

SYLLABUS

NET 377

Fundamentals of Network Security

Fall 2021

Instructor: Greg Brewster
E-mail gbrewste@depaul.edu
Class Meeting: Thursdays at 5:45 pm
Classroom: CDM 206 or Zoom
Office Phone: (312) 362-6587
Office Hours: Thursdays 4:00 – 5:30 PM (Zoom or in-person CDM 850)
Course website: <http://d2l.depaul.edu>
Prerequisite: NET 365
E-Text: Cisco Networking Academy, **CCNA Security:**
<https://www.netacad.com>

Fundamentals of Network security design and implementation. Review of components used in an enterprise security infrastructure including routers, firewalls, security auditing and assessment tools, and Virtual Private Networks (VPN). 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. Course includes laboratory work with routers, firewalls, Virtual Private Networks and security assessment tools.

This course is combined Flex/synchronous online. Students are expected to either come to the classroom or connect and participate by Zoom every Thursday at 5:45 pm. Students should check on D2L regularly for course updates and new content. Zoom meetings will be recorded and posted on D2L for students who cannot join.

Required coursework components and their contribution to the final grade will be:

- a) 3 Homework Assignments (30%)
- b) 5 Lab Exercises (45%)
- c) Security Design Report (10%)
- d) Final Exam (10%)
- e) Class Participation (5%)

Further details on each assignment will be distributed in class. Final grades will be calculated as follows: points earned divided by possible points in each category will be multiplied by the contribution percentages shown to yield a total course percentage score between 0% and 100%. Letter grades will be assigned as:

A = 90% - 100% A- = 88% - 90% B+ = 86%-88% B = 82% - 86%

B- = 80% - 82% C+ = 78% - 80% C = 70% - 78% C- = 63% - 70%
D+ = 60% - 63% D = 55% - 60% F = 0% - 55%

Some assignments will not be accepted late – this will be marked on the assignment. Any other assignments received late will be penalized as follows: up to 1 day late is 10% penalty; between 1 day and 2 days late is 15% penalty; between 2 days and 3 days late is 20% penalty; between 3 days and 7 days late is 25% penalty; More than 1 week late is 30% penalty. Assignments are due by 9:00 pm on the due date unless otherwise indicated. Homework assignments, labs and exams must be completed individually unless the assignment explicitly states that team work is permissible.

Week-by-Week Class Topics

Note: NetAcad Packet Tracer exercises are not required and may not even work.

<i>Week</i>	<i>Topics</i>	<i>NetAcad Readings</i>	<i>Assignments</i>
Sep. 9	Security and Networking Overview	Ch. 1 2.1-2.3, 2.4.1	Lab #1 out
Sep. 16	Firewalls	Ch. 4	HW #1 out
Sep. 23	Adaptive Security Appliances (ASA)	9.1, 9.2.1-9.2.4, 10.1	Lab #2 out
Sep. 30	Network Address Translation (NAT)	9.2.5	HW #2 out
Oct. 7	Firewall Architectures		Lab #3 out
Oct. 14	Cryptography Systems	Ch. 7	
Oct. 21	Virtual Private Networks	Ch. 8	HW #3 out
Oct. 28	VPN Configuration	10.2	Labs #4,5 out
Nov. 4	Security Topics		
Nov. 11	Wrapup and Review		
Nov. 18	Final Exam Due		

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.

COVID-19 Health and Safety Requirements

Keeping our DePaul community safe is of utmost importance in the pandemic. Students, faculty and staff are expected to (1) wear a mask as required at all times while indoors on campus; (2) refrain from eating and drinking in classrooms; (3) keep current with their COVID-19 vaccinations or exemptions; (4) stay home if sick; (5) participate in any required COVID-19 testing; (6) complete the online Health and Safety Guidelines for Returning to Campus training; and (7) abide by the City of Chicago Emergency Travel Advisory. By doing these things, we are Taking Care of DePaul, Together. The recommendations may change as local, state, and federal guidelines evolve. Students who

do not abide by the mask requirement may be subject to the student conduct process and will be referred to the Dean of Students Office. Students who have a medical reason for not complying with any requirements should register with DePaul's Center for Student with Disabilities (CSD).

Academic Integrity and Plagiarism

This course will be subject to the academic integrity policy passed by faculty. More information can be found at <http://academicintegrity.depaul.edu/>.

The university and school policy on plagiarism can be summarized as follows: Students in this course 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 any 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.

Withdrawal

Students who withdraw from the course do so by using the Campus Connection system (<http://campusconnect.depaul.edu>). Withdrawals processed via this system are effective the day on which they are made. Simply ceasing to attend, or notifying the instructor, or nonpayment of tuition, does not constitute an official withdrawal from class and will result in academic as well as financial penalty.

Retroactive Withdrawal

This policy exists to assist students for whom extenuating circumstances prevented them from meeting the withdrawal deadline. During their college career students may be allowed one medical/personal administrative withdrawal and one college office administrative withdrawal, each for one or more courses in a single term. Repeated requests will not be considered. Submitting an appeal for retroactive withdrawal does not guarantee approval. College office appeals for CDM students must be submitted online via MyCDM.

Incomplete

An incomplete grade is a special, temporary grade that may be assigned by an instructor when unforeseeable circumstances prevent a student from completing course requirements by the end of the term and when otherwise the student had a record of satisfactory progress in the course. CDM policy requires the student to initiate the request for incomplete grade before the end of the term in which the course is taken. Prior to submitting the incomplete request, the student must discuss the circumstances with the instructor. Students may initiate the incomplete request process in MyCDM.

- All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval.
- If approved, students are required to complete all remaining course requirement independently in consultation with the instructor by the deadline indicated on the incomplete request form.

- By default, an incomplete grade will automatically change to a grade of F after two quarters have elapsed (excluding summer) unless another grade is recorded by the instructor.
- An incomplete grade does NOT grant the student permission to attend the same course in a future quarter.

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

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.