By the end of the course, you should be able to meet the following objectives:

- Assess the business and application requirements of the current environment
- Apply a framework to a design
- Analyze design choices and best-practice recommendations
- Create a design that ensures availability, manageability, performance, recoverability, and security
- Design the core management infrastructure for an enterprise
- Design the virtual data center for an enterprise
- Design the compute infrastructure for an enterprise
- Design the storage and networking infrastructures for an enterprise
- Design virtual machines to run applications in a vSphere infrastructure
- Design security, management, and recoverability features for an enterprise

Outline:

1. Course Introduction

- Introductions and course logistics
- Course objectives

2. Infrastructure Assessment

- Follow a proven process to design a virtualization solution
- Define customer business objectives
- Gather and analyze business and application requirements
- Document design requirements, constraints, assumptions, and risks
- Use a systematic method to evaluate and document design decisions
- Create a conceptual design

3. Core Management Infrastructure

- Determine the number of vCenter Server and VMware Platform Services Controller™ instances to include in a design
- Choose the appropriate platforms for vCenter Server components
- Choose the appropriate single sign-on identity source
- Choose the time synchronization method
- Choose methods to collect log files and ESXi core dumps
- Design a vCenter Server deployment topology that is appropriate for the size and requirements of the data center

4. Virtual Data Center Infrastructure

- Calculate total capacity requirements for a design
- Create a virtual data center cluster design that meets business and workload requirements
- Evaluate the use of several management services, such as VMware vSphere® High Availability and VMware vSphere® Distributed Resource Scheduler™, in the virtual data center
- Evaluate the use of resource pools in the virtual data center design

5. Compute Infrastructure

- Create a compute infrastructure design that includes the appropriate ESXi boot, installation, and configuration options
- Choose the ESXi host hardware for the compute infrastructure

6. Storage Infrastructure

- Calculate storage capacity and performance requirements for a design
- Evaluate the use of different storage platform and storage management solutions
- Design a storage platform and storage management architecture that meets the needs of the vSphere environment

7. Network Infrastructure

- Evaluate the use of different network component and network management solutions
- Design a network component architecture that includes information about network segmentation and virtual switch types
- Design a network management architecture that meets the needs of the vSphere environment

8. Virtual Machine Design

- Make virtual machine design decisions, including decisions about resources
- Design virtual machines that meet the needs of the applications in the vSphere environment and follow VMware best practices

9. Infrastructure Security

- Make security design decisions for various layers in the vSphere environment
- Design a security strategy that meets the needs of the vSphere environment and follows VMware best practices

10. Infrastructure Manageability

- Make infrastructure manageability design decisions that adhere to business requirements
- Design an infrastructure manageability strategy that meets the needs of the vSphere environment and follows VMware best practices

10. Infrastructure Recoverability

- Make infrastructure recoverability design decisions that adhere to business requirements
- Design an infrastructure recoverability strategy that meets the needs of the vSphere environment and follows VMware best practices