
# FULL STACK PYTHON PROGRAMMER PROGRAM

Ramaq Chools
Consulting &Training

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# INTRODUCTION TO FULL STACK PYTHON PROGRAMMING

Hey there, future full stack developer!  The Full Stack Python Programmer course teaches you how to build, deploy, and operate Python-powered applications both front and back end. Python is a versatile and powerful programming language that is widely used in the tech industry for web development, data analysis, artificial intelligence, and more. By mastering full stack development with Python, you'll be able to create dynamic web applications, manage databases, deploy projects on web servers, and analyze data to generate insights.

# Why Choose Chools?

**Numbers That Speak for Themselves:**

- 10,000+ Successful Alumni: Join a network of impactful professionals.
- 95% Job Placement Rate: Secure your future with Chools' proven track record.
- 20+ Years of Excellence: Trust in a legacy of education and industry expertise.
- 200+ Industry Partnerships: Leverage our connections for real-world insights and opportunities.

## What Sets Us Apart?

- **Expert Instructors**: Learn from industry veterans with hands-on experience.
- **Hybrid Learning Model**: Balance online flexibility with in-person engagement.
- **Comprehensive Curriculum**: Stay ahead with courses designed to meet market demands.
- **Community and Networking**: Be part of an active community of learners and professionals.

## Who Can Apply?

**Eligibility Criteria:**

- A bachelor's degree in any subject, preferably with a STEM background.
- Good command of English.
- A basic understanding of object-oriented programming.

- Some prior knowledge of Python and web development concepts and tools

## Program Overview

**The Full Stack Python Programmer Program at Chools is designed to provide a comprehensive education in full stack development. Our curriculum covers a wide range of topics to ensure a thorough understanding, combining theoretical knowledge with practical, hands-on experience.**

**Learning Mode:**

- **Hybrid Learning Model:** Combines online learning with in-person sessions for flexibility and interactive engagement.
- **Interactive Sessions:** Includes live webinars, workshops, and Q&A forums with expert instructors and peers.
- **Self-paced Learning:** Access course materials anytime, allowing you to learn at your own pace.

## Skills Learned

- **Python Programming:** Mastering Python syntax, data structures, and libraries.
- **Front-End Development:** HTML, CSS, JavaScript for creating user interfaces.
- **Web Frameworks:** Django, Flask for creating server-side logic.
- **Databases:** MySQL, MongoDB, PostgreSQL for data storage and retrieval.
- **Web Servers:** Apache, NGINX for deploying applications.
- **Data Analysis and Visualization:** Pandas, SciPy, Numpy, Bokeh, d3.js.
- **Testing and Debugging:** Unittest, pytest, pdb for ensuring code quality.
- **Source Control:** Git, Mercurial for version control.

## Job Positions and Opportunities

- **Career Paths:** Full Stack Developer, Back-End Developer, Front-End Developer, Python Developer, Web Developer, Software Engineer, Data Engineer.
- **Industry Demand:** High demand across various sectors, competitive salaries, and strong growth potential.

## Key Industry Verticals

- **Skill Application Areas:** Technology, Finance, Healthcare, Retail, Manufacturing, Marketing, Telecommunications, Education, Logistics and Supply Chain, Government and Public Services.

## Program Objectives

- Master technical skills in full stack Python development.
- Implement advanced web development techniques.
- Explore front-end and back-end frameworks.
- Address real-world development challenges.
- Understand best practices in software development.
- Foster continuous learning.
- Encourage teamwork and collaboration.
- Prepare for advanced roles in web development.

## Expected Outcomes

- Proficiency in full stack development tools and techniques.
- Practical experience through hands-on projects.
- Strong analytical and problem-solving skills.
- Application of best practices in software development.
- Innovation in web development solutions.

# PROGRAM OUTLINE

**Stage 1: Fundamentals of Python Programming**

**1. Introduction to Python Programming**
- Core principles, syntax, data structures, and libraries.

**2. Basics of Object-Oriented Programming**
- Classes, objects, inheritance, polymorphism, encapsulation.

**Stage 2: Front-End Development**

**3. HTML, CSS, JavaScript**
- Creating user interfaces, responsive design.

**4. Front-End Frameworks**
- React, Angular, Vue.js for enhanced UI/UX.

**Stage 3: Back-End Development**

**5. Web Frameworks (Django, Flask)**
- Server-side logic, API development.

**6. Databases (MySQL, MongoDB, PostgreSQL)**
- Data storage, retrieval, and management.

**7. Web Servers (Apache, NGINX)**
- Application deployment and scaling.

**Stage 4: Capstone Project**

**8. Integration of Learned Skills**
- Apply tools and techniques to real-world full stack projects.

**9. Advanced Data Analysis and Visualization**
- Utilizing tools like pandas, SciPy, Numpy, Bokeh, d3.js.

**10. Testing and Debugging**
- Ensuring code quality with unittest, pytest, pdb.

**11. Source Control with Git and Mercurial**
- Version control best practices.

**Elective Modules**

**12. Advanced Python Techniques**
- Multi-threading, multiprocessing, asynchronous programming.

**13. Cloud Computing for Web Development**
- Deploying applications on AWS, Azure, Google Cloud.

**14. DevOps for Full Stack Development**
- CI/CD pipelines, containerization with Docker, Kubernetes.

**15. Mobile App Development**
- Creating cross-platform applications with Flutter, React Native.

# PROGRAM OUTLINE

**16. Cybersecurity for Web Development**

- Best practices, threat modeling, security testing.

**Enrollment Now Open!**

Take the first step towards becoming a certified full stack Python developer. Enroll in our **Full Stack Python Programmer Program** and enhance your career with Chools.

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