INFO 3229 – 001
Business Data Communications and Information Security
Fall 2020

INSTRUCTOR: Dr. Sungjune Park
OFFICE: 353B Friday
PHONE: (704) 687-7628
EMAIL: supark@uncc.edu
OFFICE HOURS: Tue 4:00 pm am – 5:45 pm & Thu 12:45 pm – 2:00 pm,
and by appointment
CLASS HOURS: Tue & Thu 11:30pm - 12:45pm, Friday 339

COURSE DESCRIPTION

A study of the current and potential impact of computer data communications
technologies and information security on business operations and productivity. Topics
include: designing, planning and implementing solutions in such areas as local area
networks, networked applications, and information assurance.

Prerequisites: INFO 3130 with a grade of C or above.

LEARNING OBJECTIVES

The objective of this course is to provide a basic understanding of the technical and
management aspects of business data communications and networking. It will include
the study of the business impact of data communications technologies on organizational
operations and productivity. By the end of the course you will be able to:

- Explain how networks such as the Internet move messages from one computer
to another through the different hardware and software components
- Design networks using a variety of LAN, backbone and WAN technologies and
components
- Understand the risk of security breaches and suggest solutions with appropriate
tools and techniques.

REQUIRED MATERIALS

  FitzGerald and Dennis. ISBN: 978-1118891681
- Additional notes and online resources will be posted on Canvas as needed.
GRADING

<table>
<thead>
<tr>
<th>Component</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exams (3)</td>
<td>600</td>
</tr>
<tr>
<td>Assignments and Quizzes (5)</td>
<td>150</td>
</tr>
<tr>
<td>Project</td>
<td>150</td>
</tr>
<tr>
<td>Project Presentation</td>
<td>50</td>
</tr>
<tr>
<td>Class Participation/Attendance</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

Final grades will be based on the following scale.
**A: 900 and above, B: 800-899, C: 700-799, D: 600-699, F: 599 and below.**

EXAMS

Exam dates (Oct. 13, Nov. 12, & Dec. 15) are fixed unless there is an unexpected event such as university closing. You may have an opportunity to take a make-up test if you provide legitimate and documented reasons. The format of make-up exams may differ from the format of the regularly scheduled exam. Permission must be obtained from the professor prior to the scheduled exam time.

Exams are closed book and notes when they are administered in class. If any exam (including make-up exams) has to be administered remotely due to unexpected events, an oral exam may replace all or part of it. The instructor will keep all exams. However, exam reviews are available during office hours or by appointment for 10 days after exam grades are posted. All exam grades will be posted on Canvas.

ASSIGNMENTS AND QUizzes

Each student must develop his or her own solutions to the assigned homework. Students may not "work together" on homework assignments. Such collaboration constitutes cheating unless it is a group assignment. A student may not use or copy (by any means) another's work (or portions of it) and represent it as his/her own.

To ensure that students stay on track with their learning goals for this class, the instructor will give short quizzes during the semester. These quizzes will focus on the current topic, assigned readings, and review questions. Quizzes are usually given on Canvas before the topic is covered in order to facilitate the class discussions.

Homework deadline is always at the beginning of the class when it is due unless specified by the instructions. In the case of a late submission on the same day, 20% of the points earned from the submission will be deducted. After the due date, the late homework may be accepted, but with a 50% penalty. Once the grade is posted or a week has passed after the due date, whichever comes first, you will receive a 0 for the late assignment.
GROUP PROJECT

Each student will form a group of six for a research project related to data communications and information security. The purpose of the project is to provide an opportunity for you to extend your knowledge on fast-evolving data communication technology and various information security issues. Each group will submit a written report and have an oral presentation. More details about the group project will be posted on Canvas.

All members of the group are expected to contribute to the project. If a member of your group does not contribute, you must ask him/her to leave your group and notify me before Dec. 1. I will assign him/her an individual project instead of the group project whose maximum grade will be a B.

WORKLOAD

Just as any courses require understanding of technical concepts, learning how networks work is challenging. Learning technical concepts is not something that you can put off until the night before the exam, and the knowledge is built only by developing familiarity with those concepts. Put in as much time as necessary in order to understand how networks operate and to be better prepared for the exams. I expect that you will spend 6 hours per week on average outside of class time for reading assignments, projects, and exams. The textbook and web materials will provide you with enough information about network technology, so I will be using the class time mostly to fill in any gaps that you experienced while reading the materials. Class participation is thus very important and will be counted toward your grade.

ATTENDANCE POLICY

Students are expected to attend every class and remain in class for the duration of the session when it is safe to do so in accordance with university guidance regarding COVID-19. Failure to attend class or arriving late may impact your ability to achieve course objectives which could affect your course grade. An absence, excused or unexcused, does not relieve a student of any course requirement. Regular class attendance is a student’s obligation, as is a responsibility for all the work of class meetings, including tests and written tasks. Any unexcused absence or excessive tardiness may result in a loss of participation points.

Students are encouraged to work directly with their instructors regarding their absence(s). For absences related to COVID-19, please adhere to the following:

Complete your Niner Health Check each morning.

Do not come to class if you are sick. Please protect your health and the health of others by staying home. Contact your healthcare provider if you believe you are ill.
If you are sick: If you test positive or are evaluated by a healthcare provider for symptoms of COVID-19, indicate so on your Niner Health Check to alert the University. Representatives from Emergency Management and/or the Student Health Center will follow up with you as necessary. Submit a copy of your Niner Health Check notification email to your instructors.

If you have been exposed to COVID-19 positive individuals and/or have been notified to self-quarantine due to exposure, indicate so on your Niner Health Check to alert the University. Representatives from Emergency Management and/or the Student Health Center will follow up with you as necessary. Submit a copy of your Niner Health Check notification email to your instructors.

To return to class after being absent due to a period of self-quarantine, students should submit a copy of their Niner Health Check clearance email to their instructor(s). To return to class after being absent due to a COVID-19 diagnosis, students should submit an online request form to Student Assistance and Support Services (SASS). Supporting documentation can be attached directly to the request form and should be from a student's health care provider or the Student Health Center, clearly indicating the dates of absences and the date the student is able to return to class. Instructors will be notified of such absences.

If you are absent from class as a result of a COVID-19 diagnosis or quarantine, as instructor I will do the following to help you continue to make progress in the course:

- Allow you to participate in class via Zoom during the designated class time.
- Extend the deadline of assignment and provide make-up exam on a case-by-case basis.
- Give a high priority when schedule meetings during office hours.

The final decision for approval of all absences and missed work is determined by the instructor.

CLASS CONDUCT

Disruptive behavior in class distracts from the ability of others to profit from their in-class experience. Such disruptive behavior includes arriving late, leaving early, cell-phone interruptions, checking e-mail, surfing the net during the class, spending class time working on assignments for other classes, side conversations between two or more students during lecture, unnecessary comments that add no value to class, and any activities that negatively impact the ability of other students to learn and/or listen in class. Such behavior will be considered rude and inappropriate and will not be tolerated.

I will take very seriously any distraction caused by violating the above policies. Any member of the class should feel free to let me know if any behavior of fellow student(s) is distracting her/his learning experience. Such complaints will be treated as confidential
but will help me to take appropriate action to provide a positive learning environment in the class.

Since it is my responsibility to provide an environment that is conducive to learning for everyone in the class, I will deduct all participation points from the grade of any student who chooses to repeatedly distract others or create other disruptions. In particularly egregious cases, I will have the student permanently removed from the class and deduct up to a maximum of 15% of the final grade. To attend or not to attend is your decision to make, but once you decide to attend my class, you should refrain from any disruptive behavior during the class.

COVID-19 PROTECTION

It is the policy of UNC Charlotte for the Fall 2020 semester that as a condition of on-campus enrollment, all students are required to engage in safe behaviors to avoid the spread of COVID-19 in the 49er community. Such behaviors specifically include the requirement that all students properly wear CDC-compliant face coverings while in buildings including in classrooms and labs. Students are permitted to remove face coverings in classroom or lab settings only when I explicitly grant permission to do so (such as while asking a question, participating in class discussion, or giving a presentation) and while at an appropriate physical distance from others. Failure to comply with this policy in the classroom or lab may result in dismissal from the current class session. If the student refuses to leave the classroom or lab after being dismissed, the student may be referred to the Office of Student Conduct and Academic Integrity for charges under the Code of Student Responsibility.

ACADEMIC INTEGRITY

THE UNC CHARLOTTE CODE OF STUDENT ACADEMIC INTEGRITY governs the responsibility of students to maintain integrity in academic work, defines violations of the standards, describes procedures for handling alleged violations of the standards, and lists the applicable penalties. The following is a list of prohibited conduct in that Code as violating these standards: A) Cheating; B) Fabrication and Falsification; C) Multiple Submission; D) Plagiarism; E) Abuse of Academic Materials; and F) Complicity in Academic Dishonesty. For more detail and clarification on these items and academic integrity, students are strongly advised to read the current "UNCC undergraduate and graduate catalog."

GRADE APPEALS

If you believe that the grade you received on an assignment, exam or other graded course component was in error or unfair, you can appeal to the professor in writing within 10 calendar days of the receipt of your grade. The appeal should clearly state the reasons why you believe the grade to be unfair or the nature of the error. Overdue appeals will not be considered.
INCOMPLETE GRADE POLICY

The incomplete is not based solely on a student’s failure to complete work or as a means of raising his/her grade by doing additional work after the grade report time. An incomplete grade can be given when a student has a serious medical problem or other extenuating circumstance that legitimately prevents completion of required work by the due date. In any cases, the student's work to date should be passing, and the student should provide proper written proof (e.g., a doctor's note), in order to get an 'I' grade.

DISABILITY ACCOMMODATIONS

UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please provide a letter of accommodation from Disability Services early in the semester. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 or visit their office in Fretwell 230.

COURSE SCHEDULE

The Instructor reserves the right to change the course contents and schedule. The up-to-date course schedule is available on Canvas. Important announcements, specific policies regarding exams, etc. are also available on Canvas. It is the student's responsibility to be aware of any changes in the course schedule, course contents, and course policies by visiting Canvas regularly.

Tentative Course Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/8</td>
<td>Introduction / Binary, Decimal and Hexadecimal Numbers</td>
<td>&quot;There are only 10 types of people in the world: those that understand binary and those that don't.&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;There are only 10 types of people in the world: those that understand binary and those that don't.&quot;</td>
<td><a href="http://www.mathsisfun.com/binary-decimal-hexadecimal.html">http://www.mathsisfun.com/binary-decimal-hexadecimal.html</a></td>
</tr>
<tr>
<td>9/10, 9/15, 9/17, 9/22</td>
<td>Layered Network Model / Virtual Lab with Oracle Virtualbox / Application Layer</td>
<td>Ch. 1, Ch. 2</td>
</tr>
<tr>
<td>9/24, 10/1, 10/6</td>
<td>Physical Layer</td>
<td>Ch. 3</td>
</tr>
<tr>
<td>10/8</td>
<td>Data Link Layer</td>
<td>Ch. 4</td>
</tr>
<tr>
<td>10/13</td>
<td>Exam 1</td>
<td></td>
</tr>
<tr>
<td>10/22, 10/27</td>
<td>Network and Transport Layer</td>
<td>Ch. 5</td>
</tr>
<tr>
<td>10/29, 11/3</td>
<td>Wired and Wireless Local Area Networks</td>
<td>Ch. 7</td>
</tr>
</tbody>
</table>
The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.