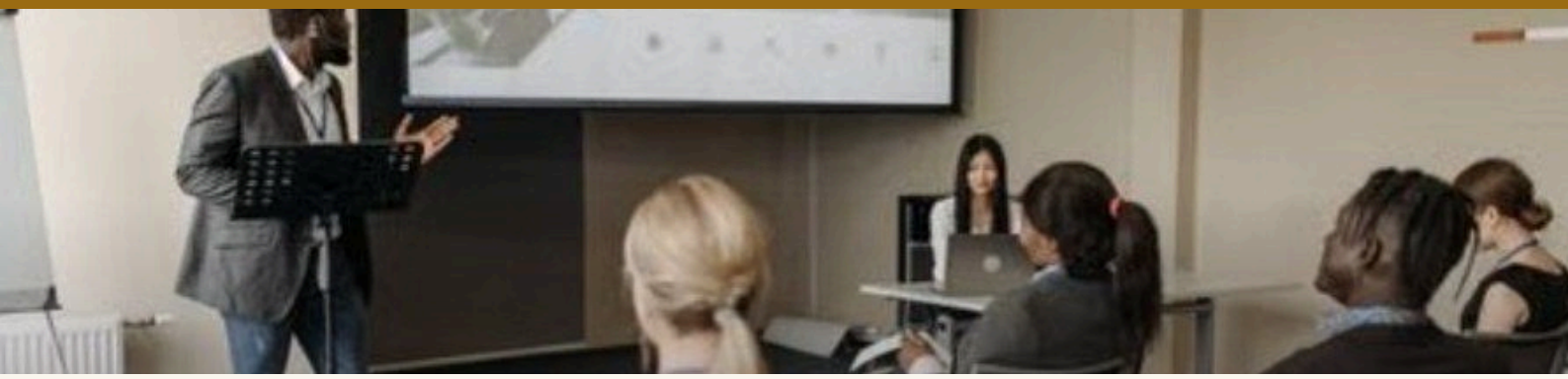


SEYA CAPITAL
INSIGHT.STRATEGY.GROWTH

INFORMATION & COMMUNICATION TECHNOLOGY

Python Programming and Data Analytics Professional Certificate Programme

Developing Intelligent Applications, Automating Business Processes & Driving Data-Driven Innovation

SECTOR	FORMATS	FEE FROM	2027 SESSIONS
Information & Communication Technology	5 days & 2 weeks	US$ 2,100	3

OVERVIEW

About this course

Python has emerged as one of the world's most powerful and versatile programming languages, widely used in software development, data science, artificial intelligence, machine learning, cybersecurity, automation, cloud computing, financial modelling, and business analytics. Its simplicity, flexibility, and extensive ecosystem make it the preferred language for professionals seeking to build innovative solutions and extract value from data.

The Seya Capital Python Programming and Data Analytics Professional Certificate Programme equips participants with the knowledge, methodologies, tools, and practical skills required to design, develop, automate, analyse, and deploy Python-based solutions. The programme combines programming fundamentals, data analytics, automation, database integration, machine learning concepts, and business application development to support digital transformation and innovation initiatives.

Participants will gain hands-on experience developing Python applications, analysing business data, automating workflows, and implementing intelligent solutions for real-world organisational challenges.

2027 SCHEDULE

Dates, venues & fees

DATES	VENUE	FORMAT	FEE PER DELEGATE
1 – 5 Nov 2027	Singapore	5 days	**US$ 3,700**
8 – 19 Nov 2027	Dar es Salaam, Tanzania	2 weeks	**US$ 3,780**
15 – 19 Nov 2027	Dar es Salaam, Tanzania	5 days	**US$ 2,100**

Fees exclude travel and accommodation. This course is also available in-house, on dates and at a venue of your choice.

HIGHLIGHTS

What you will learn

- Python programming fundamentals and best practices
- Object-oriented programming using Python
- Data analysis and business analytics with Python
- Database programming and SQL integration
- Process automation and scripting
- Data visualisation and reporting
- Introduction to machine learning and artificial intelligence
- Web and application development fundamentals
- Cybersecurity automation using Python
- API integration and cloud connectivity
- Software testing and debugging
- Real-world business applications of Python
- Participants will explore practical applications including:
- Business Process Automation
- Financial Analysis and Reporting
- Data Cleaning and Transformation
- Dashboard and Report Development
- Database Integration Projects
- Customer Analytics Solutions
- Data Visualisation Projects
- Automated Reporting Systems
- Machine Learning Demonstrations
- Cybersecurity Automation Scripts
- API Integration Projects
- Enterprise Analytics Solutions
- Python for Data Analytics
- Focuses on data analysis, business intelligence, forecasting, reporting, and decision support systems.
- Python for Artificial Intelligence and Machine Learning
- Focuses on predictive analytics, machine learning models, AI applications, and intelligent automation.
- Python for Financial Modelling and Analytics
- Focuses on financial forecasting, investment analysis, budgeting, risk analysis, and reporting.
- Python for Cybersecurity and Automation
- Focuses on security automation, scripting, monitoring, penetration testing support, and incident management.
- Python for Software Development
- Focuses on application development, object-oriented programming, APIs, web applications, and software engineering practices.

OBJECTIVES

By the end of the course

By the end of this programme, participants will be able to:

- Understand Python programming concepts and development methodologies.
- Develop Python applications for business and technical environments.
- Design and implement automated solutions using Python scripts.
- Collect, process, analyse, and visualise data effectively.
- Integrate Python applications with databases and external systems.
- Apply object-oriented programming techniques in software development.
- Develop analytical solutions for business decision-making.
- Understand fundamental machine learning and AI concepts.
- Test, debug, and optimise Python applications.
- Support organisational automation and digital transformation initiatives.

WHO SHOULD ATTEND

Designed for

Software Developers | Data Analysts | Business Analysts | Data Scientists | ICT Professionals | Systems Administrators | Financial Analysts | Researchers and Statisticians | Cybersecurity Professionals | Automation Specialists | Technology Consultants | Computer Science Graduates | Digital Transformation Professionals | Professionals seeking careers in programming and analytics

PROGRAMME

Course outline

Day 1: Python Programming Fundamentals

- Introduction to Python Programming
- Python Installation and Development Environment Setup
- Variables, Data Types and Operators
- Input and Output Operations
- Conditional Statements and Loops
- Functions and Modular Programming
- Programming Best Practices

Day 2: Object-Oriented Programming and Data Structures

- Object-Oriented Programming Concepts
- Classes and Objects
- Inheritance and Polymorphism
- Lists, Tuples, Dictionaries and Sets
- File Handling and Data Storage
- Exception Handling
- Debugging and Error Management

Day 3: Data Analytics and Database Programming

- Introduction to Data Analytics
- Data Collection and Preparation
- Data Manipulation Techniques
- Database Fundamentals
- SQL and Python Integration
- Data Analysis and Reporting
- Business Analytics Applications

Day 4: Automation, Visualisation and Machine Learning

- Process Automation Using Python
- Task Scheduling and Scripting
- Data Visualisation Techniques
- Dashboard Development Concepts
- Introduction to Machine Learning
- Predictive Analytics Fundamentals
- Artificial Intelligence Applications

Day 5: Application Development and Capstone Project

- Web and Application Development Fundamentals
- API Integration Techniques
- Cloud Connectivity Concepts
- Software Testing and Quality Assurance
- Cybersecurity Applications of Python
- Emerging Trends in Python Development
- Capstone Python Programming and Analytics Project

METHODOLOGY

How you will learn

This highly interactive programme combines:

- Expert-led presentations
- Hands-on Python coding laboratories
- Data analytics workshops
- Programming exercises and practical assignments
- Business automation simulations
- Database integration exercises
- Machine learning demonstrations
- Real-world application case studies
- Group discussions and collaborative learning

- Capstone Python development project

Participants will gain practical experience through coding exercises, data analysis projects, and automation applications.

IMPACT

The return on learning

For your organisation

- Improve automation of business processes
- Strengthen software development capabilities
- Enhance data analytics and reporting functions
- Improve operational efficiency and productivity
- Support digital transformation initiatives
- Enable data-driven decision-making
- Strengthen innovation and technology adoption
- Reduce manual processing and operational costs
- Improve business intelligence and forecasting capabilities
- Develop internal technical and analytical capacity

For you

- Develop professional Python programming competencies
- Strengthen analytical and problem-solving skills
- Gain practical experience in application development
- Improve automation and scripting capabilities
- Enhance data analysis and visualisation expertise
- Build machine learning and AI awareness
- Strengthen career opportunities in software development and analytics
- Develop competencies demanded across multiple industries

CERTIFICATION

Seya Capital certificate

Upon successful completion of the programme, participants will be awarded the prestigious:

Seya Capital Professional Certificate in Python Programming and Data Analytics

Recognising professional competence in Python programming, software development, data analytics, business intelligence, database programming, process automation, machine learning fundamentals, artificial intelligence applications, cybersecurity automation, and digital innovation solutions.

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Register or enquire

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