Solutions Architect Associate 2023-2024 Catal

[ARCHIVED CATALOG]

SVAD 220 - Solutions Architect Associate

PREREQUISITES: SVAD 150 - Cloud Foundations
PROGRAM: Cloud Technologies
CREDIT HOURS MIN: 3
LECTURE HOURS MIN: 2
LAB HOURS MIN: 2
DATE OF LAST REVISION: Fall, 2020

Solutions Architect Associate covers the fundamentals of building IT infrastructure. The course is designed to teach students how to optimize their use of the cloud by understanding cloud-based services and how they fit into cloud-based solutions. Although architectural solutions can differ depending on the industry, type of application, and size of the business, this course emphasizes best practices that apply to all of them. Students will explore case studies and build a variety of infrastructures through a guided, hands-on approach.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Describe the business impact of design decisions.
2. Identify the design patterns and architectural options applied in a variety of use cases.
3. Discuss how to avoid single points of failure.
4. Design for high availability, fault tolerance, and scalability.
5. Discuss the benefits of Infrastructure as Code and how it supports automation.
6. Describe principles to consider when migrating or designing new applications for the cloud.
7. Describe database services and compare SQL with NoSQL databases.
8. Articulate the importance of making systems highly cohesive and loosely coupled.
9. Apply the principles of a well-architected design to eliminate unneeded costs and suboptimal resources,
10. Demonstrate the appropriate tools and services to provide security-focused content.

COURSE CONTENT: Topical areas of study include -

- Designing a cloud environment
- Designing for High Availability
- Automating the Infrastructure
- Decoupling the Infrastructure
- Designing Web-Scale Media
- Well-Architected Framework
  - Operational Excellence
  - Security
  - Reliability vs Availability
  - Performance Efficiency
  - Cost Optimization
- Troubleshooting
- Design Patterns and Sample Architectures

Course Addendum - Syllabus (Click to expand)