# STUDENT INFORMATION SHEET
# CPSC:4/526, OPERATING SYSTEMS, SPRING 2025

## Course Information

- **Days/Times/Place**:

  | | | |
  |---|---|---|
  | CPSC 426 001 | TR 9:15 – 10:30 AM | BCAS 134 |
  | CPSC 526 001 | TR 9:15 – 10:30 AM | BCAS 134 |

- **Web page** : *https://timoneilu.github.io/teaching/cs426/*
  *Consult the "Info Sheet" link there for content regarding diversity, the ethical use of AI tools, accessibility, Title IX and sexual harassment and violence.*
- **Prerequisites**: One of
  - o CPSC 210 (Computer Science II) and CPEN 320 (Computer Systems);
  - o Equivalents with grades of C- or better; or
  - o Permission.

## Course Description

**Course Rationale** :

Be it Linux, OS X or MS Windows, the operating system defines a user's view of a computer and the environment in which programs run. This course focuses on aspects of o.s. design and construction which affect the behavior of application programs.

**Learning Objectives** :

- To demonstrate a basic knowledge of the abstractions and services presented by an o.s. as the basic building blocks of applications.
- To utilize the presented course concepts by writing a series of programs using the C or C++ programming language and the Linux operating system.
- To exhibit the ability to teach and learn from others.

## Course Personnel

| | |
|---|---|
| **Instructor** : | Dr. Tim O'Neil |
| **Contact Info** : | *Office* : BCAS 221A        *Phone* : (330) 972 – 6492        E-*mail* : *toneil@uakron.edu* |
| **Office Hours** : | Tues 1045 – 1215 and Thurs 215 – 315 in BCAS 221A; and by appointment. |

## Course Outline

**Textbook** :   Silberschatz, Galvin and Gagne, *Operating System Concepts* (10th Ed.) (Wiley, 2018).
**Topics** :

*Overview*: Introduction, O.S. Structures
*Process Management*: Processes, Threads and Concurrency, CPU Scheduling
*Process Synchronization*: Synchronization Tools, Synchronization Examples, Deadlocks
*Memory Management*: Main and Virtual Memories
*Storage Management*: Mass Storage Structure, I/O Systems; File System Interface, Implementation, and Internals
*Advanced Topics*: Security & Protection, Virtual Machines, Networks & Distributed Systems, Linux Case Study

## Course Grading

**Items** :

| | |
|---|---|
| 27% | Midterm exam in-class (Thursday February 27 in class) |
| 35% | Final exam (Tuesday May 6, 12:15 PM) |
| 30%/10% each | 3 programming projects |
| 8% | Homework, Quizzes and Class Participation |

**Approximate Scale** :

A 90 – 100, B 80 – 89, C 70 – 79, D 60 – 69. Plus/minus grades assigned at my discretion.

# Other Class Policies, Spring Semester 2025

## Registration/Drop/Withdrawal

•   Students whose names do not appear on the university's official class list by **Sunday January 19** will not be permitted to participate (attend class, take exams or receive credit).

•   Students may drop a course online (without my signature) through **Sunday January 26**. Courses dropped by this date will not appear on a student's transcript.

•   Students may withdraw from a course online (without my signature) through **Sunday March 2**. A "WD" will appear on the student's transcript.

## Scholastic Honesty and Professional Integrity

•   All work turned in for grade is to be exclusively the work of the student(s) whose name(s) appear(s) on the work. Incidents of academic dishonesty (such as cheating or plagiarism) will be handled in accordance with university policy by the Office of Student Conduct. In particular, the use of sources other than the textbook without citation, including other books, AI tools like ChatGPT and the World Wide Web, will be viewed as plagiarism. (If you're unsure of what constitutes plagiarism, consult the links on my home page.)

•   Some of the materials in this course are possibly copyrighted. They are intended for use only by students registered and enrolled in this course and only for instructional activities associated with and for the duration of this course. They may not be retained in another medium or disseminated further. They are provided in compliance with the provisions of the TEACH Act (2002).

## In-Class Conduct During Lectures

•   Students are expected to attend all class meetings prepared (i.e. carrying the textbook, note paper, writing instruments, etc.) and participate. You may be dropped from this course and receive an "F" on your transcript for repeated absences (BOT Rule 3359-20-05D, effective 2/14/2013).

•   All cell phones, etc., are to be turned off or switched to manner mode during class. Portable computers will be permitted until this privilege is abused.

## In-Class Quizzes

•   Written resources (i.e. textbook and printed notes) may be used during in-class quizzes; *electronic ones may not*. In-class quizzes may not be made up if absent, late or unprepared.

## In-Class Exams

•   The use of electronic devices is forbidden during in-class exams. Food and drink are also banned.

•   Students who leave the room during an exam, or who use electronic devices during an exam, may not continue working on that exam.

•   Make-up exams will be given only under extraordinary circumstances. Arrangements should be made prior to the exam and proof furnished.

## Homework and Programming Assignments

•   There will be no extra credit assignment or do-overs so don't even ask.

•   Homework assignments and projects are to be submitted electronically in the manner specified in class. Submissions to my personal e-mail account will be ignored.

•   Late assignments will be accepted but penalized according to the following scale: 10% penalty for one calendar day late, 25% for 2, 50% for 3, 75% for 4, and 100% (i.e. no credit) for 5 calendar days (i.e. one week) late. An exception will be made only for medical emergencies.

•   All programming assignments must be completed within 10 calendar days of the original due dates to be eligible for a passing grade.

•   All programming assignments will be graded according to how well they execute on the computers in CAS 241 or 254. It is your responsibility to check your work on our equipment prior to submission.

•   All class assignments must be submitted by 5:00 PM on **Friday May 2**. Nothing will be accepted after this time.

•   Students have one week from the return of a graded assignment to seek corrections from me regarding grading; after that no changes will be made to scores.

**DISCLAIMER**: Save for changes that substantially affect implementation of the evaluation (grading) statement, this document is a guide for the course and is subject to change with advance notice.