



PeopleCert Software Development Skills Foundation and Advanced (Python)

Learning Mode:

Online

Duration:

16 days training + Post Class Coaching + 1 Day Exam

This course is specifically designed to provide participants with:

- **Comprehensive software development expertise** from front-end design (HTML, CSS, JavaScript, React.js) to back-end programming with Python and API integration.
- **Hands-on experience** in setting up developer environments, managing version control with Git/GitHub, and deploying real-world web applications using Cloudflare and AWS.
- **Practical Python skills** covering fundamentals, file handling, error management, and using Python to create animations, automate workflows, and integrate AI chatbot systems.
- **Real-world implementation exposure**, including video streaming APIs, cloud-based data collection, and cloud integration using AWS, Google Cloud, and Cloudflare platforms.
- **In-depth understanding** of web optimization, SEO, and performance analytics using industry tools like Lighthouse and GTmetrix.
- **Applied cybersecurity and compliance knowledge**, ensuring that deployed web systems are secure, resilient, and follow best practices in privacy and protection (SSL, WAF, DDoS).
- **A project-driven learning experience** that culminates in the design, deployment, and optimization of a fully functional, secure web application.

Course Overview

SUMMARY

equips learners with end-to-end web and software development skills – from HTML, CSS, and JavaScript to React, Python, Cloudflare, AWS, and Google Cloud.

Each module includes theoretical insights, and real-world project examples.

Course Content

Module 01: Environment Setup & Developer Tools

- Overview of VS Code, GitHub, and Cloudflare
- Installing VS Code, configuring extensions & themes
- Git basics: commit, push, pull, branch
- GitHub repository creation, SSH setup
- Cloudflare Pages and DNS setup for hosting

Module 02: HTML & CSS Significance in Software Development

- HTML as a structure for content and accessibility
- Semantic tags and HTML5 APIs
- CSS for responsive and accessible design
- CSS frameworks (Bootstrap, Tailwind) and SCSS usage

Module 03: JavaScript Essentials

- Syntax, Variable, loops and functions
- DOM manipulation and event handling
- Fetch API and JSON data
- Debugging in browser developer tools

Module 04: React.js Development

- React setup
- Components, props, and state management
- React Hooks (useState, useEffect)
- API integration and dynamic rendering

Module 5: Python Programming Fundamentals

- Syntax, data types, loops and functions
- File handling and error management

MODULE 6 Making Animation using Python

- What is Manim?
- Benefits of Code-Driven Animation
- Manim Ecosystem
- Setting Up Manim Environment

• MODULE 7 AI Chatbot Integration (Python)

- Introduction to AI Chatbots
- TestiUnderstanding Large Language Models (LLMs)
- Designing a Chatbot Flow

MODULE 8 Video Streaming Integration using API (Python)

- What is Video Streaming?
- Why Cloudflare Stream?

• MODULE 9 Data Collection by Cloud Server (Python)

- Data Collection in Web Applications
- Responsible Data Handling
- Setting Up the Environment

MODULE 10 Software Design and Development

Software Architectures

- robots.txt configuration and purpose
- Meta tags, Open Graph data, and Twitter Cards
- Schema.org structured data with JSON-LD
- Performance optimization using Lighthouse and GTmetrix

Module 11: Cloudflare, AWS & Google Cloud Integration

- Overview of cloud concepts (IaaS, PaaS, SaaS)
- AWS S3, Lambda, and RDS basics
- Google Cloud Storage, Firestore, and Cloud Functions
- Cloudflare for CDN, caching, and DNS management



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Course Content

Core Technologies

Choosing a hosting provider (Shared, VPS, Cloudflare, AWS, HTML / CSS, SQL, JavaScript, Bootstrap Framework, AngularJS / React, Version Control (Git), REST architecture, Web servers (Apache, nginx), xUnit, Unix command-line, MongoDB and C# Specific other NoSQL databases, UI / UX Design, Cloud-based services, and their development, like (AWS, Google Cloud Platform)

Python Specific Technologies

- Python Programming
- Flask
- MySQL
- Django
- ActiveRecord
- ORM

Module 12: Web Hosting & Web System Performance

- Choosing a hosting provider (Shared, VPS, Cloudflare, AWS, Netlify)
- Tools for speed testing: Lighthouse, GTmetrix, Pingdom, WebPageTest
- Front-end and back-end optimization strategies
- Implementing caching and CDNs
- Web security best practices (SSL, WAF, DDoS protection)

Module 13: Web Security & Protection

- Why security impacts speed.
- Security best practices.
- Why It's Important.

Accredited by:

PeopleCert

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013-2256981 (Ms. Hikmah)

