

 <b>FLORIDA ATLANTIC UNIVERSITY</b>	<b>COURSE CHANGE REQUEST</b> <b>Undergraduate Programs</b>	UUPC Approval <u>3/25/24</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department _____ College _____	
<b>Current Course Prefix and Number</b>		<b>Current Course Title</b>
<i>Syllabus must be attached for ANY changes to current course details. See <a href="#">Template</a>. Please consult and list departments that may be affected by the changes; attach documentation.</i>		
<b>Change title to:</b>  <b>Change prefix</b> From: _____ To: _____ <b>Change course number</b> From: _____ To: _____ <b>Change credits*</b> From: _____ To: _____ <b>Change grading</b> From: _____ To: _____ <b>Change WAC/Gordon Rule status**</b> Add _____ Remove _____ <b>Change General Education Requirements***</b> Add _____ Remove _____ <small>*See <a href="#">Definition of a Credit Hour</a>.</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See <a href="#">WAC Guidelines</a>.</small> <small>***GE criteria must be indicated in syllabus and approval attached to this form. See <a href="#">Intellectual Foundations Guidelines</a>.</small>		<b>Change description to:</b>          <b>Change prerequisites/minimum grades to:</b>          <b>Change corequisites to:</b>          <b>Change registration controls to:</b>          Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).
<b>Effective Term/Year for Changes:</b>		<b>Terminate course? Effective Term/Year for Termination:</b>
<b>Faculty Contact/Email/Phone</b>		
<b>Approved by</b> Department Chair <u>Hani Kalva</u> College Curriculum Chair <u>Hongbo Su</u> College Dean <u>[Signature]</u> UUPC Chair <u>Korey Sorge</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____		<b>Date</b> <u>3/11/2024</u> <u>3/12/24</u> <u>3/12/24</u> <u>3/25/24</u> <u>3/25/24</u> _____ _____

Email this form and syllabus to [mjenning@fau.edu](mailto:mjenning@fau.edu) seven business days before the UUPC meeting.



FLORIDA ATLANTIC UNIVERSITY

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**COP 4610**  
**Computer Operating Systems**

**Date:**  
**Building: Room:**  
**3 Credit(s)**

### **Instructor Information**

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TBD

**Email:**

**Office:**

**Office Hours:**

**Phone:**

**TA Name:** TBD, Will be announced on Canvas when details become available

**Office:**

**Office Hours:**

**Telephone: Email:**

### **Course Description**

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This course provides 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 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.

### **Prerequisites**

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COP 3530C and CDA 4102 with a minimum grade of C

## **Instructional Method**

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### **In-Person**

This course may be offered in in-person, hybrid, or fully online modes

## **Required Texts/Materials**

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### **Operating System Concepts**

**ISBN:** 9781119800361

**Authors:** Abraham Silberschatz, Peter B. Galvin, Greg Gagne

**Publisher:** John Wiley & Sons, Incorporated

**Edition:** 10th

The 9th edition is also acceptable.

### **Operating System Concepts, Enhanced eText**

**ISBN:** 9781119320913

**Publisher:** John Wiley & Sons, Incorporated

**Edition:** 10th.

## **Course Objectives/Student Learning Outcomes**

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The high-level objective of this course is to understand the architecture of operating systems and how the main concepts of operating systems are applied.

### **Objectives:**

1. The student will understand the basic elements of Operating Systems.
2. The student will be able to explain how processes are managed, including scheduling, creation and termination.
3. The student will demonstrate process and thread synchronization mechanisms using C programs on Linux.
4. The student will be able to describe the concept of deadlock and OS mechanisms to handle deadlocks.
5. The student will learn and explain the concepts of memory management and virtual memory.

## **Faculty Rights and Responsibilities**

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Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise. To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.

- Establish and enforce reasonable behavior standards in each class.
- Recommend disciplinary action for students whose behavior may be judged as disruptive under the Student Code of Conduct [University Regulation 4.007](#).

## **Disability Policy**

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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/](http://www.fau.edu/sas/).

## **Course Evaluation Method**

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### **Course Grade Breakdown**

Homeworks	45%
Midterm Examination	22%
Final Examination	23%
Homework Q&A Discussion	5%

Introductions and Syllabus Quiz: You will post an introduction in discussions and take a syllabus quiz. The syllabus quiz can be taken as many times as necessary to achieve 100%.

The homeworks include tests administered online using Canvas with multiple choice-type of questions and problems involving theoretical concepts, OS algorithms, programming tasks in C or C++.

Homework Q&A Discussion: as part of the course assignments, you will be asked to post questions and substantive answers related to homeworks. The two exams are taken in class with closed books/no notes and no access to phones or computers, or any other electronic devices.

## **Code of Academic Integrity**

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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](#).

## **Attendance Policy Statement**

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Students are expected to attend all 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.

## **Religious Accommodation Policy Statement**

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In accordance with the rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of examinations and work assignments. University Regulation 2.007, Religious Observances, sets forth this policy for FAU and may be accessed on the FAU website at [www.fau.edu/regulations](http://www.fau.edu/regulations).

Any student who feels aggrieved regarding religious accommodations may present a grievance to the executive director of The Office of Civil Rights and Title IX. Any such grievances will follow Florida Atlantic University's established grievance procedure regarding alleged discrimination.

## **Time Commitment Per Credit Hour**

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For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of out-of-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time

and effort.

## **Course Grading Scale**

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<b>Letter Grade</b>	<b>Letter Grade</b>
A	94 - 100%
A-	90 - 93%
B+	87 - 89%
B	83 - 86%
B-	80 - 82%
C+	77 - 79%
C	73 - 76%
C-	70 - 72%
D+	67 - 69%
D	63 - 66%
D-	60 - 62%
<b>Letter Grade</b>	<b>Letter Grade</b>
F	Below 60

## **Grade Appeal Process**

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You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructor's own grading system.

[University Regulation 4.002](#) of the University Regulations contains information on the grade appeals process

## **Policy on Make-up Tests, Late work, and Incompletes**

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Late submissions will not be accepted or graded.

No makeup exams will be offered.

Throughout the semester, multiple homework assignments will be posted via Canvas. For each homework assignment, you will have about a week to complete and submit your solution via Canvas. Allow enough time to submit your work since once the system is closed there will not be other possibilities to submit (don't send your work via email). Please note that the due date for homework assignments will not be updated after the assignment is posted.

## **Policy on the Recording of Lectures**

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Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

## **Counseling and Psychological Services (CAPS) Center**

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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/>

## **Student Support Services and Online Resources**

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- ♦ [Center for Learning and Student Success \(CLASS\)](#)
- ♦ [Counseling and Psychological Services \(CAPS\)](#)
- ♦ [FAU Libraries](#)
- ♦ [Math Learning Center](#)
- ♦ [Office of Information Technology Helpdesk](#)
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[Center for Global Engagement](#)

- [Office of Undergraduate Research and Inquiry \(OURI\)](#)
- [Science Learning Center](#)
- [Speaking Center](#)
- [Student Accessibility Services](#)
- [Student Athlete Success Center \(SASC\)](#)
- [Testing and Certification](#)
- [Test Preparation](#)
- [University Academic Advising Services](#)
- [University Center for Excellence in Writing \(UCEW\)](#)
- [Writing Across the Curriculum \(WAC\)](#)

## **Course Topical Outline**

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1. Operating Systems Structures: weeks 1-2
2. Processes and Threads: weeks 3-4
3. Process Synchronization: weeks 5-7
4. Processor Scheduling and Deadlocks: weeks 8-9
5. Memory Organization: week 10-11
6. Virtual Memory: weeks 12-13
7. Virtual Machines: week 14