



CSC 476 Operating Systems

(3 contact hours – 2 lab hours - 3 credits)

Syllabus¹

- **General Information**

Instructor	
Office	
Phone	
Class Time	
Class Location	
Office Hours	
Teaching Assistant	

- **Required Textbook**

Modern Operating Systems, 4th edition, A. Tanenbaum and H. Bos, Pearson, 2014, ISBN: 978-1292061429.

- **Supplementary Textbook**

Operating System Concepts, 9th edition, A. Silberschatz, P. Galvin and G. Gagne, Wiley, 2013, ISBN: 978-1118093757.

- **Course Description**

Survey of operating systems issues. Introduction to hardware and software components including: processors, peripherals, interrupts, management of processes, threads and memory, deadlocks, file systems, virtual machines and I/O systems.

- **Course Prerequisites**

CSC 271 & CSC 313

- **Course Category**

Required

¹ This syllabus may change as needed. In such a case, students will be informed accordingly

- **Course Outcomes:**

At the completion of this course, students will be able to:

- Identify the components of operating system process management. [ABET a]
- Describe concurrency, synchronization and deadlock issues. [ABET a]
- Describe and analyze CPU scheduling techniques. [ABET a, j]
- Describe and analyze memory management techniques. [ABET a, j]
- Describe and analyze file system interfaces and management. [ABET a, j]
- Write a report on operating systems-related subjects. [ABET h]
- Communicate effectively on these issues, orally and in writing. [ABET f]
- Work effectively within a team. [ABET d]
- Install and use LINUX / UNIX operating systems. (Lab) [ABET i]
- Use advanced LINUX / UNIX threads in hands on exercises. (Lab) [ABET a, i]

- **Tentative Schedule**

Topic	Week
Syllabus	1
Ch1: Introduction	1,2
Ch2: Processes and Threads	3-6
Ch6: Deadlocks	7
Ch3: Memory Management	8-10
Ch4: File Systems	11-13
Ch5: Input/Output	14,15

- **Grading Scheme**

Quizzes	15%
Lab Exercises	20%
Mini-project	5%
Midterm Exam	30%
Final Exam	30%