



COURSE SYLLABUS

Advanced PHP and MySQL

Industrial Training

(3 MONTHS)



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Target Audience

This course is specially designed for the B.Tech/B.E, M.Tech/M.E and all other IT related Graduates and Post Graduate students who are interested in learning web development using PHP framework.

Mission

Professionalism has conquered the job scenario and companies seek for well qualified, professional and skilled manpower. Keeping in view this demand of companies we groom students in such a way that they will be second to none. Quality Education and Performance Oriented Training is our motto.

Course Overview

This course provides the necessary knowledge to design and develop dynamic, data-driven & interactive web pages using PHP. It introduces students to PHP framework and syntax, most important techniques used to build dynamic web sites and perform hands on practice with a MySQL database to create database-driven HTML forms. It is interspersed with step-by-step exercises illustrating the concepts as they are explained.

Live Project Work

Live project is the phase when you finally implement most of the things that you have learnt during your software training. Software development is more than just coding. Before you write even a single line of code, it requires careful analysis of the requirements, gathering information, preparing the necessary documentation which requires understanding the live project using Software Development Life Cycle. So you have to learn tricks to produce bulk output on time maintaining the right design quality or coding standard. That is the significance of Live Project Training. We assure that our Live Project Training will impart the confidence in students to work on real time projects.

➤ Add on Programs

- Personality Development
- Listening Skills
- Communication Skills
- Interview Skills
- Group Discussion

- Topics Presentation
- Awareness of IT Trends
- Aptitude Tests
- Technical Tests
- Mock Interview

This course covers concepts of software engineering. It intends to lay a foundation for software designing and professional practice by conveying fundamental knowledge about software development process, requirements analysis, design techniques, and testing methods. The course emphasizes on modeling skills with the Unified Modeling Language (UML).

Section 1: Overview of Software Development

- 1.1 Software Engineering Concepts
- 1.2 Software Engineering Development Activities
- 1.3 System Development Models and Approaches
- 1.4 Software Process and Project Management

Section 2: Software Development Life Cycle

- 2.1 Requirement Elicitation
- 2.2 Analysis
- 2.3 System Design
- 2.4 Object Design
- 2.5 Implementation
- 2.6 Testing

Section 3: UML

- 3.1 Introduction
- 3.2 Need of UML
- 3.3 Use Case Driven Object Oriented Analysis
- 3.4 Use Case Model
- 3.5 Use Case Diagram
- 3.6 Activity Diagram
- 3.7 Sequence Diagram
- 3.8 Collaboration Diagram
- 3.9 Class Diagram

Section 4: Project Development Models

- 4.1 Waterfall
- 4.2 V model
- 4.3 Prototype model
- 4.4 Spiral model

Section 1: HTML5- The Static Web Page Creation

- 1.1 HTML5 Introduction
- 1.2 Structure
- 1.3 Elements
- 1.4 Semantics
- 1.5 Audio & Video
- 1.6 Section & Article
- 1.7 Canvas, Aside
- 1.8 Drag & Drop
- 1.9 Forms & Form Elements

Section 2: CSS 3 - The Presentation Semantics

- 2.1 CSS Properties, Selectors, Style Declaration Types
- 2.2 Colors, Backgrounds, Text and Fonts
- 2.3 Images, Links, Tables and List
- 2.4 Borders, Padding, Margin
- 2.5 Cursor, Dimension, Scrollbars, Visibility and Positioning
- 2.6 Pseudo class & Elements, @Rules(import, font-face, charset)
- 2.7 Filters, Media Types, Printing and Layouts

Section 3: JavaScript - The Interpreted Programming Language

- 3.1 Interpreted Programming Languages
- 3.2 Integrating JavaScript with HTML
- 3.3 Variables in JavaScript
- 3.4 Operators in JavaScript
- 3.5 Expressions in JavaScript
- 3.6 Arrays in JavaScript
- 3.7 Handling Loops & Decision structures
- 3.8 Executing Conditional statements
- 3.9 Working with Functions

Section 4: jQuery - Write Less Do More...

- 4.1 Understanding jQuery
- 4.2 jQuery Selectors
- 4.3 Event Manipulation Methods
- 4.4 Sliding, Easing, Fading, Toggling
- 4.5 jQuery and AJAX calls
- 4.6 JSON

Section 5: Bootstrap

- 5.1 Introduction to Bootstrap
- 5.2 Bootstrap Grid System
- 5.3 Creating Layouts with Bootstrap
- 5.4 Bootstrap CSS - Understanding the CSS
- 5.5 CSS Customization / Skins
- 5.6 Responsive Web design with Bootstrap
- 5.7 Single Page Responsive site with Bootstrap
- 5.8 Bootstrap Layout Components
- 5.9 Bootstrap Plug-ins :
 - ✓ Transition
 - ✓ Modal
 - ✓ Dropdown
 - ✓ Scrollspy
 - ✓ Tab
 - ✓ Tooltip
- 5.10 Building Websites with Bootstrap

Section 6: AngularJS

- 6.1 AngularJS Introduction
- 6.2 Single Page Application (SPA)
- 6.3 Directive, Filters and Data Binding
 - ✓ What are Directives?
 - ✓ Using Directives and Data Binding Syntax
 - ✓ Data-Binding Example using AngularJS Directives
 - ✓ Iterating with the ng-repeat Directive
 - ✓ ng-repeat Example
 - ✓ The AngularJS API Reference for Directives
 - ✓ Using Filters
 - ✓ Using Filters Demo
- 6.4 Views, Controllers and Scope
- 6.5 Modules, Routes And Factories
 - ✓ Creating a Module
 - ✓ Creating a Controller in a Module
 - ✓ The Role of Routes
 - ✓ Defining Routes
 - ✓ Defining Routes Demo
 - ✓ Using Factories and Services
 - ✓ The Role of the Factory

Course Description:

The contents of this course are a comprehensive solution that moulds you to a PHP specialist by providing a combination of on hand labs and the training provided in the class. It helps the trainee to learn and develop various php technology applications that definitely meets the current industry needs.

Section 1: PHP – Understanding the Preliminaries

- 1.1 Introduction to web & internet
- 1.2 Introduction to server
- 1.3 Understanding localhost server
- 1.4 Starting PHP
- 1.5 PHP syntax and variables
- 1.6 Operators and Expressions
- 1.7 Conditional Branching and Looping Statements
- 1.8 Learning Arrays in PHP

Section 2: PHP - The Core Logics and Techniques

- 2.1 String and Math functions in PHP
- 2.2 Introduction HTML Form Elements and Fields
- 2.3 Accessing PHP, HTTP Data
- 2.4 Query Strings and Hyperlinks
- 2.5 Describing Pre-Defined Variables - Super Global Arrays
- 2.6 Understanding Functions, Important PHP Functions
- 2.7 What are the Scope of variables
- 2.8 Usage of Include and require statements

Section 3: PHP – File Handling. The Plain Repository of Data

- 3.1 Handling files and directories in PHP
- 3.2 Fetching information from files
- 3.3 Uploading and downloading files

Section 4: PHP and MySQL - The Structured Repository

- 4.1 PHP MySQL Connectivity
- 4.2 Integrating Web Forms and Database
- 4.3 Using PHP's MySQL Extension
- 4.4 Using PHP's PDO Extension

Section 5: Learn More Advanced Techniques in PHP

- 5.1 Introduction to Object Oriented Programming
- 5.2 Classes and Objects
- 5.3 Abstraction, Encapsulation, Inheritance and Polymorphism
- 5.4 Constructors and Destructors
- 5.5 Overloading, Overriding of functions
- 5.6 Exception Handling
- 5.7 Regular Expressions
- 5.8 Session Handling
- 5.9 Using Cookies

Section 6: Working with XML and JSON

- 6.1 Introduction to XML
- 6.2 How to Integrate PHP and XML
- 6.3 Introduction to JSON
- 6.4 Building a Sample Web Application

Section 7: Content Management Systems

- 7.1 Knowing Content Management System
- 7.2 Sample Web Application Development using Wordpress
- 7.3 Install Wordpress On The Mysql Database
- 7.4 Install, and activate a Theme
- 7.5 Posts, Pages and Menus
- 7.6 Using Widgets and Plugins
- 7.7 Customizing Themes

Section 8: CodeIgniter Framework

- 8.1 Introduction to PHP Frameworks
- 8.2 Working with CodeIgniter Framework
- 8.3 MVC architecture in CodeIgniter
- 8.4 Routing
- 8.5 Controllers, Views and Models
- 8.6 Helpers and Libraries
- 8.7 FormValidation
- 8.8 FetchingData using Input Class
- 8.9 Session
- 8.10 Database

Section 9: Payment Gateway, E-mail and Social Media Networks

- 9.1 Integration of payment gateway
- 9.2 Integrating emails to web application
- 9.3 Integrating social media networks to web application

Section 10: FTP Management/Web Hosting

- 10.1 Set up a domain and hosting account
- 10.2 Understanding FTP
- 10.3 Setting up FTP Server (Live)
- 10.4 Uploading and downloading FTP contents

Section 11: Web Security

- 11.1 Data Validation
- 11.2 SQL Injection
- 11.3 Cross Site Scripting

Section 12: Search Engine Optimization(SEO)

- 12.1 Onsite Optimization Basics
- 12.2 Coding Best Practices
- 12.3 Title Tag Optimization
- 12.4 Keywords
- 12.5 Meta Tags Optimization
- 12.6 Headers Optimization SEO Content Writing
- 12.7 Page Speed Optimization Tool

Section 1: Relational Database Basics

- 1.1 Brief History of MySQL
- 1.2 Relational Databases and Popular Databases
- 1.3 SQL Statements

Section 2: Data Manipulation Language (DML)

- 2.1 INSERT
- 2.2 UPDATE
- 2.3 DELETE
- 2.4 SELECT

Section3: Data Definition Language (DDL)

- 3.1 CREATE
- 3.2 ALTER
- 3.3 DROP

Section4: Sub-Queries, Joins and Unions with MySQL

- 4.1 Order By, Like , And & Or, Where , Between
- 4.2 Joins & Unions
- 4.3 Aggregate Functions and Grouping

Section 5: Constraints and Normalization

- 5.1 Understanding Primary and Foreign Keys
- 5.2 Understanding Database Normalization
- 5.3 Views and Triggers

Live Project (The Mapping of what you learn...)

A software development process provides a basis for the organized production of software, using a collection of predefined techniques and notations. The process starts with the formulation of the problem, and then continues through analysis, design and implementation.

Development Stages:

1. System Conception

Conceive an application and formulate tentative requirements. It deals with genesis of an application.

2. Analysis

Analysis focuses on creation of models. It specifies what must be done, not how it should be done. Developers must fully understand the problem before addressing the additional complexities of design. During analysis developers consider the available sources of information and resolve ambiguities.

3. System Design

During system design, the developer makes strategic decisions with broad consequences. The system designer must understand how a new system interacts with other system, and the system must support future modifications

4. Class Design

Developer expands and optimizes analysis models, there is a shift in emphasis from application concepts toward computer concepts. Developers choose algorithms to implements major system functions.

5. Implementation

Implementation is the stage for writing the actual code. Developers map design elements to programming language and database code.

6. Testing

During testing, Testers once again revisit the original business requirements and verify that the system delivers the proper functionality. It also uncovers the accidental errors that have been introduced.
