INSTITUTE	**DIPLOMA STUDIES**
PROGRAM	**DIPLOMA ENGINEERING (COMPUTER ENGINEERING)**
SEMESTER	**5**
COURSE TITLE	**ADVANCED WEB TECHNOLOGY**
COURSE CODE	**09CE1503**
COURSE CREDITS	**2**

Objective:

1 The increasing use of Internet and WWW encourages everyone to use web-based solutions for their requirements. Now a days most of services are available on Internet using as an web application which user can access using only an browser. E.g. user can edit photos, use services like word processing, spreadsheet and making presentation etc. This subject will attempt to give you an advanced knowledge to develop and web application which can run on either computer and/or mobile using various echnologies/frameworks such as HTML, CSS, PHP, MySQL and twitter's bootstrap framework.

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Course Outcomes: After completion of this course, student will be able to:

1 Apply advanced concepts of HTML and CSS to create structured and styled web pages

2 Implement modern web design techniques to develop visually appealing and user- friendly interfaces

3 Apply responsive design principles using various tools and frameworks to ensure compatibility across devices

4 Utilize server-side scripting with PHP and integrate MySQL to perform data storage and retrieval operations

5 Develop a fully functional and responsive web application using HTML, CSS, PHP, and MySQL

Pre-requisite of course: Basic knowledge of HTML, CSS and basic programming knowledge

Teaching and Examination Scheme

Theory Hours	Tutorial Hours	Practical Hours	ESE	IA	CSE	Viva	Term Work
0	0	4	0	30	20	25	25

MR. MITTAL KIRITBHAI JOISER
Digitally signed by (Name of HOD)

DR. RAJESHKUMAR MEGHAJIBHAI PATEL
Digitally signed by (Name of Dean/ Principal)

Contents : Unit	Topics	Contact Hours
1	**Web Design** Concept of effective web design, Web design issues related to browsers, Effect of resolution on web design, Layout and Linking of pages	1
2	**Advance CSS & HTML** HTML: Div and Span tag, HTML 5 tags, Form tags and data input tags, CSS: CSS selectors, margin & padding, collapsing margin, resets and CSS box-sizing, Shadow & Gradients, Types of fonts, transition and animation, tool tip, CSS variables, CSS Media Query	3
3	**Responsive Web Design** Concept of Responsive web design, Viewport, CSS Position and float properties, CSS flex-box and CSS Grid layouts	3
4	**Responsive Web Design using Bootstrap** Introduction to Bootstrap framework, Bootstrap Grid Layout, Bootstrap Component like navbar, forms, carousel, tooltips, buttons, images	2
5	**JavaScript & JQuery** Ajax Introduction, AJAX request and response, Event Handling, Manipulate HTML/CSS using JavaScript/JQuery	2
6	**Object Oriented Programming in PHP** looping structures, conditional structures, arrays, functions, retrieving data from HTML forms, Class & Objects in PHP, Inheritance and Polymorphism	3
7	**Database Connectivity and Session Handling** PHP – MySQL database connectivity, using MySQLi and PDO, Concept of Session, Usage of Session, Different ways to handle session data, using URL, Session and Cookies.	3
Total Hours		**17**

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Suggested List of Experiments:

Contents : Unit	Topics	Contact Hours
1	**Practical List** Write an HTML code to design static webpage using various HTML tags. Format page using tables, lists and other tags. Create a page for your resume and time table page., Write an HTML pages to demonstrate the use of various ways to insert CSS in web page and use of different selectors., Write an HTML page that contains various images and text which will be shown/hidden based on screen size using CSS media query, Develop a page to learn the use of CSS flexbox, CSS Grid., Develop a responsive page to learn Bootstrap grid system and various component of bootstrap., Create an HTML form and use Java Script / JQuery event handling to validate the form., Create an Page to hide/show HTML elements using JavaScript/JQuery and change the style of HTML elements using JavaScript/JQuery, Creates an web page to demonstrate AJAX concepts., Programs to demonstrate the use of PHP OOPs programming concepts., Create an HTML form and use PHP to put server-side validation., Create HTML pages to demonstrate and learn database connectivity operation like connection to database, insert, delete and update of data. Use classes and object to implement database operation., Implement login and registration functionality to demonstrate the use of various session handling techniques., Develop a mini project which covers entire syllabus.	40
Total Hours		**40**

Textbook :

1 “Introducing Html5”, Bruce Lawson, Remy Sharp, Pearson Education, 2

References:

1 Bruce Lawson, Remy Sharp, “Introducing Html5”, Pearson Education, second edition

2 Steven Holzner, “PHP: The Complete Reference”, McGraw-Hill Osborne

3 Ralph Moseley and M. T. Savaliya, Developing Web Applications, Wiley-India

4 Julie C. Meloni, “Teach yourself PHP, Mysql and Apache All in One”, Pearson Education

Suggested Theory Distribution:

The suggested theory distribution as per Bloom’s taxonomy is as follows. This distribution serves as guidelines for teachers and students to achieve effective teaching-learning process

Distribution of Theory for course delivery					
Remember / Knowledge	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Higher order Thinking / Creative**
35.00	35.00	30.00	0.00	0.00	0.00

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Instructional Method:

1. The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, also need to use ICT tools and facilities.
2. The internal evaluation will be done on the basis of continuous evaluation of students in the laboratory and class-room.
3. Practical examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

Supplementary Resources:

1. http://nptel.ac.in
2. https://www.w3schools.com/html/default.asp
3. https://www.w3schools.com/css/default.asp
4. https://getbootstrap.com/docs/4.1/getting-started/introduction/
5. https://www.w3schools.com/js/default.asp
6. https://www.htmldog.com

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