



Course Information

Course Title	Computer Virtualization
Course Prefix, Num. and Title	ITNW 1313 - Computer Virtualization
Division	Technology and Business
Department	Computer Science
Course Type	WECM Course
Course Catalog Description	Implement and support virtualization of clients of servers in a networked computing environment. This course explores installation, configuration and management of computer virtualization workstation and servers.
Pre-Requisites	None
Co-Requisites	None

Semester Credit Hours

Total Semester Credit Hours (SCH): Lecture Hours:	3:2:2
Lab/Other Hours	
Equated Pay Hours	3
Lab/Other Hours Breakdown: Lab Hours	3
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Prepared by:		
Department Head:		
Division Chair:		
Dean/VPI:		
Approved by CIR:		

Additional Course Information

Topical Outline: Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non-lecture instruction).

1. Understanding Virtualization
2. Describe Hypervisors and their roles
3. Understand a virtual machine and how it works
4. Create a Virtual machine
5. Installing operating systems on a virtual machine (Windows and Unix)
6. Manage CPUs, Memory and storage on a virtual machine
7. Network virtual machines
8. Clone and move virtual machines
9. Understanding availability of virtual machines
10. Securing virtual machines
11. Deploy applications on a virtual machine

Course Learning Outcomes:

Learning Outcomes – Upon successful completion of this course, students will:

1. Explain virtual infrastructure overview and design principles
2. Install and configure virtual machine managers
3. Create and network virtual machines
4. Set priorities for accessing resources
5. Move and clone virtual machines
6. Ensure high availability for applications within virtual machines
7. Understanding virtualization in regards to computers, networks and storage
8. Explain what constitutes a hypervisor
9. Create a virtual machine (VM)
10. Install operating systems (such as Windows, Unix and Server) on a VM
11. Manage CPUs, RAM and storage on a VM
12. Managing additional devices in VMs

Methods of Assessment:

All outcomes will be assessed by one or more of the following:

Individual/Group Projects
Tests and Quizzes
Lab Assignments
Final Exam
Skills Exam

Required text(s), optional text(s) and/or materials to be supplied by the student:

VMware vSphere ICMV6.0 - eText (English)

Suggested Course Maximum:

18

List any specific or physical requirements beyond a typical classroom required to teach the course.

NetLab - 3 Virtual Servers running vSphere V6.0 or better

Classroom computer for each student.

The course maximum is set by current equipment contained in the lab.

Course Requirements/Grading System: Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course.

Final Exam: 10-20%

Labs/Homework: 40-60%

Tests: 25-50%

Grade System:

100 -90 = A

89 - 80 = B

79 - 70 = C

69 - 60 = D

and below = F

Curriculum Checklist:

- Administrative General Education Course** (from ACGM, but not in WCJC Core) – No additional documents needed.
- Administrative WCJC Core Course.** Attach the Core Curriculum Review Forms
 - Critical Thinking
 - Communication
 - Empirical & Quantitative Skills
 - Teamwork
 - Social Responsibility
 - Personal Responsibility
- WECM Course** -If needed, revise the Program SCANS Matrix and Competencies Checklist