



## COURSE OUTLINE

### Section 1:

**Course Title:** Virtualization

**Course Code:** CNET-2210

**Course Description:** A study of the common virtualization platforms used in enterprise IT infrastructures. Students design, implement, and manage virtualized IT environments.

**Grade Scheme:** ☐ Pass/Fail ☒ Percentage Minimum Pass Mark: 60%

**Course Value:** Outcome hours OR 3 Credit(s) 60 (15 class + 45 lab) Hours

**Pre-requisites:** NONE

**Co-requisites:** CNET-2201 Network Analysis and Design

### Section 2:

#### Learning Outcomes and Competencies

#### 1. Explain virtualization and its use in enterprise IT systems.

- 1.1 Describe server, workstation, desktop, storage, and network virtualization.
- 1.2 Compare and contrast software and hardware based server virtualization.
- 1.3 Understand benefits of implementing Virtual Desktop Infrastructure (VDI).
- 1.4 Describe the benefits of virtualization to a business.
- 1.5 Compare and contrast virtualization products from the leading providers

#### 2. Implement virtualization to optimize availability, performance, and costs.

- 2.1 Use industry recommended guidelines/processes when implementing virtualization.
- 2.2 Measure existing workloads to determine physical hardware requirements for virtualization.
- 2.3 Determine hardware compatibility for a given virtualization product.
- 2.4 Determine the licensing, training, and hardware costs of virtualization.

- 2.5 Implement a virtualized infrastructure to meet business requirements.
- 2.6 Compare/Contrast different vendors and implementations of VDI technology.
- 2.7 Install, configure, and test a VDI implementation.
- 2.8 Implement vendor recommended best practices to maximize performance.

### 3. Manage virtualized infrastructures to maintain performance and uptime.

- 3.1 Use software tools to analyze performance and determine bottlenecks.
- 3.2 Perform backups of virtual machines.
- 3.3 Perform live migration of virtual machines.
- 3.4 Manage storage among elements in a virtual infrastructure.

### Section 3:

<b>Assessment Categories:</b>	Theory Tests and Exams	30%
	Labs and Assignments	30%
	Projects	30%
	Professionalism	10%

Research Component? ☐ Yes ☒ No

### Section 4:

(For administrative use only)

Is this course new? ☒ Yes ☐ No

Is this course replacing an existing course(s)? ☐ Yes ☒ No

If this course is replacing another, please record the name and code of the old course:

Course equivalents: NONE

Note: See Quality Procedure [A01](#) for more details.

Catalog Year of Original Course Implementation: 2015

Catalog Year of Current Version Implementation: 2015

Revision level: 3      Version: 2      Date: June/2016      Authorized by: MLGJ

**Accreditation and or Supporting Documents:** National Technology Benchmarks: Canadian Council of Technicians & Technologists; Discipline: Information Technology; Level: Technologist

**Additional Information:** None

**Subject matter expert(s):** Chris Arsenault

**Approved by:** (Program Manager)

**Paul Murnaghan**

Date Approved: **2016-06-30**

**Approved by:** (Curriculum Consultant)

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Date Approved: **2016-06-30**