Quarter 1

AWS Business Foundations

Learners will develop the professional skills and emotional intelligence to navigate new work environments, work well with others, and manage complex, multiphase projects. Learners will also focus on enhancing their writing and presentation skills to ensure they will be able to lead effective meetings with colleagues and clients.

Course Modules

Program Overview, Professional Skills, Writing and Presentation Skills, Problem Solving, Customer Conversations, Project Management, Sustainability

Introduction to Cloud Foundations

Learners will develop a fundamental understanding of the AWS Cloud, independent of any specific technical role. This course will teach AWS Cloud concepts, core AWS services, security, architecture, pricing, and support to build your AWS Cloud knowledge. This course will also help students prepare for the AWS Certified Cloud Practitioner exam.

Course Modules

Introduction to Computer Technology, Cloud Intro, Architecting on AWS 1, Compute 1, Databases 1, Cloud Cost Management, Networking 1, Security 1, Storage 1, AWS Certified Cloud Practitioner Certification Preparation, AWS Cloud Quest: Cloud Practitioner

Developer Fundamentals 1

Learners will develop foundational knowledge of widely-used programming language (Python), understand the importance of visual thinking for a cloud-based application developer role, and the basics of whiteboarding for brainstorming and system design.

Course Modules

Python 1, System Design and Whiteboarding Essentials, Software Development Lifecycle

Quarter 2

AWS Cloud Fundamentals 1

In this course learners will take a deeper dive into concepts presented in Intro to Cloud Foundations, including compute, storage, databases, networking, and security. Learners will be able to describe the features and use cases for AWS Lambda, explain the structure of schemas and relational databases, analyze network connectivity, and protect confidentiality and integrity of data in-transit upon completion of the course.

Course Modules

Compute 2, Networking 2, Storage 2, Databases 2, Security 2

Developer Fundamentals 2

In this course, learners will build on the foundational knowledge of Python covered in Developer Fundamentals 1. Learners will cover topics required for day-to-day programming in Python, including regular expressions, functions, arrays, various libraries, and different programming techniques. In addition, the learner will gain a deeper understanding of data structures and unit testing.

Course Modules

Python 2

AWS Cloud Operations 1

This course gives learners an opportunity to develop systems management skills, understand the purpose and benefit of logging and scaling, and explain the guiding principles and methodologies of DevOps. Learners will start the course by learning the differences between scalability and elasticity and identifying AWS logging and scaling services. The course will introduce learners to Bash shell scripts, Power Shell, and the basic constructs of scripting. Learners will be able to define and discuss the purpose of AWS command line interface (CLI) and develop functional knowledge of Amazon CloudWatch, AWS CloudTrail, and Amazon EventBridge.

Course Modules

Logging and Scale, Systems Management, Scripting, DevOps 1, Monitoring, Security, and Compliance

Quarter 3

AWS Cloud Fundamentals 2

In AWS Cloud Fundamentals 2 learners will focus on mastering the concept of serverless computing and utilizing AWS Lambda. Learners will learn how to create and manage AWS Lambda functions- they will be able to describe AWS Lamba security and how to use triggers, push, and pull models for AWS Lambda. Learners will be able to construct a serverless workflow and discuss AWS Step Function activities. This course will give learners an opportunity to practice application optimization and learn how to fine-tune Lambda performance and how to use API Gateway response caching.

Course Modules

Compute 3, Security 3, Networking 3, Database and Caching, Architecting on AWS 2

Developer Fundamentals 3

By the end of this course learners will be able to deploy microservices for event-driven applications on containers or in a serverless fashion. They will design and develop a working application that demonstrates their skill and ability to use AWS services and Python code to create cloud-based solutions to employer-informed problem scenarios (Cloud Capstone 1).

Course Modules

Python 3, Modern Application Architecture and Developing Serverless Applications

AWS Cloud Operations 2

In this course, you will have the opportunity to practice with application deployment services and strategies, learn how to enable DevOps teams, and understand Infrastructure as Code (IaC) and its benefits. This course introduces you to the AWS Cloud Development Kit (CDK) and guides you through setting up an environment to work with AWS CDK in Python. You will also develop functional knowledge of distributed

tracing and troubleshooting with Amazon X-Ray, and understand open-source monitoring. Lastly, you will be able to discuss application troubleshooting with Amazon CloudWatch.

Course Modules

DevOps 2, Monitoring and Troubleshooting 2, Infrastructure as Code

Quarter 4

AWS Cloud Fundamentals 3

This course gives learners an opportunity to explore data analytics and visualization services on AWS, data lakes, and the basics of AI/ML. Learners will also take a deep dive into DevSecOps to understand the goals and benefits of DevSecOps. Learners will be able to perform threat modeling on a cloud-based application, demonstrate their understanding of security best practices for AWS Service Catalog, and use Amazon DynamoDB encryption client. Learners will also develop functional knowledge of common code analysis techniques and tools- they will explore Amazon CodeGuru features and benefits, Software Composition Analysis (SCA), and Dynamic Application Security Testing.

Course Modules

Introduction to Advanced Cloud Technologies (Machine Learning and Data Analytics), Security 4

Developer Fundamentals 4

In this course learners will design and develop a more complex working application that demonstrates their skill and ability to use AWS services and Python code to create cloud-based solutions to employer-informed problem scenarios (Cloud Capstone 2).

Course Modules

Developing on AWS, Cloud Capstone Project II, AWS Certified Developer – Associate Certification Preparation

Getting Hired Essentials

This course will prepare learners to apply for cloud application developer roles and launch their professional career. The course covers the different types of resumes, how to organize and write a resume, and what to include in a resume. Learners will be introduced to various interview techniques and have an opportunity to practice effective strategies to communicate their accomplishments to potential employers. Learners will be taught how to prepare to technical (coding) interviews and will also learn about the structure of compensation packages and employer benefits included in a job offer.

Course Modules

Resume Building, Interview Skills, Coding Interviews, Transitioning into the Working World, Workplace Etiquette