

# Course Addendum

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| Semester: | 2221 - Winter | Subject Code: | | **DPS950** | Section: | NSA |
| Subject Title: | **Introduction to Microsoft Cloud Technologies** | | | | | |
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| Approved by: |  | | | | | |
| Sue Abraham, Chair, School of Information Technology Administration and Security | | | | | | |

Please read this addendum to the general course outline carefully. It is your guide to the course requirements and activities.

Please refer to the course outline for learning outcomes, course description and text and materials.

Please also visit [itas.senecacollege.ca](https://seneca-my.sharepoint.com/personal/laura_ojanen_senecacollege_ca/Documents/Course%20Materials/ict.senecacollege.ca) for key information on courses, graduation requirements, transfer credit, and more from the School of Information Technology Administration and Security.

## Assessment Summary

* Quizzes (minimum 6) 10%
* Test 10%
* Labs (minimum 20) 40%
* Projects (minimum 2) 40%

## Course Policies

1. Achieve a weighted average of 50% or better on the overall course
2. Achieve a weighted average of 50% or better on the labs
3. Achieve a weighted average of 50% or better on the projects
4. Must satisfactorily complete all labs and projects

## Academic Policies

<http://www.senecacollege.ca/about/policies/academics-and-student-services.html>

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**TENTATIVE WEEKLY SCHEDULE: *Winter 2021***

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| --- | --- | --- | --- | --- |
| **Week** | **Topic or Skill** | **Reading** | **Assessment** | **Weight** |
| **Week 1**  **Jan 10-14** | **01 Describe core Azure concepts**  Identify the benefits and considerations of using cloud services:   * identify the benefits of cloud computing, such as High Availability, Scalability, Elasticity, Agility, and Disaster Recovery * identify the differences between Capital Expenditure (CapEx) and Operational Expenditure (OpEx) * describe the consumption-based model   Describe the differences between categories of cloud services:   * describe the shared responsibility model * describe Infrastructure-as-a-Service (IaaS) * describe Platform-as-a-Service (PaaS) * describe serverless computing * describe Software-as-a-Service (SaaS) * identify a service type based on a use case   **01 Describe core Azure concepts**  Describe the differences between types of cloud computing:   * define cloud computing * describe Public cloud * describe Private cloud * describe Hybrid cloud * compare and contrast the three types of cloud computing | Azure Fundamentals part 1: Describe core Azure concepts  [3 Modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-cloud-concepts/ |  |  |
| **Week 2**  **Jan 17-21** | **02 Describe Core Azure Services**  Describe the core Azure architectural components:   * describe the benefits and usage of Regions and Region Pairs * describe the benefits and usage of Availability Zones * describe the benefits and usage of Resource Groups * describe the benefits and usage of Subscriptions * describe the benefits and usage of Management Groups * describe the benefits and usage of Azure Resource Manager   explain Azure resources | Azure Fundamentals part 2: Describe core Azure services  [5 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-core-azure-services/ | Reading Submission  Quiz 1 | Quiz 1.67% |
| **Week 3**  **Jan 24-28** | **02 Describe Core Azure Services**  Describe core resources available in Azure:   * describe the benefits and usage of Virtual Machines, Azure App Services, Azure Container Instances (ACI), Azure Kubernetes Service (AKS), and Windows Virtual Desktop * describe the benefits and usage of Virtual Networks, VPN Gateway, Virtual Network peering, and ExpressRoute | Azure Fundamentals part 2: Describe core Azure services  [5 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-core-azure-services/ |  |  |
| **Week 4**  **Jan 31 - Feb 4** | **02 Describe Core Azure Services**  Describe core resources available in Azure:   * describe the benefits and usage of Container (Blob) Storage, Disk Storage, File Storage, and storage tiers * describe the benefits and usage of Cosmos DB, Azure SQL Database, Azure Database for MySQL, Azure Database for PostgreSQL, and SQL Managed Instance * describe the benefits and usage of Azure Marketplace   Introduction to Project 1 | Azure Fundamentals part 2: Describe core Azure services  [5 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-core-azure-services/ | Reading Submission  Labs 1-6  Quiz 2 | Labs 11.43%  Quiz 1.67% |
| **Week 5**  **Feb 7-11** | **03 Describe core solutions and management tools on Azure**  Describe core solutions available in Azure:   * describe the benefits and usage of Internet of Things (IoT) Hub, IoT Central, and Azure Sphere * describe the benefits and usage of Azure Synapse Analytics, HDInsight, and Azure Databricks * describe the benefits and usage of Azure Machine Learning, Cognitive Services and Azure Bot Service * describe the benefits and usage of serverless computing solutions that include Azure Functions and Logic Apps * describe the benefits and usage of Azure DevOps, GitHub, GitHub Actions, and Azure DevTest Labs | Azure Fundamentals part 3: Describe core solutions and management tools on Azure  [7 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-core-solutions-management-tools-azure/ |  |  |
| **Week 6**  **Feb 14-18** | **03 Describe core solutions and management tools on Azure**  Describe Azure management tools:   * describe the functionality and usage of the Azure Portal, Azure PowerShell, Azure CLI, Cloud Shell, and Azure Mobile App * describe the functionality and usage of Azure Advisor * describe the functionality and usage of Azure Resource Manager (ARM) templates * describe the functionality and usage of Azure Monitor * describe the functionality and usage of Azure Service Health | Azure Fundamentals part 3: Describe core solutions and management tools on Azure  [7 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-core-solutions-management-tools-azure/ | Reading Submission  Lab 7-11  Quiz 3 | Labs 9.52%  Quiz 1.67% |
| **Week 7**  **Feb 21-25** | **Review | Catch up** |  |  |  |
| **Study Week**  **Feb 28 - Mar 4** |  |  |  |  |
| **Week 8**  **Mar 7-11** | **04 Describe general security and network security features**  Describe Azure security features:   * describe basic features of Azure Security Center, including policy compliance, security alerts, secure score, and resource hygiene * describe the functionality and usage of Key Vault * describe the functionality and usage of Azure Sentinel * describe the functionality and usage of Azure Dedicated Hosts | Azure Fundamentals part 4: Describe general security and network security features  [3 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-general-security-network-security-features/ |  |  |
| **Week 9**  **Mar 14-18** | **04 Describe general security and network security features**  Describe Azure network security:   * describe the concept of defense in depth * describe the functionality and usage of Network Security Groups (NSG) * describe the functionality and usage of Azure Firewall * describe the functionality and usage of Azure DDoS protection   Introduction to Project 2 | Azure Fundamentals part 4: Describe general security and network security features  [3 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-general-security-network-security-features/ | Reading Submission  Project 1  Lab 12-13  Quiz 4 | Project 20%  Labs 3.80%  Quiz 1.67% |
| **Week 10**  **Mar 21-25** | **05 Describe identity, governance, privacy, and compliance features**  Describe core Azure identity services:   * explain the difference between authentication and authorization * define Azure Active Directory * describe the functionality and usage of Azure Active Directory * describe the functionality and usage of Conditional Access, Multi-Factor Authentication (MFA), and Single Sign-On (SSO) | Azure Fundamentals part 5: Describe identity, governance, privacy, and compliance features  [4 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-identity-governance-privacy-compliance-features/ |  |  |
| **Week 11**  **Mar 28- Apr 1** | **05 Describe identity, governance, privacy, and compliance features**  Describe Azure governance features:   * describe the functionality and usage of Role-Based Access Control (RBAC) * describe the functionality and usage of resource locks * describe the functionality and usage of tags * describe the functionality and usage of Azure Policy * describe the functionality and usage of Azure Blueprints * describe the Cloud Adoption Framework for Azure | Azure Fundamentals part 5: Describe identity, governance, privacy, and compliance features  [4 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-identity-governance-privacy-compliance-features/ |  |  |
| **Week 12**  **Apr 4- 8** | **05 Describe identity, governance, privacy, and compliance features**  Describe privacy and compliance resources:   * describe the Microsoft core tenets of Security, Privacy, and Compliance * describe the purpose of the Microsoft Privacy Statement, Product Terms site, and Data Protection Addendum (DPA) * describe the purpose of the Trust Center * describe the purpose of the Azure compliance documentation * describe the purpose of Azure Sovereign Regions (Azure Government cloud services and Azure China cloud services) | Azure Fundamentals part 5: Describe identity, governance, privacy, and compliance features  [4 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-identity-governance-privacy-compliance-features/ | Reading Submission  Labs 14-18  Quiz 5 | Labs 9.52%  Quiz 1.66% |
| **Week 13**  **Apr 11-15** | **06 Describe Azure cost management and Service Level Agreements**  Describe methods for planning and managing costs:   * identify factors that can affect costs (resource types, services, locations, ingress and egress traffic) * identify factors that can reduce costs (reserved instances, reserved capacity, hybrid use benefit, spot pricing) * describe the functionality and usage of the Pricing calculator and the Total Cost of Ownership (TCO) calculator * describe the functionality and usage of Azure Cost Management   Describe Azure Service Level Agreements (SLAs) and service lifecycles:   * describe the purpose of an Azure Service Level Agreement (SLA) * identify actions that can impact an SLA (i.e. Availability Zones) * describe the service lifecycle in Azure (Public Preview and General Availability) | Azure Fundamentals part 6: Describe Azure cost management and service level agreements  [3 modules]  https://docs.microsoft.com/en-us/learn/paths/az-900-describe-azure-cost-management-service-level-agreements/ | Reading Submission  Project 2  Lab 19-21  Quiz 6 | Project 20%  Labs 5.71%  Quiz 1.66% |
| **Week 14**  **Apr 18-22** | Test Review | Catch up | N/A | Test | Test 10% |

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