Course Syllabus: CS 61004 Operating System & Architecture

Spring 2021

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Office Hours T/Th 10:00-12:30pm

Delivery: Remotely via BB collaborate Ultra

Course Information

Course Description
The intent of the Operating System and Architecture course is to ensure that graduate students from non Computer Science majors are having the required background in Operating systems and Computer architecture topics. The course is divided into two topics: Operating Systems module where the students will learn about the services and the components of different operating systems, and the computer architecture module which provides a functional overview of computer systems, interconnection of basic components, system performance measures, and instruction set design.

Course Times and Location
This is remote 15-week course. The lecture will be in held in bb ultra. All assignments have due dates and should be submitted through both Blackboard; please refer to the Course Schedule located within the course.

Course Learning Outcomes
By the end of the Operating System Module, you will be able to:

1. Define the major components, the services and the structures of operating systems.
2. Differentiate threads and processes.
3. Examine solutions to critical-section problems and various CPU scheduling algorithms.
4. Compare and evaluate various techniques for allocating memory to processes.
5. Explain the physical structure of storage management devices and how they are managed, and the implementation of file systems and directory structures.

By the end of the Computer Architecture Module, you will be able to:

6. Explain the interaction between hardware and software (the s/w and h/w interface).
7. Explore the functional overview of computer systems and the interconnection of basic components.
8. Evaluate system performance.
9. Relate the basics of an instruction set design and assembly language programming using a Reduced Instruction Set Computer (RISC).
10. Describe key ideas in control mechanisms including pipelining.
11. Illustrate arithmetic operations for computers, and data and instruction representation within computers.
12. Describe hardware and software algorithms that provide arithmetic and logic operations within a computer system.

Learning Materials
The textbooks for CS 61004 and the course lectures are equivalent to each other, though there is more detail in the books about some topics. The books are required. We will be referring to them in reading and assignments.

References:
I will provide likes in Blackboard for any other references that students may need.

Technology Requirements and Skills

Computer Hardware and Software
Students new to Kent State University should review Information Service’s Technology Viewbook (link available in the Start Here folder). A personal computer with consistent, reliable Internet access is required:

1. A DSL or cable connection to the Internet; dial-up is not sufficient.
2. Laptop or desktop computer with a minimum of a 2 GHz processor and 2 GB of RAM

You should have one of the following computer operating systems and additional software applications installed on your computer:

1. Windows 7 system operating software for PC computers OR Mac OS X 10.6 or 10.7 for Apple Mac computers.
2. Microsoft Office Suite (Word, Excel, PowerPoint) discounts available at The Microsoft Store, link available in the Start Here folder.
3. A free version of Microsoft Office is available for students. Instructions and information can be found on https://support.kent.edu
4. Antivirus for Windows OS, Microsoft Security Essentials OR Antivirus for Mac OS, Sophos
5. A Blackboard Learn compatible browser, such as the latest version of Mozilla Firefox. Blackboard also supports Chrome and Safari. Internet Explorer is NOT a supported browser and should not be used.

Blackboard (Bb) Learn
This class will use Blackboard (Bb) Learn, the official learning management system (LMS) used by Kent State University to deliver course materials to university students. ALL course materials and activities will take place in Bb Learn.

In order to login to the online Bb Learn LMS, students will need a Kent State FlashLine User Name ID and password.

* Students can login to Bb Learn either through a student FlashLine account or via a direct link to the login page: https://learn.kent.edu

For help using the Blackboard (Bb) Learn system use the “Bb Learn Tutorials for Students” link in the main navigation of your course.

In general, Bb Learn works best using the latest version of most major web browsers, including Firefox (recommended), Chrome, and Safari.

Policies and Expectations

Communication Policy

1. Email course questions and personal concerns, including grading questions, to me privately using your @kent.edu email.
2. Email will be checked at least twice per day Monday through Friday; Saturday and Sunday, email is checked once per day. During the week, I will respond to all emails within 24 hours; on weekends and holidays, allow up to 48 hours. If there are special circumstances that will delay my response, I will make an announcement to the class.
3. For questions related to technology, please contact: 330-672-HELP for 24/7 support.
4. The subject of your email should include (CS43203 or System Programming) because I am teaching more than one course.

University Use of Electronic Email
A university-assigned student e-mail account is the official university means of communication with all students at Kent State University. Students are responsible for all information sent to them via their university-assigned e-mail account. If a student chooses to forward information in their university e-mail account, he or she is responsible for all information, including attachments, sent to any other e-mail account. To stay current with university information, students are expected to check their official university e-mail account and other electronic communications on a frequent and consistent basis. Recognizing that some communications may be time-critical, the university recommends that electronic communications be checked minimally twice a week.

Assignments and Grades
A detailed breakdown of course assignments and due dates by lesson module is available as a separate .pdf document that can be accessed in Bb Learn by clicking on the Syllabus & Course Schedule link in the course menu.

To view grades on scored assignments, click on the link to My Grades located in the main navigation sidebar in your Bb Learn course.

Late and Make-up Work Policy
Late assignment will not be accepted.
No makeup for quizzes.
No makeup for the midterm and final exams.
Do not email your assignment to me, all submission should be through BB.

Grading and Feedback
Assignments will be graded within one week of due date.

Assignment Distribution and Grading Scale

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<tr>
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University Policies

Students are required to be aware of and follow all general and academic policies established by Kent State University. A list of the general academic policies is listed on the Kent State University Policy Register, which can be found in the Start Here folder. Specific policies related to the successful completion of this online course can be located and reviewed in your Blackboard Learn course.

University policies are located in the Online Student Support Services & University Policies folder contained within the START HERE folder in your Blackboard Learn course.

Students with Disabilities
(Revised 6/01/07) University policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Accessibility Services (contact 330-672-3391 or visit www.kent.edu/sas for more information on registration procedures).

The Blackboard accessibility statement can be found in the Start Here folder.

Course Enrollment and Withdrawal
University policy requires all students to be officially registered in each class they are attending. Students who are not officially registered for a course by published deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking his/her class schedule (using Student Tools in FlashLine) prior to the deadline indicated.

If registration errors are not corrected by this date and you continue to attend and participate in classes for which you are not officially enrolled, you are advised now that you will not receive a grade at the conclusion of the semester for any class in which you are not properly registered. Also, it is your responsibility to check the withdrawal dates for each semester.

Plagiarism and Academic Integrity
Students enrolled in the university, at all its campuses, are to perform their academic work according to standards set by faculty members, departments, schools and colleges of the university; and cheating and plagiarism constitute fraudulent misrepresentation for which no credit can be given and for which appropriate sanctions are warranted and will be applied.

For more information, see the Kent State policy on plagiarism in the Start Here folder.

Subject to Change Statement
The syllabus and course schedule may be subject to change. Changes will be communicated via email or the Blackboard Learn announcement tool. It is the responsibility of students to check email messages and course announcements to stay current in their online courses.

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**Final Grading Scale:**

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