SpiralTrain
d e v e l o p e r   c o u r s e s

Advanced PHP Programming

Audience Course Advanced PHP Programming
The course Advanced PHP Programming is intended for **PHP** web developers with basic knowledge of PHP who want to make advanced use of PHP to write dynamic Web applications.

Prerequisites Course Advanced PHP Programming
To participate in this course knowledge and experience with PHP is required as is discussed in the course **PHP Programming**.

Realization Training Advanced PHP Programming
The concepts are treated on the basis of presentation slides. Demos are used to clarify the theory. The theory is interspersed with exercises. The course uses PHP 7 which is installed in a WAMP package with the Apache Web server and MySQL.

Certification Advanced PHP Programming
Participants receive an official certificate Advanced PHP Programming after successful completion of the course.

Duration: 4 days　　　**Price: € 2450**

Open Schedule

PHP Advanced Programming

Content Course Advanced PHP Programming

The course Advanced PHP Programming covers advanced features of PHP.

Object Orientation in PHP
In the first place it is addressed how to deal with Object Orientation in PHP. Attention is paid to the known object oriented concepts like classes and objects, encapsulation and inheritance and how PHP deals with them.

Exception Handling
Also the concept of Exception Handling is covered. New features of PHP 7 are discussed as well.

XML and JSON Access
Another issue is how to handle XML and JSON in PHP. Various XML libraries in PHP are discussed, such as libraries for SAX, DOM, SimpleXML and XPath. Also attention is paid to the handling of JSON data with the JSON library functions.

Regular Expressions
The use of regular expressions in PHP is also part of the subject matter.

Database Access with PDO
Attention is paid to various libraries for database access such as PDO, PHP Data Objects. Database abstraction, transactions and SQL joins are also discussed.

Security
Further attention is payed to several aspects of security such as security threats, authentication and SSL.

PHP and Ajax
In the following module it is discussed how interactive PHP Ajax Web Applications can be developed. The XAJAX Framework is addressed in this respect.

PHP and Web Services
In the module Web Services both SOAP and REST Services are discussed.

Design Patterns
Finally an overview of Design Patterns is given and a number of Design Patterns in PHP applications are treated. In conjunction with the course **PHP Programming** this course covers the requirements for the **Zend PHP Certification** exam.

Modules Course Advanced PHP Programming

Module 1 : Classes and Objects	Module 2 : Inheritance	Module 3 : Exception Handling
Object Oriented Programming	Derived Classes	Types of Errors
Class Definition	Base Class Access	Exceptions in PHP
Creating Objects	Constructor Visibility	try, catch and finally
Encapsulation and Data Hiding	Overriding Methods	Exception Handling Rules
Private Data	Pseudo Constants	Exception Class
Constructors and Destructors	Final Classes and Methods	Exception Specialization
$this Variable	Abstract Classes	User Defined Exceptions
Default Field Values	Implementing Interfaces	Multiple catch Clauses
Static Members	instanceOf Operator	Standard PHP Exceptions
Class Constants	Polymorphism	Main Exception Branches
Object References	Type Hinting	RunTime Exceptions
Cloning Objects	Catchable Type Errors	Turn Errors into Exceptions

Module 4 : PHP 7 Features	Module 5 : XML and JSON	Module 6 : Regular Expressions
Scalar Type Declarations	XML Extensions for PHP	Regular Expressions in PHP
Coercive and Strict Mode	SimpleXML	PHP Regular Expression Functions
Return Type Declarations	Load XML from File and String	Meta Characters
Null Coalescing Operator	Reading Attributes and Elements	Quantifiers and Character Classes
Spaceship Operator	Creating XML Data	Regular Expression Modifiers
Constant Arrays	Document Object Model	Matching Text with preg_match
Anonymous Classes	DOM Validation	Matching on Word Boundaries
Closure::call()	SAX, Simple API for XML	Matching Text with preg_match_all
Filtered unserialize()	Using XPath in PHP	Greedy and Non-Greedy Quantifier
Expectations	PHP JSON Functions	Replacing Text with preg_replace
Use Statement	JSON Syntax	Splitting Text with preg_split
Error Handling	Encoding and Decoding JSON	Searching Text with preg_grep

Module 7 : Databases Access	Module 8 : Security	Module 9 : PHP and Ajax
PHP Data Objects	Security Issues	Classic Web Application Model
Data Access with PDO	Register Globals	Ajax Web Application Model
Creating and Closing Connections	Spoofed Form Submissions	Typical Ajax Interactions
PDO Error Retrieval	Cross Site Scripting	Drawbacks of Ajax
Select Queries	Validating Input	Creating the XMLHttpRequest
Fetching Results	SQL Injection	Object Methods
Direct Query Execution	Cross Site Request Forgery	Sending the Request
Array and Column Fetching	HTTP Authentication	Object Properties
PDO Transactions	SSL Overview	XMLHttpRequest readyState
Prepared Statements	SSL Handshakes	Handling the Response
Calling Stored Procedures	Configuring SSL in Apache	PHP and Ajax, XAJAX

Module 10 : Web Services	Module 11 : Design Patterns	
REST versus SOAP	What are Patterns?	
SOAP Messages	Singleton Pattern Defined	
WSDL and Code Generation	Singleton Pattern Usage	
PHP SOAP Extension	Adapter Pattern	
WSDL for SoapService	Factory Patterns	
PHP SOAP Services	Factory Method Pattern	
REST Services	Abstract Factory Pattern	
Everything an Id	Abstract Factory Usage	
Standard HTTP Methods	Observer Pattern	
Content Negotiation	Iterator Pattern	