

## Building Web Applications with Apache, PHP & MySQL

**Level:** foundation

**Length:** 35 – 40 hours

**Course Objective:** introduction to LAMP (Linux, Apache, MySQL, PHP) technologies used to building web applications, mainly the server part

### What You Will Learn

- How to install and configure Apache web server
- PHP programming language
- How to install, configure and use MySQL database

**Who Can Attend:** anybody interested in these technologies

### Prerequisites

- Basic notions about Internet: browsers, web servers, HTTP protocol
- Basic notions about HTML, CSS, JavaScript
- General notions about programming or knowledge of a programming language
- Comfortable with using the host operating system, preferable Linux

**Required Infrastructure:** VGA projector, whiteboard, personal computer with Windows or Linux, Internet connection

### Bibliography:

- PHP Cookbook: Solutions & Examples for PHP Programmers (3rd Edition), 2014, David Sklar, Adam Trachtenberg, O'Reilly Media
- MySQL Cookbook: Solutions for Database Developers and Administrators (3rd Edition), 2014, Paul DuBois, O'Reilly Media
- Apache Cookbook: Solutions and Examples for Apache Administrators (2nd Edition), Rich Bowen, Ken Coar, 2008, O'Reilly Media

**Related Courses:** Introduction to Linux, Linux Administration, Web Technologies HTML5, CSS, JavaScript & JQuery

## Description

This course introduces gradually the technologies covered by LAMP acronym – the Apache web server which is heavily used in industry, the PHP programming language (very common in server side programming) and the MySQL relational database used for data persistence.

Each component will be installed and configured, it will be shown their role, and how they interact in order to support the data flow in a web application.

The theoretical part is complemented by many examples and practical assignments. During the course it will be built a larger web application like a social site or blog.

Even the LAMP technologies refer only to the server part of a web application, we shall approach briefly the client related technologies like HTML, CSS and JavaScript.

## Content

1. Introduction to WWW. How the web is organized. Client / server architecture
2. Apache
  - a. Introduction to Apache
  - b. Installing and configuring Apache
  - c. Create the target site model in HTML. Short introduction to HTML, CSS and JavaScript
  - d. Directory securing by using passwords
  - e. Redirecting URLs
  - f. Starting and stopping Apache by using the command line
3. PHP
  - a. Installing PHP
  - b. PHP syntax. Integration with HTML
  - c. The first application – “Hello World”. Execute the code in command line
  - d. Introducing Eclipse for writing PHP code
  - e. Data types and operators
  - f. Arrays, variables and constants
  - g. Control structures, repetitive structures
  - h. Predefined and user defined functions
  - i. Forms processing
  - j. Sessions and cookies
  - k. Working with files. Uploading the files
  - l. Error handling
  - m. Introduction to object oriented programming in PHP
4. MySQL
  - a. Introduction to database servers
  - b. Installing and configuring MySQL
  - c. Creating databases and tables
  - d. Insert, update, delete, query commands
  - e. Operations to modify the database structure
  - f. Primary keys, foreign keys
  - g. MySQL functions
  - h. Procedures and triggers
  - i. Access to MySQL from the PHP code