Cpr E 489: Computer Networking and Data Communications
Spring 2019 Course Syllabus

Instructor:
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Office Hours: TR 2:00 ~ 3:00 PM or by appointment
Location: 313 Durham Center

Teaching Assistants:
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Class Information: Class meets on TR 11:00 AM ~ 12:15 PM @ 2019 MORRILL.

Course Description: Welcome to Cpr E 489. We are looking forward to learning together with you. In this course, we will try to understand how computer networks operate: how packets are transmitted, how packets are routed, what to do when there is network congestion, and so on. We will study the OSI reference model and the TCP/IP networking architecture. Various protocols at the physical, data link, network, and transport layers will be studied. We will learn what sockets are and how to use them, and we will write codes to build simple client-server applications. We will get to know Cisco routers, Geni, and Mininet.

Prerequisite: Cpr E 381 or E E 324

Textbook: There is no required textbook. The following books are recommended:
- A. Leon-Garcia and I. Widjaja, *Communication Networks: Fundamental Concepts and Key Architectures*, 2nd Ed., McGraw-Hill, 2004.
- J.F. Kurose and K.W. Ross, *Computer Networking: A Top-Down Approach,* 6th Ed., Pearson, 2012.
- W.R. Stevens, B. Fenner, and A.M. Rudoff, *UNIX Network Programming, Vol. 1: The Sockets Networking API*, 3rd Ed., Addison-Wesley, 2003.

Canvas: This course will use Canvas for communication and course information. All course materials, including class notes, homework assignments, lab descriptions, and supporting materials, will be posted on Canvas. You will have access to your individual grades on Canvas. **Please check Canvas regularly.**

Grading:

Homework Assignments	10%
Labs	20%
Quizzes	5%
Midterm Exams	20% x 2
Final Exam	25%

Exam Information:
- Quizzes and exams are open-books/notes/references/assignments.
- Quizzes: random number, random time.
- Two midterm exams (tentative): 02/28 (Thu) and 04/11 (Thu) @ 2019 MORRILL.
- Final exam (tentative): 05/08 (Wed) 9:45 ~ 11:45 AM @ 2019 MORRILL.
- **Final exam is comprehensive.**

Homework Policies: **Homework assignments are due one week from the assign date.** Please type your answers and submit on Canvas. **Late submissions will NOT be accepted.**

Lab Policies:
- There are four lab sections: T 2:10 ~ 4:00PM, T 4:10 ~ 6:00PM, W 1:10 ~ 3:00PM, and F 1:10 ~ 3:00PM.
- Lab location: 2048 COOVER.
- **We will be doing labs in groups of two.** You have to inform us who your partner is in your first lab report. The partners will last the entire semester. Try to form a group where you have an opportunity to learn from each other or at least one person can learn from the other. Taking turns to do labs is not allowed. It has to be a joint effort each time. **Both partners should write their effort levels, totaling to 100%, on each lab report.**
- **Lab reports are due at the beginning of the next lab session unless specified otherwise.** Please submit on Canvas. If you are asked to submit source codes, they are expected to be well-commented.
- **Late submissions will NOT be accepted.**
- Each of your lab grade will be: **min (100, report_grade_obtained * effort_level * 2).**

Important Notes:
- **Academic Dishonesty –** The class will follow Iowa State University's policy on academic dishonesty. Anyone suspected of academic dishonesty will be reported to the Dean of Students Office.
- **Students with Documented Disabilities –** Iowa State University is committed to assuring that all educational activities are free from discrimination and harassment based on disability status. Students requesting accommodations for a documented disability are required to meet with staff in Student Accessibility Services (SAS) to establish eligibility and learn about related processes. Eligible students will be provided with a Notification Letter for each course and reasonable accommodations will be arranged after timely delivery of the Notification Letter to the instructor. Students are encouraged to deliver Notification Letters as early in the semester as possible. SAS, a unit in the Dean of Students Office, is located in room 1076 Student Services Building or online at www.sas.dso.iastate.edu. Contact SAS by email at accessibility@iastate.edu or by phone at 515-294-7220 for additional information.
- **Mutual Respect and Professionalism –** You are expected to treat your instructor and all other participants in the course with courtesy and respect. Your comments to others should be factual, constructive, and free from harassing statements. You are encouraged to disagree with other students, but such disagreements need to be based upon facts and documentation (rather than prejudices and personalities). It is the instructor's goal to promote an atmosphere of mutual respect in the classroom. Please contact the instructor if you have suggestions for improving the classroom environment. It is preferable if students discuss issues directly with the instructor, however, students may also leave a note in the instructor's mailbox.
- **Emergency Awareness**
  - Call 911 in an emergency. Report suspicious activity or objects to ISU Police at 515-294-4428.
  - During a campus emergency, go to www.iastate.edu for additional information.
  - Classroom management emergencies
    - Call ISU Police for immediate health/safety classroom concerns at 515-294-4428.
    - For other concerns regarding classroom management, contact the instructor and/or chair of the academic department for guidance.
  - Know the following information posted in your building Emergency Map
    - Locate the evacuation routes
    - Locate the severe weather shelter areas
  - Keep your contact information up-to-date in the ISU Alert
  - Additional emergency information is available at www.ehs.iastate.edu/prep/students.
  - ISU PD Facebook (www.facebook.com/ISUPD) and Twitter (www.twitter.com/ISUPD)
  - To be better prepared during an act of violence on campus and understand the principles of A-D-D (Avoid Deny Defend), please Violent Incident Response Training (VIRT).