# CSE 5344 Computer Networks, Protocols and Architecture (3-0) Fall 2013, Section 033 Wednesday, 6:00 – 9:00 PM, L-3/Link Arlington Facility, Training Room

Instructor: Mike O'Dell Email: odell@uta.edu

Website: http://ranger.uta.edu/~odell

GTA: TBD GTA email: TBD

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### Required Textbook:

Computer Networking: A Top-down Approach Featuring the Internet,6<sup>th</sup> Edition, James F. Kurose and Keith W. Ross, Pearson/Addison-Wesley, 2013 (ISBN-13: 978-0-13-285620-1)

#### Online Materials:

At the discretion of the instructor, assignments including homework, labs and quizzes, for this course will be taken directly from the Pearson Higher Education Companion Website for the Kurose and Ross textbook *Computer Networking: A Top-down Approach Featuring the Internet*, 6<sup>th</sup> *Edition*. To access these materials, students must set up a student account using the Key Code found in the inside front cover of their textbook. The companion site can be found via the Student Resources link at <a href="http://wps.pearsoned.com/ecs\_kurose\_compnetw\_6/">http://wps.pearsoned.com/ecs\_kurose\_compnetw\_6/</a>.

### Course Objectives and Outcomes:

To provide a well-rounded understanding of the concepts underlying modern communications networks, with particular emphasis on the protocols and architectures deployed in the Internet. Networking reference models will be discussed, with a focus on the Internet protocol stack. Network programming concepts, techniques, and applications will be studied. The course will provide an opportunity for limited hands-on experience with various network applications and protocols. Presentation will include end-to-end network protocols, flow/congestion control, Ethernet and wireless/mobile network principals. Network communications security principals will be introduced. The student who successfully completes this course will understand the protocols and architectures employed in modern computer networking, and will be prepared to apply his/her knowledge in developing networking applications toward further studies in the networking field. Prerequisite: CSE 3320 (Operating Systems).

### General Policies:

Students are responsible for checking the course Website frequently for updates and notices relative to class materials and schedule. Email may be used occasionally to send notices of an advisory nature, but should NOT be relied upon as the official means of communication to the class. ONLY THE EMAIL ADDRESS specified in MyMav as your primary UTA account will be used for any correspondence sent to the class by the instructor. It is the <a href="student's responsibility">student's responsibility</a> to ensure that your email address is operational and accessed frequently.

The course schedule is aggressive, but achievable. However, if necessary, the schedule will be modified during the semester to allow coverage of the most critical topics. I will attempt to provide advance notice of changes, but you should check the schedule frequently on the course Website at <a href="http://ranger.uta.edu/~odell">http://ranger.uta.edu/~odell</a>.

Quizzes will be given throughout the semester to measure learning progress. Quizzes will <u>typically</u> be given during the final 15-20 minutes of the class period, but may be given at any time during the class period as the situation dictates. I may also use online quizzes found on the Kurose & Ross/Pearson website. The schedule for quizzes indicated in the class schedule may be adjusted at the discretion of the instructor based on the pace of topics covered.

There will be a comprehensive final exam at the end of the semester. Students must be prepared to identify themselves to the exam proctor with their UTA student ID cards during exams.

**NO early quizzes or exams** will be given. Failure to appear for a scheduled quiz or exam at the appointed time, unless due to a dire emergency or a pre-authorized work-related absence, will result in the assignment of a zero grade.

Homework and programming assignments are due on the day indicated on the class schedule available on the course web site. Programming assignments/projects must be submitted via email and in hardcopy (per submission instructions in the assignment document). They must be time-stamped as sent before the class period on the due date, or late policy grading applies (see below). Any homework assignments that are not web-based will be due and collected at the beginning of the class period on the due date. Electronic submission may be required/authorized per the specific assignment and for students in the remote classroom site in Binghamton. Work submitted after the end of the class on the due date will be considered late.

Discussion or challenges of individual grades will not be entertained in the classroom before, during or immediately following class. Students who wish to contest grading must first discuss the issue with the GTA and then may schedule a discussion with the instructor as necessary. Solutions/keys for any homework assignments will be discussed in class and/or made available for general distribution. In the case of any dispute concerning submission/grade on an assignment, it is the student's responsibility to produce papers as proof. Final Exam papers will not be returned but can be reviewed in the instructor's office during regular posted office hours. Final Papers/Projects will not be returned in class but can be reviewed after the end of the semester.

## Grading Policy:

Final grades in this course will be assigned based on following weighted components:

Homework (2)	10%
Programs/Projects (2)	20%
Quizzes (5)	25%
Final Exam	30%
Final Paper/Project	15%

Based on progress of the class, the instructor reserves the right to make other assignments that are not part of the published schedule and modify the specified weightings accordingly. Any changes will be announced in class and published in an update to this syllabus.

#### Grade Distribution:

In general, semester grades will be determined as follows:

A 100 to 90
B 89 to 80
C 79 to 70
D 69 to 60
F 59 and below

Final grades <u>may</u> be curved based on overall class performance. Grades are final once submitted, and are not changed unless a grading error has been made.

## Late / Makeup Policy:

No makeup quizzes will be given. No makeup exams will be given.

Late homework and programming/project assignments will be accepted at a penalty of 10% per 24 hours, or fraction thereof, beyond deadline. Homework and programming assignments will not be accepted after 40% has been deducted (i.e. 4 days late), and a grade of zero will be assigned.

## Academic Dishonesty:

It is the policy of the UTA College of Engineering to strictly enforce a code of ethics, professionalism and conduct for students. Each student's work must be solely and completely the work of the student. Academic dishonesty is completely unacceptable and will not be tolerated. Academic dishonesty includes, but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student, or the attempt to commit such acts. Any case of academic dishonesty will be treated in accordance with the UTA's statement on Academic Integrity as specified at <a href="http://www.uta.edu/conduct/academic-integrity/index.php">https://www.uta.edu/conduct/academic-integrity/index.php</a> and the Student Code of Conduct found at <a href="https://www.uta.edu/policy/hop/stu/2">https://www.uta.edu/policy/hop/stu/2</a>.

If you do not understand this policy, it is your responsibility to obtain clarification or any additional information you may require. ACADEMIC DISHONESTY IN ANY FORM WILL NOT BE TOLERATED IN THIS CLASS.

## Class Schedule for CSE 5344-033 Computer Networks I Fall 2013

(Wednesday, 6:00 PM – 9:00 PM, L-3/Link Training Room)

Text: <u>Computer Networking, A Top Down Approach Featuring the Internet, 6e</u> (Kurose and Ross)

Date	Day	Topics Covered/Comments	K&R Text Sections	Homework/ Project/Lab	Quiz
08/28/13	Wed.	Course Intro, Computer Networks Overview	1.1 – 1.4		
09/04/13	Wed.	Network Components and Protocols	1.5 – 1.8	HW1	
09/11/13	Wed.	Application Layer Protocols	2.1 – 2.4		
09/18/13	Wed.	DNS, P2P, Socket Programming	2.5 – 2.8	Prog1	Q1
09/25/13	Wed.	Transport Layer, Reliable Data Transfer	3.1 – 3.4		
10/02/13	Wed.	TCP Features and Operation	3.5	Prog2	
10/09/13	Wed.	TCP Congestion Control & Latency	3.6 – 3.8		Q2
10/16/13	Wed.	The Network Layer, Routing Principles	4.1 – 4.2, 4.5		
10/23/13	Wed.	IP, Internet Routing	4.4, 4.6		Q3
10/30/13	Wed.	Routers, Multicast	4.3, 4.7 – 4.8	Prog3	
11/06/13	Wed.	Data Link Layer, Error Detection, MAP	5.1 – 5.3		
11/13/13	Wed.	Switched LANs, Link Virtualization	5.4 – 5.8	HW2	Q4
11/20/13	Wed.	Wireless Networks, Mobility	6.1 – 6.9		
11/27/13	Wed.	Network Security Principles	8.1 – 8.4	HW3	
12/04/13	Wed.	Security in the Internet	8.5 – 8.10		Q5
12/11/13	Wed.	FINAL EXAM		Final Project	

#### Notes:

- 1. The assignment schedule shown above may be adjusted slightly during the semester depending on the learning pace of the class and fine tuning to accommodate the long class periods for this section. Although some of the specified materials may be summarized in the lecture, the reading schedule should be maintained to maximize the student's learning potential/opportunity.
- 2. Programming assignments (*Prog1-3*), **found in the assignment write-ups on the Kurose & Ross Companion Website for the 6<sup>th</sup> edition** of our textbook, are due via email on the days indicated in the schedule above.

  Specific submission requirements/instructions may be specified in class.
- 3. Homework assignments (*HW1-3*) and the Final Project are due and will be collected at the beginning of the class period indicated.
- 4. Email submissions may be specified for some/all of the assignments, as determined by the professor.
- 5. Quizzes will generally be allotted 15-20 minutes at the end of the class period indicated. However, at the discretion of the instructor, quizzes may be given, unannounced, at any time during the scheduled class period.