

**2IT06: ADVANCED WEB TECHNOLOGY  
CREDITS – 4 (LTP:3,0,1)**

**Course Objective:**

To learn how to implement a web application using one specific set of open source server side tools like PHP and MySQL and to understand the concepts of Service Oriented Architecture along with the evolution of SOA.

**Teaching and Assessment Scheme:**

Teaching Scheme (Hours per week)			Credits	Assessment Scheme				Total Marks
L	T	P		Theory		Practical		
			ESE	CE	ESE	CE		
3	0	2	4	60	40	20	30	150

**Course Contents:**

Unit No.	Topics	Teaching Hours
1	<b>Introduction:</b> Internet2 and semantic web, Web server basics, Software for web servers, E-mail, Web site utility programs, Web hosting alternatives, Open source technologies, Foss, Cloud web hosting.	4
2	<b>Introduction to PHP and Form Handling with PHP:</b> Introduction and basic syntax of PHP, Examining variable type, Understanding variable scope, Arrays, Functions, Accessing PHP, PHP and HTML, Embedding PHP in HTML, Adding dynamic content, String manipulation, Accessing form variables, PHP form handling, PHP form validation, PHP complete form.	5
3	<b>Advanced concepts of PHP:</b> Using operators, Using variable functions, Making decision with conditionals, Using require() and include(), Using functions in PHP, Defining your own functions, Passing by reference and passing by value, Understanding object-oriented concepts, Operations in PHP.	6
4	<b>Working with MySQL Database:</b> Introduction of SQL, Web database architecture, Inserting and Retrieving data from the database, Updating and Deleting records in the database, Altering tables After creation, Dropping tables, Dropping a whole database, Using prepared statements.	9
5	<b>Session Control in PHP:</b> PHP cookies, PHP sessions, Session control in PHP, Understanding basic session functionality, Implementing simple sessions, Creating a simple session, Configuring session control, Implementing authentication with session control.	5
6	<b>PHP Error Handling &amp; PHP File Handling:</b> Exception handling concepts, The exception class, User-defined exceptions, PHP file handling.  Managing the Date and Time:	7

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Unit No.	Topics	Teaching Hours
	Managing the date and time, Getting the date and time from PHP, Converting between PHP and MySQL, Date formats.	
7	<b>PHP- AJAX:</b> AJAX introduction, AJAX web application model, Creating a simple AJAX application, Exploring interactions between AJAX and PHP, Validating fields using AJAX and PHP, PHP - AJAX and MySQL.	5
8	<b>Web Services and Primitive SOA:</b> Introduction of web services, Web services framework, Services (Web services: Definition, Architecture and standards), Service descriptions with WSDL, Messaging with SOAP, UDD, RDF, RSS.	4
<b>Total</b>		<b>45</b>

### List of References:

1. Ralph Moseley and M. T. Savaliya, “*Developing Web Applications*”, Wiley publications-India.
2. Luke Welling, Laura Thomson: “*PHP and MySQL Web Development*”, Pearson, ISBN: 9788131729878 (Fifth Edition)
3. Bible –Steve Suehring, Tim Converse and Joyce Park, “*PHP6 and MySQL*” – Wiley publications- India
4. Harwani, “*Developing Web Applications in PHP and AJAX*”, McGraw-Hill
5. Thomas Erl, “*Service Oriented Architecture: Concepts, Technology, and Design*”, Pearson education.
6. Mark D Hansen, “*SOA using Java Web Services*”, Prentice Hall Publication.

### Course Outcomes (COs):

At the end of this course students will be able to ...

1. Explain concepts for web development & web design.
2. Design and apply markup languages for processing, identifying, and presenting of information in web pages.
3. Develop dynamic Website/Web based applications using HTML, PHP and MYSQL database.
4. Develop application by applying concepts of error handling techniques and session management in PHP, MYSQL.
5. Explain primary concepts of SOA.
6. Design and implement Web Services to transfer data and add interactive components to web pages.