

COMPUTER NETWORKS - CS4283

Syllabus

1. GENERAL INFORMATION:

Instructor name:

Email:

Credit: 3 (3 lecture)

Prerequisite: none

2. COURSE INFORMATION:

- Course description:

To provide the concepts of computer networks. This course covers all layers of network protocol stacks from physical layer up to application layer in a mixed style of layer-based and system-based approaches . The new features to be introduced this semester is to adopt extensive hands-on experiments and simulations through two major tools OPNET and Ethereal. Through the theory and practice, students will be exposed to the nuts and bolts of the fundamental protocols that make the Internet and gain deep understanding of protocol design and network protection issues. Wireless local networks and wireless sensor networks, which are the current spotlights of network research, will also be introduced..

3. BOOK AND MATERIALS:

- Required textbook:

Computer Networks: A Systems Approach (5th Edition) by Larry L. Peterson and Bruce S.Davie, Morgan Kaufmann, 2012.

- Other materials: Computer Networks: A Top-Down Approach (4th Edition) by James F. Kurose, Keith W. Ross, Addison Wesley, 2007.

4. GRADING PROCEDURES:

Computer-based testing 30%
Midterm Examinations: 20%
Final Examination: 50%

8. COURSE OUTLINE:

Week	Topic	Assignments
1	Ch. 1 Introduction	

2	Ch. 2 Application Layer	
3	Ch. 3 Direct Link Networks	
4	EXAM I	
5, 6	Ch. 4 Packet Switching	
7	Ch. 5 IP and internet	
8	Ch. 6 Scalable Routing	
9	EXAM II	
10	Ch. 7 TCP and UDP	
11	Ch. 8 Congestion Control	
12	EXAM III	
13	Ch. 9 Network Security	
14	Ch. 10 Wireless Sensor Networks	
15	Review for FINAL EXAM	

6. COURSE REQUIREMENTS:

- Assignments: Exercises are in corresponding sections of the required book.
- Projects or Team Class Projects: Projects are given by the instructor after finishing a chapter.
- Class attendance/participation: Evaluated by checking in the Attendance Book
- Final Examination: Students are directly tested and automatically marked on computers.

7. ACADEMIC INTEGRITY POLICIES:

- Student may not use Vietnamese language in class, or will be reduced 2% final marks
- Be punctual to come and leave the class.
- Maximum cancellation time per semester is 6 hours per class.

8. COMMENTS AND NOTES:

- Preparation for Class: It is expected that the students read related chapter in textbook and lecture noted before each class. This will help to capture the topics presented and discussed during class hours.
- Use of Class Time: Class time will be used mainly for lectures and discussions. A small part of class hours is used for testing. House works will be discussed on individual basis.
- Class Attendance: Due to the broad range of topics discussed throughout the course and their inter-relationship, it is requested that the students should attend the class regularly.
- Assignment Requirement: Assignments of each session must be submitted by email before the next session begins.

Instructor's Signature