Cloud Technology Administration (Track I)

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 CompTIA ITF+ 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 Cloud 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 I (Azure)

Azure Fundamentals (84 hours)

In this course students will learn the basic cloud concepts and understand the benefits of cloud computing in Azure environments. Students will also learn how to compare and contrast basic strategies for moving users and applications to the Azure. In addition, students will explore the different services that are used, such as CPU, networking storage and security.

Course Objectives:

- Learn cloud concepts such as High Availability, Scalability, Elasticity, Agility, Fault Tolerance, and Disaster Recovery
- Understand the benefits of cloud computing in Azure and how it can save you time and money
- Compare and contrast basic strategies for transitioning to the Azure cloud
- Explore the breadth of services available in Azure including compute, network, storage, and security

MS Certified Azure Fundamentals (126 hours)

In this course students will prepare the Microsoft Certified Azure Fundamentals Exam (AZ-900). The students will learn the industry terms and concepts. They will learn the Azure core services, products, solutions and tools used in Azure Administration tasks. Additionally, the students will learn about security, privacy, compliance as it relates to standard industry protocols and Azure cloud administration. Finally, the students will learn how the Azure pricing structure are defined, as well as h ow to maintain and support Azure cloud services and environments.

Course Objectives:

- Understand Azure cloud concepts and terminology
- Understand core Azure services, protocols and standards
- Understand the administration tasks used in Azure cloud services
- Understand security, privacy, compliance, and trust
- Understand Azure pricing and support

Practicum (Track I -Azure) (120 hours)

The practicum course is a synthesis of courses the students completed throughout the duration of the Cloud Technology Administration (Tracks I) 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 Azure 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 Azure 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 Azure Cloud Services
- The students will be able to create a visualization diagram of the old infrastructure to the new Azure 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

Technology Programs

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 Weeks

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 I (Azure)

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
NET18*	Azure Fundamentals	32	52	84	3.5
NET19*	MS Certified Azure Fundamentals	50	75	126	5.5
CDV01	Career Development	6	18	24	0.5
NET25*	Practicum	40	80	120	5.5
	Total Hours	**246**	**390**	**636**	**25.5**

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