

COSC 6360—OPERATING SYSTEMS

<i>Semester and Year Course Offered</i>	<i>Fall 2021</i>
<i>Department</i>	<i>Computer Science</i>
<i>Course Number and Name</i>	<i>COSC 6360—Operating Systems</i>
<i>Instructor:</i>	Jehan-François Pâris
<i>Office Hours:</i>	Monday 4:15-5:00 pm outside Wednesday 4:15-5:00 pm on MS Teams
<i>E-mail Address:</i>	jfparis AT uh DOT edu (alias for jfparis AT sbcglobal DOT net)
<i>Phone:</i>	713-743-3341 (inactive)
<i>Class Schedule:</i>	MW 5:30–7:00 pm in S 114/MS Teams.
<i>Media of Instruction:</i>	<i>Videos on MS Teams</i> and <i>Face to Face Blackboard</i> (assignment submissions)
<i>Prulu Q&A Page:</i>	https://prulu.com/class/11656/cosc-6360-section-28217/
<i>“Old” Course Page:</i>	http://www2.cs.uh.edu/~paris/6360/resources.htm (
<i>Teaching Assistant:</i>	Qixin Deng (qdeng4 AT uh DOT edu) Office Hours TBA

OVERVIEW

COSC 6360 covers current topics in operating systems research and Linux/FreeBSD system programming. It assumes a strong familiarity with basic operating system topics such as scheduling, memory management, concurrent processes and so forth. As in many advanced courses, a reading list of papers will be provided. Accessing these papers from any computer outside the UH domain will require a login (“cosc6360”) and a password to be given during the first lecture.

LECTURE DELIVERY

Until further notice, the course will be taught face to face at the place and times appointed by the university. All lectures will be recorded and posted on MS Teams. *Your physical presence on campus outside of—possibly—quiz days will never be required.*

In addition, the Wednesday lectures of the two first weeks (August 25 and September 1) will be online.

MAJOR ASSIGNMENTS/EXAMINATIONS

There will be five quizzes on the readings, worth 60 percent of the semester average, and three to four programming assignments worth the remaining 40 percent. The last quiz will take place at the time and date of the final.

All programming assignments will be *Linux/FreeBSD* system programming assignments. Most of them will be in C/C++. Late assignments will be assessed a penalty of **5 points per day** unless announced otherwise. You will be given **three** grace days to be used at your discretion.

No cheating or plagiarism will be tolerated in any quiz or graded assignment. In particular, the code that you turn in must either be written by you or have its source clearly identified. The minimum penalty for any transgression will be an F grade for the course. You have been warned!

Please let the instructor know as soon as possible of any *special circumstances* that could affect your class performance, such as conference travel, health emergencies, family emergencies, and so on. ***Do not wait until the last minute.***

READINGS

A [course reading list](#) that will be posted online will covers paper from various areas of the OS realm including *Unix/Linux*, OS kernels, distributed systems fundamentals, security, peer to peer systems, file systems, distributed file systems, virtual machines, and atomic transactions.

HANDS-ON LINUX EXPERIENCE

The best way to learn a computing environment is to use it to solve real problems. For this reason, you will all have to install some version of UNIX on your personal computer. Your simplest options are either learning to use your Mac shell or installing the Windows Subsystem for Linux (WSL) on your PC. The best tutorial for the latter option is <https://docs.microsoft.com/en-us/windows/wsl/install-win10>

If you have a Mac, you should know that its system call interface is not fully compatible with Linux. This is especially true for the way, its include files are organized. I am aware of the situation and will do my best to help you.

I do not recommend installing Cygwin on your PC because it does not seem to handle all Pthread synchronization primitives in a correct fashion.

KEY DATES

<i>First Quiz</i>	<i>Monday, September 13</i>
<i>First Program Due</i>	<i>End of September</i>
<i>Second Quiz</i>	<i>Monday, October 4</i>
<i>Second Program Due</i>	<i>End of October</i>
<i>Third Quiz</i>	<i>Monday, October 25</i>
<i>Third Program Due</i>	<i>Last day of classes</i>
<i>Fourth Quiz</i>	<i>Monday, November 15</i>
<i>Fifth Quiz</i>	<i>Monday, December 13 at <u>5 pm</u></i>

OTHER POLICY ISSUES

1. I want all my classes to be safe spaces for all students. There is ***zero tolerance*** for discrimination or hate speech on any ground, including race, ethnic origin, religion, sexual orientation, gender or gender identity, or political beliefs.
2. Please contact the instructor if you have ***any special need***. We will work together around them.
3. For the safety of all, I will strictly follow all the health recommendation from the US Center for Disease Control. ***Safe distancing will be strictly enforced.***
4. Please verify that the university has your ***correct email address***: This is the only way I can get in touch with you for things like missing assignments and so on.
5. Please refer to the ***MS Teams course pages*** for course notes, quiz solutions, links to video lectures and other announcements.
6. Please use the ***Prulu course pages*** for all non-personal questions so that they can be answered faster and the answers can be shared by all students.

THE PROVOST OFFICE REQUIRES THE INCLUSION OF THE FOLLOWING LANGUAGE IN ALL SYLLABI

Face Covering Policy

To reduce the spread of COVID-19, the University strongly encourages everyone (vaccinated or not) to wear face coverings indoors on campus including classrooms for both faculty and students.

Presence in Class

Your presence in class each session means that you:

- Are NOT exhibiting any Coronavirus Symptoms that makes you think that you may have COVID-19
- Have NOT tested positive or been diagnosed for COVID-19
- Have NOT knowingly been exposed to someone with COVID-19 or suspected/presumed COVID-19

If you are experiencing any COVID-19 symptoms that are not clearly related to a pre-existing medical condition, do not come to class. Please see Student Protocols for what to do if you experience symptoms and Potential Exposure to Coronavirus for what to do if you have potentially been exposed to COVID-19. Consult the Graduate Excused Absence Policy for information regarding excused absences due to medical reasons.

COVID-19 Information

Students are encouraged to visit the University's COVID-19 website for important information including on-campus testing, vaccines, diagnosis and symptom protocols, campus cleaning and safety practices, report forms, and positive cases on campus. Please check the website throughout the semester for updates.

Vaccinations

Data suggests that vaccination remains the best intervention for reliable protection against COVID-19. Students are asked to familiarize themselves with pertinent vaccine information, consult with their health care provider. The University strongly encourages all students, faculty and staff to be vaccinated.

Reasonable Academic Adjustments/Auxiliary Aids

The University of Houston complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic adjustments/auxiliary aids for disabled students. In accordance with Section 504 and ADA guidelines, UH strives to provide reasonable academic adjustments/auxiliary aids to students who request and require them. If you believe that you have a disability requiring an academic adjustments/auxiliary aid, please contact the Justin Dart Jr. Student Accessibility Center (formerly the Justin Dart, Jr. Center for Students with DisABILITIES).

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 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. Under these policies, students with excused absences will be provided with an opportunity to make up any quiz, exam or other work that contributes to the course grade or a satisfactory alternative. Please read the full policy for details regarding reasons for excused absences, the approval process, and extended absences. Additional policies address absences related to military service, religious holy days, pregnancy and related conditions, and disability.

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 Justin Dart, Jr. Student Accessibility Center. 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 email, MS Teams, Piazza or Prulu.