

Class : Tu 5:45 – 9:00 P.M.
Instructor : Dr. Anthony Chung
Office : CDM 844
Office Hours : M Tu 3:15-4:45 PM / Other times by appointment

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Fax : (312)-362-6116

Email : achung@depaul.edu

While email is a great means of communication, increasingly we are bombarded with a volume of emails that is getting difficult to manage. Please observe the following email etiquette so that we will be able to better focus our energy on learning and getting the most out of the class. It is also part of being professional. Some recruiters were abhorred at some of the emails received from recent recruits. It is important to form the good habit of writing appropriate emails in a professional setting.

- Under normal situation I will respond **within two business days. Therefore work on your assignments early so as to give you ample time to ask questions.** If I do not respond within the normal time frame, it's properly because one or more of the following etiquettes is not followed.
- Expect lab assistants to respond only during posted lab hours.
- Before sending questions via email or posting questions on the d2l discussion forum, make sure that your question is not already answered on the course syllabus, the d2l website (announcements, discussion forums, assignment information etc), or in the lecture (view the class recording if you missed a class, or if you are an OL student).
- Questions that are of general interest to the entire class should be posted on the course discussion forum.
- Be specific about the subject of the email in the mail subject heading and use proper spelling, grammar, and punctuation. Include course number in the subject. Please don't respond to an old email with a different subject when asking a new question.
- Include your full name in the message body.
- While you have my permission to address me as Tony, you should not assume that you can address other professors on a first name basis unless you have their explicit permissions.

Course Home Page : <https://d2l.depaul.edu> (It will open by Thursday, Dec 29, 2016)

Prerequisites: TDC 365 (Network Interconnection Technologies)

Note: This is a STRONG prerequisite, Students are expected to have a good knowledge of TCP/IP including IP packet format, IP addressing, IP routing, and TCP operation.

Required Text: (Available through DePaul's ebooks library – Safari)

CCNA Security 210-260 Official Cert Guide

Santos & Stuppi, Cisco Press/Pearson, 2015. ISBN: 978-1587205668

Optional Text:

CCNA Security Lab Manual Version 2 (Lab Companion)

Cisco Network Academy/Pearson, 2015. ISBN: 978-1587133503

CCNA Security Course Booklet Version 1.2, 3rd edition

Cisco Network Academy/Pearson, 2014. ISBN: 978-1587133466

Reference:

Textbook from TDC 365

Course Description and Objective:

This course is an introductory class in network security and security applications. Both the theory behind security methods and their applications in today's business environments will be presented. Topics include: Review of components used in an enterprise security infrastructure including routers, firewalls, security auditing and assessment tools, Virtual Private Networks (VPN), and Intrusion Detection/Prevention Systems. The integration of the different components will be studied in detail, including IP addressing, Network Address Translation (NAT), design of firewall rule sets and performance considerations.

Grading

Homework		10%
Alert Monitoring	2%	
Firewall Rules	8%	
Mini Lab Assignments (Performed in Network Security Lab or on a student's own computer)		10%
Mini Lab 1 - General	2%	
Mini Lab 2 - NMAP and Wireshark	2%	
Mini Lab 3 - Steganography	1%	
Mini Lab 4 - Traffic Analysis	2%	
Mini Lab 5 – Traffic Analysis - Challenge	3%	
Lab Assignments (Performed in Network Security Lab)		28%
Configure ASA via CLI (Lab 2 in Lab Manual)	2%	
Configure ASA via ASDM (Lab 3)	2%	

Basic Site-to-Site VPN (Lab 4)	4%
Core 2-layer Firewall (Lab 5)	4%
Intermediate Site-to-Site VPN (Lab 6)	4%
3-Sites VPN (Lab 7)	6%
Client-Based VPN (Lab 8)	2%
ASA to IOS VPN Setup (Lab 9)	4%

Packet Tracer Activities**16%**

PT - Syslog	1%
PT - AAA	2%
PT - ACL	2%
PT - CBAC	2%
PT - ZPF	3%
PT – Site-to-Site VPN	3%
PT - General	3%

Midterm**15%****Final****15%****Class Participation****10%****Extra Credit Lab Assignments** (Optional-Performed in Network Security Lab)

Site-to-Site VPN (Lab 10)	2%
Multi-level Site-to-site VPN (Lab 11)	4%
Full mesh VPN as backup to T1s (Lab E1)	5%
Multi-level 3 sites VPN (Lab E2)	5%

These add up to 120% but the final total grade will be capped at 100%

Note: A student must score 60% or above in each exam to pass the course.

The following scale is applied if the above condition is met, otherwise a grade of F will be assigned.

A	90-100%
A-	87-89%
B+	84-86%
B	80-83%

B-	77-79%
C+	74-76%
C	70-73%
C-	67-69%
D+	64-66%
D	60-63%
F	< 60%

Students at or above the class average (calculated from grades 60% or above) will receive at least a B-. I will modify the grading scale if the class average is below 77%.

Notes:

- **Changes to Syllabus:** This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L and sent via email.
- **Late assignments will not be accepted.** I am strict about this. Homework solutions are available right after a homework is due and I cannot accept any assignments submitted after that. **All due dates and time are given in the dropboxes.** Please check the schedule and be sure of the due dates. You must use the homework submission system (drop box) through d2l. If there are problems with the submission system, you may email me a copy of the assignment BEFORE the due time.
- The exams are **closed books and notes**. The final is not comprehensive. Makeups of exams must be arranged before the scheduled time.
- Class attendance is essential as lectures may cover topics outside the readings. **Attendance is expected** for this class. To earn the full participation point for each class you **must be in class for the entire duration, participate in activities such as in class exercises, occasional quizzes, discussions, and be fully engaged. Engaging in activities not related to the class, such as (but not limited to) texting/emailing during the class, or working on assignments from another class, will result in lowered participation grade.** Also if there's a **documentable and acceptable** reason (such as being sick with a doctor's slip, or a note from your manager about work responsibility), make up for the participation points can be considered. **1 point** is assigned for each class (including midterm but excluding the final) with a maximum of **10 pts** total.
- Any grading questions **must be directed to me within 1 week of the posting of the grade. No grade adjustments will be made more than a week after the grade is posted. You should email me with the following information:**
 - **The assignment**
 - **The problem in question**
 - **Why you think you should get a grade rather than the one given.**

- **Wireless Internet Access Policy:** Please **do not** work on your laptops / Internet during class **except for course related activities**. If you need to do something un-related to the class, please leave the room and complete what you need to do.
- Please check DePaul's academic calendar <http://oaa.depaul.edu/what/calendar.jsp> for important dates such as last day to add/drop/withdraw from classes.
- **Please make sure that you read and understand DePaul's academic integrity policy:** <http://academicintegrity.depaul.edu/AcademicIntegrityPolicy.pdf> For additional resources concerning academic quality, please check here: <http://academicintegrity.depaul.edu/Resources/index.html> **All assignments are individual assignments. You should not work so close with another student as to produce solutions that are identical or almost identical.**
 - Under no circumstances should you copy or use simple paraphrasing of someone else's work without giving proper credits and references.
 - Please be aware that any written work submitted in this course may be verified using *Turn-It-In* technology in order to ensure that the work is the student's own creation and not in violation of the University's Academic Integrity Policy. Submission of work in this course constitutes a pledge that the work is original and consent to have the work submitted to verify that fact.

- **Student Attitude:** A professional and academic attitude is expected throughout this course. Measurable examples of non-academic or unprofessional attitude include but are not limited to: talking to others when the instructor is speaking, mocking another's opinion, cell phones ringing, emailing, texting or using the internet whether on a phone or computer. If any issues arise a student may be asked to leave the classroom. The professor will work with the Dean of Students Office to navigate such student issues.

- **Civil Discourse:** DePaul University is a community that thrives on open discourse that challenges students, both intellectually and personally, to be Socially Responsible Leaders. It is the expectation that all dialogue in this course is civil and respectful of the dignity of each student. Any instances of disrespect or hostility can jeopardize a student's ability to be successful in the course. The professor will partner with the Dean of Students Office to assist in managing such issues.

- **Cell Phones/On Call:** If you bring a cell phone to class, it must be off or set to a silent mode. If you are required to be on call as part of your job, please advise me at the start of the course.

Schedule (Tentative):

Date	Topic	Readings	Assignments
1-3	Class overview, general security concept, threats and defenses; Security technologies.	Chapters 1 and 2	
1-10	Introduction to ASA configuration	Chapter 16	Mini Lab #1 due Non-graded assignments due (Prereq Assessment, academic integrity pledge and security tool usage agreement, syllabus scavenger hunt, and posting of self-introduction on discussion forum)
1-17	Firewalls I - Firewall types and filtering strategies	Chapter 14	Mini Lab #2 due HW #1 due
1-24	Firewalls II – Firewall deployment; Network Address Translation (NAT)	Chapter 14	Mini Lab #3 due Mini Lab #4 due
1-31	Virtual Private Networks (VPNs) and IPSEC	Chapter 5 (Understanding VPNs and Why Use Them) Chapters 6 and 7	HW #2 due Lab #2 due
2-7	Midterm		Lab #3 due First 4 PT Activities due *(Special due date 2-10)
2-14	Virtual Private Networks (VPNs) and IPSEC (contd.)	Chapter 5	Mini Lab #5 due Lab #4 due

	Fundamentals of Cryptography. Symmetric and asymmetric cryptography. Steganography		
2-21	Cryptography (contd.) Authentication + Public Key Infrastructure (PKI)	Chapter 5 Chapter 3	Lab #5 due Lab #6 due
2-28	Authentication + PKI (contd) Security policy development		HW #3 due Labs #7 and #8 due
3-7	Intrusion Detection/Prevention System (IDPS)	Chapter 17	Lab #9 due Last 3 PT Activities due
3-14	Final (Same class time and location)		Extra Credit Labs due

Online Instructor Evaluation

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over two weeks. Students do not receive reminders once they complete the evaluation.

Email

Email is the primary means of communication between faculty and students enrolled in this course outside of class time. Students should be sure their email listed under "demographic information" at <http://campusconnect.depaul.edu> is correct.

Academic Integrity Policy

This course will be subject to the faculty council rules on the [Academic Integrity Policy](#)

Plagiarism

The university and school policy on plagiarism can be summarized as follows: Students in this course, as well as all other courses in which independent research or writing play a vital part in the course requirements, should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in

the course and possible expulsion. The strongest of sanctions will be imposed on anyone who submits as his/her own work a report, examination paper, computer file, lab report, or other assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

Incomplete

An incomplete grade is given only for an exceptional reason such as a death in the family, a serious illness, etc. Any such reason must be documented. Any incomplete request must be made at least two weeks before the final, and approved by the Dean of the College of Computing and Digital Media. Any consequences resulting from a poor grade for the course will not be considered as valid reasons for such a request.

Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential.

To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

Student Center, LPC, Suite #370

Phone number: (773)325.1677

Fax: (773)325.3720

TTY: (773)325.7296