



Polk State College Apprenticeship Partnership in Information Technology (MAP IT)

Certified Cloud Security Engineer

Eight-week course, Online, self-paced independent study

Total Course Cost: \$336

Cost Breakdown: Credit Cost: \$336

Cost covered by the Grant: Books \$149, Lab Fees \$60, and one-time exam fee \$599

This course covers topics such as cloud concepts, architecture and design, cloud-data security, cloud-platform and infrastructure security, cloud-application security, cloud security operations. The student gains technical skills including the ability to design, manage, and secure cloud data, applications, and infrastructure.

OJT Competencies: This training develops the student's ability to:

Identity and Access Management (IAM)

- Manage users and their roles according to a least-privilege model.
- Securely manage keys, access credentials, and application secrets.
- Recognize when to use temporary access, application accounts, and user accounts.

Cloud Environment and Infrastructure

- Apply encryption principles for data at-rest and data in-transit
- Identify the role of Hardware Security Modules (HSM) in cloud environments.
- Secure access to cloud environments while restricting external access to the Internet.

Platform-as-a-Service (PaaS) and Infrastructure-as-a-Service (IaaS)

- Recognize the security responsibilities of organizations for PaaS environments.
- Recognize the security responsibilities of organizations for IaaS environments.

Network Security Monitoring (NSM)

- Monitor PaaS and IaaS for policy violations and misconfigurations.
- Integrate cloud NSM with on-premise infrastructure for a single pane of glass.
- Demonstrate the ability to respond to and mitigate incidents originating in the cloud, and determine when to contact cloud providers.
- Identify the role of organization policies and consent.
- Interpret court processes, assess the differences between technical and expert witnesses, and determine how to appropriately testify regarding an event.

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Polk State College
999 Avenue H., NE | Winter Haven, FL 33881
Phone: 863.297.1010 ext. 4664 | Fax: 863.669.2330
www.polk.edu/corporate-college/workforce-grants/MAPIT