INF423 Networking Essentials - Syllabus Fall 2011 (tentative)

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Office Hours & Place: LI 84 (CCI Student Center), Office hours: W 10AM – 12PM

Course Description:
This course is designed to convey the essentials of data communication networks. It will cover concepts, technologies and architectures. There will be practical lessons built into the semester’s topics and assignments whenever possible. A single course cannot cover all possible networking topics and issues, so we will cover the major conceptual areas balanced with practical discussions and exercises. We will also discuss important network management topics such as domain management and security.

Learning Objectives:
- To understand the fundamental concepts of communication and data networks.
- To gain the necessary knowledge and skills to work effectively with network engineers and administrators.
- To understand the basic technologies and steps required for setting up and managing a small Local Area Network.

Major Areas Covered
- Fundamentals of Networking Technologies
- OSI Model
- Physical Layer
- Data Link Layer
- Local Area Networks
- Wireless Local Area Networks
- Network, Transport Layers TCP/IP
- Backbone Networks
- Wide Area Networks
- Application Layer
- The Internet
- Network Design
- Network Management and Network Troubleshooting
- Network Security
- Voice over IP

Required Textbook: Business Data Communications and Networking, 10th ed. By Fitzgerald and Dennis, John Wiley & Sons, 2009 (ISBN-13 978-0-470-05575-5). This is available at the University Bookstore and MaryJane Bookstore. In addition, there will be selected information distributed via Blackboard.

Course Location
This course meets Monday from 5:45PM- 8:35 PM in SS 116.
Course Website and Blackboard
Blackboard 9.1 will be used to provide essential course materials, the most current syllabus, and assignment documents and no separate course website will be maintained. However, this is not an online course and class attendance is essential and required.

Evaluation:
Exams: Two exams will be given, midterm and final exam at 20% each.

Labs: Labs will be assigned and will be conducted out of class. Labs will allow students to gain hands-on experience with various networking tools / applications and techniques. Detailed requirements and due dates for the Labs will be provided in Blackboard at least 1 week before it is due.

Homework: H/W will be assigned. These will include practical exercises requiring you student to apply concepts covered in lecture and/or the text. Detailed requirements and due dates for the homework projects will be provided in Blackboard at least 1 week before it is due. Labs and H/W will be graded on a 30-point scale and will be averaged together to account for 30% of the final grade.

Final Project: Students are expected to form teams for the final project. The project will require further research and investigation of a new hardware or software networking technology or products/applications in a topic area included in the course (topics that are not covered in the course must be approved by the instructor prior to the proposal). Each team needs to submit their project proposal, they also need to present their study in class and submit it. The final project proposal and project presentation are worth 5 points each and the final project is worth 15 points (25 points total).

Grading
A final grade will be determined as a weighted average of these scores using the following weights:
Exams (2) 40% (20 points each)
Labs and Homework 30%
Final Project 25%
Class Participation: 5%

Total possible points = 100

Grading Scale
A: 100-95 points A-: 94-90 points
B+: 89-87 points B: 84-86 points B-: 80-83 points
C+: 79-76 points C: 75-70 points
D: 69-60 points
F: 59 points and below
Students must complete all requirements in order to pass the course.
A grade of incomplete will be given only when circumstances beyond the student's control cause a substantial amount of course work to be unfinished by the end of the semester. Whenever possible, the student is expected to make extra efforts to prevent this situation from occurring. The instructor will be the sole judge of whether an incomplete is warranted.
Attendance/Lateness
Students are expected to attend every class and to be on time. Attendance will be taken at every class meeting. An excused absence (one approved by either instructor prior to class or supported by a letter from the Dean of Undergraduate Studies) will not impact your grade. Each unexcused absence will result in a 1-point deduction from your class participation grade.

Responsible Computing
Students are required to read the "[[http://www.albany.edu/policies/computer_usage/ University at Albany Policy for the Responsible Use of Information Technology]]". Students will be expected to apply the policies discussed in this document to all computing and electronic communications in the course. Students are also expected to understand and follow the University's Web Policy as stated in that policy, which states in part:
"No material included in personal home pages may violate any laws, including but not limited to those regarding obscenity, harassment of others, or copyright."
"Personal web pages may not be used for commercial purposes or financial gain outside of the academic mission."

Students With Disabilities
If you are a qualified person with disabilities who might need reasonable accommodations in this class, please communicate with us as soon as possible so that we may make appropriate arrangements to meet your needs. Frequently, we will need to coordinate accommodating activities with other offices on campus.

Academic Honesty
A plagiarism policy will be distributed with the research project assignment. This policy applies to that assignment and to all other graded material in the class. Plagiarism and other acts of academic dishonesty will be punished. Read the "[[http://www.albany.edu/undergraduate_bulletin/academic/regulations.html#integrity Standards of Academic Integrity]]" in the [[http://www.albany.edu/undergraduate_bulletin/academic/regulations.html Undergraduate Bulletin]]. The standards described in this document will be applied in this course.
Course Outline and Readings
The following schedule of lecture topics is preliminary and may be changed as the semester progresses. Extra materials and readings may be provided. Any change to it will be announced. H/W, lab assignments, and projects will be provided in Blackboard. Students are expected to have read the listed material before it is covered in class.

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<td>No Class – Labor Day</td>
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