CDS511 Introduction to Information Systems and Operating Systems

(3 credit hours)

Course Syllabus

Course Description

Introduction to Information Systems and Advanced Operating Systems addresses a broad range of topics in operating system design and implementation. Operating system structuring, synchronization, communication, and failure and recovery management will all be covered.

Course Learning Outcomes

By the end of this course, you will be able to:

1. Identify current and emerging network protocols and communication systems.
2. Explain the basic principles used in the design of modern operating systems.
3. Illustrate network systems management principles and architecture.
4. Describe the scope, purpose and value of information systems in an organization.
5. Determine strengths and weakness in the leading processes for securing Information Systems.
6. Compare modern operating systems in regard to their functionality, management and architecture.

Prerequisites/Corequisites

None.

Required Textbook(s) and Resources

McHoes, A. & Flynn, I. (2018). *Understanding operating systems*. Boston, MA, USA: Cengage Learning.

Be sure to also review the weekly **Explore** sections for additional library or web resources. For access to databases, research help, and writing tips, visit the Tiffin University Library.

Time Commitment

Effective time management is possibly the single most critical element to your academic success. To do well in this online class you should plan your time wisely to maximize your learning through the completion of readings, discussions, and assignments. Because of our accelerated, seven-week term, TU online courses are designed with the expectation that you dedicate a little over **six (6)** hours per credit hour to course activities and preparation **each**

week. For example, for successful completion of a three-credit, seven-week online course you should reserve roughly **twenty (20) hours per week**.

To help plan your time and keep on track toward successful course completion, note the distinctive rhythm of assignment due dates:

1. All times assume Eastern Time (GMT-4).
2. Weeks begin at 12:00 a.m. ET on Monday and end at 11:55 p.m. ET on Sunday.
3. Unless otherwise noted, initial assignments or discussion posts are due by **11:55 p.m. ET** on **Wednesdays.**
4. Additional assignments or follow-up discussion posts are due by **11:55 p.m. ET** on **Saturdays, and**
5. Major assignments and reflections are typically due by **11:55 p.m. ET** on **Sundays.**

Learning Activities

Activities assigned will consist of multiple formats including forums, research papers, algorithms that require problem solving skills and virtual machines. All activities assigned apply to our weekly outcomes which then work towards are course learning outcomes. All activities have a real-world component including research and understanding of new equipment, comparisons of equipment specifications, and presentations on emerging security and technology in the workplace.

Grading

The chart below identifies the individual contributions from each type of activity, per week.

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Total
Discussions 50	**Discussions** 40	**Discussions**	**Discussions** 40	**Discussions** 40	**Discussions** 20 65	**Discussions**	**255**
Assignments 30 45 35	**Assignments** 45 16 40 26	**Assignments** 18 60 50 15	**Assignments** 18 30 20	**Assignments** 17 45	**Assignments** 25 45	**Assignments** 140 25	**745**
Extra Credit 3	**Extra Credit** 3	**Extra Credit** 3	**Extra Credit** 3	**Extra Credit** 3	**Extra Credit** 3	**Extra Credit** 3	
160	**167**	**143**	**108**	**102**	**155**	**165**	**1000**

Grading Scale

A: 90-100% | B: 80-89% | C: 70-79% | F: <69%

Course Schedule and Weekly Checklist

Week 1 - Operating Systems/Memory

- ☐ WED: Activity 1.1: Meet Your Peers - Initial Post
- ☐ SUN: Activity 1.2: Timeline - Evolution of the Operating System
- ☐ SUN: Activity 1.3: Job Posting
- ☐ SUN: Activity 1.4: (Written Assignment) Business Report - Systems Design
- ☐ SUN: Activity 1.5: Weekly Reflection (Extra Credit)

Week 2 - Virtual Memory/Processor Management

- ☐ WED: Activity 2.1 (Discussion): Pick a Topic - Initial Post
- ☐ SAT: Activity 2.1 (Discussion): Pick a Topic - Secondary Posts
- ☐ SUN: Activity 2.2: Report - Max Amount of Virtual Memory
- ☐ SUN: Activity 2.3: Chapter 3 Exercises
- ☐ SUN: Activity 2.4: Create a Flyer

- ☐ SUN: Activity 2.6: Weekly Reflection (Extra Credit)
- ☐ SUN: Activity 2.5: Chapter 4 Exercises

Week 3 - Process Synchronization/Concurrent Processes

- ☐ SUN: Activity 3.1: Chapter 5 Exercises
- ☐ SUN: Activity 3.2: Research Document
- ☐ SUN: Activity 3.3: 3D Printer Presentation
- ☐ SUN: Activity 3.4: Chapter 6 Exercises
- ☐ SUN: Activity 3.5: Weekly Reflection (Extra Credit)

Week 4 - Device and File Management

- ☐ WED: Activity 4.1 (Discussion): Create a Scenario - Initial Post
- ☐ WED: Activity 4.2: Magnetic Tape Calculations
- ☐ SAT: Activity 4.1 (Discussion): Create a Scenario - Secondary Posts
- ☐ SUN: Activity 4.3: Rotations Speeds Report
- ☐ SUN: Activity 4.4: Chapter 8 Exercises
- ☐ SUN: Activity 4.5: Weekly Reflection (Extra Credit)

SUN: Week 5 - Networks

- ☐ WED: Activity 5.1 (Discussion): Virtual Field Trip - Initial Post
- ☐ SAT: Activity 5.1 (Discussion): Virtual Field Trip - Secondary Posts
- ☐ SUN: Activity 5.2: Chapter 9 Exercises
- ☐ SUN: Activity 5.3: Report - Virtual Private Networks
- ☐ SUN: Activity 5.4: Weekly Reflection (Extra Credit)

Week 6 - Vulnerabilities

- ☐ WED: Activity 6.1 (Discussion): Technology Usage and Ethics Policies - Initial Post
- ☐ WED: Activity 6.2: (Discussion) Patch Installation Instruction Manual - Initial Post
- ☐ SAT: Activity 6.1 (Discussion): Technology Usage and Ethics Policies - Secondary Posts
- ☐ SAT: Activity 6.2: (Discussion) Patch Installation Instruction Manual - Secondary Posts
- ☐ SUN: Activity 6.3 (Database): Security Video Summary
- ☐ SUN: Activity 6.4: Create PowerPoint - HIPAA Requirements

- ☐ SUN: Activity 6.5: Weekly Reflection (Extra Credit)

Week 7 - Virtual Machines

- ☐ WED: Activity 7.1: Virtual Machine Project
- ☐ SAT: Activity 7.2: Peer Review
- ☐ SUN: Activity 7.3: Weekly Reflection (Extra Credit)

Tips for Success

Online learning requires self-discipline and self-direction. As seekers of the truth, we should be willing to challenge one another's academic work in a spirit of respectful comradery. Your course is a place for you to grow as you benefit from the expertise, experience, and diverse perspectives of your instructor and peers. Constructive feedback will challenge you to stretch your own thinking, thereby expanding your knowledge and understanding.

To get the most out of your learning experience, you should actively engage (participate) in **ALL** course activities. Course elements are arranged chronologically. To complete a week, simply work your way "down the page" through all of the course materials and activities.

For More Information:

Be sure to review the Support, Policies, and Procedures addendum.