Full Stack Developer (PHP or Python or Ruby)

OFFICIAL ACADEMIC PROSPECTUS & CURRICULUM GUIDE

NQF Level: Industry Certification | **Credits:** N/A

Delivery: Online

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PROGRAMME OVERVIEW

PROGRAMME DURATION	3 Months
ACADEMIC LEVEL	Industry Certification
TOTAL CREDITS	N/A
SAQA REGISTRATION	Pending
MODE OF DELIVERY	Online
TOTAL INVESTMENT	**R 9,500** (Registration Deposit: R 799)

Executive Introduction

This immersive track is engineered for the high-performance economy of 2026, focusing intensely on cross-functional engineering skills. In an era where the strict boundary between front-end aesthetics and back-end logic has entirely blurred, the 'Full Stack' capability has become the non-negotiable requirement for senior-tier engineering roles globally. We do not simply teach syntax or basic scripting; we teach the rigorous architectural patterns that allow enterprise systems to scale across international borders without failure.

Learners will master the art of the 'Deep Stack,' selecting a primary enterprise language (PHP, Python, or Ruby) and dominating its entire ecosystem—from the complex database layer to the final responsive UI rendering. Our elite pedagogical approach is rooted deeply in 'Project-Based Mastery,' where students spend hundreds of intensive hours building real-world, production-ready applications that solve actual business problems. You will explore the deep intricacies of API orchestration, state management, and modern responsive design patterns using the industry's most advanced frameworks.

By the absolute conclusion of the programme, students transition from mere scripters to elite, highly capable Software Engineers. Our faculty prioritizes 'Production-Ready Standards,' ensuring that every single graduate understands complex Git workflows, automated unit testing, and secure CI/CD deployment pipelines. You emerge with a highly professional portfolio that serves as a living, executable testament to

your ability to build the future of the web and lead technical innovation.

PURPOSE OF THE LEARNING PROGRAMME

The fundamental objective of this learning programme is to cultivate a deep-seated competency in end-to-end commercial software delivery. We aim to produce elite engineers who can independently conceive, architect, build, and deploy complete web platforms, bridging the critical gap between user experience and server-side logic.

To instill a 'Security-by-Design' mindset across the entire technology stack from day one. This programme ensures that all graduates are experts in defending against common web vulnerabilities (OWASP Top 10), ensuring the applications they build meet stringent international data protection standards like POPIA and GDPR.

To foster collaborative agility and advanced DevOps proficiency within corporate development teams. Beyond individual coding, our distinct purpose is to prepare graduates for the high-pressure, collaborative environments of modern tech firms, teaching them the communication skills required to excel in cross-functional product teams.

To aggressively address the critical 'Lead Developer' shortage within the global and South African market. By focusing heavily on architectural patterns, load balancing, and system design, we are preparing our alumni for an accelerated trajectory toward senior leadership and Chief Technology Officer (CTO) roles.

Ultimately, the purpose of this learning experience is the holistic development of the versatile technology professional. We strive to produce graduates who are characterized by a commitment to maintaining global competitiveness through lifelong framework adaptation and continuous code optimization.

MODULE BREAKDOWN

Module 00: Orientation & Student Portal Onboarding

Mandatory setup: Email, Portal, Labs & PoE guidelines.

Module 01: Introduction

Fundamental concepts of web applications and full-stack development.

Module 02: Module 1: Programming Fundamentals

Objective: Build coding foundation. Topics: Programming logic, Variables, conditions, loops, Functions (Syntax covered for PHP, Python, and Ruby).

Module 03: Lab: Build a CLI-based Student / Inventory System

Labs: Apply your foundational knowledge by building a CLI-based system in your chosen language (PHP, Python, or Ruby).

Module 04: Module 2: Web Fundamentals

Objective: Understand how the web works. Topics: HTML5 & CSS3, Responsive design, JavaScript basics, HTTP & client-server mode.

Module 05: Module 3: Core Backend Development (PHP / Python / Ruby)

Objective: Understand backend logic deeply. Topics: Core syntax & structure, Forms & data handling, Sessions & cookies, File handling, Basic MVC concepts. Lab: Build a User Registration & Login System (Core PHP, Python, or Ruby).

Module 06: Module 4: Modern Frameworks (Laravel / Django / Rails)

Objective: Build professional applications. Topics: Framework setup & structure, Routing, Controllers, Middleware, Templating (Blade/Django/ERB), ORM, Migrations & seeders. Lab: Build a CRUD Application (Tasks / Products).

Module 07: Module 5: Databases

Objective: Data management. Topics: MySQL / PostgreSQL, Database design, Relationships (1-1, 1-M, M-M), Query optimization. Lab: Build a relational database system and connect your app to the DB.

Module 08: Module 6: Frontend Integration

Objective: Modern UI + backend integration. Topics: Framework Templating + Bootstrap OR React (optional upgrade), API consumption, AJAX / Axios, Form validation (frontend + backend). Lab: Build a Dashboard System (Admin Panel).

Module 09: Module 7: API Development

Objective: Build RESTful APIs. Topics: API routes, JSON responses, API authentication (JWT / Sanctum / Token Auth), API versioning. Lab: Build a REST API for your system and connect the frontend to the API.

Module 10: Module 8: Microservices (Multi-Stack Perspective)

Objective: Scale systems. Topics: Monolith vs Microservices, Service separation, API communication, Docker basics. Lab: Split system into Auth Service & Main App Service, Connect via APIs using PHP, Python, or Ruby.

Module 11: Module 9: Security

Objective: Secure applications. Topics: Authentication & authorization, Framework-specific auth (Sanctum/Passport/Django Auth/Devise), Input validation, Preventing common attacks (XSS, SQL Injection). Lab: Implement secure login system with roles (Admin/User).

PRACTICAL LAB ENVIRONMENTS

This programme includes intensive hands-on practical labs designed to bridge the gap between theoretical knowledge and real-world industrial application.

Lab 1: Frontend Component Library

Build reusable UI components with React/Vue. Deliverable: Component library + Storybook docs.

Lab 2: REST API Development

Create CRUD endpoints with Node.js/Express. Deliverable: API code + Swagger documentation.

Lab 3: Database Integration Lab

Connect app to PostgreSQL/MongoDB. Deliverable: Schema + connection code + sample queries.

Lab 4: Full-Stack Deployment

Containerise and deploy app to cloud. Deliverable: Dockerfile + live deployment URL.

CAREER FIELDS & OPPORTUNITIES

Graduates of this learning programme are aggressively equipped with the specialized competencies required to pursue the following elite professional roles within the global industry:

FULL-STACK WEB DEVELOPER	Advance your career as a Full-Stack Web Developer in the industry.
FRONTEND/BACKEND ENGINEER	Advance your career as a Frontend/Backend Engineer in the industry.
SOFTWARE ENGINEER	Advance your career as a Software Engineer in the industry.
APPLICATION DEVELOPER	Advance your career as a Application Developer in the industry.
DEVOPS DEVELOPER	Advance your career as a DevOps Developer in the industry.
API INTEGRATION SPECIALIST	Advance your career as a API Integration Specialist in the industry.
WEB PERFORMANCE OPTIMISER	Advance your career as a Web Performance Optimiser in the industry.

NEXT STEPS & APPLICATION

Ready to definitively advance your professional trajectory? Formal applications are currently open for the upcoming academic cycle. To securely guarantee your placement in the next intake for **Full Stack Developer (PHP or Python or Ruby)**, please complete our online application process or contact our admissions advisory team directly.

CONTACT ADMISSIONS

Official Email: apply@softkingsacademy.co.za

Academy Website: **www.skacademy.co.za**

WhatsApp: +27 69 271 9901

Tel: +27 21 1097 366 | +27 12 004 3732 | +27 70 5422 373

DIGITAL STUDENT PORTALS

Studentzone: **portal.skacademy.co.za**

Exam Centre: **exams.skacademy.co.za**

Verify Certificate: **skacademy.co.za/verify-certificate**

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