

CSCE 4753 Computer Networks (3 credits) - Distance Learning

Catalog Description: This course is an introductory course on computer networks. Using the Internet as a vehicle, this course introduces the underlying concepts and principles of modern computer networks, with emphasis on protocols, architectures, and implementation issues.

Prerequisites: Statistics

Textbook/required material: James F. Kurose and Keith W. Ross, *Computer Networking: A Top-down Approach*, 6th ed., New York: Addison-Wesley, 2013.

Goals: The goal of the class is for students to understand the application, transport, network, link, and physical layers of a computer network.

Topics covered:

- Client/server model, socket programming, and popular Internet application-layer protocols such as HTTP, FTP, SMTP, and DNS.
- Principles of reliable data transfer and the two transport-layer protocols TCP and UDP.
- Principles of datagram and virtual circuit packet networks, routing algorithms, IPv4, and IPv6.
- Principles of different types of multiple access protocols, Ethernet, hubs, bridges, and switches.

Class/laboratory schedule: Eight-week term

Relationship of course to Computer Engineering Program Student Outcomes:

- (b) An ability to design and conduct experiments, as well as to analyze and interpret data.
- (e) An ability to identify, formulate, and solve engineering problems.
- (h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- (k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

Relationship of course to Computer Science Program Student Outcomes:

- (c) An ability to design, implement and evaluate a computer-based system, process, component or program to meet desired needs.
- (g) An ability to analyze the local and global impact of computing on individuals, organizations and society.
- (i) An ability to use current techniques, skills, and tools necessary for computing practices.

Prepared by: Dale R. Thompson

Date: January 14, 2016

**CSCE 4753 – COMPUTER NETWORKS (3) – Distance Learning
Spring 2016 (Jan. 19 – Mar. 8), CSCE 4753-939 (ISIS #6172)**

General Information

- Class websites: <http://learn.uark.edu> (primary) and <http://www.netgeekdr.com/classes/> (backup)
- Instructor: Dale R. Thompson, Ph.D., P.E.
 - Office hours: <http://www.NetGeekDr.com/calendar/>
 - Office: JBHT 521
 - Phone: 575-5090
 - Email: *drt@uark.edu*

Grading

Course grades will be determined by these weights:

| | |
|-----------|-----|
| Homework: | 10% |
| Quizzes: | 40% |
| Exam I: | 25% |
| Final: | 25% |

The final class grade will be assigned according to the 10-point scale shown below. The grades may or may not be curved.

| | |
|---|------------|
| A | 90 – 100% |
| B | 80 – 89.9% |
| C | 70 – 79.9% |
| D | 60 – 69.9% |
| F | < 60% |

Homework

All assignments will be given with a strict deadline, and students are required to submit their assignments on or before the deadline. In case of extenuating circumstances, students are advised to contact the professor as soon as practical. You are encouraged to discuss the course and the assignments with each other; however, your exams and homework should be your own work.

Academic Dishonesty Policy

As a core part of its mission, the University of Arkansas provides students with the opportunity to further their educational goals through programs of study and research in an environment that promotes freedom of inquiry and academic responsibility. Accomplishing this mission is only possible when intellectual honesty and individual integrity prevail.

Each University of Arkansas student is required to be familiar with and abide by the University's 'Academic Integrity Policy' which may be found at <http://provost.uark.edu/>. Students with questions about how these policies apply to a particular course or assignment should immediately contact their instructor.