Cloud Technology Administration (Track II)

This program is designed to prepare students for entry-level positions in Cloud Administration for industry leading Cloud Computing providers and cloud-based organizations. The program provides the students with the practical knowledge on Cloud Computing and Cloud Technologies. Students will learn the business justification, benefits, impacts for Cloud Computing. In addition, the students will learn how to install, operate, provision and configure Cloud Platforms. This includes Microsoft Azure, Amazon AWS and Google Cloud Platform, depending on the track the student selects.

Core Courses (Tracks I, II, III)

IT Fundamentals (30 hour)

This course prepares the student for the FC0-U61 certification exam. The students will learn the basics of Information Technology. The student will learn about the hardware, software and networking concepts in computing. The student will also learn about software development, databases, security concepts and best practices, as well as business continuity strategies. Finally, the students will learn about computer support and common troubleshooting techniques.

Course Objectives:

- Understand the basics of computer hardware and software
- Describe the different operating system types
- Explain software development and database uses
- Explain the basics of networking
- Understand security concepts and threats
- Explain business continuity and backup strategies

Networking Fundamentals (30 hours)

This course is designed to give the students the needed knowledge of Microsoft Windows Networking in a technical environment. Students will learn the essential principles Networking, Overview of Networking Components, Understanding of the OSI Model, Core TCP/IP Protocols, Exploring IPv4, Exploring IPv6, Connecting Computers to a Network, Networking Computers with Switches, Connecting Networks with Routers, Resolving Names to IP Addresses, Understanding Network Security Zones, Understanding Wireless Networking, Understanding Internet Access Methods and Wide Area Networks, Troubleshooting TCP/IP.

Course Objectives:

- Planning and Implementing Server Roles and Server Security
- Understand the concepts of Internet, intranet, and extranet
- Understanding Network Hardware
- Understanding Protocols and Services
- Understand the OSI model/Understand networking services

IT Security Fundamentals (30 hours)

This course is designed to give the students the needed knowledge of Microsoft Windows Security in a technical environment. Students will learn the essential principles: Understanding Core Security Principles, Understanding Malware and Social Engineering, Understanding User Authentication, Securing Access with Permissions, Using Audit Policies and Network Auditing, Protecting Clients and Servers, protecting a Network, Understanding Wireless Security, Understanding Physical Security, Enforcing Confidentiality with Encryption, Understanding Certificates and a PKI, Understanding Internet Explorer Security.

Course Objectives:

- Understanding Security Layers
- Understand core security principles.
- Understanding Operating System Security
- Understanding Network Security

Cloud Essentials (72 Hours)

This course prepares the student for the CompTIA Essentials+ certification exam. Students will learn the industry concepts and principles of cloud computing. The student will also conduct hands-on lab exercises on how to management and operate cloud services. The student will also learn the business aspects, benefits and value of cloud solutions. Finally, the student will understand the cloud governance, risks, impacts, compliance and security best practices in cloud computing environments.

Course Objectives:

- Explain concepts and principles of cloud computing
- Understand the business principles of cloud environments
- Understand the management and technical operations in cloud computing
- Understand Cloud Governance, Risk, Compliance and Security

Cloud+ (120 hours)

This course prepares the student for the CompTIA Cloud+ certification exam. Students will learn the fundamentals of cloud and be introduced to hands-on labs that simulates real-world, hardware, software and command line interface environments. The students will also learn and understand working with business continuity, infrastructure, security, virtualization, resource management, and cloud models. The course also provides an overview of the new technologies to support the changing cloud market as more organizations depend on cloud-based technologies.

Course Objectives:

- Understand cloud computing configurations and deployments
- Learn cloud security technique, rules and compliance requirements Learn how to Implement cloud security features

- Understand how to maintain cloud operations
- Understand disaster recovery, business continuity, and on-going maintenance Understand cloud management baselines, performance, and SLAs
- Learn how to troubleshoot networking and security issues

Track II (AWS Cloud)

AWS Cloud Practitioner Essentials (84 hours)

This course prepares the student for the AWS Certified Cloud Practitioner course. This course is a basic course to familiarize the students with AWS cloud services. The students will get an overall understanding of the AWS cloud, independent of the specific technical roles. It will provide students with a detailed overview of cloud concepts, AWS services, security, architecture, pricing, and support.

Course Objectives:

- Learn the cloud concepts and fundamental terminology of AWS cloud
- Understand AWS core cloud services and functionality
- Learn the AWS enhanced cloud services
- Understand the AWS core cloud architecture
- Learn the security features and functionalities of the AWS cloud services
- Understand the pricing and support model for AWS cloud services customers

AWS Certified Cloud Practitioner (126 hours)

This course prepares the student for the AWS Certified Cloud Practitioner (CLF-C01) examination. Students will learn basic knowledge of the AWS platform, including available services and their common use cases, AWS Cloud architectural principles (at the conceptual level), account security, and compliance. Student will get an understanding of AWS Cloud economics including costs, billing, and analysis, and the value proposition of the AWS Cloud.

Course Objectives:

- Explain the value of the AWS Cloud
- Understand and explain the AWS shared responsibility model
- Understand AWS Cloud security best practices
- Understand AWS Cloud costs, economics, and billing practices
- Describe and position the core AWS services, including compute, network, databases, and storage
- Identify AWS services for common use case

Practicum (Track II Cloud Practitioner) (12 hours)

The practicum course is a synthesis of courses the students completed throughout the duration of the Cloud Technology Administration (Tracks II) program. The students will receive instructor-led theory with a hands-on lab research approach in this practicum. The student will complete assignments under the supervision of the instructor. The final project in the practicum will consist of researching, designing, building, configuring, and presenting a migrated AWS cloud environment for a business. The research assignments are hands-on labs that provide the students with a guided view of the cloud standards, rules, compliance, and security. Student will understand how all of the hardware, software, devices and components fits together in an AWS cloud environment. This practicum will also guide students through cloud configuration techniques and use cases based on the courses within the program.

Course Objectives:

- The students will be able to showcase their program-based knowledge to conduct research, design, build and migrate a mock enterprise company workloads, applications and users from an in-house environment to AWS Cloud Services
- The students will be able to create a visualization diagram of the old infrastructure to the new AWS infrastructure, including internal, external and cloud-based network environments
- The students will be able to stay within the Project budget, timelines and due dates
- The students will be able to successfully articulate the project components in a PowerPoint presentation to potential employers and management teams

CLOUD TECHNOLOGY ADMINISTRATION (TRACKS I, II, III)

This program is designed to prepare students for entry-level positions such as Cloud Administration for industry leading Cloud Computing providers and cloud-based organizations such as Microsoft, Google and Amazon. The program provides the students with the practical knowledge of Cloud Computing and Cloud Technologies. Students will learn the business justification, benefits, and the impacts for Cloud Computing. In addition, the students will learn how to install, operate, provision and configure Cloud Platform. This includes Azure, Amazon, Amazon AS and Google Platform, depending on the track the student selects upon enrollment.

Upon completion of the program, the student will receive a Certificate of Completion in Cloud Technology Administration.

Class Hours 636 FSA Semester Credit Hours 21.1
Program Length: 27 Weeks/40 Week

Tuition	**$12,970**
Books	**$ 850**
Registration	**$ 100**
Total Cost	**$13,920**

Federal Student Aid (FSA) credit hour calculations are based on Department of Education guidelines.

Track II (AWS)

Course Number	Course Title	Clock Hours			TWC Semester Credits
		Lecture	Lab	Total	
NET01	IT Fundamentals	12	18	30	1.0
NET02	IT Security Fundamentals	12	18	30	1.0
NET03	Networking Fundamentals	12	18	30	1.0
NET09*	Cloud Essentials	32	40	72	3.0
NET10*	Cloud+	50	70	120	5.0
NET20*	AWS Cloud Practitioner Essentials	32	52	84	3.5
NET21*	AWS Certified Cloud Practitioner	50	76	126	5.5
CDV01	Career Development	6	18	24	0.5
NET25*	Practicum	40	80	120	5.0
	Total Hours	**246**	**390**	**636**	**25.5**

** Course has a prerequisite - see course description for details.*