Instructor Information:
  Instructor: Dr. Nihat Altiparmak
  Office: DC 209
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  Office Hours: Tue & Thu 1:15 PM - 2:15 PM in-person (DC 209), or by appointment (in-person or online through MS Teams).

TA Information:
  TA: Sidharth Sundar
  Office: DC 242
  Phone: 502-852-0462
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  Office Hours: Mon & Wed 1:30 PM - 2:30 PM in-person (DC 242), or by appointment (in-person or online through MS Teams).

Course Information:
  Class Website: http://cecs.louisville.edu/nihat/teaching/cse420s22

Technology and Logistics Requirements:
  • A working computer with Ubuntu Linux (18.04 LTS or higher) installed either side by side with your current OS (strongly recommended), or provided via a virtualization tool such as Virtual Box.

Textbook:
  Recommended OS Book:
  Recommended C Programming Books:
    • Learn C the Hard Way, 1st Edition by Zhed Shaw. ISBN: 9780321884923. (Highly recommended)
  Other Optional Supplementary Books:
    • Operating Systems: Three Easy Pieces by Remzi H. Arpaci-Dusseau and Andrea C. Arpaci-Dusseau. (This is a very good OS Book free in PDF.)

Prerequisites:
  CSE 302 and CSE 130 are prerequisites. Consult the instructor immediately if you have not completed these courses or their equivalents. Taking CSE 412 or a Computer Organization course before this course is strongly recommended.

Course Content:
  This course is composed of the following components, covering chapters [1-15] of the Recommended OS Book. See the class website for an up-to-date detailed schedule:
    • Introduction: C, Linux, and Data Structures Review, Introduction (Ch. 1), OS Structures (Ch. 2)
    • Process Management: Processes (Ch. 3), Threads (Ch. 4), CPU Scheduling (Ch. 5), Process Synchronization (Ch. 6 & 7), Deadlocks (Ch. 8)
    • Memory Management: Main Memory (Ch. 9), Virtual Memory (Ch. 10)


- **Storage Management**: Mass Storage Structure (Ch. 11), File System Interface & Internals (Ch. 13 & 15), File System Implementation (Ch. 14), I/O Systems (Ch. 12)

**Grading:**
- 50% Projects (First two projects are 10% each, last two project are 15% each.)
- 40% Tests (Two tests with equal weight.)
- 10% Quizzes (Pop quizzes with equal weight. No make-up; lowest 2 will be dropped instead.)

The letter grade is calculated as follows: 100 ≥ A+ ≥ 97 > A ≥ 94 > A- ≥ 90 > B+ ≥ 87 > B ≥ 84 > B- ≥ 80 > C+ ≥ 77 > C ≥ 74 > C- ≥ 70 > D+ ≥ 67 > D ≥ 64 > D- ≥ 60 > F ≥ 0.

**Announcements:**
All announcements will be posted in BlackBoard and will also be immediately emailed to you.

**MS Teams:**
This course will be utilizing MS Teams to facilitate class discussion. Rather than emailing questions to the course staff (instructor/TA), please post your questions on MS Teams. The course staff will monitor MS Teams closely and you will usually get a quick response. If you know the answer to a question, you are encouraged to help your classmates by replying to their posts, which will improve your virtual class participation and it is highly recommended! **You should ask your questions directly to the course staff only if your question might reveal part of your solution to an assignment.** MS Teams is the most effective way to communicate with the course staff. Please avoid email if MS Teams will do.

**Attendance:**
Attendance will not be taken in this class.

**Projects:**
Projects will be programming based and will be assigned and submitted through Blackboard as scheduled in the class website. All projects will be performed **in Linux using C only** (not C++, Java, Python, etc.).

**Plagiarism:**
1. All submitted assignments should be done individually unless explicitly stated as a group assignment. **Except your group members (if a group project), you are not allowed to go over your friends’ code, and your friends cannot see your code.** You are only allowed to make high-level verbal discussions on the projects with other students.

2. Posting assignments and/or solutions online is not permitted. You cannot publish your code partially (in forums or other sites for asking questions) or completely (in public source code repositories). **For instance, you cannot post your code on your public GitHub account unless you make it private!**

3. **You are not allowed to share your code with the future students of this class.**

4. **You may NOT use Chegg.com, CourseHero.com, MyAssignmentHelp.com, or any other sites to post any course material, including syllabus, quizzes, exams, projects, slides, etc., and/or to find solutions to assignments.** Instead, post your questions on MS Teams if they do not reveal your answer, or email them to the Instructor or the TA if your answer might be revealed on MS Teams. In addition, both the Instructor and the TA have dedicated office hours, and are also available via appointment for one-on-one help. Seek immediate help through these means when you need help!

Not complying with these collaboration and code sharing rules will put you under the risk of plagiarism for this semester or the following semesters, including the cases where future students of this class copying your code from online resources (forums, GitHub, etc.). **WE USE ADVANCED COPY CHECKERS!** Cheating/copying of assignments (including Internet resources) will be reported to the
dean’s office for plagiarism and a grade of zero will be recorded. **NO EXCEPTIONS WILL BE MADE!!!**

**Exams:**
Exams will be administered in-person during the class meeting. Exam dates and times are provided in the class website; and a grade of zero will be recorded for missed exams unless prior arrangements are made **with a valid excuse** at least 2 weeks in advance, in which case your exam will be administered at an earlier time than the scheduled time, and it will include a different set of questions. Exams will be closed books and notes. You will be responsible for only what is covered in lectures. No restroom breaks will be allowed, and you will not be allowed to use calculators, cellphones, or other electronics during the exam.

**Quizzes:**
Quizzes can happen at any time during the class meeting (pop quizzes). They will generally take around 10 minutes, which will be announced at the beginning of each quiz. You will get 50% of your quiz grade as a bonus just for taking the quiz. No make-up will be provided for missed quizzes; instead, the lowest two quiz grades will be dropped.

**Policies:**
- Students with special needs will be accommodated and all necessary arrangements will be made to facilitate learning the material, doing the assignments, and taking the tests.
- The instructor reserves the right to make changes in the syllabus when necessary.

**Computer Issues and IT Support:**
Speed IT staff are available by appointment from 9:00 am to 4:00 pm to assist you with your technology needs. You may schedule an appointment by sending a detailed email including any relevant error codes and screen snips at SPDH@Louisville.edu (preferred) or 502-852-7620. You can also seek help from the course TA or the CSE IT Staff (2nd floor Duthie) if you need assistance with your Ubuntu installation. Make sure you set up an appointment in advance, preferably early in class before the first project is assigned.

**COVID Items:**
As a Community of Care, all Cardinals are expected to abide by public health guidelines and regulations as published by the University. For Spring 2022, this includes:
- Wearing of cloth/paper masks (covering nose and mouth) when in shared indoor spaces like classrooms. (Per the July 2020 code of student conduct, a student who refuses to follow these guidelines may be asked to leave a classroom.)
- Staying Home When Sick: Any UofL community member experiencing fever, consistent dry cough, or other symptoms of contagious disease should remain at home until symptoms subside or advised that it is safe to return by a medical professional.
- Practicing good hygiene and responsibility for one’s own surrounding:
  - Cover sneezes and coughs.
  - Wash hands frequently with soap and water when possible, use hand sanitizer when soap and water are not available.
  - Wipe down frequently touched surfaces.
  - Maintain 6 feet physical distancing when possible.
- Faculty have the responsibility to help students meet these recommendations by:
– allowing students absent for reason of illness and/or quarantine to make up missed work and not penalize students for these absences,
– and notifying physical plant when classrooms are not adequately stocked with cleaning supplies and arranging classroom furniture or seating charts to maximize physical distancing where possible.

**Title IX/Clery Act Notification:**
Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain confidential support from the PEACC Program (852-2663), Counseling Center (852-6585), and Campus Health Services (852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (852-5787) or University of Louisville Police (852-6111).

**Disclosure to University faculty or instructors** of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is not confidential under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University’s Title IX officer.

For more information, see [http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure](http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure).