INF 203: Introduction to Network Systems (3 credit hours)
Fall 2015, Class number 9430

Instructor: Norman Gervais
Office location: BA 313
Office hours: Tuesdays and Thursdays 12:15-1:45 or By Appointment
Contact information: ngervais@albany.edu
Office phone: (518) 442-3173

Graduate Teaching Assistant: Martha Avila
Office Location: 3rd floor, BA
Office Hours: Friday 10:00-12:00
Contact Information: mavilamaravilla@albany.edu

Peer Educator: Mike Dombrowski
Office Location: BA 354
Office Hours: Monday 2:00-3:00 and Wednesdays from 11:00-noon
Contact Information: mdombrowski@albany.edu

Course Information
Meeting time: Tuesdays and Thursdays 2:45-4:05
Meeting location: BB0121

Course description from *Undergraduate Bulletin*:

This course provides an introduction to computer networking and computer systems. The course covers the fundamentals of networked computing systems with an emphasis placed on the basics of network protocols and how they operate at all layers of the networking models. The course also introduces students to personal computer internal system components, storage systems, peripheral devices, and operating systems from an introductory computer architecture perspective. Prerequisite(s): I CSI 105 or 201.

Prerequisites
The prerequisite course for INF 203 is I CSI 105 or I CSI 201. This course will build on several of the primary concepts from these courses and add several more.

Course Goals
By the end of the semester, you should be able to:
> - Identify computer internals and how they impact system performance.
> - Distinguish the different layers of software and hardware.
> - Recognize the fundamental capabilities of different classes of computers.
> - Understand how computers interoperate.

Readings
Required readings
Systems Architecture, Burd, Stephen D., 2011, 6th Edition, Course Technology. ISBN 13: 978-0-538-47533-4.

Supplemental readings
Will be distributed via Blackboard as appropriate

Additional Materials
iClicker2 - This class will utilize iClickers for in-class activities. You must bring your iClicker to every session.

Students will require access to a computer, a modern generation browser, and the Internet.

Course Approach
I believe (and research shows) that students learn best from interacting with texts and with other learners, engaging in challenging tasks, being held accountable for their work, and receiving frequent feedback on their progress. As a result, this course was designed with these elements in mind.

Course Policies

Attendance
Attendance is mandatory in every class and students are expected to arrive on time. Your in-class performance is key to your success in this course. Attendance, itself, is not graded. Instead, graded in-class activities, assignments, and iClicker questions constitute an important part of the course grade. It is very difficult to maintain a passing average without consistent attendance. Missing class means the student earns an automatic zero for the activities, assignments, or iClicker question missed. Because of the nature of the activities, assignments and iClicker questions, no make-up opportunities will be available.

Tardiness
Missing an assignment, activity, or iClicker question that happened before a student arrives or after a student leaves also earns a zero. No make-up opportunities will be available.

If you know that it will be difficult for you to consistently get to class on time and stay for the entire period, you should take this course at a time that better fits your schedule. Being late frequently will guarantee a low or failing grade for the course.

Make-up Policy
There are generally no make-up opportunities for missed assignments except in extenuating circumstances. Instead of asking to make up missed work, please see the course 'safety valves' described below.

Since there will be occasions in your life when missing a class meeting is simply unavoidable, this course has a no-fault safety valve.

Safety valve 1
Your lowest in-class activity will be dropped. So, if you must miss an in-class activity for any reason, it will be possible to drop the zero you would automatically receive for missing the activity. Be careful not to waste your drop on frivolous things early in the semester, since you may need it if you catch a cold or need to leave town for a day later in the semester. If you do not use your safety valve for a missed activity, you will be able to use your safety valve to improve your grade, by dropping your lowest activity score.

Plan carefully for classes that you know you will need to miss. Work, religious practice, sports team travel, military duty, club activities, fraternity/sorority obligations, family responsibilities, assignments for other courses, and even brief illnesses, etc.—these are your responsibility to manage by using your safety valve. If you need to be out of class for any of these, make sure you have conserved your droppable grade to cover the class you need to miss.

Safety valve 2
There will be four individual assignments. The single lowest grade of these four assignments will be dropped.

Safety valve 3
If you become seriously ill during the semester, or become derailed by unforeseeable life problems, and have to miss so many assignments that it will ruin your grade, schedule a meeting with me in order to make arrangements for you to drop the course to save your grade point average. Don't wait until it's too late to see me when you get in trouble.

Late homework
Homework is due on the due date at the specified time, in class or submitted through Blackboard, depending on the assignment. Late assignments will be accepted, but at the cost of a full letter grade for missing the first, in-class deadline, and an additional letter grade for each additional 24 hours late up to 48 hours late, at which point an automatic 0 will be assigned. Discussions, activities, iClicker questions, tests, assignments, other in-class work, and the project and its associated content will not be accepted late.

Extra Credit
There may be extra credit work. All students will be expected to complete, and be graded on, the same set of assignments. Details to follow. All extra-credit opportunities are capped at no more than 5 points on your overall grade.

Withdrawal from the course
The drop date for the Fall 2015 semester is November 9 for undergraduate students. That is the last date you can drop a course and receive a 'W'. It is your responsibility to take action by this date if you wish to drop the course. In particular, grades of "incomplete" will not be awarded to students because they missed the drop deadline.

Cell phones & laptops
Please make sure your electronic devices are turned off before entering the classroom unless we are doing a class exercise where they are helpful. Use of phones, tablets, computers, etc. for non-class purposes during class will count against you in your class participation grade. While you may be using computers in class, texting, using Facebook, *etc.*, are not appropriate uses of class time and your instructor-evaluated grade will suffer for it.

Incompletes
As per the Undergraduate Bulletin, the grade of Incomplete (I) will be given "only when the student has nearly completed the course requirements but because of circumstances beyond the student's control the work is not completed." A student granted an incomplete will make an agreement specifying what material must be made up, and a date for its completion. The

incomplete will be converted to a normal grade on the agreed upon completion date based upon whatever material is submitted by that time.

Important: Incompletes will not be given to students who have not fulfilled their classwork obligations, and who, at the end of the semester, are looking to avoid failing the course. This is asking for special treatment.

Academic Integrity

It is every student's responsibility to become familiar with the standards of academic integrity at the University. Claims of ignorance, of unintentional error, or of academic or personal pressures are not sufficient reasons for violations of academic integrity. See http://www.albany.edu/undergraduate_bulletin/regulations.html

Course work and examinations are considered individual exercises unless otherwise explicitly specified. Copying the work of others is a violation of university rules on academic integrity. Individual course work is also key to your being prepared and performing well on tests and exams. Forming study groups and discussing assignments and techniques in general terms is encouraged, but the final work must be your own work. For example, two or more people may not create an assignment together and submit it for credit. If you have specific questions about this or any other policy, please ask.

The following is a list of the types of behaviors that are defined as examples of academic dishonesty and are therefore unacceptable. Attempts to commit such acts also fall under the term academic dishonesty and are subject to penalty. No set of guidelines can, of course, define all possible types or degrees of academic dishonesty; thus, the following descriptions should be understood as examples of infractions rather than an exhaustive list.
- Plagiarism
- Allowing other students to see or copy your assignments or exams
- Examining or copying another student's assignments or exams
- Lying to the professor about issues of academic integrity
- Submitting the same work for multiple assignments/classes without prior consent from the instructor(s)
- Getting answers or help from people, or other sources (*e.g.* research papers, web sites) without acknowledging them.
- Forgery
- Sabotage
- Unauthorized Collaboration (just check first!)
- Falsification
- Bribery
- Theft, Damage, or Misuse of Library or Computer Resources

Any incident of academic dishonesty in this course, no matter how "minor" will result in no credit for the affected submission as well as additional possible ramifications which can be found in the undergraduate bulletin (http://www.albany.edu/undergraduate_bulletin/regulations.html).

Policies from Undergraduate Bulletin:
http://www.albany.edu/undergraduate_bulletin/regulations.html

Responsible Use of Information Technology

Students are required to read the University at Albany Policy for the Responsible Use of Information Technology available at the ITS Web Site: https://wiki.albany.edu/display/public/askit/Responsible+Use+of+Information+Technology+Policy

Time Management

For every credit hour that a course meets, students should expect to work 3 additional hours outside of class every week (3 x 3= 9). For a three-credit course you should expect to work 9 hours outside of class every week. Manage your time effectively to complete readings, assignments, and projects.

Available Support Services

Reasonable accommodation

Reasonable accommodation will be provided for students with documented physical, sensory, cognitive, learning and psychiatric disorders. If you believe you have a disability requiring accommodation in this class, please notify the Director of Disability Resource Center (Business Administration 120, 442-5490). That office will provide the course instructor with verification of your disability, and will recommend appropriate accommodations. In general, it is the student's responsibility to contact the instructor at least one week before the relevant assignment to make arrangements.

Grading

The grade breakdown for the course is:
- Individual Assignments: 30%
- Final Project: 20%
- In-Class Assessments: 30%
- In-Class Activities: 15%
- iClicker Activities: 5%

A-E graded:

93 – 100% A	77 – 79% C+	60 – 62% D-
90 – 92% A-	73 – 76% C	0 – 59% E
87 – 89% B+	70 – 72% C-	
83 – 86% B	67 – 69% D+	
80 – 82% B-	63 – 66% D	

Course Outline and Schedule

The following schedule of course topics and reading assignments is preliminary and may be changed as the semester progresses. The final schedule and specific homework and lab assignments and materials will be provided in Blackboard and/or discussed in class. Students are expected to have read the listed material before it is covered in class.

Week	Major Topics	Readings Due	Assignments
24-Aug	• Course introduction	Syllabus	
31-Aug	• IS design phases • Information resources • Careers • Development and capabilities of the computer	Ch 1 & Ch 2	Homework 1 – due 9/9
7-Sep	• Data representation	Ch 3	Homework 2 – Due 10/7
14-Sep	• The CPU	Ch 4	
21-Sep	• Primary vs secondary storage • Choosing storage • No class Tuesday Sep 22	Ch 5	
28-Sep	• Input/output technology	Ch 7	
5-Oct	• Applications Development	Ch 10	Homework 3 – Due 11/4
12-Oct	• Assessment #1 Tuesday - CH 1-5, 7, and 10 • Operating systems	Ch 11	
19-Oct	• No Classes – Spring Break		
26-Oct	• File systems and secondary storage	Ch 12	
2-Nov	• Data and network communication technology	Ch 8	Final project proposal - due 11/18
9-Nov	• Computer networks • The OSI layers	Ch 9	
16-Nov	• Internet and distributed applications	Ch 13	Homework 4 – due 11/25
23-Nov	• Systems administration • No class Thursday Nov 26	Ch 14	Final Project – Paper due 12/8
30-Nov	• Assessment #2 Tuesday - CH 8,9, and 11-14 • Final project presentations	None	
7-Dec	• Final project presentations • Last Day of Class, Dec 8	None	