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# Back-End Web Development Programme

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# Professional Foundations Programme

(your first 3 months)

## What is Professional Foundations?

Professional Foundations is a foundational programme that helps young professionals develop the essential skills needed to excel in their careers.

Over 3 months, learners engage in a programme designed around practical skills and knowledge, specifically tailored to the modern tech workplace. Through a mix of individual projects, team-based challenges, and real-world applications, this programme builds a solid foundation for professional success.

## Why is this Programme Important?

In today's job market, technical skills alone are not enough for a successful career. Employers seek well-rounded professionals who possess both technical know-how and soft skills—like communication, problem-solving, and leadership.

The Professional Foundations programme bridges this gap, empowering learners to navigate complex work environments with competence and confidence. This programme provides a complete toolkit for building the vital skills professionals need to succeed in a career in any industry.

## Career Readiness

Learners gain critical professional skills that help them stand out in the workforce and succeed in tech-focused roles.

## Collaborative Learning

Learners work in squads, encouraging peer-to-peer learning, teamwork, and a culture of continuous growth. This experience also helps build a strong professional network that will help learners grow their future careers.

## Practical Application

The programme features hands-on exercises and deliverables that allow learners to immediately apply their newly acquired skills, making learning both engaging and relevant to the real world.

## Key Components of the Programme

Professional Foundations emphasises 8 key Meta-Skills across Leadership, Analysis, and Execution—essential skill sets for thriving in today's workplace.

**Leading Self**

**Leading Others**

**Communicating for Impact**

**Quantitative Reasoning**

**Entrepreneurial Thinking**

**Critical Thinking**

**Managing Complex Tasks**

**Tech Skills**

# 8 Months (20 hrs per week)

## What is Back-End Web Development?

The programme aims to equip learners with the skills needed to construct robust server-side solutions through practical exposure to server, database, and application logic for the development of dynamic web applications.

## Why Back-End Web Development?

In response to the industry's growing need for adept back-end developers, this programme presents a flexible learning pathway for individuals eager to explore server-side programming and database management.

## Programme Objectives

- Gaining proficiency in backend languages, frameworks, and databases.
- Mastering RESTful API design, authentication, and server deployment.
- Building and deploying a fully functional web application.

## Technologies and Concepts Covered

- Backend language ( Python)
- Web Framework (Django)
- Database management with SQL (e.g., MySQL) and NoSQL (e.g., MongoDB) databases.
- REST API, Authentication, and other backend concepts.

## Why Choose Us?

### ALX Foundations

Before starting the Back-End Web Development programme, learners complete our 3-month foundational training, where they acquire vital skills such as self-awareness, teamwork, communication, and critical thinking—essential for success in tech

### Hands-On Learning

Focused on practical application through project-based learning, facilitating the direct application of theoretical knowledge to real-world scenarios for a comprehensive understanding of concepts.

### Mentor Support

Receive guided learning from experienced mentors to navigate through backend challenges, gaining valuable insights and support linked directly to real-world experiences and industry best practices.

## Tools Learners Get to Use



VS Code



Git



GitHub



Bash Shell (WSL2, Ubuntu)

**8-Month**

Programme

**100%**

Digital (Online)  
Learning  
programme

**20 hrs**

Per Week

# Specialisation Breakdown

- **Project releases:** Projects are released on Mondays and ends by end of Sundays
- **Live learning sessions:** Twice weekly live learning sessions. Learners will be introduced to the projects for the coming week during the first session and then there will be a deep dive into the concepts during the second session.
- **Peer learning days:** There is a dedicated day for learners to connect with one another and study together.

## Content Breakdown

**Part 01:** Onboarding and introduction to web

**Part 02:** Version control

**Part 03:** Command Line Basics

**Part 04:** Introduction to Python

**Part 05:** Introducing Logic into programming (Control flow and loops)

**Part 06:** Functions, Data Structures & Modules

**Part 07:** Programming Paradigms & Exception handling

**Part 08:** More about OOP

**Part 09:** Introduction to Databases

**Part 10:** Introduction to Django

**Part 11:** Deep Dive into Django Models and Views

**Part 12:** Advanced Features and Security

**Part 13:** Introduction to Building APIs with Django REST Framework

**Part 14:** Advanced API Development with Django REST Framework

**Part 15:** Building a Complete Django Application

**Part 16:** Building and deploying a Django API

**Part 17:** Capstone Project