 Wharton County Junior College

Administrative Master Syllabus

Course Information

Course Title	Computer Virtualization
Course Prefix, Num. and Title	ITNW 1313 Computer Virtualization
Division	Technology and Business
Department	Information Technology and Networking
Course Type	WECM Course
Course Catalog Description	Implement and support virtualization of clients and 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: Lab/Other Hours	3:2:2
Equated Pay Hours	3
Lab/Other Hours Breakdown: Lab Hours	2
Lab/Other Hours Breakdown: Clinical Hours	0
Lab/Other Hours Breakdown: Practicum Hours	0
Other Hours Breakdown	0

Approval Signatures

Title	Signature	Date
Department Head:	Muna Saqer, Comp Sci and IT&N Program Director	11-16-2023
Division Chair:	David Kucera, Technology & Business Division	11-16-2023
VPI:		

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).

- Understanding Virtualization
- Describe Hypervisors and their roles
- Understand a virtual machine and how it works
- Create a Virtual machine
- Installing operating systems on a virtual machine (Windows, Linux and Windows Server)
- Manage CPUs, Memory and storage on a virtual machine
- Network virtual machines
- Clone and move virtual machines
- Understanding availability of virtual machines
- Securing virtual machines
- Deploy applications on a virtual machine

Course Learning Outcomes:

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

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

Methods of Assessment: All outcomes will be accessed by one or more of the following:

- Individual/Group Projects
- Tests and Quizzes
- Labs/Homework
- Final Exam
- Skills Exam

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

Mastering Windows Server 2019 or current version. Author: Jordan Krause. Publisher: O'Reilly. (Second or latest edition)
Mastering Windows Server 2022 - Fourth Edition: Comprehensive administration of your Windows Server environment. Jordan Krause. Publisher: Packt. (Forth or latest edition).

Suggested Course Maximum:

18

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

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:
90-100% .... =A
80-89% .... =B
70-79% .... =C
60-69% .... =D
Below 60% .... =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