

<b>Learning Outcomes</b>	<b>Suggested Pedagogical Processes</b>
Get concepts of basics of the HTML and CSS.	Discuss various concepts of HTML and CSS using Blackboard with examples. Notepad application is used to create the script and demo is shown using Web Browser.
Obtain the knowledge of various concepts of PHP scripting language.	Discuss various concepts of PHP scripting language on the Blackboard with examples. Notepad application is used to create the script and demo is shown using Web Browser and Web Server.
Able to understand the concept of object oriented programming.	Discuss various object oriented concepts of PHP scripting language on the Blackboard with examples. Notepad application is used to create the script and demo is shown using Web Browser and Web Server.
Acquire the knowledge and skills for creation of website by considering both client- and server-side programming to build up responsive web applications. Gain the knowledge of using PHP to access database.	PowerPoint presentation to demonstrate the process of constructing website using client-side programming and server-side programming with the help of Database connectivity. Demonstration of PHP and Database connectivity is shown using Web Browser and Web Server.
Able to create XML documents.	Discuss the structure of XML document using Blackboard. Demonstration of creating an XML document using PHP with the help of Web Browser and Web Server.
Gain familiarity with the object oriented concepts of PHP.	Classroom discussion about revision of object oriented concepts using PHP. Demonstration of object oriented concepts in PHP using Web Browser and Web Server.
Able to create graphic objects using PHP.	Classroom discussion about graphics concepts using PHP. Demonstration of creating various graphic objects in PHP using Web Browser and Web Server.

<b>Unit No.</b>	<b>Title of Unit and Contents</b>
<b>I</b>	<b>Introduction to Internet Programming</b> 1.1 Client-Server model 1.2 Browsers - Graphical and Hypertext Access to the Internet 1.3 HTTP - HyperText Transfer Protocol (how it actually works)
<b>II</b>	<b>Overview of Language Essentials</b> 2.1 Data Types 2.2 Variables 2.3 Embedding PHP into web pages

	2.4 Functions 2.5 Arrays 2.6 Objects 2.7 Strings
III	<b>HTML forms processing</b> 3.1 Building a form 3.2 Text fields and value, size, maxlength, 3.3 HTML buttons 3.4 Radio buttons 3.5 Checkboxes 3.6 Selection lists 3.7 Introduction to CGI scripting Action and Method - GET and 3.8 POST 3.9 Global variables 3.10 Reading files 3.11 File permissions 3.12 Uploading files 3.13 Reading from other Servers 3.14 Security: Filtering Input and Escaping Output
IV	<b>Web Techniques</b> 4.1 Server Information 4.2 Cookies 4.3 Sessions 4.4 Maintaining state
V	<b>Object Oriented Programming</b> 5.1 Introduction 5.2 Defining PHP Classes 5.3 Creating Objects in PHP 5.4 Calling Member Functions 5.5 Constructor, Destructor 5.6 Inheritance 5.7 Function Overriding 5.8 Access Specifiers: Private, Public, Protected 5.9 Interfaces 5.10 Abstract classes
VI	<b>Databases</b> 6.1 Relational databases and SQL 6.2 Using PHP to access a database 6.3 Accessing Databases 6.4 PEAR DB Basic
VII	<b>XML</b> 7.1 Introduction 7.2 PHP and XML 7.3 Functions in XML 7.4 The Simple XML extension 7.5 Loading XML Document into a SimpleXML Object 7.6 Looping through an Element 7.7 Use SimpleXML Element Constructor 7.8 Looping over all Elements and its Attributes 7.9 Recursively processing XML Document 7.10 Parsing XML

VIII	<b>Graphics</b> 8.1 Basic concepts 8.2 GD extensions 8.3 Creating and drawing images 8.4 Images with text 8.5 Scaling images 8.6 Color handling 8.7 Embedding an image into page
IX	<b>E-mail via scripts</b> 9.1 Email Background 9.2 Internet Mail Protocols 9.3 Structure of an Email message 9.4 Sending Email with PHP 9.5 Email-Id Validation and Email-Id Verification

### Learning Resources

1. Rasmus Lerdorf and Kevin Tatroe, Programming PHP, O'Reilly Publication, 3<sup>rd</sup> Edition, 2013
2. Matt, Doyle, Beginning PHP 5.3, Wrox Publication, 2014
3. Pratiyush Guleria, PHP – Beginner's Practical Guide, BPB Publications, 2018
4. PHP cookbook, O'Reilly Publication, 2014
5. Learning PHP and MYSQL, O'Reilly Publication, 4<sup>th</sup> Edition, 2016
6. PHP for Beginners, SPD Publication
7. Robert W. Sebesta, Programming the World Wide Web, Pearson, (4<sup>th</sup> Edition), 2009
8. [www.php.net.in](http://www.php.net.in)
9. [www.w3schools.com](http://www.w3schools.com)
10. [www.wrox.com](http://www.wrox.com)

