

# Course : ASP.NET level 2, Web development

**Practical course - 5d - 35h00 - Ref. NEA**  
**Price : 3070 CHF E.T.**

This course will introduce participants to the advanced aspects of Web development with ASP.NET, including the use of the IIS and ASP.NET cache, security and user profiles, Ajax functionalities and data sources of various types (Entity Framework, business objects, etc.).

## Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Managing object data in the Entity Framework relational framework
- ✓ Creating user and interactive controls with JavaScript
- ✓ Master authentication and security for web applications
- ✓ Writing secure, asynchronous Web services with SOAP
- ✓ Consuming JSON Web services with MS Ajax or Angular \$http

## Intended audience

ASP.NET developers.

## Prerequisites

Good knowledge of Web programming in .NET or knowledge equivalent to that provided by the course "ASP.NET, level 1" (ref. AST). Experience required.

## Practical details

### Hands-on work

Exercises are carried out in C# or VB.NET, depending on the participants' choice.

## Course schedule

### 1 ASP.NET application architecture

- Architecture, components and lifecycle of ASP.NET WebForms pages.
- ASP.NET and IIS cache management.

## PARTICIPANTS

ASP.NET developers.

## PREREQUISITES

Good knowledge of Web programming in .NET or knowledge equivalent to that provided by the course "ASP.NET, level 1" (ref. AST). Experience required.

## TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

## ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more. Participants also complete a placement test before and after the course to measure the skills they've developed.

## 2 Advanced data access

- ObjectDataSource as a proprietary DAL access adapter.
- Entity Framework 6. TableAdapters and typed datasets.
- Template-based controls.

### Hands-on work

Creation of the data access layer and optimizations.

## 3 Customized controls

- Dynamic control generation.
- ASCX-type user controls.
- Distributable and composite user controls.
- Designer integration.

### Hands-on work

3 types of user controls and interaction with JavaScript.

## 4 Security and authentication

- Authentication, authorization and personification. Types of attacks and defenses.
- System identity and customer identity theft.
- Membership providers or personalized application identification.
- Roles and profiles management.

### Hands-on work

Create a secure Web application managing roles and profiles.

## 5 Web Services

- Architecture, security, customized SOAP header.
- Proxies, synchronous and asynchronous invocations.
- Asynchronous communication in the ASP.Net page lifecycle.

### Hands-on work

Write and use asynchronous, secure services.

## 6 Ajax

- Microsoft Ajax Library, MS Ajax templates with DataView JavaScript class.
- PageMethods, Web services and WCF.
- Updatepanels.
- AngularJS architecture.
- JSON Web services consumption with MS Ajax or Angular \$http.

### Hands-on work

Use of JSON services. UpdatePanels to optimize an online discussion service.

## 7 Supplements

- Internationalization. Globalization API and resource utilization.
- Non-HTML rendering with HTTP handlers.
- Use the Reflection API.
- ASP.Net Dynamic Data.
- Bundling and minification, unobtrusive validation, typed linked data, validation by decoration.

## TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

## TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

## ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

