

# CSCI 545 Advanced Data Communications

Department of Engineering and Computer Science  
Virginia State University, Petersburg, Virginia

Fall 2016

Instructor	Hui Chen, Ph.D.	Office Phone	(804)524-5428
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Office Hours	08:00 – 10:00 Monday 08:00 – 09:00 Wednesday 08:00 – 10:00 Friday 11:00 – 12:00 Friday and by appointment		

## Class Meeting and Location

5:00 – 6:30PM Monday and Wednesday, August 15 – December 5, 2016 HM 14S

## Catalog Description

Topics include classification of data communication systems, developments in communication technologies, routing models and algorithms, performance analysis in data networks, and modeling and simulation of large-scale networks.

**Prerequisites:** Prerequisite: CSCI 445 or its equivalent

## Textbook

1. Larry L. Peterson and Bruce S. Davie, Computer Networks: A Systems Approach, 5th Ed., Morgan Kaufmann, 2011. ISBN-10: 0123850592. ISBN-13: 978-0123850591.

## Additional Reading

2. Andrew S. Tanenbaum, Computer Networks, 5th Ed. Prentice Hall PTR, Saddle River, New Jersey 07458, USA, 2010, ISBN-10: 0132126958, ISBN-13: 978-0132126953.
3. James F. Kurose and Keith W. Ross, Computer Networking: A Top-Down Approach, 5th Ed., Addison Wesley, 2009, ISBN: 0-13-607967-9
4. Dimitri Bertsekas and Robert Gallager, Data Networks, 2nd Ed., Prentice Hall, Saddle River, New Jersey 07458, USA, 1992, ISBN: 0-13-200916-1

## Goals

This class introduces the rationale that shapes the networks today. Some focus will be given to network algorithms and their performance analysis. Selected topics from the following list will be discussed: layered network architecture, Link Layer protocols, high-speed packet switching,

queueing theory, Local Area Networks, and Wide Area Networking issues including routing and flow control.

## Class Participation

Students' attendance and active class participation are expected and required. Students are also expected to maintain appropriate affect and demeanor.

## Disability Services

The Americans with Disability Act (ADA) is intended to insure that students have equal access to the campus and course materials. The instructor will work with the students with Disabilities program to provide reasonable accommodation to students with disabilities. Please contact the Office of Disable Students Services at (804)524-5061.

## Access to Course Material and Grades

The instructor uses Blackboard (<http://blackboard.vsu.edu>) to post students' grades on exams, quizzes, in-class exercise, laboratory exercise, and projects.

The instructor maintains a class website to disseminate course lecture nodes, exercises, projects, and other course related material. The website is at <http://huichen-cs.github.io/course/CSCI545>.

The University use the Banner system to post midterm and final grades.

The instructor advises that students check often Blackboard, the class website and Banner for any class updates and their performance in the class.

## Grading

The evaluation is based a few components listed as follows,

Component	Percentage
Midterm Exam	25%
Final Exam	25%
Attendance	5%
Quizzes and In-Class Exercises	15%
Laboratory and Homework	15%
Projects	15%
Total	100%

Note that

- Both examinations are cumulative and given in a varied format;
- There will be multiple projects. Some projects are individual project and some are group projects. A project may require written report, oral presentation, and in-class or out-of-class demonstrations.
- Quizzes are unannounced individual work.

- The instructor may merge some components the above into one when calculating midterm and final grades

Your final letter grade will be given as follows according to the percentage,

Percentage	Grade
90-100%	A
80-89%	B
70-79%	C
60-69%	D
0-59%	F

## Important Dates

Monday, Aug. 15	University classes begin
Friday, Aug. 19	Last Day to Add/Drop classes
Monday, Sep. 5	Labor Day Holiday
Monday Sep. 26 – Friday Sep. 30	Midterm Exam
Monday Oct. 3 – Tuesday Oct. 4	Fall Break
Friday, Nov. 21	Last Day to Withdraw from classes
Wednesday, Nov. 23 – Sunday, Nov. 27	Thanksgiving Holiday
Monday, Nov. 28	Last day of classes
Tuesday, Nov. 29	Reading day
Friday, Nov. 30 – Monday, Dec. 5	Final Exam

## Disclaimer

The instructor reserves the right to revise this syllabus.