

- A. <u>Academic Division</u>: Business, Industry, and Technology
- B. <u>Discipline</u>: Information Technology Networking
- C. <u>Course Number and Title</u>: ITEC2610 Implementing Windows Server
- D. <u>Course Coordinator</u>: Jesse Payne <u>Assistant Dean</u>: Toni Johnson, PhD

Instructor Information:

- Name: Click here to enter text.
- Office Location: Click here to enter text.
- Office Hours: Click here to enter text.
- Phone Number: Click here to enter text.
- E-Mail Address Click here to enter text.
- E. <u>Credit Hours</u>: 3 Lecture: 2 hours Laboratory: 2 hours
- F. <u>Prerequisites</u>: ITEC 1420 (minimum grade of C- required) or ITEC1610 (minimum grade of C- required)
- G. Syllabus Effective Date: Fall 2018
- H. <u>Textbook(s) Title</u>:
 - TBD
- I. <u>Workbook(s) and/or Lab Manual</u>: An external USB 3.0 hard drive, 500 gigabytes or larger is required.
- J. Course Description: This course focuses on the installation, storage, and compute features in Windows Server 2016. It covers general installation tasks and considerations, and the management of images for deployment. Upon successful completion of the course, students will be able to implement and configure Windows Server compute resources and Hyper-V virtualization services in an enterprise environment. This course prepares students for Microsoft's 70-740 certification exam: Installation, Storage, and Compute with Windows Server 2016.
- K. <u>College-Wide Learning Outcomes</u>:

| College-Wide Learning Outcome | Assessments How it is met & When it is met |
|--|--|
| Communication – Written | |
| Communication – Speech | |
| Intercultural Knowledge and Competence | |
| Critical Thinking | |
| Information Literacy | |
| Quantitative Literacy | |

L. <u>Course Outcomes and Assessment Methods</u>:

Upon successful completion of this course, the student shall:

| | Outcomes | Assessments – How it is met & When it is met |
|----|--|---|
| 1. | Install, upgrade, and migrate servers for a given set of conditions | Weeks 1-2 tests, labs, midterm/final exam |
| 2. | Implement and configure Windows server storage solutions for a given set of conditions | Weeks 3-4 tests, labs, midterm/final exam |
| 3. | Install and configure Hyper-V | Weeks 5-8 tests, labs, midterm/final exam |
| 4. | Configure virtual machine (VM) settings | Weeks 5-8 tests, labs, midterm/final exam |
| 5. | Configure Hyper-V storage and networking | Weeks 5-8 tests, labs, midterm/final exam |
| 6. | Deploy and manage Windows Containers | Week 9 tests, labs final exam |
| 7. | Implement high availability and disaster recovery options in Hyper-V | Weeks 10-13 tests, labs final exam |
| 8. | Implement and manage failover clustering and load balancing | Weeks 10-13 tests, labs final exam |
| 9. | Monitor and maintain server installations for a given set of conditions | Weeks 14-15 tests, labs final exam |

M. <u>Topical Timeline (Subject to Change)</u>:

Weeks 1–2: Install Windows Servers in Host and Compute Environments (10-15%)

- a. Install, upgrade, and migrate servers and workloads
- b. Create, manage, and maintain images for deployment

Weeks 3-4: Implement Storage Solutions (10-15%)

- a. Configure disks and volumes
- b. Implement server storage
- c. Implement data deduplication

Weeks 5-8: Implement Hyper-V (20-25%)

- a. Install and configure Hyper-V
- b. Configure virtual machine (VM) settings
- c. Configure Hyper-V storage
- d. Configure Hyper-V networking

Week 9: Implement Windows Containers (5-10%)

- a. Deploy Windows containers
- b. Manage Windows containers

Weeks 10–13: Implement High Availability (30-35%)

- a. Implement high availability and disaster recovery options in Hyper-V
- b. Implement failover clustering
- c. Implement Storage Spaces Direct
- d. Manage failover clustering
- e. Manage VM movement in clustered nodes
- f. Implement Network Load Balancing (NLB)

Weeks 14–15: Maintain and Monitor Server Environments (10-15%)

- a. Maintain server installations
- b. Monitor server installations

N. <u>Course Assignments</u>:

- 1. Tests
- 2. Labs
- 3. Midterm/Final Exams
- 4. Final Project (optional)

O. <u>Recommended Grading Scale</u>:

| NUMERIC | GRADE | POINTS | DEFINITION |
|---------|-------|--------|---------------|
| 93–100 | A | 4.00 | Superior |
| 90–92 | A- | 3.67 | Superior |
| 87–89 | B+ | 3.33 | Above Average |
| 83–86 | В | 3.00 | Above Average |
| 80-82 | B- | 2.67 | Above Average |
| 77–79 | C+ | 2.33 | Average |
| 73–76 | С | 2.00 | Average |
| 70-72 | C- | 1.67 | Below Average |
| 67–69 | D+ | 1.33 | Below Average |
| 63-66 | D | 1.00 | Below Average |
| 60-62 | D- | 0.67 | Poor |
| 00-59 | F | 0.00 | Failure |

P. <u>Grading and Testing Guidelines</u>:

Click here to enter text.

Q. <u>Examination Policy</u>:

Click here to enter text.

R. <u>Class Attendance and Homework Make-Up Policy</u>:

Click here to enter text.

S. <u>Classroom Expectations</u>:

Click here to enter text.

T. <u>College Procedures/Policies</u>:

Important information regarding College Procedures and Policies can be found on the <u>syllabus</u> <u>supplement</u> located at https://sharept.ncstatecollege.edu/committees/1/curriculum/SiteAssets/SitePages/Home/SYLLABUS %20SUPPLEMENT.pdf

The information can also be found Choose an item.