

Skills for Employment Investment Project (SEIP)

Standards/ Curriculum Format

for

Web Application Development-

PHP

Course Duration: Three Months

Course Structure and Requirements

Course Title: Web Application Development Using PHP

Course Objectives:

- a) This course is specially designed to provide technical knowledge and skills to cope with the requirement of Web Developer occupations of the PHP sector. The course will be implemented to ensure at least 80% of total contact hours on practical/hands on skills training or practice and 20% trade/ occupations related theory including OHS and soft modules;
- b) The course is designed to enable trainees to acquire a range of technical and vocational, practical, personal and organizational skills valued and utilized both within and beyond the workplace;
- c) The course is designed to meet the required competencies of the occupations needed in the labor market in and outside the country;

Course Outline

Name of the Course	Duration of Course	Entry Qualification
Web Application Development Using PHP	1. Three days per week 2. 4 Hours per day	1. Education = Graduation from Computer Science or any equivalent subject

Module 1: Basic PHP

Sl No	Unit Code	Unit of Competency (UoC) Title
Generic- Compulsory		
1	PHP-M1-GC-01	How to keep a variable in computer memory.
2	PHP-M1-GC-02	Naming convention of PHP code
3	PHP-M1-GC-03	Understand how a program is run in a computer in PHP environment
4	PHP-M1-GC-04	Understand array mechanism for keeping a series of data in computer memory
5	PHP-M1-GC-05	Traverse an array to get each of its item for further processing
6	PHP-M1-GC-06	Apply linear search for finding a particular item from a series
7	PHP-M1-GC-07	Apply quick sort algorithm for ascending or descending ordering of a series of data
Occupation Specific Knowledge(trade theory) –Compulsory		
8	PHP-M1-SK-01	Understand anatomy of a PHP program and PhpStorm IDE
9	PHP-M1-SK-02	Apply logic using if-then-else for checking conditions of user input
10	PHP-M1-SK-03	Iterate through series of data finding each of its item
11	PHP-M1-SK-04	How to keep data in an array and find them later
12	PHP-M1-SK-05	Traverse a series of data using foreach loop
13	PHP-M1-SK-06	Work with collection classes : ArrayList, Array to get benefits over array
14	PHP-M1-SK-07	Use Stack, Queue data structure for solving particular problem
15	PHP-M1-SK-08	Use hashtable and dictionary for solving dictionary type problem.
Occupation Specific Skills(practical/demonstration)- Compulsory		
16	PHP-M1-SS-01	Declare and assign a string type variable.
17	PHP-M1-SS-02	Show value of a variable in browser
18	PHP-M1-SS-03	Take input from user and display it in browser application.
19	PHP-M1-SS-04	Take user name from user and show it in a message box
20	PHP-M1-SS-05	Control business logic using if-then-else
21	PHP-M1-SS-06	Make a simple arithmetic calculator by which user can add, subtract, divide and multiply two number.
22	PHP-M1-SS-07	Make an application where user will input data in a range and the data between this range will be shown in list box
23	PHP-M1-SS-08	Create an application where user will enter as many name as (s)he wants. After that user will search any of given input data.
24	PHP-M1-SS-09	Create an application where user will input some persons' name and after that user will want to sort these name in ascending or descending order
25	PHP-M1-SS-10	Create an application which will keep persons' name in a file and show these in a list box
26	PHP-M1-SS-11	Update the above application so that user can search a name and edit it, if (s)he wants.

Module 2: OOP basics

SI No	Unit Code	Unit of Competency (UoC)Title
Generic Compulsory		
1	PHP-M2-GC-01	Encapsulate your data and its functionality
2	PHP-M2-GC-02	Define association relationship
3	PHP-M2-GC-03	Understand the essence of inheritance relationship
Occupation Specific Knowledge(trade theory) –Compulsory		
4	PHP-M2-SK-01	Find an object from problem domain
5	PHP-M2-SK-02	Keep some field, property, method inside a class
6	PHP-M2-SK-03	Create a class with the collection of another class in its field
7	PHP-M2-SK-04	Define one-to-one, one-to-many association relationship between objects
8	PHP-M2-SK-05	Define static class and method from real life example
Occupation Specific Skills(practical/demonstration)- Compulsory		
9	PHP-M2-SS-01	Create user defined type and create object from it
10	PHP-M2-SS-02	Create association relationship between two classes
11	PHP-M2-SS-03	Create inheritance relationship between classes
12	PHP-M2-SS-04	Create in-memory department application
13	PHP-M2-SS-05	Make an in-memory Queue management system

Module 3: Web basics (HTML, CSS, JavaScript)

SI No	Unit Code	Unit of Competency (UoC)Title
Generic Compulsory		
1	PHP-M3-GC-01	How web works.
2	PHP-M3-GC-02	Understand HTML and The Web, HTML Document Structure,
3	PHP-M3-GC-03	What and why: CSS
4	PHP-M3-GC-04	Why do we need JavaScript
Occupation Specific Knowledge(trade theory) –Compulsory		
5	PHP-M3-SK-01	HTML5 Fundamentals, HTML Foundations
6	PHP-M3-SK-02	HTML5 Semantic Page Elements, HTML5 Inline Semantic Elements
7	PHP-M3-SK-03	HTML5 New Form Elements, HTML5 New Form Element Attributes, HTML5 New Form Input Types
8	PHP-M3-SK-04	Behind the Canvas, Drawing on Canvas
9	PHP-M3-SK-05	CSS Basic, Up and Running with Selectors, CSS Position
10	PHP-M3-SK-06	CSS Text, Managing Details in Style Sheets
11	PHP-M3-SK-07	CSS3 And Modern Web Design, Building A Solid Cross-Browser Template
Occupation Specific Skills(practical/demonstration)- Compulsory		
12	PHP-M3-SS-01	Create a HTML template by an editor and open it by any of browser

		application
13	PHP-M3-SS-02	Put some HTML Tags (for heading, paragraph, break, bold, italics, HTML lists) in a HTML page
14	PHP-M3-SS-03	Create a menu using using HTML tags
15	PHP-M3-SS-04	Define the color and font using CSS3
16	PHP-M3-SS-05	Make a basic web page layout using HTML5 and CSS3
17	PHP-M3-SS-06	Insert JavaScript in your page for making a simple calculator
18	PHP-M3-SS-07	Validate logic using JavaScript
19	PHP-M3-SS-08	Make a web page layout (professional look) for student registration process

Module 4: Working with database: MySQL Server

Sl No	Unit Code	Unit of Competency (UoC)Title
Occupation Specific Knowledge(trade theory)-Compulsory		
1	PHP-M4-GC-01	Understand the necessity of relational database for keeping user data.
2	PHP-M4-GC-02	Find out entities and their attributes from a real life scenario
3	PHP-M4-GC-03	Define the relationship between entities and draw an E-R diagram
4	PHP-M4-GC-04	Create schema from an E-R diagram
5	PHP-M4-GC-05	Understand INSERT, SELECT, DELETE & UPDATE sql for basic relational database operation
6	PHP-M4-GC-06	Apply where for filtering data retrieving from a table
7	PHP-M4-GC-07	Apply inner join to retrieve data from one more table
8	PHP-M4-GC-08	Understanding aggregate function and advanced queries
Occupation Specific Skills(practical/demonstration)- Compulsory		
9	PHP-M4-SK-01	Create a database in MySQL Server
10	PHP-M4-SK-02	Create a Table and fields to keep data of an entity
11	PHP-M4-SK-03	Define the relationship between tables for data integrity
12	PHP-M4-SK-04	Create view to retrieve data from database
13	PHP-M4-SK-05	Create reports by writing complex queries
14	PHP-M4-SK-06	Create E-R, Schema, DB and queries for an simple application

Module 5: Web Programming basics using PHP

Sl No	Unit Code	Unit of Competency (UoC)Title
Occupation Specific Knowledge(Trade theory) –Compulsory		
1	PHP-M5-SK-01	Understand Web design fundamentals PHP web form life cycle
2	PHP-M5-SK-02	Use PHP server side controls in your web application
3	PHP-M5-SK-03	State management of PHP
4	PHP-M5-SK-04	How to put JavaScript in web page
5	PHP-M5-SK-05	Working with server side programming
6	PHP-M5-SK-06	Understand user management in PHP application
7	PHP-M5-SK-07	Why and what is user control
Occupation Specific Skills(practical/demonstration)- Compulsory		
8	PHP-M5-SS-01	How PHP works? Demonstrate, session and cookie
9	PHP-M5-SS-02	Make UI layout for student information entry.
10	PHP-M5-SS-03	Make a web application for keeping and searching student information. Use three layer architecture concept in your application.
11	PHP-M5-SS-04	Make an application for user sign up, sign in, sign out. Use three layer architecture concept in your application.
12	PHP-M5-SS-05	Make your above application responsive

Module 6: Software Project Management & Project Work

Sl No	Unit Code	Unit of Competency (UoC)Title
Generic- Compulsory		
1	PHP-M6-GC-01	Key principles of Agile project management
Occupation Specific Knowledge(trade theory)-Compulsory		
2	PHP-M6-SK-01	Understand iteration and release of a project
3	PHP-M6-SK-02	Understand user story
4	PHP-M6-SK-03	Estimate a story
5	PHP-M6-SK-04	Understand the essence of burndown chart
6	PHP-M6-SK-05	Familiarize with Trello.
7	PHP-M6-SK-06	Define user stories of your project work
Occupation Specific Skills(practical/demonstration)- Compulsory		
8	PHP-M6-SS-01	Create project in Trello
9	PHP-M6-SS-02	Create card in Trello
10	PHP-M6-SS-03	Assign a card to a group member
11	PHP-M6-SS-04	Work with project stories
12	PHP-M6-SS-05	Group project presentation