SYLLABUS
NET 377
Network Security
Spring 2024

April 2, 2024

Instructor:	Dale Buchholz
Class Time:	Tuesday 5:45-9:00 pm
Location:	Loop Campus – Lewis 1517
Office Hours:	Tuesday 4:00-5:30 pm or by appointment (Zoom)
Phone:	312-362-6819
Office:	CDM 617
E-mail:	dbuchhol@depaul.edu
Prerequisite:	NET 365 Network Interconnection Technologies
E-Text:	*CCNA SECURITY 210-260: Official Cert Guide,* Santos, Omar; Stuppi,John, Cisco Press, 2015, ISBN 0-13-407785-7
Optional Text:	*CCNA SECURITY 640-554: Live Lessons*, Barker, Keith, Pearson IT Certification, 2012, ISBN 0-13-325900-5

Course Summary:

Network infrastructure security issues, including perimeter security defense, firewalls, Virtual Private Networks, Intrusion Detection Systems, wireless security, network security auditing tools and ethical considerations. Strategies for the deployment of "Defense-In-Depth" mechanisms in an enterprise computing environment.

Class Attendance:

Class attendance (sync or async) is strongly recommended. All class sessions will be recorded for asynchronous viewing.

Coursework and Grades:

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

a) 4 Homeworks (50 pts each; total 200 pts)

b) 4 Labs (50 pts each; total 200 pts)

c) Final Design Project (100 pts)

Further details on each assignment will be distributed in class. The due date for any assignment will be on a Sunday by 11:59 pm.

Final grades will be calculated as follows: points earned divided by possible points will yield a total course percentage score between 0% and 100%. Letter grades will be assigned as:

Percent	Grade		Percent	Grade
93-100	A		77-79	C+
90-92	A-		73-76	C
87-89	B+		70-72	C-
83-86	B		60-69	D
80-82	B-		< 60	F

Late Assignments:

Late assignments will be accepted solely at the discretion of the instructor. The student <u>MUST notify the instructor in advance</u> if an assignment will be turned in late and ask for an exemption from late submission penalties. This request MUST be submitted via email before the due date.

Homeworks submitted late will be penalized as follows: 10% penalty for 1 day late; 25% penalty for 2 days late; 50% penalty for 3 days late. Homework Answers will be posted on D2L on the 4th day after the due date. No points are available after HW Answers are posted.

Labs must be completed within 2 weeks of the due date. 10% penalty for 1 week late; 25% penalty for 2 weeks late. No points are available after 2 weeks. All labs are due by the date of the last class.

All assignments must be submitted by the last class on June 11.

All HWs, labs and the design project must be completed individually.

Class Schedule and E-Text:

Class dates, topics, readings, and assignments are shown in the Class Schedule below.

All readings are from the E-Text *CCNA Security 210-260.*

Other readings may be distributed as references for some of the topics.

Class Schedule
NET 377—Spring 2024
(April 2, 2024)

Week	Topics	Readings	Assignments
Week 1 April 2	Security and Networking Overview	Ch. 1, 2	HW0 due April 7
Week 2 April 9	Firewalls 1: Technologies and Filtering	Ch. 4, 9, 10	
Week 3 April 16	Firewalls 2: NAT		Lab 1 due April 14
Week 4 April 23	Firewalls 3: Firewall Architectures		HW 1 due April 21
Week 5 April 30	Cryptography Fundamentals **Security Design Report distributed**	Ch. 7, 11	Lab 2 due April 28
Week 6 May 7	Cryptography Systems Authentication and PKI	Ch. 5	HW 2 due May 5
Week 7 May 14	Virtual Private Networks	Ch. 8, 10	Lab 3 due May 12
Week 8 May 21	IPSEC VPN Configuration		HW 3 due May 19
Week 9 May 28	Introduction to Intrusion Detection (IDS) and Prevention (IPS)		Lab 4 due May 26
Week 10 June 4	Next Generation Networking (Zero-Trust and SASE)		HW 4 due June 2
Week 11 June 11	**Security Design Report Due** **No class**		**Tuesday, June 11**

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.

Online Course Evaluations

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 three weeks. Students

do not receive reminders once they complete the evaluation. Please see https://resources.depaul.edu/teaching-commons/teaching/Pages/online- teaching-evaluations.aspx for additional information.

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at https://resources.depaul.edu/teaching-commons/teaching/academic-integrity/Pages/default.aspx.

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the University Academic Calendar. Information on enrollment, withdrawal, grading and incompletes can be found at: http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx

Incomplete Grades

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. All incomplete requests must be approved by the instructor of the course and a CDM Associate Dean. Only exceptions cases will receive such approval. Information about the Incomplete Grades policy can be found at:

http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx

Students with Disabilities

Students seeking disability-related accommodations are required to register with DePaul's Center for Students with Disabilities (CSD) enabling them to access accommodations and support services to assist with their success. There are two office locations:

- Loop Campus (312) 362-8002

- Lincoln Park Campus (773) 325-1677

- Email: csd@depaul.edu

Students who register with the Center for Students with Disabilities are also invited to contact Dr. Gregory Moorhead, Director of the Center, privately to discuss how he may assist in facilitating the accommodations to be used in a course. This is best done early in the term. The conversation will remain confidential to the extent possible. Please see https://offices.depaul.edu/student-affairs/about/departments/Pages/csd.aspx for Services and Contact Information.