	1											2	1	
CLO 9	2														
CLO 10	1	3											1		
CLO 11		2													
CLO 12	1				3								1	1	
CLO 13					3								2	1	
CLO 14	1	2											1	1	

3 = High; 2 = Medium; 1 = Low

XI. ASSESSMENT METHODOLOGIES – DIRECT

CIE Exams	PO1, PO2 PO3, PO5	SEE Exams	PO1, PO2 PO3, PO5	Assignments	-	Seminars	-
Laboratory Practices	PO1, PO2 PO3, PO5	Student Viva	PO1,PO2	Mini Project	PO3,PO5	Certification	-

XII. ASSESSMENT METHODOLOGIES - INDIRECT

✔	Early Semester Feedback	✔	End Semester OBE Feedback
✘	Assessment of Mini Projects by Experts		

XIII. SYLLABUS

LIST OF EXPERIMENTS	
Week-1	**INSTALLATIONS**
Installation of XAMPP and WAMP servers	
Week-2	**HTML**
a. Create a table to show your class time table. b. Use tables to provide layout to your HTML page describing your college infrastructure. c. Use and tags to provide a layout to the above page instead of a table layout.	
Week-3	**HTML**
a. Use frames such that page is divided into 3 frames 20% on left to show contents of pages,	

60% in center to show body of page, remaining on right to show remarks. b. Embed Audio and Video into your HTML web page.	
Week-4	**HTML**
a. Create a webpage with HTML describing your department use paragraph and list tags. b. Apply various colors to suitably distinguish keywords , also apply font styling like italics, underline and two other fonts to words you find appropriate , also use header tags. c. Create links on the words e.g. Wi-Fi and LAN to link them to Wikipedia pages. d. Insert an image and create a link such that clicking on image takes user to other page. e. Change the background color of the page; At the bottom create a link to take user to the top of the page.	
Week-5	**HTML**
Develop static pages (using only HTML) of an online book store, the pages should resemble: www.amazon.com, the website should consist the following pages, home page, registration and user login, user profile page, books catalog, shopping cart, payment by credit card, order confirmation.	
Week-6	**CASCADING STYLE SHEET**
Write an HTML page that contains a selection box with a list of 5 countries, when the user selects a country, its capital should be printed next to the list; Add CSS to customize the properties of the font of the capital (color, bold and font size).	
Week-7	**JAVASCRIPT**
a. Write a java script program to test the first character of a string is uppercase or not. b. Write a pattern that matches e-mail addresses. c. Write a java script function to print an integer with commas as thousands separators.	
Week-8	**JAVASCRIPT**
a. Write a java script program to sort a list of elements using quick sort. b. Write a java script for loop that will iterate from 0 to 15 for each iteration, it will check if the current number is odd or even, and display a message to the screen.	
Week-9	**JAVASCRIPT**
a. Write a java script program which compute, the average marks of the following students then this average is used to determine the corresponding grade. b. Write a java script program to sum the multiple s of 3 and 5 under 1000. c. To design the scientific calculator and make event for each button using java script.	
Week-10	**PHP**
a. A simple calculator web application that takes two numbers and an operator (+, ,/,*and %) from an HTML page and returns the result page with the operation performed on the operands. b. Write PHP program how to send mail using PHP.	
Week-11	**PHP**
a. Write PHP program to convert a string, lower to upper case and upper case to lower case or capital case. b. Write PHP program to change image automatically using switch case. c. Write PHP program to calculate current age without using any pre-define function. d. Write PHP program to upload image to the server using html and PHP.	

Week-12	PHP
a. Write PHP program to upload registration form into database. b. Write PHP program to display the registration form from the database.	
Week-13	**PHP**
a. Write PHP program to update the registration form present in database. b. Write PHP program to delete the registration form from database.	
Text Books:	
1. Chris Bates, "Web Programming: Building Internet Applications", Wiley Dream Tech, 2nd Edition,2002 2. Steven Holzner,"the Complete reference PHP",TataMcGraw-Hill,1st Edition,2007	
Reference Books:	
1. WHans Bergsten, "Java Server Pages", O"Reilly, 3rd Edition, 2003. 2. D. Flanagan, "Java Script", O"Reilly, 6th Edition, 2011. 3. Jon Duckett, "Beginning Web Programming", WROX, 2nd Edition, 2008. 4. Herbert Schildt, "Java the Complete Reference", Hill - Osborne, 8th Edition, 2011.	

XIV. COURSE PLAN:

The course plan is meant as a guideline. Probably there may be changes.

Week No.	Topics to be covered	Course Learning Outcomes (CLOs)	Reference
1	Installations	CLO9	T2:1
2	HTML tables	CLO1, CLO2	T1:2.6-2.9
3	HTML frames	CLO1, CLO2	T1:4.1-4.2
4	HTML basic tags.	CLO1, CLO2	T1:2.1-2.4 T1:2.6-2.9
5	HTML form elements	CLO2, CLO4	T1:4.2-4.3
6	HTML using CSS	CLO1, CLO2,CLO4	T1:4.4-4.7
7	Javascript functions.	CLO2, CLO4,CLO5	T1:5.6- 5.10
8	Javascript Control statements	CLO2, CLO4	T1:5.6- 5.10
9	Javascript Control statements	CLO2, CLO4	T1:5.6- 5.10
10	PHP	CLO10,CLO11	T2:1, 2
11	PHP functions	CLO10,CLO11	T2:2
12	PHP database access	CLO11,CLO12,CLO13,CLO14	T2:10
13	PHP database access	CLO11,CLO12,CLO13,CLO14	T2:10

XV. GAPS IN THE SYLLABUS - TO MEET INDUSTRY / PROFESSION REQUIREMENTS:

S No	Description	Proposed actions	Relevance with POs	Relevance with PSOs
1	Updating latest version and new features of the PHP Language.	Seminars	PO1,PO2,PO5	PSO 1
2	Familiarizing the role of Java script Objects in developing system level programs.	Seminars / NPTEL	PO2,PO5	PSO 3

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HOD, CSE