

CS 2200 – (Computer) Systems and Networks
Syllabus – Fall 2017

Prof. Tom Conte conte@gatech.edu

Office Hours [held in 2334 KACB]: 11:00-noon Tuesdays and Wednesdays

Description: 4 Credit Hrs. A broad exposure to computer system structure and networking including software abstractions in operating systems for orchestrating the usage of the computing resources.

Website: <http://t-square.gatech.edu> --Check the website often (at least once per week). All assignments, course notes, etc/ will be passed out via the website only.

Preq: (1) ECE 2030 & CS2130 *or* (2) CS2110; and (3) Programming in C, machine language (eg, LC-3)

Books: (1) [Computer Systems: An Integrated Approach to Architecture and Operating Systems, Ramachandran & Leahy: ISBN # 978-0321486134](#) (any version of the textbook is acceptable)
 (2) My hand-written class notes (made available “just in time”)

Goals: This course is designed to give you an overview of computer systems structures, both hardware architecture and software layers. The focus is on performance issues.

Topics to be covered:

1. Introduction and Overview	8. Memory management
2. Processor architecture	9. Memory hierarchy (caching)
3. Datapath architecture	10. Parallel systems
4. Interrupts	11. I/O and disks
5. Performance	12. Networking
6. Pipelining	13. Disk scheduling, File systems
7. Process scheduling	14. Advanced topics (time permitting)

How your grade is calculated:

30%	Projects I-VI (6 total)
20%	Exam I (Thursday, September 28th)
20%	Exam II (Thursday, November 9th)
25%	Final exam (Friday, Dec 8th, 11:30am-2:20pm, in classroom)
5%	Homeworks

***Homework #0:** You are required to visit my office at least once during my office hours and before the second exam (Exam II) (Nov. 9th). You must announce that your visit is “for homework 0.” This counts as a real homework! *If for some reason you cannot meet this requirement, please contact me via email.*

Course Rules (the legal stuff...)

1. **There is no extra credit provided in this course.**
2. Some assignments will be due during the final instructional days of the semester.
3. If you have any major personal problems (family/illness/etc.), please go to the Division of Student Life office.
4. **All assignments must be turned in on time.** Only excuses approved by the Division of Student Life are valid.
5. You are also responsible for insuring that what you turned in is what you meant to turn in. T-Square includes a “retrieve” feature: This allows you to retrieve exactly what you submitted and insure that it works. Always use this feature to confirm what you have submitted. If you have any problems submitting via T-Square, email the Head TA what you would have submitted BEFORE the deadline of the assignments. After the deadline is a 0, no exceptions.
6. **Recitation attendance is required.** Homework assignments will be collected in recitation and the TAs may discuss important information pertaining to projects and assignments. If you will need to miss a recitation, stop by TA office hours prior to the recitation.

7. **Demos are required for all projects.** Sign up for demo times with TAs via T-Square. If you cannot attend one of the predetermined demo time slots, e-mail the Head TA. You must contact the Head TA at least 72 hours before the last posted demo slot for the project begins. Do not wait until the last minute to sign up! ***If you sign up for a demo and miss it without a valid excuse you will get 50% of the points off.*** Only excuses approved by the Division of Student Life are valid. If you know you are going to miss a demo at least 24 hours ahead of time, you may cancel your slot on T-Square with no penalty. Cancellations closer to the demo time may be treated as a missed demo.
8. **Tests must be taken at the scheduled date and time.** Failure to attend an exam results in a 0.
9. **The deadline for re-grades is 1 week after an assignment grade is posted** or returned to the class. Regrades are only for correct answers accidentally marked as wrong. **There are no regrades for higher partial credit.**
10. The T-Square announcements should be read every day.
11. The course piazza forum is only for posting technical questions about assignments, tests, etc. Do not give away answers to questions on piazza!
12. **Computer, tablet and phone usage is not permitted during lecture.** There is much research that handwritten note taking is a fundamental and important way to integrate information. Use a paper notebook. If you don't understand something, ask a question. I don't bite (much).
13. **Electronic recording of lecture is not permitted without prior consent.**
14. **Reasonable accommodations will be made for students with verifiable disabilities.** In order to take advantage of available accommodations, students must register with [Disability Services](#).

Coding guidelines

15. You must turn in ALL files specified in the "Deliverables" section of the assignment instructions. We reserve the right to impose a penalty on submissions that do not follow the given submission directions.
16. You must provide a ***Makefile*** that compiles and links your code by default. **If you are given a Makefile with the project, we expect your code to compile under the given Makefile.**
17. Your code must compile with **gcc** on Ubuntu 16.04 LTS. If your code does not compile, you will receive a 0 for the assignment.
18. You will be penalized if your code produces warnings when compiled with the given Makefile, or the following flags if no Makefile is provided: **gcc -Wall -pedantic -O2**
19. Code should be well commented and use a clean, consistent (readable) style (i.e., proper indenting, etc.). We reserve the right to impose style requirements, and deduct for non-conforming solutions. This is **not** the [obfuscated C code competition](#)!

Plagiarism (cheating)

20. Students are expected to have read and agreed to the Georgia Tech Honor Code, see <http://osi.gatech.edu/content/honor-code>
21. Suspected plagiarism will be reported to the Division of Student Life office. It will be prosecuted to the full extent of Institute policies.
22. A student must submit an assignment or project as his/her own work (this is what is expected of the students).
23. Using code from github, via googling, from stack overflow, etc., **is** plagiarism and is not permitted. Do not publish your assignments on public repositories (i.e., accessible to other students). This is also a punishable offense
24. Although discussion among the students through piazza and other means are encouraged, **the sharing of work is plagiarism**. If you are not sure about it, please ask a TA or stop by the instructor's office during the office hours.
25. TAs and Instructor determine whether the project is plagiarized. **Trust us, it is really easy to determine this....**

<p>Statement for not mentioned policies and issues: Any policies and issues not mentioned in this syllabus will follow policies and procedures according to the Georgia Institute of Technology: http://policylibrary.gatech.edu</p>
