Course : JavaScript fundamentals

Practical course - 3d - 21h00 - Ref. LLJ
Price : 1830 € E.T.

NEW

This course is aimed at web developers, architects and project managers wishing to acquire a solid grasp of the fundamentals of the JavaScript language for the development of dynamic and interactive web sites and applications. This training program is intended for employees of professional branches covered by the OPCO Atlas.

Teaching objectives

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

- Understanding JavaScript for building websites and web applications
- Master essential functions
- Manipulate pages and make them dynamic
- Manage events and increase interactivity
- Developing in responsive design

Intended audience

For OPCO Atlas members: web developers, web architects, project managers, webmasters.

Prerequisites

Knowledge of HTML, CSS and structured programming.

Practical details

Hands-on work

Discussions, practical work.

Teaching methods

To optimize the learning experience, e-learning modules can be provided before and after the classroom session or virtual class, at the participant's request.

Course schedule

PARTICIPANTS

For OPCO Atlas members: web developers, web architects, project managers, webmasters.

PREREQUISITES

Knowledge of HTML, CSS and structured programming.

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.

1 HTML and CSS, building modern, semantic websites - Content digital learning pre-training

- HTML basics
- Structure and organize an HTML page.
- Formatting HTML with CSS.
- Use semantic HTML.
- Create HTML forms.

Digital activities

This online training course introduces the basics of HTML and CSS for designing modern websites. Participants will learn how to structure a page with text, media and interactive elements, how to use id and class attributes, and how to create a first style sheet. The course also covers semantic HTML and the new features of HTML5, before concluding with the creation of a complete contact form.

2 Web technologies

- Introduction to web architecture.
- Browsers and how they work.
- HTTP/HTTPS protocols.
- Development tools (DevTools).
- Accessibility and SEO.

Hands-on work

Découverte des DevTools, analyse d'applications web, les protocoles web.

3 Getting started with JavaScript

- History and evolution of JavaScript.
- Configuration of the development environment.
- Syntax and basic concepts.
- Data types and variables.

Hands-on work

Installation et configuration, premiers scripts, manipulation des types.

4 Fundamental JavaScript programming

- Variables and scopes (var, let, const).
- Control structures (if, switch, loops).
- Functions and parameters.
- Error handling (try/catch).

Hands-on work

Les structures de contrôle, création de fonctions, debugging et gestion d'erreurs.

5 Introduction to object-oriented programming with JavaScript

- Objects and classes in JavaScript.
- Prototype system.
- Inheritance mechanisms.
- JSON data manipulation.
- Common design patterns.

Hands-on work

Les objets et classes, héritage et prototypes, JSON et données.

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.

6 JavaScript events

- JavaScript event system.
- Mouse and keyboard events.
- Form events.
- Event propagation.
- Best practices and patterns.

Hands-on work
Les fondamentaux des événements, événements avancés, debugging d'événements.

7 DOM manipulation

- DOM structure and hierarchy.
- Element selection methods.
- Create and modify elements.
- Handling attributes and styles.
- DOM tree navigation.

Hands-on work
Sélecteurs DOM, manipulation dynamique, styles et attributs.

8 Forms and validation

- HTML form creation and structure.
- Client-side validation in JavaScript.
- Error management and user messages.
- Common validation patterns.
- Forms security.

Hands-on work
Construction de formulaires, validation des données, tests et debugging.

9 Customer data

- Introduction to client storage mechanisms.
- Web Storage API (localStorage and sessionStorage).
- Cookie management.
- Safety and best practices.
- Limits and use cases.

Hands-on work
Manipulation des cookies, Local Storage API, persistance des données.

10 Modern, responsive JavaScript

- ES6+ features (arrow functions, destructuring, modules).
- Principles of responsive design.
- Media queries and breakpoints.
- CSS/JS animations and transitions.
- Responsive frameworks.

Hands-on work
ES6+ en pratique, design responsive, animations web.

11 Optimization and performance

- Best practices in JavaScript optimization.
- Advanced debugging tools.
- Profiling methods and benchmarking.
- Caching strategies.
- Lazy loading techniques.

Hands-on work
Audit de performance, optimisation de code, tests de charge.

12 Final project - Development

- Project management methodology.
- Application architecture and design.
- Iterative development.
- Testing and validation.
- Code review.

Hands-on work
Planning et architecture, développement des fonctionnalités, tests et optimisation.

13 Final project

- Finalization of functionalities.
- Technical and user documentation.
- Demonstration preparation.
- Deployment strategies.
- Non-regression tests.

Hands-on work
Tests et debugging final, documentation du projet, présentation des projets.

14 TypeScript, getting to grips with the language for web application development - Post-training digital learning content

- Introduction.
- Installation.
- Language basics.
- Object-oriented programming (OOP).
- Modules and definition file.

Digital activities
This online training course introduces the TypeScript language. Participants will learn how to use it to develop more robust and secure web applications. After an introduction to its evolution and environment (Visual Studio Code, Node.js, CLI), they will study the basics of the language, object-oriented programming and the module system. At the end of the course, participants will be ready to use TypeScript with frameworks such as Angular, React, Vue or Node.js.

Dates and locations

REMOTE CLASS
2026 : 23 June, 6 Oct., 15 Dec.

PARIS LA DÉFENSE
2026 : 16 June, 29 Sep., 8 Dec.

LILLE
2026 : 23 June, 6 Oct., 15 Dec.