Course : 501 : Web Development - II

Course Code	501
Course Title	Web Development – II
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation, holidays etc.)
Last Review / Revision	June 2018
Purpose of Course	This course provides practical approach for web application development using open source web technologies and language like PHP and frameworks available as open source.
Course Objective	To make student understand significance of open source technology, MVC architecture, and develop web applications using open source language and framework.
Pre-requisite	Object Oriented Fundamentals, Web Technology Fundamentals
Course Out come	After studying this course, students will be able to understand concept and importance of open source technology and also develop web application using open source languages and framework.
Course Content	**Unit : 1 : Open Source Web Technology and PHP Language Basics** 1.1 PHP Language Characteristics, Features and Extensions 1.2 Language Constructs, Variables, Declarations and Types, Constants 1.3 Use of Operators and Control Structures 1.4 Arrays, Functions and References 1.5 PHP Configuration Directives of php.ini file 1.6 Super Global Arrays 1.7 Handling Session, Cookies, Form Data, File Uploads, Server Data, Server Environment 1.8 Handling Form Data Using JavaScript **Unit : 2 : Object Oriented and Advanced Features of PHP** 1.1 Classes and Objects 1.2 Use Of Constructors, Destructors, Inheritance 1.3 Serialization, Magic Methods 1.4 Built-In Library Functions and Library Classes: String, Array, Mathematics, Graphics Library, File System, Date and Time, Files and Directory, XML, PDF, HTTP, Network, PHP Options and Information, ZIP File **Unit : 3 : Security Threats and Remedies** 3.1 Securing Request Data 3.2 Using CAPTCHA 3.3 Session Fixation Attack and Remedy 3.4 SQL Injection Attack and Prevention **Unit : 4 : PHP Integration with Databases** 4.1 MySQL Server and MySQL Client, Databases, Tables 4.2 Working with PhpMyAdmin 4.3 MySQL Functions, Error Handling, PDO 4.4 What is NoSQL Database? 4.5 Types of NoSQL databases 4.6 Advantages, SQL vs NoSQL 4.7 Any one NoSQL Database for Modern Web with PHP

	Unit : 5 : Web Development Add-ons 4.1 Template Systems: PHP itself, Template Engine 4.2 Web application Frameworks and Libraries 4.3 JavaScript Frameworks and Libraries 4.4 Plug-ins 4.5 Introduction to AJAX with PHP and handling JSON data
Reference Book	1. Programming PHP - Rasmus Lerdorf, Kevin Tatroe - O'Reilly 2. PHP Cookbook - David Sklar, Adam Trachtenberg - O'Reilly 3. Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5 (Learning Php, Mysql, Javascript, Css & Html5) 4th Edition by Robin Nixon Publisher: O'Reilly Media; 4 edition (December 14, 2014) 4. PHP and MySQL Web Development (5th Edition) (Developer's Library) 5th Edition by Luke Welling Publisher: Addison-Wesley Professional; 5 edition (September 30, 2016) 5. Modern PHP: New Features and Good Practices 1st Edition by Josh Lockhart O'Reilly Media; 1 edition (March 1, 2015) 6. PHP Cookbook: Solutions & Examples for PHP Programmers 3rd Edition by David Sklar (Author), Adam Trachtenberg (Author) Publisher: O'Reilly Media; 3 edition (July 25, 2014) 7. NoSQL For Dummies 1st Edition by Adam Fowler Publisher: For Dummies; 1 edition (February 24, 2015) 8. Learning from jQuery Paperback – 19 Mar 2013 by Callum Macrae Publisher: Shroff/O'Reilly; First edition (19 March 2013) 9. Mastering jQuery Paperback – Import, 30 May 2015 by Alex Libby Publisher: Packt Publishing Limited (30 May 2015) 10. Learning AngularJS Paperback – 1 Jan 2015 by Ken Williamson Publisher: Shroff; First edition (1 January 2015) 11. Angular 2 Cookbook – 23 Jan 2017 by Matt Frisbie Publisher: Packt Publishing Limited; 2nd Revised edition edition (23 January 2017)
Teaching Methodology	Lectures, Discussion, Independent Study, Seminars and Assignment
Evaluation Method	30% Internal assessment 70% External assessment