CSE 533: Network Programming

Fall 2017

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Lecture: T & Th 11:30am-12:50pm in Old CS 2120
Final Exam: Weds. December 13, 2017 5:30pm-8:00pm

Course Webpage:http://www.cs.stonybrook.edu/∼cse533

Office Hours: W 11-12pm, Th 1-3pm
Course Only Office Hours: W 10-11am

Course Description: This course is focused on low-level networking protocols, including:

- C / Unix TCP & UDP socket programming

- routing & raw sockets

- RPC

- and shared memory.

Assignments and programming projects will focus the course on network programming in the context of network protocol development and implementation (e.g., TCP, ICMP, routing, multicasting, ARP, etc.), and distributed services and system-level applications (e.g., client-server and peer-to-peer applications, distributed file systems, name services, etc.).

CSE 533 is a demanding programming course! You must be a confident C programmer to be succsefull in this course. You will need to dedicate many hours outside of class time studying the material, working on the homework assignments and preparing for exams.

Prerequisite(s): CSE 230 (Intermediate Programming in C & C++), CSE306 (Operating Systems), and CSE310 (Computer Networks) , or equivalents.

Credit Hours: 3

Required Text: *Unix Network Programming, Volume 1: The Sockets Networking API*, 3rd Edition, Addison-Wesley 2004. **Author(s):** W. Richard Stevens, Bill Fenner & Andrew M. Ruddof

Course Homepage & PIAZZA: http://www.cs.stonybrook.edu/∼cse533

This term we will be using PIAZZA for class discussion. The system is highly catered to getting you help fast and efficiently from classmates and the Professor. All non-personal course-related communication should be posted to the discussion board. If you have questions about assignments, technical problems that need troubleshooting, or other questions that might be of interest to other students, they must be posted to PIAZZA and not emailed to the instructor or TA.

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If you have any problems or feedback for the developers, email team@piazza.com. Find our class page at: https://piazza.com/stonybrook/fall2017/cse533/home

Course Announcements: Course announcements will be posted to PIAZZA. You are expected to be aware of course announcements.

Grade Distribution: *Pass/No Credit (P/NC) option is not available for this course.*

Programming Assignments	65%
Cumulative Final Exam	35%

NOTE: You must obtain a minimum of 60% of the homework points in order to pass the course. This is a programming course. If you can not do the homeworks, you did not learn anything!

Course Policies:

- **Programming Assignments**

  - A major component of the course is to implement networking protocols in C. Therefore, to pass the course with a grade of a C or higher students must satisfy the following 2 criteria: (i) can miss only 1 assignment and (ii) must obtain a minimum of 60% of the homework points.

  - The course will contain 4 programming assignments. **Offering** and **accepting** solutions from others is an act of **plagiarism**, which is a serious offense and **all involved parties will be penalized according to the Academic Honesty Policy**. Discussion amongst students is encouraged, but when in doubt, direct your questions to the professor, tutor, or lab assistant.

  - Programming assignments must be turned in on the day they are due. Students are urged to plan ahead to avoid problems such as congestion or failure of computer facilities at the last minute. If your assignment is incomplete or is not working by the due date, turn in whatever you have.

  - **Extensions or late assignments will NOT be accepted under any circumstances**.

  - **Note due to limited resources for grading, programs which do not compile or run for testing may not be graded.**

  - **Grading Issues:** All issues with grading MUST be emailed to cse533ta@cs.stonybrook.edu within 1 week of release of the graded assignment. Any requests/concerns after this date will not be honored. The email must include a detailed explanation of the specific grading issues and reason/correction. We believe students often learn by investigating and understanding their mistakes. Therefore, it is the responsibility of the student to determine the issues, not the grader/instructor/TA. In person "discussions" with the TA/Professor concerning grading will not be permitted. All concerns will be addressed via email, unless you are directly contacted to meet.

- **Final Examination**

  - Exam is closed book, closed notes.

  - **No makeup exams will be given, except for PRIOR excused absences with official documentation approved by the University.**

- **Attendance**

  - Attendance is expected and highly encouraged.
  - Students are responsible for all missed work, regardless of the reason for absence. It is also the absentee's responsibility to obtain all missed notes or materials.

Etiquette:

- **PIAZZA**

  PIAZZA is a forum for additional learning and assistance. It is not the place for cyber-bullying, memes, grade complaints, concerns/comments/criticisms about the course, or in general, anything unrelated to the course material and your learning. Improper behavior will result in the deactivation of PIAZZA and reporting of the individual's behavior to University Office of Community Standards.

  Therefore, students are expected to use the PIAZZA forum for all non-personal course-related communication. If you have questions about assignments, technical problems that need troubleshooting, or other questions that might be of interest to other students, they must be posted to PIAZZA and not emailed to the instructor or TA.

- **Email**

  All course logistic emails should be directed to **cse533ta@cs.stonybrook.edu**.

  Email Professor Wong directly in the following circumstances:

  - If you cannot come to office hours and need to set up an appointment to meet at another time; in this case you must include your availability for the upcoming week.
  - Making arrangements for disability accommodations.
  - To discuss private, personal matters that are impacting your coursework such as physical or mental illness, death in the family, etc.
  - If the instructor asks you to email them something relating to a previous conversation.

  When emailing, use the following guidelines to ensure a timely response:

  - use your official @stonybrook.edu email account
  - use a descriptive subject line that includes "CSE 533", identifies the item you are emailing about, and a brief note on the topic (eg. "CSE533: HW1 Submission error", "CSE533: HW2 Blackboard Grade")
  - begin with a proper greeting, such as "Hi Prof. Wong"
  - briefly explain your question or concern or request
  - end with a proper salutation that includes your full name, netid, and SBU ID number

Academic Dishonesty:

You may discuss the assignments with anyone you like, however each students' assignment (including coding) which they submit must be their own work, and only their own work. Any evidence that source code or solutions have been copied, shared, or transmitted in any way (this includes using source code downloaded from the Internet or written by others in previous semesters!) will be regarded as evidence of academic dishonesty. The College of Engineering and Applied Sciences regards academic dishonesty as a very serious matter, and provides for substantial penalties in such cases, such as receiving an 'F' grade, or expulsion from the University. For more information,

obtain a copy of the CEAS guidelines on academic dishonesty from the CEAS office.

All examinations will be closed-notes and closed-book. No electronic devices of any kind will be permitted to be used during exams. All cell phones must be turned off during exams. Any use of electronic devices, textbooks, notes or any other materials will constitute cheating.

Be advised that any evidence of academic dishonesty will be treated with utmost seriousness. Those involved will be prosecuted to the fullest extent permitted by the University and College laws. Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the academic judiciary website.

Students with Disabilities:
If you have a physical, psychological, medical or learning disability that may impact on your ability to carry out assigned course work, I would urge that you contact the staff in the Disability Support Services office (DSS), ECC Building (behind SAC), 632-6748/TDD. DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to their and search Fire Safety and Evacuation and Disabilities.

Critical Incident Management:
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Judicial Affairs any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures.