

# Python software development e-learning channel

*Practical course - 2d - 15h29 - Ref. 8YT*

*Price : 290 € E.T.*

Take an in-depth look at software development in Python with our specialized channel. From basic syntax to advanced concepts, acquire the skills you need to build robust, efficient software applications. Are you ready to enter the world of Python?

## Teaching objectives

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

- ✓ Know the Python language and what's new between versions 2 and 3.
- ✓ Identify program structure and package managers in the virtual environment.
- ✓ Know basic types, functions and control structures.
- ✓ Identify classes and strings.
- ✓ Manage exceptions.
- ✓ Creating websites with Django.
- ✓ Handling images with Open CV.
- ✓ Improving user experience with Django.
- ✓ Create unit tests, factories or integration tests.

## Intended audience

Anyone interested in Python software development, web design and data science.

## Prerequisites

Knowledge of HTML, CSS and Javascript.

### PARTICIPANTS

Anyone interested in Python software development, web design and data science.

### PREREQUISITES

Knowledge of HTML, CSS and Javascript.

### 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.

## Practical details

### Digital activities

IT structure: recorded courses, expert videos and best practice sharing.

### Mentoring

L'option tutorat propose un accompagnement personnalisé par un formateur référent ORSYS, expert du domaine. Adapté aux besoins, aux capacités et au rythme de chaque apprenant, ce tutorat combine un suivi asynchrone (corrections personnalisées d'exercices, échanges illimités par message...) et des échanges synchrones individuels. Bénéfice : une meilleure compréhension, le développement des compétences et un engagement durable dans la formation.

### Pedagogy and practice

A wealth of content produced by trainers following a rigorous pedagogical approach. During each course, operational cases are commented on by experts to help learners put into practice what they have just learned. To help learners anchor their memory, each content item is broken down into short sequences of 3 to 10 minutes. This enables each learner to learn dynamically and independently.

## Course schedule

### 1 Python 3, learning the language fundamentals

- First steps.
- Fundamentals.
- Algorithms.
- Data.
- Object-oriented programming.
- Best practices.

### 2 Flask, developing web applications in Python

- Introducing the Flask web microframework.
- Jinja template engine.
- Creation of a web application.

### 3 Django, create your first web application in Python

- Introduction.
- Data model.
- ORM.
- CRUD.
- Views.
- Third-party functionalities.
- Testing.

### 4 Django, advanced concepts

- Models.
- Administration interface.
- Views.
- Third-party tools.
- Unit testing.

### 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](mailto:psh-accueil@orsys.fr) to review your request and its feasibility.

## 5 OpencvV, learn basic image processing functions using the Python language

- Discover OpenCV.
- Basic image processing with OpenCV.
- Combine images.
- Smoothing and denoising.
- Histograms.

### Options

Certification : 100€ HT