



The PHP Company

Spring 2009



# Zend Course Catalog

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# Introduction

If you are eager to learn PHP, go to those that know it best. Founded by the creators of PHP, Zend - the PHP Company - is the authority in PHP. Our expert PHP instructors were handpicked for their extensive knowledge in PHP and their ability to communicate and present the curriculum in an effective manner using practical examples.

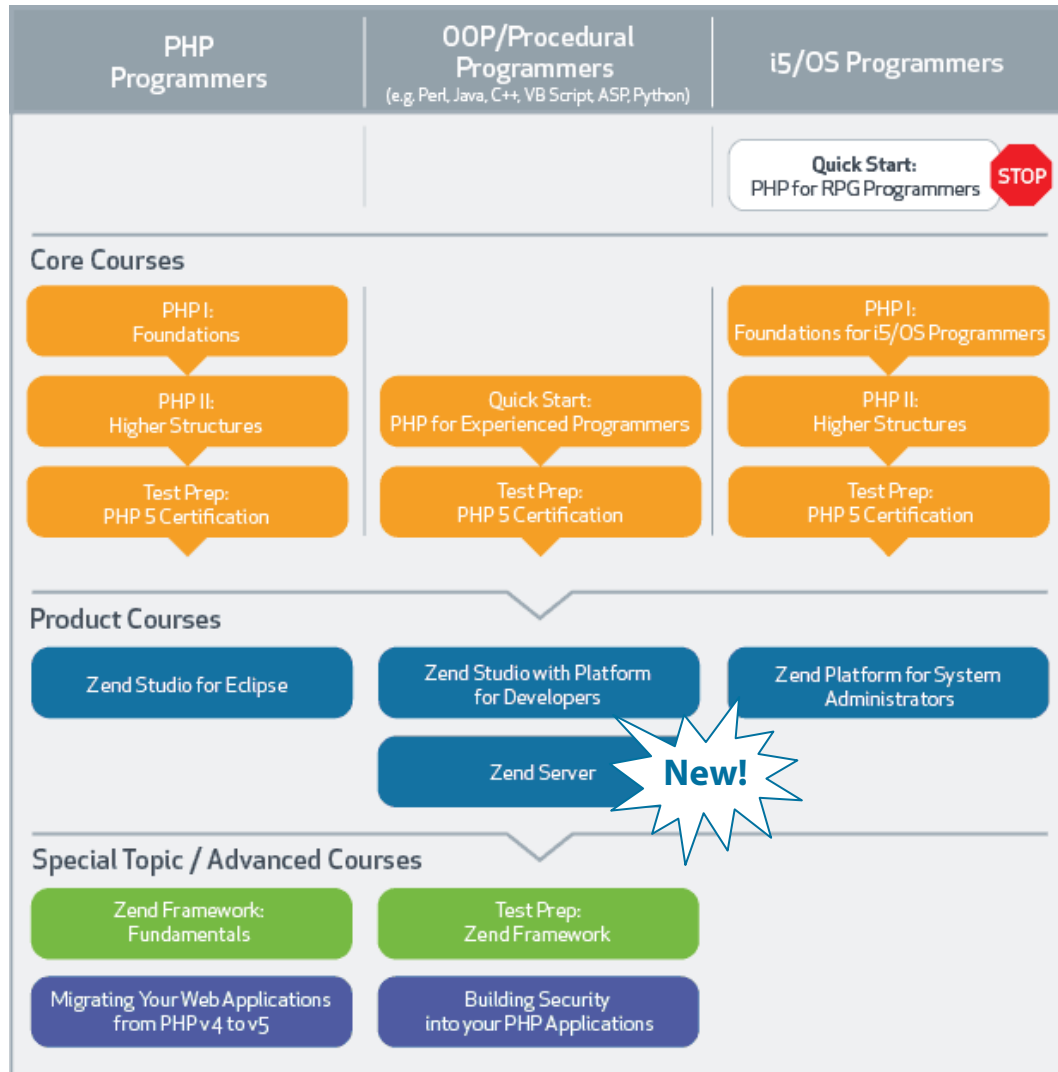
## Mission Statement

Here at Zend's Training Department, our mission is to provide relevant and engaging learning opportunities – from the basics, through cutting edge topics, and on to certification - advancing the knowledge and success of our PHP colleagues, and the wider Open Source community.

*"You cannot teach a man anything; you can only help him find it within himself."*

**- Galileo Galilei**

# Curriculum Tracks



\* This diagram is for illustration purposes only and is not intended to suggest the speed with which an individual can proceed through the courses, nor their level of expertise upon completion of any one course. That level of achievement depends on the individual's own experience and ability to learn. For the PHP language sequence (Core Courses) we highly recommend that participants actively practice, for at least several months, what they have learned before attempting the next level.

## Role-Based Curriculum Tracks

### I am a(n)...

#### Web Designer

**Web Designers, who wants to be able to develop in PHP... I should take the following courses:**

- PHP I: Foundations
- PHP II: Higher Structures
- Test Prep: PHP 5 Certification
- Zend Studio with Platform for Developers – or Zend Studio for Eclipse Course (Platform Add-on Optional)
- Zend Framework: Fundamentals
- Building Security into Your PHP Applications
- Test Prep: Zend Framework Certification

#### i5/OS Programmer

**i5/OS Programmer, who wants to be able to retool my existing RPG applications for the web by combining them with PHP... I should take the following courses:**

- Quick Start Course: PHP for RPG Programmers

**i5/OS Programmer, who wants to be able to not only tie existing RPG applications to PHP, but also create new PHP applications... I should take the following courses:**

- PHP I: Foundations (i5/OS Programmers)
- PHP II: Higher Structures
- Test Prep: PHP 5 Certification
- Zend Studio with Platform for Developers – or Zend Studio for Eclipse Course (Platform Add-on Optional)
- Building Security into Your PHP Applications

#### Object-Oriented / Procedural Programmer

**Object-Oriented / Procedural Programmer\*, who wants to learn the syntax and best practices of developing with PHP... I should take the following courses:**

- Quick Start: PHP for Experienced Programmers
- Test Prep: PHP 5 Certification
- Zend Studio with Platform for Developers – or Zend Studio for Eclipse Course (Platform Add-on Optional)
- Zend Framework: Fundamentals
- Building Security into Your PHP Applications

\*e.g., Perl, Java, C++, VB, JavaScript, Ruby

#### System Administrator

**System Administrator, who wants to provide a more stable and efficient development and production environment by learning and using Zend Platform or Zend Server... I should take the following courses:**

- Zend Platform for System Administrators or Zend Server
- Building Security into Your PHP Applications

### I want to become a Zend Certified Engineer in...

#### PHP 5

**I should take the following courses:**

- PHP I: Foundations
- PHP II: Higher Structures
- Test Prep: PHP 5 Certification

#### Zend Framework

**I should have a solid foundation in PHP and then I should take the following courses:**

- Zend Framework: Fundamentals
- Test Prep: Zend Framework Certification

## Online Training

Zend's Instructor-led Online Training courses will help you learn PHP quickly and easily. The courses are built around the foundation that practice makes perfect. Relevant exercises are integrated throughout the curriculum, allowing students to apply their newly learned PHP skills. Each training class is delivered live using our state-of-the-art online training system, allowing for real-time interaction between instructor and participants. Each online course is delivered over multiple days. To view the current Online Training Schedule, please go to: <http://www.zend.com/en/services/training/course-schedule/>

## Classroom Training

All online courses can also be delivered in a classroom setting, for more information, please contact sales at: <http://www.zend.com/en/contact>

## Customized Training

Zend's Global Services Team can provide custom training solutions for your own PHP professionals, bringing their knowledge of PHP, PHP applications, and Zend Products directly to you. Zend's Training and Certification Department can adapt the training curriculum to suit your unique needs. For more information, please contact sales at:

<http://www.zend.com/en/contact>

## Available in Multiple Languages

Zend's Training courses are offered globally and currently available in English, French, German and Italian. Contact our local offices for more information about the courses offered:

- France: <http://www.zend.com/fr/services/training/> Email: [fr-formation@zend.com](mailto:fr-formation@zend.com)
- Germany: <http://www.zend.com/de/services/training/> Email: [gs-germany@zend.com](mailto:gs-germany@zend.com)
- Italy: <http://www.zend.com/it/services/training/> Email: [infoitaly@zend.com](mailto:infoitaly@zend.com)

# Core Courses

## PHP I: Foundations (EDUT-PI)

The Zend PHP I: Foundations course is designed to provide non-programmers with a solid foundation in the PHP language. This course guides you through the basics of PHP with an experiential approach, filled with numerous examples and hands-on exercises. By the end of the course, you will have completed a functioning Blackjack program while you learn the essentials you need to program in PHP.

You will also have the opportunity to use the Zend Studio IDE (Integrated Development Environment) to start your coding adventures the easy and correct way! The Zend Training Center will allow you to code exercises live during the course with your instructor able to both see and coach your progress.

### Audience:

This course is designed for those who want to learn the basics of the PHP language, and assumes some familiarity with web sites – what they are and the very basics of how they work – but no programming experience. Web designers who want to become PHP Developers would certainly benefit from this course. If you are a programmer in a Procedural or OO language, we recommend you take the **Quick Start: PHP for Experienced Programmers course**. If you are an ILE programmer, we recommend you take the **PHP I: Foundations (i5/OS Programmers) course**.

### Pre-requisite(s):

None

### Objectives:

To learn the basics of the PHP programming language

### Topics Include:

- Introduction to Programming Languages
- PHP Language Basics: Syntax, Quotes, Comments, Data types
- PHP Variable Basics: Numbers, Constants, Variables, Strings, Arrays
- PHP Control Flow Basics: Operators, Conditionals, Loops
- PHP Functional Basics: Functions, Libraries, Advanced Arrays, File Handling
- PHP Programming Basics: Best Practices, Debugging, Brief Introduction to HTML
- PHP Web Basics: Brief Introduction to Server Communication, Sessions, Security
- PHP Database Basics: Introduction to the MySQL/SQLite Database as it relates to Web Sites
- PHP Application Basics: Best Approaches to Creating Applications; Course project

### Course Information:

Duration: 18 hours – Online; 3 days – Classroom

## PHP I: Foundations (i5/OS Programmers) (EDUT-PI-i5)

The Zend PHP I: Foundations (i5/OS Version) course is designed to provide ILE programmers with a solid foundation in the PHP language. This course guides you through the basics of PHP with an experiential approach, filled with numerous examples and hands-on exercises, and makes frequent reference to the similarities and differences between the PHP and RPG languages, for better comprehension. You will also learn about the exciting new 5250 Bridge for your legacy content, as well as tools for i5 system programmers, such as the PHP i5 Toolkit and DB2 extensions. A coding project at the end of the course serves to reinforce the concepts taught and your proficiency in working within PHP.

### Audience:

This course is designed for experienced i5 system programmers who currently utilize RPG (or COBOL), and want to explore using PHP to create web-based application front ends for existing RPG applications or begin the track to become PHP programmers.

### Pre-requisite(s):

Active i5/OS programming experience (ILE language DB2 experience)

### Objectives:

To learn the basics of the PHP programming language and its relation to the i5/OS system

### Topics Include:

- Why use PHP : What is PHP, Why use it, Benefits for RPG programmers, Connecting to a DB2 data source & accessing data demonstration
- Zend Core Management: What an ILE programmer needs to know about Zend Core
- Development Tools: Increasing code efficiency & performance through Zend Studio for i5, including code completion, syntax highlighting, context sensitive templates for the PHP i5 Toolkit, DB2 extensions, 5250 bridge
- Language Basics: Syntax, Quotes, Comments, Data Types
- Variable Basics: Numbers, Constants, Variables, Strings, and Arrays
- Control Flow Basics: Operators, Conditionals, Loops
- Function Basics: Functions, Libraries, Array functions, File Handling functions
- Programming Basics: Best Practices, Debugging, Introduction to HTML
- Web Basics: Introduction to Server Communications, Sessions, Security
- Database Basics: Introduction focused on how databases relate to PHP and websites
- Application Basics: Course project

### Course Information:

Duration: 18 hours – Online; 3 days – Classroom

## PHP II: Higher Structures (EDUT-PII)

The Zend PHP II: Higher Structures course is designed to expand a beginning programmer's understanding of the PHP language. This intermediate-level course builds upon knowledge gained in PHP I: Foundations. It utilizes a hands-on approach with numerous examples and practical exercises, as well as a key development project, to enhance learning. You will also have the opportunity to use the Zend Studio IDE (Integrated Development Environment) to continue honing your coding skills utilizing best practices and effective tools.

### Audience:

This course continues where PHP I: Foundations leaves off, and is designed for novice PHP developers who want to further advance their skills in the PHP language and already know the basics of PHP syntax, language constructs, and web site functionality. Experienced programmers in Procedural and OO languages should refer to the Quick Start: PHP for Experienced Programmers course description.

### Pre-requisite(s):

PHP I: Foundations, or PHP I: Foundations (i5/OS Programmers), or equivalent knowledge. \*\*

### Objectives:

To learn the essentials for creating web-based PHP applications

### Topics Include:

- PHP Language Concepts: Scope, Globals, working with Files, Advanced Variable Usage / Array Manipulation and References
- Configuring PHP: PHP.INI configuration considerations
- Regular Expressions: Using Perl-Compatible Regular Expressions in PHP applications
- PHP and OOP Concepts: Principles of Object Oriented Programming and Design, Access Modifiers, Abstract Classes, Interfaces, and more
- Building Applications: Debugging, Security and Validation
- PHP Web Fundamentals: Server Communication, Sessions & Cookies, Working with Forms and Form Validation, Email, HTTP Headers, Buffers & Caches
- PHP Database Basics: Introduction to manipulating database contents using PHP; PDO
- PHP Application Essentials: Best Approaches to Creating Applications; Course project

### Course Notes:

\*\*This course assumes a thorough grounding in the language and syntax of PHP and does not fully review those topics. It also assumes that students who completed the Foundations course have practiced applying the skills they learned before attempting this next level.

### Course Information:

Duration: 18 hours – Online; 3 days – Classroom

## Test Prep: PHP 5 Certification (EDUT-CER)

The Test Prep: PHP 5 Certification course prepares experienced PHP programmers for the challenge of passing the PHP certification exam and achieving the status of Zend Certified Engineer (ZCE).

This is a test preparation and PHP review course – it does not teach PHP. The content discusses important information about the exam itself and strategies for answering the exam questions, while providing an in-depth review of the twelve certification topic areas. Participants are continually challenged to test their knowledge with focused quizzes. The course moves at a fast pace, and assumes at least an intermediate skill level in PHP programming.

### Audience:

This course is designed for experienced PHP developers (intermediate-level +) who wish to gain information on how to take and pass the PHP 5 Certification exam while being guided through a quick, intense review of all of the major topics within the 12 certification areas.

### Pre-requisite(s):

At least intermediate-level knowledge of the twelve topic areas

### Objectives:

Preparation for the Zend PHP Certification Exam

### Topics Include:

- PHP Certification: Why Certification; Exam Essentials; Questions and Strategies; Topic Areas
- PHP Basics: Embedding PHP; Variables; Constants; Data Types; Strings; Type Conversions; Operators; Conditions; Loops
- Functions: Declaring Functions; Function Parameters; References; Scope; Variable Functions
- Arrays: Creating, Filling, Splitting; Adding & Removing Elements; Looping; Checking for Values; Sorting; Comparing; Merging
- PHP and OOP: Classes; Properties; Methods; Objects; Static Properties Methods; Inheritance; Abstract Classes; Interfaces; Autoloading; Reflection
- Strings and RegEx: Substrings; Comparing & Counting Strings; Phonetic Functions; Strings and Arrays; Formatted Output; RegEx Essentials
- PHP 4/5 Differences: Object-Oriented Programming; Other Areas
- Design and Theory: Active Record, Factory, Iterator, MVC, Proxy, Singleton
- Files, Networks: Resources; Output Files; R/W; File Operations; Wrappers; Streams
- Web Features: HTTP POST & GET; Accessing Form Data; File Uploads; Cookies
- XML and Web Services: XML; SOAP; WSDL; Create & Consume a Web Service; Debugging
- Databases: Keys; SQL; Sorting, Grouping, Joins
- Security: Rules; XSS; CSRF; Injections; Sessions; Secure Configurations; Uploads

### Course Notes:

- For more information on Zend Certification, go to: <http://www.zend.com/en/services/certification/>

### Course Information:

Duration: 18 hours – Online; 3 days – Classroom

## Quick Start: PHP for Experienced Programmers (EDUT- EXP)

The Zend Quick Start: PHP for Experienced Programmers course is designed to quickly build an experienced programmer's understanding of the PHP language. This course covers many of the same topics as both the PHP I: Foundations and PHP II: Higher Structures of PHP classes but at an accelerated rate with special emphasis on the differences between PHP and other commonly used languages. As with the other classes, it utilizes a hands-on approach with numerous examples and practical exercises, primarily related to the course project, to enhance learning. You will also have the opportunity to use the Zend Studio IDE (Integrated Development Environment) to continue honing your coding skills utilizing best practices and effective tools.

### Audience:

This course is designed for experienced developers (2+ years) of other languages - Procedural & OO, such as C, Java, C++, C#, JavaScript, Python, Perl, Ruby - who want to transfer their skills to PHP and need to quickly learn the PHP-specific version of common features, such as syntax and language constructs. For ILE programmers without experience in these other programming families, we recommend taking the PHP I: Foundations (i5/OS Programmers) & PHP II: Higher Structures courses.

### Pre-requisite(s):

Experience developing applications, 2+ years

### Objectives:

Upon completion of this course, participants should be able to:

- Apply their existing programming skills to the PHP language
- Define and utilize the components of PHP syntax, language, and structure
- Set up a development environment using php.ini
- Apply fundamental concepts around web application design and implementation to PHP, including Forms and Form validation, other security aspects, sessions/ cookies / buffers

### Topics Include:

- PHP Syntax Essentials: Data types, Syntax, Quotes, Comments, Constants, Variables, Strings, Arrays, Operators, Conditionals, Loops, Functions
- PHP Language: Scope, Globals, Files, Advanced Variable Usage / Array Manipulation and References, Callback Functions, Dynamic Function Invocation, Recursive Transversals, and Variable Variables
- Configuring PHP: PHP.INI configuration considerations
- Regular Expressions: Using Perl-Compatible Regular Expressions in PHP applications
- PHP and OOP Concepts: Principles of Object-Oriented Programming and Design, Access Modifiers, Abstract Classes, Interfaces, and more
- PHP Web Essentials: Sessions & Cookies, Working with Forms & Form Validation, Email, HTTP Headers, Buffers
- PHP Database Essentials: Introduction to Manipulating DB Contents using PHP
- Building Applications: Debugging, Security and Validation
- PHP Application Essentials: Best Approaches to Creating Applications; Course Project

### Course Information:

Duration: 18 hours – Online; 3 days Classroom

## Quick Start: PHP for RPG Programmers (EDUT-RPG)

The course demonstrates to experienced RPG programmers the value of PHP programming by providing an easy and robust method to move their applications online, to the Internet or a company's Intranet. This 8-hour overview course begins with some basics on both the PHP language and HTML, and then shows you how to exploit key features within Zend Studio to improve your coding and debugging processes. It then discusses Zend Core and the full-featured PHP API Toolkit. Along the way, you'll learn how to access your existing files and objects, as well as how to harness the power of thousands of open source applications in providing custom solutions for your projects. The course will feature numerous interactive examples with optional homework assignments that offer hands-on practice with the principles you learn.

**Please Note:** This is a stand-alone course. For those who want to learn the PHP language, you should instead take the PHP I: Foundations (i5/OS Programmers) course, followed by PHP II: Higher Structures. There is considerable overlap between the Quick Start: PHP for RPG Programmers and the PHP I: Foundations (i5/OS Programmer) courses, so we do not recommend taking both.

### Audience:

This course is designed for active programmers with practical experience developing applications for the i5 system using RPG (or COBOL), who want to explore using PHP to create web-based application front-ends for existing RPG applications, or who want to take advantage of the many open source applications available on the web. \*

### Pre-requisite(s):

Extensive RPG Programming experience

### Objectives:

To provide a brief overview of the PHP programming language and the PHP API Toolkit for i5.

### Topics Include:

- What is PHP
- Why use PHP: The benefits for RPG programmers
- Introduction to HTML: tags, tables, forms; embedding PHP into HTML, HTML into PHP
- Increasing code efficiency & performance through Zend Studio for i5 (includes code completion, syntax highlighting, context sensitive templates for Toolkit, etc.)
- Debugging Tools
- Zend Core management
- Connecting to a DB2 data source & accessing data
- I5 PHP API Toolkit
- Customizing Open Source applications
- Creating & consuming Web Services from PHP

### Course Notes:

- Participant's course materials include a PHP & API Toolkit Job Aid.
- \*This is not a comprehensive PHP class. For in-depth instruction on the PHP language, we recommend taking the PHP I: Foundations (i5/OS Programmers) course, followed by PHP II: Higher Structures.

### Course Information:

Duration: 8 hours – Online; 1 day – Classroom

# Zend Product Courses

## Zend Platform for System Administrators (EDUT-PSA)

The Zend Platform Training Course for System Administrators will demonstrate to System Administrators how Zend Platform provides an optimal environment for running PHP applications tools - improving availability and performance while maintaining and synchronizing PHP configurations.

This 2-day course is designed to provide System Administrators or System Operators (or equivalent) with the knowledge and confidence to successfully utilize Zend Platform in their responsibilities to provide a stable, secure, and robust server environment to both internal and external users.

### Audience:

This course is designed for Systems Administrators or equivalent; individuals responsible for the live operation of web applications, for internal infrastructure (version control, etc.), or for ongoing service and application support; Project Managers; Development Managers and Professionals.

### Pre-requisites:

Experience as a functioning System Administrator

### Objectives:

After completing the course, participants will be prepared to:

- Maximize the availability of their production environment
- Shorten the time to resolution in case availability issues occur
- Optimize the performance and improve the responsiveness of their Web application

### Topics Include:

- Introduction to Zend's Suite of Products
- Zend Platform
- Server Set Up: Architecture & Configuration
- Session Clustering
- Job Queues
- Java Bridge
- Actuate BIRT Reporting
- Configuring Platform for Optimal Studio Performance Integration
- PHP Intelligence
- Web Services Designed for Platform Management
- Dynamic Content Caching
- Zend Download Server
- Performance Tuning and Tests
- Administration: Users, Groups, Licenses
- Performance and Problem Resolution Lifecycles

### Course Information:

Duration: 12 hours – Online; 2 days – Classroom

## Zend Server (EDUT-ZSR)



The Zend Server Training Course provides an in-depth look at Zend Server, the complete, enterprise-ready Web Application server for running and managing PHP applications that require a high level of reliability, performance, and security. This course is designed to provide System Administrators or Operators (or individuals who fulfill similar functions) with the knowledge and confidence to successfully utilize Zend Server in their critical role of providing a stable, secure, and robust server environment to both internal and external users.

### **Audience:**

System Administrators or equivalent; individuals responsible for setting up and managing PHP runtime environments and applications; for developers who also perform system administration functions; Development Managers and Professionals.

### **Pre-requisites:**

Experience as a functioning System Administrator, or equivalent

### **Objectives:**

After completing the course, participants will be prepared to:

- Maximize the availability and performance of their production environment
- Rapidly respond to any issues, and shorten the time to resolution
- Setup and provide their development staff with a Business-grade PHP environment

### **Topics Include:**

- Administration
- Server Setup
- Rule Management
- Monitor
- Controller
- Optimizer+
- Caching
- Debugging
- Guard Loader
- Java Bridge
- Zend Download Server
- phpMyAdmin
- Zend Studio & Zend Framework

### **Course Information:**

Duration: TBD – Estimated at 12-15 hours Online; 2 days – Classroom

## Zend Studio for Eclipse (EDUT-ZSE)

The Zend Studio for Eclipse Course is designed to provide PHP programmers with a practical, in-depth knowledge of the next generation tool in the Zend Studio IDE family. Zend Studio for Eclipse combines professional PHP development capabilities with the Eclipse multi-language support and plug-in extension technology, to create the world's most powerful PHP IDE.

This course simulates many of the major processes and challenges faced when developing an application, and demonstrates – through hands-on exercises and a course project – how Zend Studio for Eclipse provides all the functionality needed to increase the robustness of your applications while decreasing production cycle time. This course presents a full treatment of the features offered by this leading IDE, many of which revolve around a knowledge of PHP, OO programming, and the MVC design pattern. The integration of Zend Studio with Zend Framework is also covered in the context of best practices.

An add-on to the course examines the tight integration of Zend Platform with the Studio for Eclipse IDE, while in-depth exercises allow you to experience how Platform's reliability, scalability, and full production performance will enhance the end-user experience once your web application is deployed.

### Audience:

Active web application developers. Please note that this course is not designed to teach PHP or web application development. Rather, it focuses on how to exploit the features of Zend Studio for Eclipse IDE to let you excel with your development projects.

### Pre-requisites:

A good working knowledge of PHP 5 and the basic tenets of Object-Oriented design. Familiarity with Zend Framework, while not required, is beneficial in absorbing the material.

### Objectives:

At the conclusion of the course, participants will:

- Understand the overall design and methodology for the Studio for Eclipse IDE
- Be familiar with the major features the product has to offer
- Be able to utilize the various Perspectives and Views of the IDE to complete their development tasks more efficiently

### Topics Include:

#### Zend Studio for Eclipse:

- Framework for Development: Model - View - Controller
- Coding the Application, including use of Templates, Bookmarks, PHPDoc
- Testing and Debugging Techniques, including PHPUnit, Code Coverage
- Source Control
- Web Services (IDE-based)
- Instant and Server Debugging
- Database Integration

#### Zend Platform Integration Add-On:

- Optimizing Web Application Performance PHP Intelligence, Profiler
- Site Analysis, including code acceleration, File Compression, Dynamic Content Caching
- Job Queues
- Full and Partial Page
- Caching Web Services (Platform-based)
- Zend Download Server
- PHP/Java Bridge Integration

*\* Please note that this course is designed to teach the best use of the Zend Studio IDE. Therefore, it will cover the Studio feature-set, including those features that interface with Eclipse (for Eclipse). It is not a course on Studio and Eclipse, so that any functionality that is specific only to Eclipse will not be covered.*

### Course Information:

Duration: 15 hours - Online; 2 days – Classroom; Platform Add-on: 7.5 hours Online; 1 day – Classroom

## Zend Studio with Platform for Developers (EDUT-SPD)

The Zend Studio with Platform Course for Developers is designed to provide PHP programmers with a practical, in-depth knowledge of the leading development tools for the open source PHP environment. This 3-day course is designed to simulate many of the major processes and challenges you face when developing an application, and demonstrate to you – through hands-on exercises - how Zend Studio with Platform provides all the functionality you need to increase the robustness of your applications while decreasing production cycle time. It will also highlight how Platform’s reliability, scalability, and full production performance will enhance your end user experience once the web application is deployed. While completing a live PHP development project, you will learn how to exploit the key features of Studio with Platform to transform the development of complex applications into a simple process.

### Audience:

This course is designed for active web application developers with a good working knowledge of PHP 5 and the basic tenets of Object Oriented design. Please note that this course is not designed to teach PHP or web application development. Rather, it focuses on how to exploit the features of Zend Studio with Platform to let you excel with your development projects.

### Pre-requisites:

Working knowledge of PHP 5 and the basic tenets of Object Oriented design

### Objectives:

At the conclusion of the course, participants will:

- Have a thorough understanding of the main features of Zend Studio and Zend Platform
- Be able to use Zend Studio to develop and debug PHP projects
- Understand how to integrate Zend Studio and Zend Platform into existing infrastructures
- Understand how to use Zend Platform for development and maintenance tasks

### Topics Include: (as they relate to Zend Studio and Platform)

- Introduction to Zend’s Suite of Products
- Zend Studio
- Framework for Development: The Model-View-Controller Pattern
- Source Control
- Coding the Application, including use of Templates, Bookmarks, PHPDoc
- Testing and Debugging Techniques
- Instant Debugging
- Configure Platform Studio Servers
- Server Debugging
- Optimizing Web Application Performance (PHP Intelligence, Profiler)
- Full and Partial Page Caching
- Site Analysis (code acceleration, file compression, dynamic content caching)
- Web Services (SOAP)
- Zend Download Server
- PHP/Java Bridge Integration

### Course Information:

Duration: 3 days – Classroom

# Special Topic/Advanced Courses

## Zend Framework: Fundamentals (EDUT-ZF)

The Zend Framework: Fundamentals course is designed for experienced PHP programmers who want to learn to combine ZF concepts and structural elements to utilize the full power of this software development kit for PHP 5 applications.

Zend Framework is an open-source class library with a central theme of “extreme simplicity”. ZF helps you to reduce the tedious details of coding and instead allows developers to be more productive as they focus on the big picture. Utilizing a collection of customizable PHP classes, ZF provides robust functionality suitable for both large and small tasks.

This course combines teaching ZF with the introduction of the Model-View-Component (MVC) design pattern, to ensure you learn current best practices in PHP development.

The Zend Framework: Fundamentals course helps you to learn by doing. Each discussion of related components is presented with examples of how best to utilize them in your applications, Hands-on exercises and the mini-projects you develop during the course reinforce the concepts you have learned. The online Zend Training Center allows participants to develop code during the course with your instructor able to see and coach your progress.

### Audience:

This course is designed for experienced, PHP programmers who are familiar with object-oriented programming and need to learn both Zend Framework and the Model-View-Component design pattern. The course does not teach the PHP programming language.

Participants are assumed to be proficient enough in the language to understand intermediate-level code examples and to perform coding exercises.

### Pre-requisite(s):

Solid understanding of PHP at an intermediate to advanced level and OOP experience

### Objectives:

Upon completing the course, active PHP developers should be equipped to best utilize the Zend Framework, along with the Model-View-Component design pattern, to create robust web applications with more ease and less time.

### Topics Include:

- Authentication and Authorization (Zend\_Acl, Zend\_Auth, ...)
- Core Infrastructure (Zend\_Cache, Zend\_Config, Zend\_Debug, ...)
- Databases (Zend\_Db, Zend\_Db\_Table,...)
- Model-View-Controller (Zend\_Controller, Zend\_Controller\_Action, ...)
- Web Form (Zend\_Form...)
- View and Layout (Zend\_View, Zend\_Layout, ...)
- Search (Zend\_Search\_Lucene, ...)
- Mail (Zend\_Mail, ...)

### Course Information:

Duration: 18 hours – Online; 3 day – Classroom

## Test Prep: Zend Framework Certification (EDUT-ZFC)

The Test Prep: Zend Framework (ZF) Certification course prepares experienced developers who design and build PHP applications using ZF for the challenge of passing the certification exam and achieving the status of Zend Certified Engineer in Zend Framework (ZCE-ZF). **Please Note:** This is a Test Preparation course it does not teach ZF or PHP. It utilizes a special review format for presenting the material that mimics the exam experience.

The content is delivered at a fast pace through a series of quick reviews and corresponding quiz questions focused on the fourteen exam topic areas. The course also provides important information about the exam itself and strategies for answering the questions. This course is offered online - with a live instructor - for 16 hours (eight 2-hour sessions) or can be adapted for the classroom setting (3 days).

### Audience:

This course is designed for experienced Zend Framework developers (intermediate-level +) who wish to gain information on how to take and pass the Zend Framework Certification exam while being guided through a quick, intense review of all of the major topics within the 14 certification areas.

### Pre-requisite(s):

At least intermediate-level knowledge of the fourteen topic areas.

### Objectives:

Preparation for the Zend Framework Certification Exam.

### Topics Include:

- **Introduction:** Why Certification; Exam Essentials; Questions and Strategies; Certification Topic Areas
- **MVC:** Components, Pattern Basics, Bootstrap, Zend\_Controller, Zend\_Layout
- **Forms:** Zend\_Form, Validation/Filtering, Decorators, Elements, Forms, Display Groups & Sub Form, Configuration, Internationalization
- **Database:** Zend\_Db, Zend\_Db\_Statement, Zend\_Db\_Table, Zend\_Db\_Profiler, Zend\_Db\_Select, Table Data Gateway Pattern, Row Data Gateway Pattern
- **Authentication and Access:** Zend\_Acl, Zend\_Auth, Zend\_Auth Adapters
- **Filtering and Validation:** Filtering Chains, Custom Filters, Standard Validation Classes, Validator Chains, Custom Validators
- **Web Services:** XML-RPC Client, XML-RPC Server, REST Client, REST Server, Zend\_Service Web Services
- **Infrastructure:** Zend\_Config, Zend\_Session, Zend\_Registry, Zend\_Loader
- **Search:** Zend\_Search\_Lucene, Indexing, Querying, Performance
- **Mail:** Constructing, Storage, Message retrieval, Storage providers, Message sending
- **Internationalization:** Zend\_Date, Zend\_Translate, Zend\_Locale, Zend\_Currency, Zend\_View\_Helper\_Translate, Internationalization Performance
- **Security:** Cross Site Request Forgery, Secure Authentication, Escaping for output, Cross Site Scripting, Security Best Practices
- **Coding Standards:** Coding conventions, Zend\_Loader
- **Performance:** Zend\_Cache, Script inclusion, Optimization, Zend\_Memory
- **Diagnosis and Maintainability:** Zend\_Debug, Zend\_Log

### Course Information:

Duration: 16 hours – Online; 3 day – Classroom

## Building Security into your PHP Applications (EDUT-SEC)

Security is one of the most important things to keep in mind when developing web applications. Unfortunately, it is also one of the things often overlooked. Reviewing hundreds or thousands of lines of code is a daunting task, one that can be avoided if an application is developed with security in mind.

This PHP class presents a comprehensive overview of security and has been designed to equip PHP developers with the knowledge they need to build more secure web applications.

### Audience:

This course is designed for experienced PHP application developers who want to learn or be reminded of security best practices. It is also appropriate for new PHP developers who want to learn how to build security into the applications they are learning to create.

### Pre-requisites:

Basic knowledge of PHP 5

### Course Objectives:

Upon completing the course, participants will be prepared to:

- Incorporate standard, best practice security measures into their PHP applications
- Identify the most common types of vector attacks and how best to monitor and guard against them.

### Topics Include:

- What is Security
- The Defense in Depth Concept
- Security's Basic Rules
- Guidelines for Building Secure Web Applications
- Injection Attacks (SQL, XSS, Command, Remote Code)
- XSRF Attacks
- Session Security
- Secure File Uploads
- Creating Secure Configurations
- Password Security
- Sandboxes & Tarpits
- Security through Obscurity
- Security Implications for AJAX
- Filtering for Charsets

### Course Information:

- Duration: 6 hours – Online; 1 day – Classroom

## Migrating Your Web Applications from PHP 4 to PHP 5 (EDUT-MIG)

The Zend Migrating Your Web Applications from PHP v4 to v5 course is designed to provide experienced PHP programmers with the knowledge to plan and conduct a successful migration and optimization process. This webinar guides you through the basics of planning a migration, as well as discussing some of the tools to make the process easier, such as unit testing and PHPDoc. By the end of the webinar, you can begin to plan your own migration and optimization project while you learn the essential changes between PHP versions 4 and 5.

### Audience:

This course is designed for experienced PHP developers who need to migrate existing web applications from PHP v4 to PHP v5.

### Topics Include:

- Why Migrate: More functionality, stability, reusability, additional features
- Major Differences: Syntax changes, object model changes, new functionality such as XML support
- Development Tools: Unit testing, PHPDoc, profiler, debugger, E\_STRICT setting
- Migration Planning: Syntax changes, new keywords, what can be kept, what must be updated
- Class and Object Changes: Guidance on using references, clone keyword, rewriting objects
- Transition the PHP Engine: Using the compatibility mode option to work with PHP Engine I and then PHP Engine II
- Database Changes: Setting parameters, calling libraries
- Programming Basics: Best Practices, Debugging, Introduction to HTML
- Using New Features: PDO, XML, DOM, SOAP, etc.
- Optimization: Adopting native extensions, modifying the architecture, using new features
- Optimization Tools: Unit testing details, automated tools, testing and debugging techniques

### Course Information:

Duration: 3 hours – Online; ½ day Classroom

## Building Rich Internet Applications with PHP 5 and AJAX (EDUT-AJA)

Web 2.0 is the future of web application development. Are you ready for the challenge?

This online course, taught by a live instructor, covers a variety of topics related to Web 2.0 application development, such as AJAX, JavaScript, asynchronous data interfacing, JSON, and much more—all from the point of view of a PHP developer using the Yahoo! UI Library.

This course includes practical application-building exercises to ensure that you go beyond theory to master the process of building rich web applications powered by PHP, AJAX and Web Services.

### **Audience:**

This course is a specialty course and requires advanced knowledge of PHP.

### **Pre-requisites:**

Advanced programming skills in PHP development

### **Objectives:**

Upon completion of this course, participants should be able to build state-of-the-art web applications utilizing the powerful features provided by the combination of the PHP language, Ajax, and Web Services.

### **Topics Include:**

- Proper (X)HTML programming
- Web service creation and management
- REST, XML-RPC and SOAP
- JavaScript primer
- Asynchronous operations
- Debugging
- Using JSON for data transfers
- Managing events with JavaScript
- Security

### **Course Information:**

Duration: 19 hours – Online Only

# Terms and Conditions

When enrolling in a Zend Technologies, Inc. ("Zend") training course, the participant agrees to accept the following general Terms and Conditions as set out by Zend:

## Registration

Registrations for a training course can be made by completing an online form available on the Zend.com web site, or from a Zend, or official Training Partner, representative. If a registration request cannot be filled, alternative dates and/or locations will be provided, as known at that time.

Zend limits class sizes to allow for the optimal training environment for the individuals taking the class. This ensures sufficient individual attention. Students may be interviewed prior to the class commencement to ensure that the level of the students are roughly the same to maintain the high quality of the training.

## Course Fees And Payment Options

The course fee for public classes will be charged per participant for the entire course. Fees vary in accordance with the course level, duration, and delivery method. A listing of the course schedule and related fees are available on the Zend.com web site. Onsite fees will be quoted by a Zend Sales Representative via a Zend quote.

Unless otherwise noted, course fees permit attendance at all the class sessions specifically designated for that course topic, date, and time period and any materials that have been created for all participants with the express purpose of facilitating the learning within the course. Any classes missed by the participant, through no negligence or technical issues caused by Zend, remain the responsibility of the participant, and "make-up" sessions are not available as part of the original fee paid. For on-site classes, fees do not include the cost of travel, accommodation, food, or any other extra services. Travel expenses will be charged to customer at cost.

Any discounts that may apply as part of an agreement or special promotion cannot be combined, unless specifically granted by Zend. Zend reserves the right to review and change course fees without notification. However, course dates that were booked prior to the price change, and for which Zend has received valid payment, will be honored at that fee that was applicable at the time of booking.

### **Zend accepts the following forms of payment:**

- Purchase Order (net 30)
- Credit Card (Visa, MasterCard, American Express)
- Training Credits
- Bank Transfer

Payment terms for all invoices are 30 days from Invoice date unless an alternative formal and approved arrangement has been made with Zend in writing. Zend reserves the right to remove any applicable discounts if a Purchase Order or equivalent has not been received four (4) calendar weeks before a training delivery is due to begin.

For volume discounts applied to a specific client, or large pre-payments made by a specific client, the total purchase order amount will be invoiced by Zend upon receipt of the Purchase Order, or equivalent, and will be independent of when the training is delivered.

All pre-paid training credits must be used within twelve (12) months of the Purchase Order date. If any credits are unused after 12 months of the Purchase Order date, Zend reserves the right to expire these credits and offer no refund of the training credits or their attributed financial value.

All fees will be considered earned as the work is completed unless courses are not taken within timelines specified.

## Confirmation

For public courses, Zend will send a confirmation email, fax or letter to the participant and/or participant's company training contact once the completed registration and a valid form of payment have been received. Registrations for which a valid form of payment has not been received at least 3 (three) days prior to the start of the course will not be confirmed and Zend reserves the right to release any unconfirmed seats, at any time, without notice.

## Cancellation or Rescheduling Request by the Customer

For public courses, cancellations and rescheduling notifications must be made in writing at least 10 (ten) working days prior to the start of the course date. When requesting a rescheduled registration, the customer shall endeavor to reschedule the course for a mutually acceptable date no later than twelve (12) weeks from the original requested start date of the course(s). There are no refunds for training course(s).

If a cancellation or rescheduling request is received less than 10 (ten) working days before the event, or in the case of absence without any notice, the stipulated training fee will be fully charged without further notification. The customer has the right to send another participant as a substitute, provided that any applicable Pre-requisites have been completed. This change in booking is free of charge. There are no refunds for partial use of services or partial attendance.

## Cancellation or Rescheduling By Zend

For public courses, Zend may cancel or reschedule a training course if the number of participants is less than that specified for the relevant event, or if an instructor is incapacitated through illness, or for other reasons of a serious nature.

If a participant is unable to attend as a result, any payment already made will be applied to the customer's account. All further claims are excluded. For on-site or classroom trainings, Zend shall not be liable for non-refundable travel arrangements if a course is cancelled or rescheduled.

## Copyright / Intellectual Property Rights

The copyright in and all other intellectual property rights relating to the course documentation, and any other training materials provided to the course participants, are solely owned by and hereby reserved to Zend. Under no circumstances may the whole or any part of the course documentation be produced or copied in any form or by any means or translated into another language without the prior written permission of Zend. Training materials are defined to also include all electronic knowledge products or learning systems, which have been given to the participant on a storage device or made accessible via the Internet. Offenders are liable for payment of damages.

## Waivers

For courses that have mandatory pre-requisites, participants may apply for a waiver if they believe their existing knowledge and experience are sufficient to attend a Zend training course without having completed its Pre-requisites. Upon receipt of a waiver request, a Zend instructor will contact the participant to verbally assess his/her knowledge and experience in order to determine whether or not it is appropriate to provide the participant with a Prerequisite waiver.

If the requested waiver is issued, it is the full responsibility of the participant to ensure that the knowledge and/or experience that s/he may lack does not disturb the other participants in the class. By accepting a Pre-requisite waiver, the participant accepts that any topics that would have been part of one or more of the Pre-requisite course(s) will not be covered during or after the course for which s/he registered.

## Course Content

Zend reserves the right to amend the content of any course without notice to the participants where, at the sole discretion of Zend, such amendment is deemed not to fundamentally change the content of such course.

## Rules Of Participation

Each student attending Zend courses shall comply with all regulations and procedures established and communicated for the course.

Software made available by Zend for training purposes must not be removed, nor may it be copied either wholly or in part or rendered useable in any other form for which consent has not been obtained.

Course materials provided by Zend and are intended for training purposes only.

Zend reserves the right to exclude (a) participant(s) from attending any course due to disorderly conduct, failure to observe any of Zend's rules of participation or failure to attend the Pre-requisite class(es) for a particular course without having obtained a valid pre-requisite waiver. No refund of fees shall be paid to the participant or his/her employer in such circumstances.

### Online Sessions:

Zend's online courses are delivered via the Zend Webex Training Center, using your internet connection and VOIP.

- Any Operating System with a browser, including Windows 9x/2000/XP, Mac OS 10.3.x or later, or go to: <http://support.webex.com/support/system-requirements.html?nfpb=true&pageLabel=SystemRequirementsHome> to check your system
- An Internet connection (56k and above)
- Speakers and microphone or a headset (if you want to be able to talk with the instructor via voice).
- For some courses, we have created a Virtual Machine using VMWare to provide you with a full, hands-on experience. The instructions for the VMWare information will be sent a few days prior to the start of the course and will require that you have it ready for the first day of the class.
- Participants are requested to login to the class 30 minutes before the start of class on the first day.

### Classroom Sessions:

Participants are requested to come to the training site 30 minutes before the start of class on the first day. Participants and/or their supervisors are requested not to make return travel arrangements that may affect or disrupt the duration of the course.

The customer shall remain responsible for the activities and behavior of its participants while on Zend premises. The customer is liable to pay for any damage that is caused by their participant to any property belonging to Zend.

Equipment may not be used at any time for other reasons, and are not intended to provide Internet access.

Participants must not access or attempt to access any Zend computer-based data that is not specifically part of the training course.

Zend will not accept liability for any damage that may result from possible viruses on copied file disks or other external file storage devices. Disks, mobile hard disks, or any other external file storage devices brought in by participants must not be used on Zend's computers. Mobile phones must be switched off during class, and calls may only be made or received during class breaks so as to not disturb the instructor(s) and/or other participants.

### On-Site Training:

The price of on-site and/or customized training shall be negotiated prior to the offering. For training at the customer's requested location, all travel, accommodation and living expenses for the instructor(s) must be paid for by the customer in addition to daily course cost, unless specifically agreed differently by the customer and the Zend Training Manager.

Quotes for on-site training delivery as issued by Zend shall be valid for 1 (one) month, unless specifically agreed differently by the customer and the Zend Training Manager. The validity period applies to the price offered in the quote. A quote does not guarantee that Zend will have the necessary resources available to deliver the specified training at the requested time. Lead time is approximately 4 weeks.

In case of cancellation, notification must be received in writing. Zend charges a 50% cancellation fee for classes cancelled 10 (ten) or fewer business days prior to the start date of the course. Cancellations with less than 10 (ten) days notice are 100% non-refundable. In addition, any chargeable work already undertaken by Zend will also be charged to the client. Any non-refundable expenses already incurred by Zend will be charged at cost to the client.

In order to successfully deliver the onsite training, it is important that roles and expectations are clear to both Customer and Zend staff. These expectations are outlined below. Where appropriate, a single individual may fill several of the roles listed below. Zend reserves the right to use subcontractors in those roles it deems appropriate.

Customer is expected to provide prior to the commencement of the class:

- Someone readily available (Project Sponsor or Project Manager) to Zend Technologies who is familiar with the project, this proposal, and Zend's Agreement with the Customer, in order to resolve issues and facilitate communication expeditiously.

#### Training Room Requirements

- Instructor's workspace should be in front of the classroom
  - Students must utilize their own laptops for instructional purposes; some Zend training courses require specific software to be loaded for use during the training course.
  - Internet access for students and instructor (a hard-wired connection for the instructor is preferred)

- Adequate power outlets & extension cords for all computers, monitors, and peripheral devices
- A projector, and projection screen for the instructor's use, with video output connection
- Training Room must be set up before the start of the class and ready for instruction prior to beginning of class
- Additional Set Up fee is charged at \$250.00 per hour to Customer if the adequate setup has not been done prior to class commencement date and time.

If any classroom, classroom equipment, hardware or software provided by the client for use by Zend in the delivery of training to the client is not provided as agreed, Zend will not be responsible for any associated inconvenience or disruption caused to the training delivery and reserves the right to invoice for the training delivery in full.

## Warranties And Liabilities

While every effort is made by Zend to ensure that its course instructors are appropriately qualified and trained, Zend does not accept liability for any loss, cost or expense or for any special or indirect or consequential damages arising from negligence, misconduct or lack of skill in delivering the course(s). ZEND'S TOTAL LIABILITY TO CUSTOMER ARISING DIRECTLY OR INDIRECTLY FROM THE DELIVERY OF COURSES REGARDLESS OF THE FORM OF ACTION GIVING RISE TO SUCH LIABILITY (WHETHER IN CONTRACT, TORT OR OTHERWISE) SHALL NOT EXCEED THE AMOUNT ACTUALLY PAID BY A CUSTOMER FOR A COURSE. THE COURSES ARE DELIVERED "AS IS" WITHOUT ANY WARRANTY, WHETHER EXPRESS OR IMPLIED AND ZEND SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

## Contact Information

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