

TDC 405 Syllabus – Voice and Data Network Fundamentals – Fall 2018

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Office Hours	Wednesdays 2 – 3:30 pm (or by appointment)	Website	d2l.depaul.edu
Class Location	CDM 214	Class time	Wednesdays 5:45 pm – 9 pm

--- Any changes made to this syllabus will be announced in class as well as D2L --- This is Version 1: Sept 1 ---

Course Overview

This course provides an introduction to voice and data networking technologies, including public and private voice services, Ethernet and Internet data technologies, network security, business applications and network management. The structure, regulation, and history of the telecom and data network industry will be discussed as well. PREREQUISITE(S): None.

Resources:

E-Text: Introduction to Networks: Cisco Networking Academy, which you can access at <https://www.netacad.com>.

Grade distribution over required coursework

Task	% of final grade
3 Homework assignments	20 %
3 lab exercises	15 %
Midterm exam	25 %
Final exam	25 %
Technical report	10 %
Class participation	5 %

Coursework

Course topics expected to be covered in each class and the corresponding readings in the Network Academy Introduction to Networks (ItN) course are listed in the course schedule on page 3. Note: you are not required to do any Activities or Labs within the ItN course unless specifically stated, but you are encouraged to complete them for extra practice if you wish.

The Technical Report will consist of an individual report on a relevant information security topic. More details on this assignment will be provided in Week 1. The Class Participation grade will be earned as follows: students gain 1% credit towards their final grade for each lecture actively attended (until the maximum of 5.0% of the final grade). Active attendance means that you will respond if I call on you, and actively engage in class discussions.

For **online students**, you will be called upon to answer a question from time to time, and you will need to respond via e-mail within 4 days after the class is uploaded on D2L. You can only earn a participation point if you answer the question within the allotted time.

Course policies

General 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: cdm.depaul.edu/enrollment. Note that **Sept 18th 2018** is the last date to drop the class with no penalty.

Plagiarism

There is a "zero-tolerance policy" regarding plagiarism. This stands for both the plagiarizer and the person(s) facilitating plagiarism (e.g., allowing someone to plagiarize their work). There's a great resource put together by DePaul University, which you can find here: <https://resources.depaul.edu/teaching-commons/teaching-guides/learning-activities/Pages/avoiding-plagiarism.aspx>

Academic Integrity

One of the core principles of education is establishing Academic Integrity. It is a viable component in the classroom, one by which learning objectives could be honestly and efficiently met. The principles of academic integrity should span all of your learning endeavours, within and beyond this course. For more information on Academic Integrity, especially definitions and norms, please visit: <https://resources.depaul.edu/teaching-commons/teaching/academic-integrity/Pages/default.aspx>. This will be the basis of all of our interactions in this course. If you have any questions or concerns, feel free to drop by and see me, or email me.

Deadlines and submission policies

Assignments are due on D2L by 11:59 pm on the deadline day posted on each assignment, unless otherwise announced. All of your work (exams, assignments, report, etc) must be your original work. Any evidence of departure from Academic Integrity will be reported, and ensuing sanctions will be pursued. You are expected to read, understand and comply with DePaul's policy on Academic Integrity, which you can reach from the aforementioned website.

Late submissions receive a 20% penalty for every 24 hour delay, starting from the minute past the deadline.

Missing exams and/or deadlines

Emergencies happen and that is quite understandable. If you miss an exam due to a certain emergency (e.g., accident, emergency hospitalization, etc) please communicate with me as soon as you can to resolve any outstanding issues. If a major illness hinders you from attending an exam or submitting a deliverable (assignment), you need to contact me beforehand via e-mail. Notices received after the deadline will not be accounted for (unless for an emergency as highlighted above). If the illness occurred after the deadline, even if accompanied with a doctor's note, you would receive a zero for that exam/deliverable.

Otherwise, missing an exam without prior approval will warrant an automatic zero. Generally, all extensions are considered on a case-by-case basis. Falling sick prior to a deadline does not automatically warrant an extension. If you have any questions or concerns, please don't hesitate in contacting me.

Disability Accommodation

Feel free to speak to me as soon as possible regarding any difficulties you feel you might be encountering in this course, ideally within our first week of classes. Kindly refer to DePaul's Center for Students with Disabilities website at <https://offices.depaul.edu/student-affairs/about/departments/Pages/csd.aspx>. If you feel that any given disability is hindering you, or you are not sure and wish for a consult, please reach out to CSD at csd@depaul.edu; they are trained to help out and point you to the appropriate resources.

Grade calculation

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 = 70% - 76%	C- = 68% - 70%	D+ = 66% - 68%	D = 60% - 66%
		F = 0% - 60%		

Class schedule and topics

Week	Class date	Tentative Topics	NetAcad ItN Readings	Assignments (on the week of)
1	Sept 5	Course overview Network basics & Cabling	1.1 – 1.5 3.1 – 3.3 & 4.1 – 4.2	Technical report explained in class
2	Sept 12	Wired Ethernet and Switching Wi-Fi Networks	4.3-4.4 5.1-5.3	Lab 1 posted
3	Sept 19	IP addressing and DHCP TCP and packet analysis	2.1, 2.2.1, 2.3 & 6.1 & 7.1, 7.3 9.1, 9.2	HW 1 posted Lab 1 due
4	Sept 26	IP subnets and routing Subnetting	6.2 8.1-8.3	Lab 2 posted HW 1 due
5	Oct 3	Routers and Switches Midterm Review	6.3-6.4	Lab 2 due
6	Oct 10	Open discussions and examples Midterm exam		
7	Oct 17	NAT IPv6	6.1.4 7.2 & 8.3	HW 2 posted
8	Oct 24	DNS, Internet Applications Privacy and Network Security	10.1-10.2, 11.1 1.4.3	Lab 3 posted HW 2 due
9	Oct 31	Integrity and Encryption Network Vulnerabilities	11.2	Lab 3 due HW 3 posted
10	Nov 7	Authentication & Firewalls Course review and Final Exam preparation		HW 3 due Technical report due
11	Nov 14	Final Exam time: TBD		

Learning Domain Outcomes

After completing this course, students will be able to:

- Understand foundational networking topics and concepts
- Analyze and maintain Local Area Networks
- Plan IP address assignments through subnetting
- Discuss various types of security attacks and how to mitigate them
- Understand how to secure a network from common attacks
- Use tools such as Wireshark to analyze network traffic
- Analyze and explain a technical challenge in current networking domains, and write a coherent report to assess it.

Course evaluations

During the course, your feedback on how well the course is running (pace, difficulty, resources, etc) will be solicited. This is a vital component of improving and tailoring this course to your learning objectives. While all students are expected to achieve the learning outcomes highlighted above, each of us inevitably learn differently. This course is designed to meet the aforementioned learning outcomes, and I will endeavor to incorporate different activities (e.g., Kinesthetic learning) to improve the learning experience.

If you have any concerns about how the course is running, or would like to suggest an improvement, feel free to reach out to me. Also, on week 10, we will hold the official course evaluations in class.