



COMP-SCI 431 0001

COURSE SYLLABUS UNIVERSITY OF MISSOURI - KANSAS CITY 2024 Fall Semester

Instructor Information

Adu Baffour

Title: Instructor

Department/Division: Division of Computing, Analytics, and Mathematics

Email: aabnxq@umkc.edu

Preferred Instructor Contact Method: Email

Instructor Response Time: maximum 48 hours

Office Hours

Friday: 2 PM - 3 PM

Instructor Office Location or Zoom Link

FH 410B

Zoom:

<https://umsystem.zoom.us/j/5767859766?pwd=TEEx3RXRaaVVla1dQZHJRTmd4MU03dz09>

Meeting ID: 576 785 9766

Passcode: 869269

Course Details

COMP-SCI 431

Credit Hours: 3

Meeting Time: MoWe 5:30PM - 6:45PM

Meeting Location: Education-Rm 00119

Modality: P

Course Description

This course covers concurrency and control of asynchronous processes, deadlocks, memory management, processor and disk scheduling, x86 assembly language, parallel processing, security, protection, and file system organization in operating systems.

Prerequisites: COMP-SCI 303, COMP-SCI 281R.

- Distinguish the basic tasks common to all operating systems.
- Explain the concepts and techniques of operating systems including memory management, CPU scheduling algorithms, Process Management, etc.
- Be able to design, implement, and evaluate operating system algorithms.
- Understand the security and protection schemes in an operating system.

Course Details

Attendance Verification

Maintaining accurate enrollment records throughout the term is a partnership between instructors and students. Instructors are responsible for verifying student attendance and participation within the first three weeks (16 week course) through the Attendance Verification Survey (administered through UMKC Connect) as well as maintain records of participation throughout the term so that the last date of attendance for students with recorded “F” or “W” final grades may be submitted. Because student plans for enrollment sometimes change prior to the semester start, students not engaging in courses through the initial weeks of each course may be administratively dropped.

Visit the [undergraduate catalog](#) for more detailed information regarding the policy.

Recording Class Sessions

Students are not permitted to record class sessions without written consent from the course instructor. Contact your instructor to request permission. Instructor(s) may record class sessions for the sole purpose of sharing the recording with students who can't attend class. Instructor(s) will take care not to disclose personally identifiable information from the student education records during the recorded lesson.

Recommended Technology

You will need access to the computing resources necessary to complete this course through personal and/or University channels (e.g., computer labs). Our course will take place within the Canvas LMS and utilizing various software technologies that facilitate interaction and

communication. Below is a list of some helpful computer requirements for full participation in this class:

- The latest version of Java
- Adobe Reader
- Google Chrome, Firefox, or Edge for Windows
- Computers Lockdown Browser

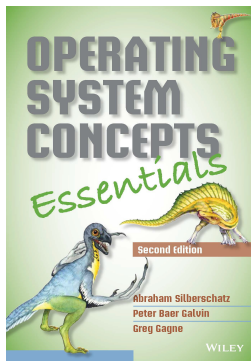
Broadband Internet connection is preferred. Examples of broadband Internet connection are high-speed DSL or a Cable modem.

Technology Assistance

The links below will connect you with answers and information for the most common technical questions and issues students experience.

- [UM System Student Learning](#)
- [Support UM System Teaching Tools](#)

Recommended Materials



Operating System Concepts Essentials (Not required) ISBN: 978-1-118-80492-6

Authors: Avi Silberschatz, Peter Baer Galvin, Greg Gagne

Publisher: John Wiley & Sons

Edition: 2nd

Course Expectations

Academic misconduct is not acceptable behavior and will not be tolerated. Academic misconduct includes, but is not limited to cheating, fabrication and falsification, plagiarism, or facilitating academic misconduct. If a student engages in academic misconduct it will result in a failing grade for the assignment in question and possible dismissal from UMKC. See the [Student Conduct Policy](#) for full details.

Plagiarism & AI Use

All work (code, text) submitted in this course must be yours. Contributions from anyone or anything else- including generative AI sources (such as ChatGPT, GPT, DALL-E, Stable Diffusion, Midjourney, GitHub Copilot, and anything after), must be properly quoted and cited every time. Failure to do so constitutes an academic misconduct violation, and I will follow UMKC's academic misconduct policy in those instances. However, using AI as a writing tool (such as Grammarly, ChatGPT, Bard), brainstorming, spell checking, and sentence rephrasing is allowed without citations. An assignment found to have been plagiarized or used unauthorized tools will automatically receive a no credits, and you will not be allowed to repeat the assignment for a passing grade.

Evaluation and Grading

Assessment items	Weight (%)
Participating Activities	10
Quiz	30
Homework	30
Final exam	30

Percentage of Points Earned	Letter Grade Earned
93-100%	A
90-92%	A-
87-89%	B+
83-86%	B
80-82%	B-

77-79%	C+
73-76%	C
70-72%	C-
67-69%	D+
63-66%	D
60-62%	D-
0-59%	F

Course Scheduling

Week	Lecture	Chapter Reading
1	Introduction	1
2	Processes, Threads and Concurrency	2
3		
4	CPU Scheduling	3
6	Concurrency	4
7		
8	Deadlocks	5
9		
10	Memory Management	6
11	Virtual Memory	7
12		
13	File System	8
14	Input/Output (Disk Scheduling)	9
15	Security and Protection	10
16	Revision	

- **Participating Activities:** These learning activities take place in class and are unscheduled (pop-up). Makeup will be considered only for emergencies. Please provide proof of the emergency.
- **Homework:** Homework should be uploaded on Canvas by the specified due date.
- **Quizzes & Final exam:** Make-ups will only be granted in emergencies, and proof of emergency is required. Permission to take any makeup quizzes or final exam needs to be arranged before each quiz or the final exam. **All quizzes and final exam will be done using the lockdown browser.**

Policy on late assignments

Assignments must be submitted by time and on the date listed on Canvas. Grades will decrease by 10% each day the assignment is late (assignments submitted more than ten days late will not earn any credit). Students need to submit documentation of extenuating circumstances to submit assignments more than ten days late (and/or to have late penalties removed).

Final Exam Date and Time

Final exam:

<https://net1.umkc.edu/registrar/finalexamschedules/examschedulelist/>

The schedule can be found on the [Final Exam website](#), which updates as changes are made to the times, dates, and rooms where final exams are held. Check this website again as you near final exams to ensure you have the most current information about the time and date of your exam for this course.

Basic Needs

It can be challenging to do your best in class if you have trouble meeting basic needs like safe shelter, sleep, and nutrition. If you have difficulty affording groceries or accessing sufficient food to eat every day, or lack a safe and stable place to live, UMKC is here to help. The UMKC [Basic Needs](#) webpage has information on resources for food assistance, housing assistance and financial literacy. The Kangaroo Pantry is a free resource for all UMKC students that provides food and other items to those in need. Check out the [Kangaroo Pantry website](#) for details on hours and locations. I strongly encourage you to set up an appointment with [UMKC Basic Needs](#) and/or me if you have a need for this type of assistance.

Academic Calendar

Students are encouraged to review important add, drop or withdraw dates by visiting the [Academic Calendar](#) on the UMKC website.

Academic Integrity

The Board of Curators of the University of Missouri recognizes that academic honesty is essential for the intellectual life of the University. Faculty members have a special obligation to expect high standards of academic honesty in all student work. Students have a special obligation to adhere to such standards. Academic dishonesty, including cheating, plagiarism, unauthorized use of artificially generated content or sabotage, is adjudicated through the University of Missouri Student Conduct Code and Rules of Procedures in Student Conduct Matters.

Academic Support and Mentoring

The department of Academic Support and Mentoring (ASM) offers a wide range of services and programs to help students meet their academic goals. ASM offers peer tutoring, writing and presentation assistance, SI study groups, instructional videos and many more resources that are valuable to your success in this class. Information can be found on the [ASM website](#). You can use [RooLearning+](#) for scheduling appointments and viewing when support for this class is available. Access RooLearning+ by downloading the app from the [App Store](#) (Apple) or [Google Play](#) (Android) and sign in with your SSO. The URL for the RooLearning+ site is umkc.tedu.app/student.

Attendance Policy

Students are expected to attend and participate in classes as indicated by the course modality (Classroom based, Online, etc. available on Pathway). To get additional information, please visit the page describing [course modalities](#) on the UMKC Registrar's site.

In order to comply with federal regulations associated with eligibility rules for federal financial aid, students not attending/participating a course during the first three weeks of the term will be administratively dropped from the specific course. Advance notice of attendance policies of academic units and individual instructors should be given, and such notice should be in writing. Students should notify instructors of excused absences in advance, where possible. Students who have an excused absence are expected to make arrangements with instructors for alternative or make-up work. Such arrangements should be made in advance of the absence, where possible. Instructors should accommodate excused absences to the extent that an accommodation can be made that does not unreasonably interfere with the learning objectives of the course or unduly burden the instructor. Attendance policies shall be applied in a non-discriminatory manner. Enrollment as a student is required to attend any class unless otherwise pre-approved by the instructor. Instructors are responsible for verifying student attendance and participation within the first three weeks (16 week course) through the Attendance Verification Survey (administered through UMKC Connect) as well as maintain records of participation throughout the term so that the last date of attendance for students with recorded "F" or "W" final grades may be submitted.

Campus Safety

Inclement weather, mass notification, and emergency response guide can be found on the [UMKC Alert](#) page.

UMKC Connect

Important information is available to undergraduate students in [UMKC Connect](#) a central location for faculty, advisors, student services and students to communicate and collaborate on a strategic plan for each student's academic success. Throughout the term, students may receive emails regarding course grades or academic performance. Students should regularly check their Connect dashboard and are expected to address information posted in a timely manner. This information may be shared with the student's Success Network made up of his or her academic advisor(s) and other campus resources so that UMKC may fully support the student's success. Students may schedule appointments to meet with members of their Success Network through UMKC Connect.

Grade Appeal Policy

The [University grade appeal procedure](#) is available only for the review of allegedly capricious grading and not for review of the instructor's evaluation of the student's academic performance. Capricious grading, as that term is used here, comprises any of the following:

- The assignment of a grade to a particular student on some basis other than the performance in the course; The assignment of a grade to a particular student according to more exacting or demanding standards than were applied to other students in the course; (Note: Additional or different grading criteria may be applied to graduate students enrolled for graduate credit in 300- and 400-level courses.)
- The assignment of a grade by a substantial departure from the instructor's previously announced standards.

Privacy Policies

Please access the following two websites for the most up to date information on the UMKC privacy and webcam policies.

[Privacy Policy](#)

[Webcam Policy](#)

Student Disability Services and Accommodations

To obtain disability related accommodations and/or auxiliary aids, students with disabilities must contact [Student Disability Services](#) as soon as possible by calling 816-235-5612. Once verified, our office will notify the course instructor and outline the

accommodation and/or auxiliary aids to be provided. You are also welcomed to contact Scott Laurent at the Office of Disability Services as soon as possible by calling (816) 235-5696 or via email at laurent@umkc.edu.

Counseling Services and Student Health & Wellness

UMKC students may experience many challenges in their lives while attending college – stress, depression, suicidality, trauma, relationship issues, health concerns, etc. As an institution, we care about your success and well-being, and want to make you aware of some helpful resources on campus. [UMKC Counseling Services](#), located at Brookside 51 Building, 5110 Oak Street, Suite 201, offers a wide range of supportive services to students. Appointments can be made by calling 816-235-1635. [UMKC Student Health and Wellness](#), located at Brookside 51 Building, 5110 Oak Street, Suite 201, offers a full range of supportive services to students. Appointments can be made by calling 816-235-1635.

[UMKC Student Health and Wellness](#) , located at Brookside 51 Building, 5110 Oak Street, Suite 237, offers a full range of health care and promotion services. Appointments can be scheduled online or by calling 816-235-6133.

[The MindBody Connection](#) is located in the Student Union, 3rd floor, room 303G & 303H. The MindBody Connection provides space for students to learn how to relieve stress and learn more about mindfulness. Featuring massage chairs, art supplies, and a quiet space, the MindBody Connection is a great place for students to unwind and get back in touch with their minds and bodies and offers a variety of stress-reduction services.

Students are encouraged to review [UMKC's Policy on Suicide Prevention Resources](#), which provides resources, referral information, and training opportunities to help recognize signs of distress in yourself and your peers as well as how to make appropriate referrals for support and assistance.

Students may contact the [UMKC Student Helpline](#) (or call 816-235-2222) with any questions or concerns. Students may also utilize the [Complaint Policy](#) to file a complaint online.

Equal Opportunity & Educational Access

UMKC is committed to providing equal opportunities to all students without unlawful discrimination on the basis of a protected identity, including race, color, national origin, ancestry, religion, sex, pregnancy, sexual orientation, gender identity, gender expression, age, disability, protected veteran status, or any other status protected by applicable state or federal law.

Discrimination & Harassment: Compliance with UM System Collected Rules and Regulations (CRRs) [600.000](#) is monitored by the [Office of Equity & Title IX](#), but it is the responsibility of the entire university community to provide equal opportunity through relevant practices, initiatives, and programs. If you or someone you know has experienced discrimination or harassment based on their protected identity, we encourage you to visit [Making a Report](#).

CRR [600.010](#) prohibits protected identity discrimination and harassment. It also prohibits sexual harassment and sexual misconduct by a student, employee, volunteer, or visitor that is not covered under [CRR 600.020](#) and Title IX (see below), that occurs within a UMKC educational program or activity, on- or off-campus, including when the conduct occurs off-campus and interferes with or limits the ability of any person to participate in or benefit from UMKC's educational programs or activities or employment. For those who have experienced discrimination or harassment, please see the [Support](#) and [Connections](#) pages of our Equity & Title IX website for a list of campus and community support services.

Sexual Harassment under Title IX: UM System Collected Rules and Regulations (CRRs) [600.020](#) prohibits all students, employees, volunteers, and visitors from engaging in sexual harassment, including sexual assault, dating violence, domestic violence, and stalking, in a university education program or activity against a person in the United States. If you or someone you know has experienced sexual harassment, please visit the [Support](#) and [Connection](#) pages of our Equity & Title IX website for a list of support services on campus and in the community. For information on how to make a report to the university, visit [Making a Report](#).

Failure to Accommodate Students with Disabilities: UM System Collected Rules and Regulations ([CRRs](#)) [600.010](#) prohibits discrimination against students with disabilities and ensures these students receive educational accommodations as issued by [Student Disability Services](#). If you believe an employee of the university has failed to accommodate your disability, visit [Making a Report](#) or contact the Office of Equity and Title IX at (816) 235-1771 or eqtix@umkc.edu.

Accommodating Pregnancy & Related Conditions: UMKC provides reasonable accommodations to students related to pregnancy and childbirth, including adjustments to attendance requirements, course due dates, leaves of absence, and other accommodations. If you have questions or would like to request arrangements, please visit [Pregnancy & Related Accommodations](#) or contact the Office of Equity & Title IX at (816) 235-1771 or eqtix@umkc.edu.

Mandated Reporting: Nearly all UMKC employees, including your course instructors, advisors, and other support staff, are required to report all information related to any

known or suspected discrimination, harassment, or sexual misconduct to the Office of Equity & Title IX and cannot offer confidentiality. However, students may seek confidential support from [RISE: Resources, Intervention, Support, & Education, Counseling Services](#), and [Student Health & Wellness](#).

Employees of these offices are exempt from mandated reporting so long as the disclosure of prohibited conduct occurs in a confidential communication while they are acting as support advocates, professional counselors, or medical personnel. An exemption does not extend to these employees when the disclosure is made in non-confidential setting. If you have a question about confidentiality when making a disclosure to RISE, Counseling Services, or Student Health & Wellness, you should first ask whether the exemption applies.

Right to Free Expression

It is vitally important for UMKC to foster and maintain an educational environment that promotes free discussion, inquiry and expression by students inside the classroom and beyond, without fear that their exercise of such rights will have negative repercussions in areas over which the university has responsibility. It is equally important that students understand the narrow line separating their First Amendment rights and the legal and privacy rights of others so that students can exercise those rights within appropriate boundaries.

Per UM System Collected Rules and Regulations (CRRs) [200.015](#) your instructors should encourage free discussion, inquiry, and expression in courses, conferences and meetings. Student performance shall be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Classroom Expectations: In exercising your right to free expression, UMKC requests students adhere to these five guidelines:

- Share responsibility for including all voices in the conversation, leaving sufficient time for others to engage in the discussion. Listen respectfully, avoiding interruptions or distractions.
- Recognize how your own identity and experiences inform your opinions and reactions to others. Be open to changing your perspectives when exposed to the ideas of others.
- Speak with care, acknowledging that your words may be perceived as disrespectful, marginalizing, biased, or harmful.
- Understand that everyone makes mistakes; view these mistakes as valuable in the learning process. Notice your own defensive reactions, and channel them into furthering a productive discussion.

- Differentiate between safety and comfort; accept discomfort as necessary for learning and exploring ideas through a social justice lens.

Although your right to free expression is protected, your instructors have the authority to take action under [CRR 200.010](#) when they believe the conduct of any student unreasonably disrupts the classroom environment and prevents others from learning or threatens or endangers the health or safety of any person. If you feel your instructor was in error in taking action under [CRR 200.010](#) related to your right to free expression, visit [Making a Report](#).

Expressions of Perceived Bias

UMKC is committed to equity, diversity, inclusion and respectful interaction. In support of our campus community, the university provides the opportunity for students, employees, volunteers, and visitors to report expressions of perceived bias and to request UMKC respond to such expressions.

An expression of perceived bias may occur when someone believes that they have been subjected to harassment, bullying, stereotyping, microaggressions, abuse, marginalization, or any other form of targeted misconduct because they identify or are associated with a particular group. If you believe you have experienced an expression of bias or you become aware of such an expression, visit [Making a Report](#).

Support: If the conduct of others prevents you from fully participating in the classroom or in university activities, UMKC offers confidential support through [Counseling Services](#) and [RISE: Resources, Intervention, Support, & Education](#). Additional campus and community support services are listed on the [Support](#) and [Connections](#) pages of our Equity & Title IX website.