PROFESSIONAL

TECHELEARN

IT TRAINING
HANDBOOK

PYTHON
CERTIFICATION COURSE

Python Certification Course

"Unlock the Power of Python – Transform Your Career with Mastery in Coding"

Our **Python Certification Course** at **TECHELEARN** is designed for individuals who want to become experts in Python programming, one of the most versatile and in-demand languages in today's tech landscape. Whether you're a beginner looking to learn Python from scratch or an experienced developer seeking to sharpen your skills, this course provides comprehensive training, making you proficient in Python development, automation, data analysis, machine learning, and more.

With Python being the top choice for web development, data science, AI/ML, and automation, mastering it will open doors to diverse career opportunities across industries.

Why Python?

Python is the go-to programming language for a wide variety of applications due to its simplicity, scalability, and community support. Whether it's building web applications, automating tasks, analysing data, or developing cutting-edge AI models, Python is the backbone of many modern technological innovations.

- **High Demand**: Python skills are in high demand across many industries, including technology, healthcare, finance, and education.

- **Career Opportunities**: Python is ideal for roles like Python Developer, Data Scientist, Web Developer, Machine Learning Engineer, and AI Specialist.

- **Versatility**: Python is used in various domains, including web development, data science, artificial intelligence, machine learning, and scripting.

By mastering Python, you'll gain the foundation for a wide range of exciting and lucrative career paths.

What Will You Learn?

Our **Python Certification Course** offers a hands-on approach to learning Python, helping you build real-world skills and applications.

Throughout the course, you'll work on practical projects and assignments that enhance your ability to develop Python-based solutions.

Core Areas of Learning:

1. **Introduction to Python Programming**:
   - Understanding Python Syntax and Structure
   - Working with Variables, Data Types, and Operators

o Writing Basic Python Programs and Scripts

o Introduction to Python IDEs: PyCharm, Jupyter Notebooks, and VS Code

2. **Control Flow and Loops**:

   o Using Conditional Statements (if-else, switch-case)

   o For and While Loops: Iterating Over Sequences

   o Functions and Recursion

3. **Data Structures in Python**:

   o Lists, Tuples, Sets, and Dictionaries

   o Advanced Data Structures: Stacks, Queues, Linked Lists

   o Working with Strings and Text Processing

4. **Object-Oriented Programming (OOP)**:

   o Understanding Classes and Objects

   o Inheritance, Polymorphism, and Encapsulation

   o Abstraction and Method Overriding

   o Working with Python's OOP Model

5. **File Handling and Exception Management**:

   o Reading and Writing Files (CSV, JSON, and Text Files)

- o Exception Handling with Try-Except Blocks
- o Managing Files and Directories in Python

6. **Python Libraries and Frameworks**:

- o Introduction to Popular Python Libraries: NumPy, Pandas, Matplotlib
- o Web Development with Flask and Django
- o Data Visualization with Seaborn and Plotly
- o Working with REST APIs in Python

7. **Data Science and Machine Learning with Python**:

- o Introduction to Data Analysis with Pandas and NumPy
- o Visualizing Data with Matplotlib and Seaborn
- o Building Machine Learning Models using scikit-learn
- o Introduction to Deep Learning with TensorFlow and Keras

8. **Web Development with Python**:

- o Building Web Applications with Flask and Django
- o Database Integration: SQLite and PostgreSQL
- o User Authentication, Forms, and Templates in Web Development

9. **Python for Automation and Scripting**:

- o Automating Tasks with Python Scripts
- o Working with Web Scraping (BeautifulSoup, Scrapy)
- o Automating Browser Tasks with Selenium
- o Automating Excel Sheets, Emails, and Reports

- **Comprehensive Curriculum**: Our Python course is structured to provide a deep understanding of the language, making you proficient in web development, automation, data analysis, and more.

- **Hands-On Projects**: Engage in real-world Python projects and assignments that will solidify your learning and help you build a strong portfolio.

- **Expert-Led Learning**: Learn from experienced instructors who bring industry expertise and practical knowledge to the table.

- **Certification**: Receive a globally recognized Python Certification upon successful completion, enhancing your career prospects and credibility.

- **Career Support**: Access career counseling, job placement assistance, and industry resources to help you succeed in your career.

- **Flexible Learning**: Study at your own pace, anytime, anywhere, with our comprehensive online learning platform.

Course Modules

Our **Python Certification Course** is broken down into easy-to-understand modules that cover everything from the basics of Python

programming to advanced concepts in data science and web development.

1. **Module 1: Introduction to Python**

   o Understanding Python syntax, variables, data types, and operators

   o Writing basic Python programs

   o Working with Python's built-in functions and libraries

2. **Module 2: Control Flow and Loops**

   o Conditional statements (if-else)

   o Looping constructs (for, while)

   o Functions and recursion

3. **Module 3: Data Structures**

   o Lists, tuples, dictionaries, and sets

   o Advanced data structures and algorithms

   o Working with strings and text manipulation

4. **Module 4: Object-Oriented Programming**

   o Introduction to OOP concepts in Python

   o Creating and managing classes and objects

   o Inheritance, polymorphism, and encapsulation

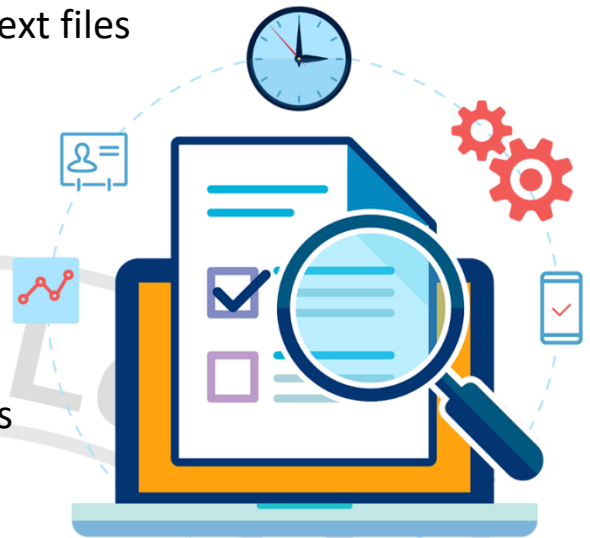5. **Module 5: File Handling and Exception Handling**

   o File reading and writing

- o Working with CSV, JSON, and text files
- o Exception handling and managing errors

6. **Module 6: Python Libraries and Frameworks**
   - o Introduction to Python libraries for data analysis (NumPy, Pandas)
   - o Data visualization with Matplotlib and Seaborn
   - o Web development with Flask and Django

7. **Module 7: Data Science and Machine Learning**
   - o Data manipulation with Pandas
   - o Visualization with Seaborn and Plotly
   - o Building machine learning models with scikit-learn

8. **Module 8: Python for Web Development**
   - o Building dynamic web applications using Flask and Django
   - o Integrating databases with SQLAlchemy
   - o User authentication and template rendering
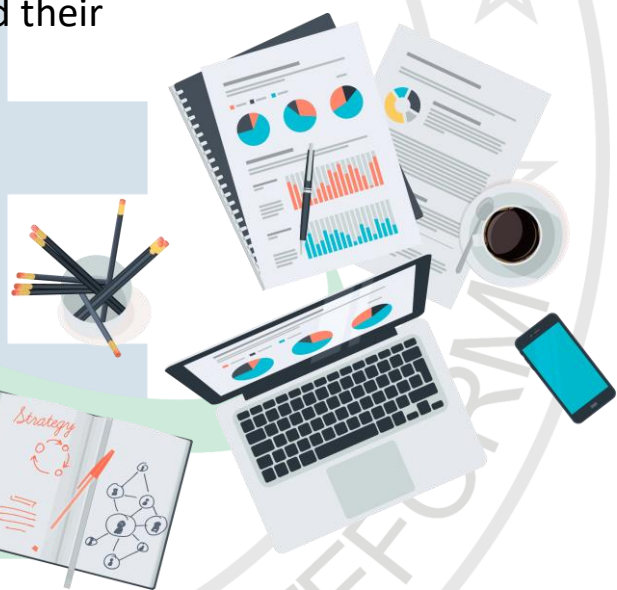
9. **Module 9: Automation with Python**
   - o Automating repetitive tasks using Python
   - o Web scraping and data extraction with BeautifulSoup
   - o Browser automation with Selenium

Who Should Take This Course?

This course is perfect for anyone looking to pursue a career in Python development or enhance their programming skills.

- **Beginners** looking to learn Python from scratch.
- **Developers** who want to enhance their skills in Python.
- **Data Scientists** and **Machine Learning Engineers** looking to apply Python in data analysis and machine learning.
- **Software Engineers** aiming to expand their knowledge in web development, automation, and cloud computing.
- **Automation Engineers** and **IT Professionals** wanting to automate tasks and processes.

Course Format

Format Detail	Description
Duration	3 Months Training + 1 Month Practice
Learning Approach	30% Theory + 70% Practical
Assessment	90-minute certification exam with 60 MCQs
Passing Score	70%
Certification Criteria	Successful project submission + exam pass

- **Industry-Relevant Training**: Our course content is designed by experts to ensure you learn the skills most in demand in today's job market.

- **Flexible Online Learning**: Learn at your own pace, anytime, anywhere, on our online platform.

- **Expert-Led Guidance**: Learn from experienced Python professionals who bring real-world knowledge and expertise.

- **Certification**: Gain a globally recognized certification that will help you stand out in the job market.

- **Career Support**: Get access to job placement assistance, interview preparation, and career counseling.

😊🏫 Training Modes

- 🏢 **Live Instructor-Led Online Training**

- 🖥 **Self-Paced Learning + Assignments**

- 👦💼 **Corporate On-Demand Training Workshops**

- 🔄 **Hybrid Model for Flexibility & Impact**

🗁 Includes: Source Code, Assignments, Quizzes, Final Capstone Project & Certificate Exam

www.techelearn.com   info@techelearn.com   9426245757

✔ GitHub Portfolio Setup

✔ Resume & LinkedIn Optimization

✔ Interview Preparation Sessions

✔ Lifetime Access to Developer

Community

🌐 **Partner with TECHELEARN – Upskill Your Team**

TECHELEARN offers customized **Python** training for businesses.

📌 **Talk to Our Enterprise Team**

📌 **Request a Tailored Group Training Plan**

🎯 **Get Started Journey Today**

Join **11,000+** learners who trust **TECHELEARN** for career-ready skills.

🔥 **Python** skills are in high demand. Don't just learn—**Master it with**

TECHELEARN.

TECHE LEARN

GET IN TOUCH

- *Personalized Support: Whether you're seeking technical assistance or career guidance, we offer personalized, professional support.*

- *Collaborate with Us: We partner with educational institutions, businesses, and experts to offer training that meets industry needs.*

💡 **JOIN US IN THIS EXCITING JOURNEY!**

📞 **+91 9426245757**

🌐 www.techelearn.com

✉️ info@techelearn.com

in https://www.linkedin.com/company/techelearn/

f https://www.facebook.com/TecheLearn

O https://www.instagram.com/techelearn/

▶ https://www.instagram.com/techelearn/