

Course : TypeScript - Producing JavaScript developments

Practical course - 2d - 14h00 - Ref. TSR

Price : 1610 CHF E.T.

★★★★☆ 4,7 / 5

You'll discover the TypeScript language, the JavaScript overlay for Front-End development. You'll learn about typing, classes and inheritance for object-oriented programming. You'll become more productive in setting up maintainable interfaces.

Teaching objectives

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

- ✓ Getting to grips with development tools
- ✓ Creating functions and tables
- ✓ Inheritance with TypeScript
- ✓ Assembling codes for the server

Intended audience

Web developers and project managers.

Prerequisites

Programmers with basic JavaScript knowledge.

Course schedule

1 The TypeScript principle

- Why has Microsoft created this alternative?
- The JavaScript overlay.
- The comparison between 2 JavaScript and TypeScript.
- Choice of editor, plug-ins and installation.
- The ecosystem of tools.
- Development environment configuration.
- Debugging transpilation.

Hands-on work

Install VS Code and set up plug-ins.

PARTICIPANTS

Web developers and project managers.

PREREQUISITES

Programmers with basic JavaScript knowledge.

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 Configuring the compiler.

- The file "tsconfig.json".
- Compiler options.
- Create a "build".
- Multi-configuration project strategies.
- Inclusion and exclusion of resources.
- Creation of a customized workflow.

Hands-on work

Handling the TypeScript compiler and designing a build.

3 TypeScript Basics & Basic Types

- TypeScript versus JavaScript types.
- When and what to type?
- Static type expression.
- Assignment and inference.
- Tuples, enums, aliases (custom types).
- Cases of special typing (never, void...).
- Functions and tables.

Hands-on work

Create class variables with standard and special typing.

4 Next-generation JavaScript

- Impact on JavaScript syntax.
- Automate documentation.
- Use TypeScript with standard JavaScript code.
- Include/generate definition files for compatibility.
- The benefit of implicit "getter,setter".
- Ahead-of-Time" programming, reduce technical debt.
- Modules and namespaces.

Hands-on work

Creating a program with TypeScript in combination with JavaScript.

5 Improving OOP with TypeScript

- OOP Pattern reminders: Singleton, Factory...
- TypeScript "Duck Typing".
- Classes & interfaces.
- The class modifier : "public, private, readonly..."
- Methods: "private, protected, overrides..."
- Simple, multiple inheritance.

Hands-on work

Multiple inheritance within previously created classes.

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 Advanced types

- Custom type management.
- Generic types and inferences.
- Generic classes.
- Generic type restrictions.

Hands-on work

Development and implementation of customized types.

7 Decorators

- Decorators and "MetaData".
- Understand the "factories" of decorators.
- Class, property, method and parameter decorators.
- Create custom decorators.
- Implement useful abstractions.

Hands-on work

Implementing a class decorator.

8 TypeScript in practice

- Use with Node.js.
- Deliver TypeScript-compatible JavaScript code.

Dates and locations

REMOTE CLASS

2026 : 8 June, 21 Sep., 26 Nov.