CSCE 311 - Operating Systems
- **Credit Hours**: 3 hours
- **Contact Hours:** 3 lecture hours
- **Instructor:** Dr. Rose
- **Required Textbooks:**
    - Abraham Silberschatz, Peter Baer Galvin, and Greg Gagne, *Operating System Concepts,* 10th Edition, John Wiley & Sons, 2021.
- **Bulletin Description:** Operating system structure and function; process implementation, scheduling, and synchronization; memory management; security; naming protection; resource allocation; network file systems.
- **Prerequisites:** CSCE 240, CSCE 210 or CSCE 212
- **Required Course** in CE and CS
- **Course Outcomes:** Students will be able to:
    1. Describe the major components of an operating system and state their functions and purpose.
    2. Implement and use algorithms for the management and programming of concurrent processes.
    3. Implement and use algorithms for resource allocation and management in computer systems.

- **Student Outcomes addressed by course**

Program	Student Outcomes Addressed
Computer Engineering	1, 2
Computer Information Systems	N/A
Computer Science	1, 2

- **Topics covered**
    1. Hardware and architecture support for OS
    2. Process description and Control
    3. Concurrency
    4. Scheduling
    5. Memory Management
    6. File Management
    7. Distributed Systems and networks
    8. Protection and security of system resources
    9. Real-world examples of implementations