

Course Name: Certificate in Programming Excellence through PHP & MYSQL

Eligibility: 10+2 with relevant basic knowledge

Duration: 3 months, 160 hrs

Objective:

- To develop awareness, capability and confidence right from the beginning in the participant and to take up independent assignment in computer field using PHP & MYSQL technology and to work as Web Developer.
- To provide the practical and theoretical knowledge in PHP & MYSQL programming language.
- To develop professional with the concept and technique in PHP & MYSQL
- To make professional in PHP & MYSQL programming

Module	Subject	Topics	Total Duration	Theory	Practical
B03-01	Programming using PHP	Programming using PHP	85	35	50
B03-02	MY SQL	MY SQL	40	15	25
B03-03	Linux	Linux	15	5	10
B03-04	Project Work Development	Project Work Development	20	---	20
	Total (Hrs)		160	55	105

DETAILED SYLLABUS

Subject Code	Subject	Syllabus	Theo.	Prac.
B03-01	Program ming using PHP	Introduction to PHP: History of PHP, Comparison with dynamic content alternatives (Perl, CGI, ASP, JSP, Servlets , CGI, etc), PHP tools and set up (web browser/server, editor, libraries, etc), Create a basic PHP Script, Taking user input, Self Referring Forms, Selecting alternatives, Use PHP to generate HTTP headers, Pass PHP variables via the URL, Debugging Tips	02	
		Introduction: Common Terminology, Getting started, Server Side Scripting Language/Definition of OBJECTS. Naming convention, data types and operators, constants array declaration, data type conversions. Data Integrity, Rule Properties, Transaction Processing and its problems, database types.	02	04
		Taking User Input from Forms via PHPL: Creating forms with PHP, Security Protection from Cross Site Scripting, Using the form GET method, Using the form POST method, Obtaining data from forms through variables, Using hidden fields, Secure Web Forms, Calling pages from themselves using forms, Quoting HTML entities in user input	02	04
		Variables and Expressions in PHP: Identifiers, Data Types (integers, floats, strings and booleans), Text constants, interpolation, here documents, Creating Variables, Variable assignment, Variable Scope, User-defined Constants, HTTP environment variables, Magic Constants, Variable References	03	04
		PHP Operators: Arithmetic Operators, Logical Operators, Relational Operators, The Identity Operator, Bitwise Operators, Other Operators, Assignment Operators, Operator Precedence and Associativity	02	03
		Conditional Tests and Events in PHP: True and False, If, Comparing Strings and Numbers, else and elseif The switch / case statement, The ? : Operator, Comparing for equality or identity	01	02
		PHP Flow Control: Loops, while, do ... while, for, break and continue, exit	0.5	01
		PHP Configuration: The php.ini file, Module Vs CGI Usage, register_globals, Commonly set configurations, PHP 4.1 and above, PHP4 compatibility in PHP5, A glance at upcoming PHP6	01	01
		PHP Functions: Purpose of functions, Built-in functions, Declaring functions, Functions Arguments, Arguments - Call by Reference, Default Arguments, Return, Returning References, Variable Scope (global vs local), Static variables, Recursion, include and require, Variable function calls	02	03
		Storing Data in Arrays using PHP: What are arrays?, How and when to use arrays, Indexing arrays, numeric and hashes,	02	03

	Initialising arrays, Using foreach, Add/remove info from arrays, One-dimensional arrays, Multi-dimensional arrays, Array operators, Array related functions		
	Handling Databases with PHP: PHP's database APIs, Error-handling strategies, Connection/disconnection, log in/log out, Escaping strings in SQL statements, Including common access functions, Doing simple SQL queries via PHP, Building HTML tables using SQL Queries, Show access to: MySQL, Oracle & MS-SQL, Using PEAR DB	02	04
	String Manipulation in PHP: substring and [] operators, Case conversion, trimming, Formatting output data, Regular expressions	0.5	01
	Sessions and Cookies in PHP: What is a session?, Dependencies on the php.ini file, Understanding PHP session variables, Create a PHP session variable, Register and modify PHP session variables, Putting PHP session IDs in pages	02	03
	Good Practice with sessions and PHP, Cookie properties, Setting a cookie in PHP, Retrieving PHP cookies, Expiring/Deleting PHP cookies, Drawbacks to cookies, Using cookies well, Cookie Security Issues	01	01
	File and Directory Access Using PHP: Opening files, local and remote, Reading and writing files, Handling file permissions Handling file ownership, File locking, Opening and reading directories, File uploads from the browser/user	02	02
	Other I/O Issues in PHP: Getting IP addresses from visitors, Getting referring URLs from visitors, Environment variables Showing different content to different browsers (IE, Netscape, Mozilla, Opera, etc), Handling HTTP and MIME headers	01	02
	Handling Email with PHP: Sending email, Unix and NT setup, mail function	0.5	01
	Object Orientation in PHP: Object basics, Classes in PHP, PHP4 – constructors, PHP5 - constructors and destructors, Inheritance, Accessing instance data and functions, __sleep and __wakeup, Class constants, PHP5 OO Additions, Objects: Assignments and References	02	02
	SOAP: SOAP Overview, Simple SOAP Client, Simple SOAP Server	0.5	01
	PEAR, PECL and Smarty: PECL quick tour, APC - Alternative PHP Cache, PEAR installation and quick tour, PEAR Config, PEAR Log, PEAR Auth, PEAR HTML_Quickform, Smarty Templates, Smarty and HTML_Quickform, Smarty and Quickform help with security	02	04
	Graphics in PHP: Graphics basics, Image MIME type, Basic examples, Creation from an existing image, Image copying and resizing, Drawing text on images, True Type fonts	01	02
	Other Segments: Difference between PHP and ASP, Adding	03	02

		Script to Documents Working with Numbers strings Date & Time and Arrays, if... Then ... Else, loops, Error Trapping, Getting message across , Confirming user action, working with forms, Validation of data , Creating and displaying graphic images.		
		Total	35	50
B03-02	MYSQL	An overview of MYSQL Systems Architecture: Introduction to Database Management Systems; Date Models; Database System Architecture; Relational Database Management Systems; Candidate Key and Primary Key in a Relation; Foreign Key; Relational Operators; Set Operations on Relations; Attribute domains and their Implementation.	03	04
		Introduction; first Normal Form; data Anomalies in 1NF Relations Partial Dependencies; Second Normal Form; data Anomalies in 2NF Relations; Transitive Dependencies; Third Normal Form; data Anomalies in 3NF Relations. The Entity Relationship Model; Entities and Attributes; Relationships	02	04
		MYSQL Commands: MYSQL commands; Data Definition Language commands; Data Manipulations Language Commands; Data types, Insert, View, Select, drop tables; Data Constraints; Type of Data Constraint; Column Level Constraint; Table Level Constraint; The CHECK Constraint; Viewing the User Constraint; Computation; Arithmetic Operators; Logical Operators; Comparison Operators; Range Searching; MYSQL FUNCTIONS; Number Functions; Group Functions; Scalar Functions; Data Conversation Functions; Manipulating Dates in MYSQL; Character Functions;	05	10
		Sub Queries and Joins: Joins; Equi Joins; No Equi Joins; Self Joins; Outer Joins; Sub Queries; Correlated Queries; Using Set Operators: - Union, Intersect; Minus;	05	07
		Total	15	25
B03-03	Linux	Introduction of LINUX, Difference between Linux And Window 2000, Understanding LILO, KDE and GNOME, System requirement and Configuration for Linux Server,	02	05
		Disk Partition under Linux Using Fdisk and Disk Drive Under Linux, Common Linux Commands Used, Configuration of networking with NIC, Administration of User Accounts, X Windows Configuration and Utilities, Using TCP/IP Under Linux and Configuring it with Windows.	01	02
		Opening files, editing and closing an existing file, Cutting, copying and pasting files, Duplicating a file, Renaming, deleting items, Changing file permissions, Creating a new directory,	01	02
		Managing system processes, Managing running services, Managing filesystems, Managing accounts. Reading system logs, Mounting and Unmounting.	01	01
		Total	5	10
B03-04	Project Work	Development of Web Application	---	20
		Total	---	20