SYLLABUS
NET 363-501
Intro to Local Area Networks
Winter Quarter 2024

Instructor:	Greg Brewster
E-mail	gbrewste@depaul.edu
Class Meeting:	Tuesdays 1:30-3:00 pm (CDM 226 or Zoom)
	Thursdays 1:30-3:00 pm (Zoom only)
Office:	CDM 850
Office Phone:	(312) 362-6587
Office Hours:	Tues/Thurs 12:30-1:30 PM (in-person, phone or Zoom)
Course website:	http://d2l.depaul.edu
Prerequisite:	IT 263
E-Text:	Cisco Networking Academy, Intro to Networks (ItN) and Switching, Routing and Wireless Essentials (SRWE) content modules: https://netacad.com

Course Summary:

This course covers the principles of local area network (LAN) technologies including protocols, switching, routing, security and design concepts. The course will focus on the lower layers of the OSI model and explore Ethernet, switching, VLANs, Wi-Fi, securing the network, Spanning-tree protocols (STP and RSTP), and static routing. The course will involve multiple lab exercises and troubleshooting activities to help reinforce the concepts.

Coursework and Grades:

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

- a) 4 Homework Assignments (30%)
- b) 4 Lab Exercises (35%),
- c) Midterm Quiz (15%)
- d) Final Quiz (15%)
- e) Class Participation (5%)

Any Homeworks or Labs that are submitted late (after the due date) will be penalized as follows: up to 1 day late is 5% penalty; between 1 day and 2 days late is 10% penalty; between 2 days and 3 days late is 15% penalty; between 3 days and 7 days late is 25% penalty. If more than 7 days late, Homework penalty is 70% and Lab penalty is 30%.

The Midterm Quiz and the Final Quiz will be D2L Quizzes that must be taken online during a specified time interval. The Zoom link will be posted on D2L News.

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 = 80% - 86%
B- = 78% - 80%   C+ = 76% - 78%   C = 65% - 76%   C- = 55% - 65%
F = 0% - 55%

Class Schedule:

Modality for class sessions and participation points for attendance will be:
- Tuesday Class Sessions - Classroom in CDM 226 (7 points) or by Zoom (5 points)
- Thursday Class Sessions - Zoom only (5 points)

Date	*Topics*	*NetAcad Readings*	*Assignments*
Jan. 9	Network Fundamentals, Protocol Layers and Encapsulation	ItN 1.1-1.8, 3.1-3.8	
Jan. 11	Ethernet LANs	ItN 4.1-4.7, 5.1-5.3, 7.1-7.2	
Jan. 16	IPv4 Addresses and Subnets	ItN 7.1-7.3, 8.1-8.2, 8.4, 9.1-9.4, 11.4-11.8	HW 1 out
Jan. 18	Cisco IOS	ItN 2.1-2.9, 10,1-10.4 SRWE 1.1-1.6	Lab 1 out;
Jan. 23	Switching	ItN 7.3-7.5 SRWE 2.1-2.3	
Jan. 25	VLANs	SRWE 3.1-3.6	HW 1 due Lab 2 out
Jan. 30	Inter-VLAN Routing, STP	SRWE 4.1-4.5, 5.1-5.2	
Feb. 1	RSTP	SRWE 5.3	HW 2 out Lab 1 due
Feb. 6	Etherchannel, DHCP	SRWE 6.1-6.4, 7.1	
Feb. 8	First Hop Redundancy	SRWE 9.1-9.3	HW 2 due
Feb. 13	Midterm Review		Lab 2 due
Feb. 15	Midterm Quiz 1:30 PM – 3:00 PM		
Feb. 20	IPv6	ItN 8.3, 9.3, 12.1-12.8, 13.1 SRWE 8.1-8.5	Lab 3 out
Feb. 22	Routing	SRWE 14.1-14.6	HW 3 out
Feb. 27	Static and Default Routes	SRWE 15.1-15.6	Lab 4 out
Feb. 29	Route Troubleshooting	SRWE 16.1-16.3	HW 3 due HW 4 out
Mar. 5	Wireless LANs (Wi-Fi)	SRWE 12.1-12.8	Lab 3 due
Mar. 7	LAN Security	SRWE 10.1-10.6	
Mar. 12	Switch Security Configuration	SRWE 11.1-11.6	HW 4 due
Mar. 14	Wrapup and Review		Lab 4 due
Mar. 21	Final Quiz: 11:30 AM – 1:45 PM		

Course Learning Outcomes Include:
1. Describe the devices and services used to support communications in data networks and the Internet.
2. Describe IPv4 and IPv6 address structure and subnetting
3. Design, calculate, and apply subnet masks and addresses to fulfill given requirements in IPv4 networks.
4. Explain fundamental Ethernet concepts such as media, services, and operations.
5. Build a simple Ethernet network using routers and switches.
6. Use command-line interface (CLI) commands to perform basic router and switch configurations.
7. Describe the purpose, nature, and operations of a router, routing tables, and the route lookup process.
8. Describe how VLANs create logically separate networks and how routing occurs between them.
9. Describe causes and mitigations for LAN attacks such as IP/MAC spoofing, MAC table overload, DHCP spoofing, and STP attacks.
10. Describe and configure static routing.

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 Precautions
The health and safety of everyone at DePaul depend on the cooperation of all who come to campus. By taking care of yourself, you protect the entire community. DePaul's COVID-19 response plans are based on the latest guidance from the Centers for Disease Control and Prevention, the Chicago Department of Public Health and the university's medical advisor from AMITA Health.
Mandatory protocols must be followed by DePaul students, faculty and staff at all times on both campuses: https://resources.depaul.edu/coronavirus/guidance/health-safety-practices/Pages/default.aspx.

Respect for Diversity and Inclusion at DePaul University as aligned with our Vincentian Values
At DePaul, our mission calls us to explore "what must be done" in order to respect the inherent dignity and identity of each human person. We value diversity because it is part of our history, our traditions and our future. We see diversity as an asset and a strength that adds to the richness of classroom learning. In my course, I strive to include diverse authors, perspectives and teaching pedagogies. I also encourage open dialogue and spaces for students to express their unique identities and perspectives. I am open to having difficult conversations and I will strive to create an inclusive classroom that values all perspectives. If at any time, the classroom experience does not live up to this expectation, please feel free to contact me via email or during office hours.

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. All students are expected to abide by the University's Academic Integrity Policy which prohibits cheating and other misconduct in student coursework. Publicly sharing or posting online any prior or current materials from this course (including exam questions or answers), is considered to be providing unauthorized assistance prohibited by the policy. Both students who share/post and students who access or use such materials are considered to be cheating under the Policy and will be subject to sanctions for violations of Academic Integrity. More information can be found at https://resources.depaul.edu/teaching-commons/teaching/academic-integrity/Pages/default.aspx.

Posting work on online sites, such as Course Hero
All students are expected to abide by the University's Academic Integrity Policy which prohibits cheating and other misconduct in student coursework. Publicly sharing or posting online any prior or current materials from this course (including exam questions or answers), is considered to be providing unauthorized assistance prohibited by the policy. Both students who share/post and students who access or use such materials are considered to be cheating under the Policy and will be subject to sanctions for violations of Academic Integrity.

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

Preferred Name & Gender Pronouns

Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with differences of race, culture, religion, politics, sexual orientation, gender, gender variance, and nationalities. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the quarter so that I may make appropriate changes to my records. Please also note that students may choose to identify within the University community with a preferred first name that differs from their legal name and may also update their gender. The preferred first name will appear in University related systems and documents except where the use of the legal name is necessitated or required by University business or legal need. For more information and instructions on how to do so, please see the Student Preferred Name and Gender Policy at http://policies.depaul.edu/policy/policy.aspx?pid=332

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.

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.