CMPT244: Computer Networking
Spring 2004

SYLLABUS

Classes: Fisher 112, MW 11:00-12:25

Instructor: Paul Shields, Fisher 111,   x4198
                pshields@simons-rock.edu
                Ofc Hrs: T 11:30-12:30, W 10-11, R 11:30-12:30, or by appt.

Web Site: http://www.simons-rock.edu/~pshields/cs/

Text

Computer Networking: A Top-Down Approach Featuring the Internet, 2nd ed., James Kurose
& Keith Ross, Addison Wesley, 2002

Description

This is a course on computer networking covering the Internet protocol stack, implementation
technologies, and management and security issues. Topics will include service paradigms and
switching alternatives, application layer protocols, transport layer protocols, network layer (IP)
protocols, data link protocols, and physical media. We will also look at new technologies for
multimedia and wireless networks. The course will have labs and presentations by computer
services.

Prerequisite: one semester of Java or C programming.

Objectives

        1) to understand the structure and organization of computer networks, and to develop
fluency with the abstractions that allow us to interact with them.

        2) to learn about the history of the internet and current directions in networking
technology and administration.

        3) to gain familiarity with common networking protocols and algorithms.

Requirements

Students will work together in groups of 2 or 3 to present two classes during the term covering
topics from the text (see presentation schedule at http://www.simons-rock.edu/~pshields/cs/).
There will also be small assignments and quizes throughout the term, and one major paper or
project (8-10 pages) which will be presented to the class at the end of the term. A high degree
independent student work will be required--as well as active participation in class. There will
be no extensions granted for class presentations.

Attendance

The normal college policy on attendance will be followed. 2 absences will result in a warning,
3 or more in possible suspension from the course.

Grading

Assignments and quizes 20%, 2 x class presentations 40%, final project 40%

Reading

Text chapters should be read <u>before</u> the first class on that chapter.

Schedule

Jan.   19   Introduction

Chapter 1--Computer Networks and the Internet, The Protocol Stack

      21

      26
      28

Chapter 2--Application Layer

Feb.   2   Presentation
      4

      7
      9

Chapter 3--Transport Layer

      16   Presentation
      18

Winter Break--Feb. 20-29.

Mar.   1
      3

Chapter 4--Network Layer

      8   Presentation
      10

      15
      17

Chapter 5--Link Layer

      22   Presentation
      24

Final project proposal due before leaving for spring break.

Spring Break--Mar. 26-Apr. 4

Apr.   5
        7

Chapter 6--Multimedia Networking

      12   Presentation
      14

      19

Chapter 7--Network Security & Management

      21   Presentation

      26
      28

Final Projects

May   3
       5

Reading Period May 6-9