

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Undergraduate Programs		UUPC Approval <u>10-11-21</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Electrical Eng. and Comp Science College Engineering and Computer Science		
Current Course Prefix and Number COP 4610		Current Course Title Computer Operating Systems	
<i>Syllabus must be attached for ANY changes to current course details. See Checklist. Please consult and list departments that may be affected by the changes; attach documentation.</i>			
Change title to: Change prefix From: _____ To: _____ Change course number From: _____ To: _____ Change credits* From: _____ To: _____ Change grading From: _____ To: _____ Change WAC/Gordon Rule status** Add <input type="checkbox"/> Remove <input type="checkbox"/> Change General Education Requirements*** Add <input type="checkbox"/> Remove <input type="checkbox"/> <small>*Review Provost Memorandum</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.</small> <small>***General Education criteria must be indicated in syllabus and approval attached to this form. See GE Guidelines.</small>		Change description to: See attached syllabus for new course description. Change prerequisites/minimum grades to: COP 3530 or COP 3410 with "C" or better Change corequisites to: Change registration controls to: Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).	
Effective Term/Year for Changes: Spring 2022		Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone Hanqi Zhuang, zhuang@fau.edu, 561-297-3413			
Approved by Department Chair _____ College Curriculum Chair <u>Dan Meeroff</u> College Dean <u>Fred Bloetscher</u> UUPC Chair <u>Dan Meeroff</u> Undergraduate Studies Dean <u>Edward Pratt</u> UFS President _____ Provost _____		Date 9/22/2021 <u>10-4-21</u> <u>10-4-21</u> <u>10-11-21</u> <u>10-11-21</u> _____ _____	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

Department of Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus

1. Course title/number, number of credit hours	
Computer Operating Systems – COP 4610	3 credit hours
2. Course prerequisites, corequisites, and where the course fits in the program of study	
Prerequisites: COP 3530 or COP 3410 with "C" or better	
3. Course logistics	
Term: TBD Class location and time:	
4. Instructor contact information	
Instructor's name Office address Office Hours Contact telephone number Email address	TBD
5. TA contact information	
TA's name Office address Office Hours Contact telephone number Email address	TBD
6. Course description	
This course teaches the basic concepts and core principles used in modern operating systems. Topics covered include processes, concurrency, synchronization, scheduling, multiprogramming, memory management, and file systems. The students will learn the concepts by developing a series of simulations and small programs. A group project allows students to put together the concepts learned in the course.	
7. Course objectives/student learning outcomes/program outcomes	
Course objectives	To evaluate the fundamental concepts applied in modern operating systems, including process management, memory organization and management, and I/O management To apply the design of collaborative processes and threads and their synchronization using semaphores To evaluate the problem of deadlock and assess their solutions To develop knowledge of basic principles of I/O management To develop simulation program for evaluation of CPU schedulers
Student learning outcomes & relationship to ABET 1-7 outcomes	An ability to communicate effectively with a range of audiences in a variety of professional contexts. (Communications) An ability to function effectively as a member or leader of a team that establishes goals, plans tasks, meets deadlines, creates a collaborative and inclusive environment, and engages in activities appropriate to the program's discipline. (Teamwork)

**Department of Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

	An ability to apply engineering/computer science theory and hardware/software development fundamentals to develop and conduct appropriate experimentation, analyze, and interpret data, and use computing/engineering judgment to produce engineering/computing-based solutions/conclusions. (Experimentation and/or simulation)
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8. Course evaluation method

----- point scale	Points (%)
Exams	
HW assignments	
Quizzes	

9. Course grading scale

Total points	500-465	464-450	449-435	434-415	414-400	399-385	384-350	349-335	334-315	314-300	< 300
	93%	90%	87%	83%	80%	77%	70%	67%	63%	60%	
grade	A	A -	B +	B	B -	C +	C	D +	D	D -	F

10. Policy on makeup tests, late work, and incompletes

Late Assignments Policy Late work is not acceptable. All projects will have a Final due date, assignments will be posted well in advance and students may submit assignments early. No assignments will be accepted after the Final due date.

Make-up Policy for Tests: Makeup tests are given only if there is solid evidence of a medical or otherwise serious emergency that prevented the student from participating in the exam.

Incomplete grades are against the policy of the department. Unless there is solid evidence of a medical or otherwise serious emergency situation and the student is currently passing the class, incomplete grades will not be given.

11. Special course requirements

TBD

12. Classroom etiquette policy

Classroom Etiquette/Disruptive Behavior Policy Statement Disruptive behavior is defined in the FAU Student Code of Conduct as "... activities which interfere with the educational mission within the classroom." Students who behave in the face-to-face and/or virtual classroom such that the educational experiences of other students and/or the instructor's course objectives are disrupted are subject to disciplinary action. Such behavior impedes students' ability to learn or an instructor's ability to teach. Disruptive behavior may include, but is not limited to: non-approved use of electronic devices (including cellular telephones); cursing or shouting at others in such a way as to be disruptive; or, other violations of an instructor's expectations for classroom conduct. For more information, please see the FAU Office of Student Conduct.

**Department of Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus**

13. Attendance policy statement

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

14. Disability policy statement

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

15. Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

16. Code of Academic Integrity policy statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#). If your college has particular policies relating to cheating and plagiarism, state so here or provide a link to the full policy—but be sure the college policy does not conflict with the University Regulation.

17. Required texts/reading

To reduce costs for our students, we strongly encourage you to explore the adoption of open educational resources (OER), textbooks and other materials that are freely accessible. We also encourage you to clearly state in the syllabus if course materials are available on reserve in the Library.

Operating Systems: Three Easy Pieces
Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau
FREE. Available at <https://pages.cs.wisc.edu/~remzi/OSTEP/>

18. Supplementary/recommended readings

Department of Electrical Engineering and Computer Science
Florida Atlantic University
Course Syllabus

TBD

19. Course topical outline, including dates for exams/quizzes, papers, completion of reading

- Overview of Operating Systems: Functions and Characteristics
- Operating System Principles
- Concurrency
 - Process management -processes and threads
 - Deadlocks and their prevention
- Scheduling and Dispatch
 - Resource allocation and scheduling
 - Process collaboration and synchronization
- Memory Management
 - Memory organization and management
 - Virtual memory organization
 - Virtual memory management
- Virtual machines
- Security and Protection
- Input/ output management and disk scheduling
 - Disk devices
 - File systems
 - Directories and links
- Lab assignments using [Pintos \(Stanford\)](#), [XINU \(Purdue\)](#), [xv6 \(MIT\)](#), or equivalent