CSCI 466: Networks
Fall 2011

Course Description

A study of the fundamental principles of computer based communication. Principles, design, and standards of networks will be discussed, including standard network protocols. Includes an introduction to telecommunications and basic data transfer processes. Prerequisite: CSCI 332.

People

Keith Vertanen
kvertanen@mtech.edu
Museum 102, 496-4385
Office hours: Tuesday 4:00 – 5:00pm
Thursday 4:00 – 5:00pm
Friday 3:00 – 4:00pm
or by appointment

Classes

Tuesday	02:00 - 03:15pm	CBB 112
Thursday	02:00 - 03:15pm	CBB 112

Resources

Textbook	Computer Networks: A Systems Approach, L. Peterson and B. Davie, 5th ed.
Class web page	http://katie.mtech.edu/classes/csci466/
Moodle	https://moodlemtech.mrooms3.net/course/view.php?id=248

Evaluation

A	90% - 100%	Midterm exam	20%
B	80% - 89%	Final exam	30%
C	70% - 59%	Assignments	50%
D	60% - 69%	Staff discretion (participation and extra-credit)	±?%
F	0% - 59%		

Assignments

Assignments will consist of written exercises, software assignments, and presentations. The exact details of how and when to submit will be stated in the assignment description. You get a total of four free late days. Each late day buys you a 24-hour extension to an assignment submission deadline. If you are out of free late days, any further late submissions will be given a zero.

Your programs will be graded on correctness, programming style (including comments), and efficiency. Partial credit is possible so if you run out of time, submit what you have.

Exams

There will be two exams that cover material from lectures and assignments. Makeup exams will only be given if you bring valid documentation explaining a legitimate reason for missing the test. The final exam will be comprehensive.

Honor code policy

Cheating will not be tolerated and can result in failure of the course. Submitted work must be your own. Under no circumstances should you copy another person's solution or code. Exams are to be strictly your own effort. No electronic devices are allowed in exams.

Programming is a creative process and no two programmers will solve the same problem in the same way. You are encouraged to discuss how to design a solution to a given problem with your classmates. But when it comes time to convert your design into code, you must write the code yourself. Be sure not to leave copies of your code where others might be able to access it (such as in the recycling bin of a lab computer). You may adapt code from the course materials provided you cite what code you used in your program's comments.

General

Any student who may need an accommodation due to a disability, please make an appointment to see me during my office hours. A letter from a Montana Tech Disability Coordinator authorizing your accommodations is needed.

Expectations:

E1. Students have implemented advanced data structures (hash table, balanced search tree, and a graph) using OOP design in a high level programming language and used them in simple programs. (CSCI 332)

E2. Students understand the syntax and semantics of programming languages and can formally describe portions of a programming language's syntax and semantics. (CSCI 305)

E3. The student can write short papers reviewing technical topics. (WRIT 101)

Course Outcomes:

R1. Students demonstrated conceptual knowledge of the traditional IETF networking protocol stack. (CAC-i; EAC-k)

R2. Students described common internet protocols and chose the appropriate protocol and protocol level when designing networked applications. (CAC-a, i, j, k; EAC-a, e, k; SEC-1, 2)

R3. Students designed simple client/server applications that used the TCP and UDP protocols. Students implemented these designs in a high-level programming language, such as C, C++, or Java. (CAC--a, i, j, k; EAC-a, e, k; SEC-1, 2)

R4. Students expressed a conceptual understanding of networking and their solutions for common applications through well organized and documented presentation. (CAC-f; EAC-g)

R5. Students demonstrated a conceptual understanding of application-level networking problems and their solutions for common networked applications such as remote file systems, RPCs, electronic mail, and applications that use the World-Wide Web. (CAC-i, EAC-k)

R6. Students demonstrated knowledge of how the Internet is constructed, physically and logically, and how high-level user actions in networked applications are mapped to concrete low-level data representations over networks. (CAC-i, EAC-k)