

TSYS School of Computer Science @ Columbus State University
Course Syllabus: CPSC 6157- Network Management
Spring 2010

Instructor Information:

Mohamed R. Chouchane
Office: Center for Commerce and Technology, Room 430
Phone: (706) 568-5376
Email: chouchane_mohamed@colstate.edu
Homepage: <http://csc.colstate.edu/chouchane>
Office Hours: TWR 12:30 pm - 4:00 pm
(via email and by appointment)

Course Title: CPSC 6157- Network Management

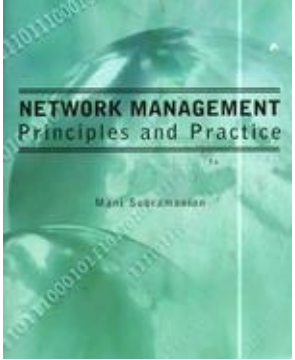
(This is an online course, taught through CougarVIEW. Go to <http://colstate.view.usg.edu> to access course material, complete assignments, take exams, and view announcements.)

Official Course Description:

Application of networking concepts related to the management of computer networks. Includes topics related to setup, management, and maintenance of networks. Additional topics will include network protocols used to manage computer networks.

Prerequisites: CPSC 5157 (Computer Networks)

Required Textbook:

	<p>Network Management : Principles and Practice (Paperback) By Mani Subramanian Publisher: Pearson Education (2006) ISBN-13: 978-0536107138</p>
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Supplementary Materials:

- Materials available on the course web site through CougarVIEW
- Software found on campus and on the Internet
- Materials available on Dr. Wayne Summers web site at <http://csc.colstate.edu/summers>

Additional Reference:

Automated Network Management Systems
by Douglas Comer (Prentice Hall, 2007)
ISBN-13: 978-0132393089

Course Objectives:

- Students will understand traditional and modern network management paradigms.
- Students will learn how to use existing tools and technologies for network management.
- Students will be able to identify ways to build software that automates management tasks.
- Students will understand configuration, fault detection, and performance monitoring issues as they relate to computer networks.

Major Topics:

- 1) Network Configuration and Operation
- 2) Fault Detection and Correction
- 3) Performance Monitoring and Assessment
- 4) Network Management Tools and Applications
- 5) SNMPv1, SNMPv2, and SNMPv3
- 6) Architectures for Network Management Software
- 7) Network Design Trade-offs

Instructional Methods and Techniques:

- 1) This course will be taught online via threaded discussions. See http://academics.colstate.edu/classes/cptr_req.asp for general information on taking an online course at CSU.
- 2) Students are expected to take part in threaded discussions.
- 3) All students must have access to a networked computer to complete their assignments and regularly visit the course website for new assignments, reading materials and announcements.

Assignments for Course:

- Readings from the textbook
- Readings from popular computing periodicals
- Online research and reporting of findings
- Contributing to online discussions
- Several homework assignments which may involve designing and evaluating network management architectures and applications
- Writing a research paper

Assessment Criteria:

Your performance will be evaluated using several homework assignments that may include hands-on activities, your timely contributions to threaded online discussions, a midterm test, a final exam, and a research paper. The final exam will be closed-books, closed-notes.

The final exam will be proctored. Information about testing centers is available at www.ncta-testing.org/cctc.

Students must locate a (preferably professional) proctor to administer their final exam. A supervisor at work or a public library official may also serve as a proctor. Students must contact the instructor no later than Tuesday, March 02, to get the instructor's approval for their chosen proctor. The name and full contact information of the proctor, as well as the proctor's affiliation must be communicated to the instructor no later than Tuesday, March 02.

A discussion topic will be posted by the instructor each week. A minimum of two *high-quality timely* contributions to the online discussion group will be required each week. A high-quality timely contribution to the online discussion group is one that addresses one of the issues raised by the discussion topic of the week, or one raised by another student during that week. Contributions such as "I agree" are not considered high-quality and will not get credit. Students are expected to interact in a professional and courteous manner. No non-topic-related issues are to be brought up on the board. No vulgarities, personal attacks, or offensive language of any sort will be allowed. Contributions made on the same calendar day will count as one contribution. Ideally, you should make your first contribution on a given day of the week, and make another contribution at least 24 hours after the first contribution is made, but before the deadline for the week's topic.

The research paper must be approved in advance by the instructor. Before they start working on their paper, students must get approval for their research topic. A list of suggested topics will be posted by the instructor on the course website, and updated as we progress through the semester. Guidelines on writing a scientific research paper will also be available on the course website. Students must have a topic approved and start working on their paper no later than 11:59 pm EST, March 02, 2010. Each student paper will be peer-reviewed by a classmate. (Guidelines on reviewing scientific papers will also be posted on the course's website.) It is then the author's responsibility to update their paper accordingly and submit a final draft for grading. All reviews must be thorough, careful, and to the point and will be graded as a homework assignment.

Assessment criteria will be weighted as follows.

Assignments	30%
One midterm test	15%
One final exam	25%
Discussions	10%
Research paper	20%

Letter grades will be assigned as follows:

A (90%-100%); B (80%-89%); C (70%-79%); D (60%-69%); F (0%-59%)

Tentative Schedule: (May change as we progress through the course.)

Date	Topic	Work Due
W01:01/12/10	Ch 1: Network Management Overview	
W02:01/19/10	Ch 3: Foundations of Network Management	

W03:01/26/10	Ch 3: Foundations of Network Management	
W04:02/02/10	Ch 4: SNMPv1- Organization	Assignment 1
W05:02/09/10	Ch 5: SNMPv1- Functional Models	
W06:02/16/10	Ch 6: SNMPv2	
W07:02/23/10	Ch 7: SNMPv3	Assignment 2
W08:03/02/10	Midterm	Research Topic
W09:03/09/10	Spring Break. No classes.	
W10:03/16/10	Ch 8: RMON	
W11:03/23/10	Ch 9: ATM Management	
W12:03/30/10	Ch 11: Telecommunications Mgt. Network	Assignment 3
W13:04/06/10	Ch 12: Network Mgt. Tools and Systems	
W14:04/13/10	Ch 12: Network Mgt. Tools and Systems	Research Paper
W15:04/20/10	Ch 12: Network Mgt. Applications	Assignment 4
W16:04/27/10	Final Exam	

General Policies:

You are responsible for all class work missed, regardless of the reason for having missed the work. Late assignments will not be accepted. No make-up exams or quizzes will be given, so please make sure you are present for all exams/quizzes. Refer to the CSU Catalog (http://academics.colstate.edu/catalogs/2009-2010/acaregs_grad.htm) for more information on class attendance and withdrawal.

Students are responsible for keeping pace with the progress of the course. Should any concerns about the course's contents be addressed, students should immediately consult with the instructor by email or during office hours. In addition to regularly reading from the text book, students must visit the course's website at least once a day for recent updates and announcements.

Academic dishonesty

Academic dishonesty includes, but is not limited to, activities such as cheating and plagiarism. It is a basis for disciplinary action. Collaboration is not permitted on assignments or exams/quizzes in this course. Any work turned in for individual credit must be entirely the work of the student submitting the work. You may share ideas but submitting identical assignments (for example) will be considered cheating.

You may discuss course material and help one another with debugging, however, I expect any work you hand in for a grade to be your own. Written and programming assignments may not contain sections that have been imported verbatim from an outside source, be it online (such as web page) or offline (such as a book or an article). The penalty for the first occurrence of this type of academic dishonesty is a zero grade on the assignment; the penalty for the second occurrence is a failing grade for the course.

A simple way to avoid inadvertent plagiarism is to talk about the assignments, but don't read each other's work or write solutions together. Keep scratch paper and old versions of assignments until after the assignment has been graded and returned to you. **If you have any questions about this, please see me immediately.**

For assignments, access to notes, textbook, books and other publications is allowed. Stealing, giving or receiving any code, diagrams, drawings, text or designs from another person (CSU or non-CSU) is not allowed. Having access to another person's work on the system or giving access to your work to another person is not allowed. It is your responsibility to keep your work confidential.

No cheating in any form will be tolerated. The penalty for the first occurrence of academic dishonesty is a zero grade on the assignment or exam/quiz; the penalty for the second occurrence is a failing grade for the course. For exams/quizzes, access to any type of written material or discussion of any kind (except with me) is not allowed.

(http://academics.colstate.edu/catalogs/2009-2010/acaregs_grad.htm)

CSU ADA Statement

If you have a documented disability as described by the Rehabilitation Act of 1973 (P.L. 933-112 Section 504) and Americans with Disabilities Act (ADA) and would like to request academic and/or physical accommodations please contact Joy Norman at the Office of Disability Services in the Center for Academic Support and Student Retention, Tucker Hall (706) 568-2330, as soon as possible. Course requirements will not be waived but reasonable accommodations may be provided as appropriate.