

COSC 3360 / 6310 COURSE SYLLABUS

Semester and Year the Course is Offered:	Spring 2021
Department:	Computer Science
Course Number and Name:	3360 - Fundamentals of Operating Systems
Instructor:	Carlos Alberto Rincon Castro
Email Address:	carincon AT uh DOT edu
Class Schedule:	Tu and Th 4:00 pm. to 5:30 pm. (MS Teams).
Office Hours:	Tu and Th from 2:00 pm. to 3:00 pm. (MS Teams).
Course Web Page:	UH Blackboard Official Website Moodle server (moodle2 DOT cs DOT uh DOT edu)
Teaching Assistants:	TBA Office: MS Teams Hours: TBA Email: TBA

NOTES:

- The information contained in this class syllabus is subject to change. Students are expected to be aware of any additional course policies presented by the instructor during the course.
- Computer and internet access required for course. For the current list of minimum technology requirements and resources, copy/paste/navigate to the URL <http://www.uh.edu/online/tech/requirements>. For additional information, contact the office of Online & Special Programs at UHOnline@uh.edu or 713-743-3327.

LEARNING OBJECTIVES

At the end of this course, the student should be able to:

- Describe the key functions of an operating system and its relationship with the components of a computer system.

- Understand the process management aspects of the operating system: control and description of processes, threads, interprocess communication, and concurrency mechanisms.
- Explain how operating systems schedule processes and threads.
- Understand the different memory management solutions provided by the operating system.
- Understand the I/O management tools and file system design aspects and implementation.

TENTATIVE LIST OF DISCUSSION/LECTURE TOPICS

WEEKS	TOPIC
1 – 4	UNIT 1: Computer Systems Overview Operating Systems Overview Processes: Description and Control, Threads.
2/16	Exam Unit 1
5 – 10	UNIT 2: Interprocess communication. Processes concurrency: Mutual exclusion and synchronization, Deadlock and starvation
3/30	Exam Unit 2
11 – 15	UNIT 3: Uniprocessor Scheduling and Multiprocessor Scheduling Memory management and Virtual Memory I/O and File Systems
5/11	Exam Unit 3 (Finals' week, 5pm-7pm)

TENTATIVE PROGRAMMING ASSIGNMENTS SCHEDULE

DATES	TOPIC
2/21	ASSIGNMENT 1: Processes and Threads
3/28	ASSIGNMENT 2: Interprocess Communication
5/2	ASSIGNMENT 3: Interprocess Synchronization

GRADING

Evaluation	%
Exam Unit 1	20
Exam Unit 2	20
Exam Unit 3	20
Programming Assignment 1	10
Programming Assignment 2	15
Programming Assignment 3	15

GRADING SCALE

A \geq 92.5 Excellent	A- \geq 89.5 and $<$ 92.5 Outstanding	B+ \geq 86.5 and $<$ 89.5 Very Good
B \geq 83.5 and $<$ 86.5 Good	B- \geq 79.5 and $<$ 83.5 Above Average	C+ \geq 76.5 and $<$ 79.5 Very Good
C \geq 72.5 and $<$ 76.5 Average	C- \geq 69.5 and $<$ 72.5 Low Average	D+ \geq 65.5 and $<$ 69.5 Below Average
D \geq 62.5 and $<$ 65.5 Poor	F $<$ 62.5 Failing	

TEXTBOOK

William Stalling. *Operating Systems: Internals and Design Principles*. Seventh Edition. Prentice Hall. 2011.

Other Useful Books:

- Tanenbaum, *Operating Systems: Design and Implementation*
- Silberschatz, Galvin. *Operating System Concepts*.
- Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau, *Operating Systems: Three Easy Pieces*, <http://pages.cs.wisc.edu/~remzi/OSTEP/>. (Free online)

IMPORTANT NOTES

- All programming assignments will be in C or C++ under Linux and submitted through the Moodle server.
- Assignments must be submitted on the due date. No late or email submissions will be accepted.
- Academic Honor Code: **Cheating** and/or **plagiarism will not be tolerated**. It is each student's responsibility to read and understand UH Academic Honesty Policy (<https://www.uh.edu/provost/policies/honesty/documents-honesty/academic-honesty-policy.pdf>).

COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS) STATEMENT

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling **713-743-5454** during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the "Let's Talk" program, a drop-in consultation service at convenient locations and hours around campus: http://www.uh.edu/caps/outreach/lets_talk.html

EXCUSED ABSENCE POLICY

Regular class attendance, participation, and engagement in coursework are important contributors to student success. Absences may be excused as provided in the University of Houston [Undergraduate Excused Absence Policy](#) and [Graduate Excused Absence Policy](#) for reasons including: medical illness of student or close relative, death of a close family member, legal or government proceeding that a student is obligated to attend, recognized professional and educational activities where the student is presenting, and University-sponsored activity or athletic competition. Additional policies address absences related to [military service](#), [religious holy days](#), [pregnancy and related conditions](#), and [disability](#).

INTERIM UNDERGRADUATE GRADING POLICY

Due to the unique and unprecedented challenges associated with the COVID-19 pandemic, the University of Houston has implemented an [Interim Undergraduate Grade Policy](#) for undergraduate grades which applies to all undergraduate students in courses offered in all sessions during fall 2020. Under this policy, students have the option of converting final assigned letter grades to S (Satisfactory, applicable to any letter grade from A to D-) or NCR (No Credit Reported COVID-19, applicable to grades of F) on their transcripts. Please visit [FAQs](#) for additional information.

RECORDING OF CLASS

Students may not record all or part of class, livestream all or part of class, or make/distribute screen captures, without advanced written consent of the instructor. If you have or think you may have a disability such that you need to record class-related activities, please contact the [Center for Students with DisABILITIES](#). If you have an accommodation to record class-related activities, those recordings may not be shared with any other student, whether in this course or not, or with any other person or on any other platform. Classes may be recorded by the instructor. Students may use instructor's recordings for their own studying and notetaking. Instructor's recordings are not authorized to be shared with *anyone* without the prior written approval of the instructor. Failure to comply with requirements regarding recordings will result in a disciplinary referral to the Dean of Students Office and may result in disciplinary action.

SYLLABUS CHANGES

Due to the changing nature of the COVID-19 pandemic, please note that the instructor may need to make modifications to the course syllabus and may do so at any time. Notice of such changes will be announced as quickly as possible through our Blackboard website.

RESOURCES FOR ONLINE LEARNING

The University of Houston is committed to student success, and provides information to optimize the online learning experience through our [Power-On](#) website. Please visit this website for a comprehensive set of resources, tools, and tips including: obtaining access to the internet, AccessUH, and Blackboard; requesting a laptop through the Laptop Loaner Program; using your smartphone as a webcam; and downloading Microsoft Office 365 at no cost. For questions or assistance contact UHOnline@uh.edu.

WEBCAMS

Access to a webcam is required for students participating remotely in this course. Webcams must be turned on (*state when webcams are required to be on and the academic basis for requiring them to be on*). (Example: *Webcams must be turned on during exams to ensure the academic integrity of exam administration.*)

HONOR CODE STATEMENT

Students may be asked to sign an honor code statement as part of their submission of any graded work including but not limited to projects, quizzes, and exams: *"I understand and agree to abide by the provisions in the (select: [University of Houston Undergraduate Academic Honesty Policy](#), [University of Houston Graduate Academic Honesty Policy](#)). I understand that academic honesty is taken very seriously and, in the cases of violations, penalties may include suspension or expulsion from the University of Houston."*

COURSE DELIVERY FORMATS AND FINAL EXAMS

This course is being offered in the Synchronous Online format. Synchronous online class meetings will take place according to the class schedule. There is no face-to-face component to this course. In between synchronous class meetings, there may also be asynchronous activities to complete (e.g., discussion forums and assignments). This course will have a final exam per the [University schedule](#). The exam will be delivered in the synchronous online format, and the specified date and time will be announced during the course. Prior to the exam, descriptive information, such as the number and types of exam questions, resources and collaborations that are allowed and disallowed in the process of completing the exam, and procedures to follow if connectivity or other resource obstacles are encountered during the exam period, may be provided.

HELPFUL INFORMATION

COVID-19 Updates: <https://uh.edu/covid-19/>

Coogs Care: <https://www.uh.edu/dsaes/coogscare/>

Laptop Checkout Requests: <https://www.uh.edu/infotech/about/planning/off-campus/index.php#do-you-need-a-laptop>

Health FAQs: <https://uh.edu/covid-19/faq/health-wellness-prevention-faqs/>

Student Health Center: <https://uh.edu/class/english/lcc/current-students/student-health-center/index.php>