

CSE 2431 Systems II – Introduction to Operating Systems
Fall 2021
Tuesday/Thursday 3:55pm – 5:15pm
Cockins Hall 312



Department of
Computer Science and Engineering

<http://www.cse.ohio-state.edu>

Contact Information:

Anthony Baietto

Email address: baietto.2@osu.edu

Office: **Dreese Lab 778**

Office Hours: **Tuesday/Thursday 12:00pm – 3:30pm**

Undergraduate/Graduate Student Grader(s):

Bobby Spech

Email address: spech.111@osu.edu

Office:

<https://osu.zoom.us/j/95081658262?pwd=amxlUXZjVmo1SnNNTENEc0xKazRJZz09>

Office Hours: **Wednesday 3:00pm – 4:00pm**

Ben He

Email address: he.1658@osu.edu

Office:

<https://osu.zoom.us/j/7140611416?pwd=Y2JaVGRRacG1vaktIbWVocWpXWEVRUT09>

Office Hours: **Wednesday 11:00am – 12:00pm**

Description:

Introduction to operating system concepts: process, CPU scheduling, memory management, file system and storage, and multi-threaded programming.

Prerequisites:

2421, or 2451 and ECE 2560; and enrollment in CSE, CIS, Data Analytics, or ECE majors.

Exclusions:

Not open to students with credit for CSE 5431.

Course Goals:

- Be competent with process concepts and CPU scheduling.
- Be competent with memory hierarchy and memory management.
- Be familiar with process control blocks, system calls, context switching, interrupts, and exception control flows.
- Be familiar with process synchronization, inter-process communication, and threads.
- Be familiar with multi-threaded programming.
- Be familiar with file systems and disk scheduling algorithms and I/O.
- Be exposed to security.

Text:

Required: *Operating System Concepts*, Silberschatz, Galvin, Gagne, 9th or 10th Edition, Wiley

The eBook can be accessed for free through the course Carmen website. For those students who prefer a hardcopy, there will be a limited supply available through OSU Barnes & Noble.

Student Companion Website for *Operating System Concepts*:

<http://bcs.wiley.com/he-bcs/Books?action=index&itemId=1118063333&bcsId=7887>

Optional: *Computer Systems: A Programmer's Perspective*, Bryant, O'Hallaron, 2nd Edition, Pearson Prentice-Hall

Topics:

- Introduction to operating systems
- Process concepts, scheduling, synchronization, deadlocks
- Multi-thread programming
- Memory hierarchy and memory management
- File systems
- Disk allocation, scheduling
- I/O
- Security

Student Conduct:

Students are required to follow the Ohio State “Code of Student Conduct” which can be found at https://trustees.osu.edu/sites/default/files/documents/2019/08/CodeStudentConduct_0.pdf.

Among other restrictions, pay specific attention to the section on Academic Misconduct.

Students are prohibited from:

- Providing or receiving information during exams
- Receiving assistance on homework and lab assignments
- Providing assistance on homework and lab assignments to students in the course during this or any other semester
- Submitting plagiarized work for credit

Faculty are required by the University to report any suspected violation of these conditions to the Council on Academic Misconduct (COAM).

More information about the Ohio State “Code of Student Conduct” can be found at <https://studentconduct.osu.edu/> and more information pertaining to COAM and their hearing processes can be found at <https://oaa.osu.edu/academic-integrity-and-misconduct>.

Grading:

Lab Assignments (4-5)	35%
Homework Assignments (3-4)	10%
Midterm Exam	20%
Final Exam	35%

Lab Assignments

Programming assignments/labs will be assigned during class. Labs must be submitted to the CarmenCanvas Dropbox by 11:59pm on the date due as specified on the assignment. Any additional hardcopy materials will be due at the next class after the submission date. A late penalty of **10% per hour** will be assessed. For instance, if a lab is submitted between 12:00am and 12:59am, there will be a 10% penalty.

Labs must be the student’s own work!

Homework Assignments

Homework will be assigned in class and is due at the **start** of class on the date specified on the assignment. The homework can be handed in anytime until the **start** of the next class for a **30%** penalty. **No** assignments will be accepted after that time. All homework must be typed except for needed diagrams which can be drawn and included as images.

Homework must be the student’s own work!

Midterm Exam

The midterm exam will be closed notes and closed book.

No calculators, phones, laptops, smartwatches, etc. are permitted.

Final Exam

The final exam is **comprehensive**.

The final exam will be closed notes and closed book.

No calculators, phones, laptops, smartwatches, etc. are permitted.

The exam date and time are determined by the OSU Registrar's Office, and the exam cannot be taken early.

If there are unforeseen emergencies that impact the grading scheme, appropriate adjustments will be made.

Attendance:

Attendance will be taken during class. It is the student's responsibility to find out what material was missed or assignments given if unable to attend class. Makeup exams require that appropriate documentation be provided ahead of time and are up to the discretion of the instructor.

Communication:

[CarmenCanvas](#) will be used for posting course materials and announcements as well as a student discussion platform for the course. Some examples of acceptable topics to discuss include:

- General information
- Concepts as related to lecture or assignments
- Interpretation of assignments
- Problems with coding such as syntax and execution errors, etc.

Please do not post answers to homework problems, and do not post any code for the programming assignments.

Students are responsible for any announcements/information provided on CarmenCanvas.

Important Dates:

First Day of Class	Tuesday, August 24th
Last Day to Drop Class Without 'W'	Friday, September 17 th
Autumn Break NO CLASS	Thursday, October 14th
Midterm Exam	Thursday, October 28th Location: Cockins Hall 312
Last Day to Drop Class	Friday, October 29 th
Veterans Day NO CLASS	Thursday, November 11th
Thanksgiving NO CLASS	Thursday, November 25th
Last Day of Class	Tuesday, December 7th
Last Day to Fill Out Student Evaluation of Instruction (SEI)	Thursday, December 9 th
Final Exam	Wednesday, December 15th 4:00pm – 5:45pm Location: Cockins Hall 312

Lab and Homework Assignment due dates will be assigned on CarmenCanvas.