IT2400: Introduction to Networking

An introductory course for students in Computer Information Systems or in Computer and Information Technologies programs, or students having general interest in computer networking. This course will instruct students in the fundamental concepts of computer networks, including physical, transport, and application layers of the OSI model. Students will be required to complete assignments predicting and measuring the behavior of computer networks under various conditions.

Prerequisites: IT1100 should be taken prior to enrolling in this course (And completed with a passing grade)

Course fee: The fee for this course is $25.00, used to assist in maintaining the CIT infrastructure.

Sections:

1. MWF 9am-9:50am in Smith 108
   Final Exam on Friday December 16, 9:30am-11:30am
2. TTh 1pm-2:15pm in Smith 108
   Final Exam on Tuesday December 13, 1pm-3pm

Instructor: Jay Sneddon

- Email: jay.sneddon at dixie dot edu
- Phone: 435-652-7887 (note: email preferred)
- Office: Burns 234
- Office Hours: M-F 11am-11:50am or by appointment

Objectives

At the end of the course, students will:

- Be able to describe how the Internet works
- Be able to define and use several different Internet protocols
- Be able to describe the TCP/IP and OSI protocol stacks and what happens at each layers
- Be able to configure a basic network and use basic networking tools to troubleshoot basic network problems
- Be able to correctly name and define related network acronyms

Resources

Canvas

Check Canvas regularly for updates, announcements and assignments.

Texts

We will be using excerpts from this textbook. We may also make use of other online materials.

Computer Resources

You may use the computers in the Smith. There will also be lab assistants in these labs. You will also have access to virtual machines to complete most of the networking tasks.

Course Website

This course has an accompanying website. You are responsible for announcements, the schedule, and other resources posted on the website. Assignments and grades will be managed using Moodle, which requires a
valid CIT username and password. If you do not already have a CIT login, visit http://cit.cs.dixie.edu/facilities/passwd.php to create one, or ask a lab assistant to help you sign up for one. The course website is accessible at http://cit.cs.dixie.edu/courses/. Grading and assignments are managed at https://moodle.cs.dixie.edu.

Assignments and Exams

Reading

The student is responsible for reading the material in the textbook. A reading schedule is provided with the class schedule on the course website. The student is expected to read the material before the class in which it is discussed. The book also includes material beyond what we will discuss in lecture, which you are encouraged to study on your own. Feel free to bring questions from the reading to lectures or to office hours.

Assignments

Exams

There will be several exams given throughout the semester. A final exam will also be given which will be comprehensive. Any missed tests will need to have the Divisional Dean’s approval before you can take the test.

Grading

Quizzes, Labs, tests, and the final each contribute to your point total.

The breakdown for the above items is as follows:

- Quizzes = 20%
- Labs = 25%
- Tests = 30%
- Comprehensive Final Exam = 25%

Here is the grading scale:

<table>
<thead>
<tr>
<th>Score</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 94</td>
<td>A</td>
</tr>
<tr>
<td>&gt;= 90</td>
<td>A-</td>
</tr>
<tr>
<td>&gt;= 87</td>
<td>B+</td>
</tr>
<tr>
<td>&gt;= 84</td>
<td>B</td>
</tr>
<tr>
<td>&gt;= 80</td>
<td>B-</td>
</tr>
<tr>
<td>&gt;= 77</td>
<td>C+</td>
</tr>
<tr>
<td>&gt;= 74</td>
<td>C</td>
</tr>
<tr>
<td>&gt;= 70</td>
<td>C-</td>
</tr>
<tr>
<td>&gt;= 67</td>
<td>D+</td>
</tr>
<tr>
<td>&gt;= 64</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 64</td>
<td>F</td>
</tr>
</tbody>
</table>

Test out

Each applicant will be treated on an individual basis. Essentially you will have to demonstrate competency by doing any one or more of the following:

- Completion of test-out exam(s) with 90% proficiency or higher.
- Project
- Interview

To apply for a test-out opportunity you must email your instructor a 1 page document that discusses why you think you should be able to test out. You should cite examples that relate to the course and the content knowledge that you already have. Upon receipt of this email, the instructor will decide if they will let you attempt to test out and what they would like you to do.

If you have previously taken the course, you do not have the option to test out.

Course Policies
Absences

Students are responsible for material covered and announcements made in class. School-related absences may be made up only if prior arrangements are made. The class schedule presented is approximate. The instructor reserves the right to modify the schedule according to class needs. Changes will be announced in class and posted to the website. Exams and quizzes cannot be made up unless arrangements are made prior to the scheduled time.

Time

Courses should require about 45 hours of work per credit hour of class. This class will require about 135 hours of work on the part of the student to achieve a passing grade, which is approximately 9 hours per week. If you do not have the time to spend on this course, you should probably rethink your schedule.

Late work

Late work is not accepted. You are expected to turn things in by the date they are due. Exceptions must be discussed with the instructor. Computer failure does not qualify as an excuse for late work.

It is your responsibility to see that assignments/projects are turned in and on time. If you come to me and say, “I turned in that assignment”, yet I have no record of it, you will receive a 0. The burden of proof is on you to prove that you turned in something at a given time. We are using an electronic submission system which records when a item is submitted.

Finally, no points can be contested after a test which covers that assigned material has been given. So for example, if you come to me at the end of the semester and say “Oh, but I turned in that assignment the second week of the semester”. If I don’t have a record of it, and we have already tested on it, you will not get the points.

Cheating and Collaboration

Limited collaboration with other students in the course is permitted. Students may seek help learning concepts and developing programming skills from whatever sources they have available, and are encouraged to do so. Collaboration on assignments, however, must be confined to course instructors, lab assistants, and other students in the course. Students are free to discuss strategies for solving programming assignments with each other, but this must not extend to the level of programming code. Each student must code his/her own solution to each assignment. See the section on cheating.

Cheating will not be tolerated, and will result in a failing grade for the students involved as well as possible disciplinary action from the college. Cheating includes, but is not limited to, turning in homework assignments that are not the student’s own work. It is okay to seek help from others and from reference materials, but only if you learn the material. As a general rule, if you cannot delete your assignment, start over, and re-create it successfully without further help, then your homework is not considered your own work.

You are encouraged to work in groups while studying for tests, discussing class lectures, discussing algorithms for homework solutions, and helping each other identify errors in your homework solutions. If you are unsure if collaboration is appropriate, contact the instructor. Also, note exactly what you did. If your actions are determined to be inappropriate, the response will be much more favorable if you are honest and complete in your disclosure.

Where collaboration is permitted, each student must still create and type in his/her own solution. Any kind of copying and pasting is not okay. If you need help understanding concepts, get it from the instructor or fellow classmates, but never copy another’s code or written work, either electronically or visually. The line between collaborating and cheating is generally one of language: talking about solutions in English or other natural languages is usually okay, while discussions that take place in programming languages are usually not okay. It is a good idea to wait at least 30 minutes after any discussion to start your independent write-up. This will help you commit what you have learned to long-term memory as well as help to avoid crossing the line to cheating.

College Policies

Additional college policies, calendars, and statements are available online at http://www.dixie.edu/reg/syllabus/.