PHP & MySQL Course Syllabus

Introduction of Web & PHP

- What is PHP?
- The history of PHP
- Why choose PHP?
- Installation overview

First Steps

- Embedding PHP code on a page
- Outputting dynamic text
- The operational trail
- Inserting code comments

Exploring Data Types

- Variables
- Strings
- String functions
- Numbers part one: Integers
- Numbers part two: Floating points
- Arrays
- Associative arrays
- Array functions
- Booleans
- NULL and empty
- Type juggling and casting
- Constants

Control Structures: Logical Expressions

- If statements
- Else and elseif statements
- Logical operators
- Switch statements

Control Structures: Loops

- While loops

- For loops
- Foreach loops
- Continue
- Break
- Understanding array pointers

User-Defined Functions

- Defining functions
- Function arguments
- Returning values from a function
- Multiple return values
- Scope and global variables
- Setting default argument values

Debugging

- Common problems
- Warnings and errors
- Debugging and troubleshooting

Building Web Pages with PHP

- Links and URLs
- Using GET values
- Encoding GET values
- Encoding for HTML
- Including and requiring files
- Modifying headers
- Page redirection
- Output buffering

Working with Forms and Form Data

- Building forms
- Detecting form submissions
- Single-page form processing
- Validating form values
- Problems with validation logic
- Displaying validation errors
- Custom validation functions
- Single-page form with validations

Working with Cookies and Sessions

- Working with cookies
- Setting cookie values
- Reading cookie values
- Unsetting cookie values
- Working with sessions

MySQL Basics

- MySQL introduction
- Creating a database
- Creating a database table
- CRUD in MySQL
- Populating a MySQL database
- Relational database tables
- Populating the relational table

Using PHP to Access MySQL

- Database APIs in PHP
- Connecting to MySQL with PHP
- Retrieving data from MySQL
- Working with retrieved data
- Creating records with PHP
- Updating and deleting records with PHP
- SQL injection
- Escaping strings for MySQL
- Introducing prepared statements

Building a Content Management System (CMS)

- Blueprinting the application
- Building the CMS database
- Establishing your work area
- Creating and styling the first page
- Making page assets reusable
- Connecting the application to the database

Using Site Navigation to Choose Content

- Adding pages to the navigation subjects
- Refactoring the navigation
- Selecting pages from the navigation
- Highlighting the current page
- Moving the navigation to a function

Application CRUD

- Finding a subject in the database
- Refactoring the page selection
- Creating a new subject form
- Processing form values and adding subjects
- Passing data in the session
- Validating form values
- Creating an edit subject form
- Using single-page submission
- Deleting a subject

- Cleaning up
- Assignment: Pages CRUD
- Assignment results: Pages CRUD

Building the Public Area

- The public appearance
- Using a context for conditional code
- Adding a default subject behaviour
- The public content area
- Protecting page visibility

Regulating Page Access

- User authentication overview
- Admin CRUD
- Encrypting passwords
- Salting passwords
- Adding password encryption to CMS
- New PHP password functions
- Creating a login system
- Checking for authorization
- Creating a logout page