


# Course Syllabus

Please note that the specifics of this Course Syllabus are subject to change. Instructors will notify students of any changes and students will be responsible for abiding by them. Even if you print this syllabus, please check the online version often.

## Class Absences

If you missed class, or know that you are going to miss class, please fill out the [IST 220 24SP Class Absence Form](https://forms.gle/kvNydoZBZNsydu6J7)  (<https://forms.gle/kvNydoZBZNsydu6J7>). It will ask you a few basic questions, and the instructor will receive an email once you fill it out. As noted in the form, you should watch lecture videos in the "Media Gallery" tab in Canvas for any class meetings you miss, and plan on making up any assignments as soon as possible. If you missed a quiz or another assignment that could only be completed during class, use the form to indicate during which office hour time you will make up that assignment.

## Description

IST 220 is an introduction to computer networking and telecommunications and their applications in information systems. Its objective is to provide you with a basic understanding of the working of computer and telecommunication networks and the ability to apply this knowledge to specific applications and situations.

While the course is about digital technology and how it works, it is not a training course in particular equipment and/or applications. There will be demonstrations of relevant technologies, but the course is not equipment-intensive and will not involve special technology needs beyond traditional access to computers and the Web.

The course will be almost completely organized around the “top-down” approach of the textbook. In other words, we’ll start by learning about the types of messages that applications send each other across the network, and then learn more and more about how those messages are delivered.

Upon completion of this course, you should be able to:

- Identify benefits and applications of computer networks.
- Recognize key components of data communications and their roles in supporting data communications.
- Plan, design, and build appropriate wired or wireless networks in given application contexts.
- Evaluate and analyze organizational network architecture.
- Assess new telecommunications or network technologies and related applications.


We’ll also learn and practice related skills, such as: writing HTML and Python; using the Linux terminal; converting values between binary, decimal, and hexadecimal; and understanding and creating finite-

state machines.

# Instructor

- Marc Friedenbergr
  - Please contact me, and the entire teaching team, using Microsoft Teams (linked in the Canvas sidebar)
  - Office hours (in E328 Westgate Building)
    - Tuesdays and Thursdays, 12:45-2:45p
    - Fridays, 12:30-2:30



## Instructional Assistant

- Olivia Lee
  - Office hours (in E301 Westgate Building)
    - Tuesday 1:00p-2:00p
    - Friday 10:00a-11:00a (via [zoom](https://psu.zoom.us/j/99484044726)  (<https://psu.zoom.us/j/99484044726>))

## Learning Assistants

- Junbeom In
  - Office Hours
 

When		Where
Tuesday	1:30 PM - 2:50 PM	Pattee and Paterno
Thursday	1:30 PM - 2:50 PM	library (TBD)
  - Please send me a message before coming to my office hour.
  - TODAY's Office Hour (2024/02/13) - 1:45PM
    - Library (W-1)

- Bakhtiar Reza
  - Office Hours:
    - Monday 3pm-4pm
      - [https://psu.zoom.us/j/98200726216?](https://psu.zoom.us/j/98200726216?pwd=QVZxT2wrWVp3OW9LanZadXZHRWZzQT09)  
[pwd=QVZxT2wrWVp3OW9LanZadXZHRWZzQT09](https://psu.zoom.us/j/98200726216?pwd=QVZxT2wrWVp3OW9LanZadXZHRWZzQT09) 
      - Password: 368341
    - Saturday 9am-10am
      - <https://psu.zoom.us/j/98994450082?pwd=N3lIZEZ1SzlwQThTK1pSRm1ZZUExZz09>  
<https://psu.zoom.us/j/98994450082?pwd=N3lIZEZ1SzlwQThTK1pSRm1ZZUExZz09> 
      - Password: 135419

- Michael Catelli
  - Office Hours: Mondays and Wednesdays, 11am - 12pm (in Reese's Cafe)

## Materials

- There are no materials to purchase for this course. All necessary materials will be provided.

## Assignments and Grading

Your final grade will be based on the following score tracking and letter grade listings:

### Score Tracking

Grading Category	Points
Labs and Homework	<b>350pts</b> (7 x 50pts)
Midterms	<b>200pts</b> (3 x 100pts; lowest score dropped)
Final Exam	<b>200pts</b>
Quizzes	<b>150pts</b> (15 x 10pts)
Participation and Attendance	<b>100pts</b>
TOTAL	<b>1000pts</b>

### Course Grading Scale

The following are minimum cutoffs for each grade:

- 92.50% = A
- 89.50% = A-
- 86.50% = B+
- 82.50% = B
- 79.50% = B-
- 76.50% = C+
- 69.50% = C
- 59.50% = D
- less than 59.50% = F

### Labs and Homework

The homework assignments and lab assignments are designed to provide an opportunity for students to explore specific topics in a structured way. Students may work together on homework assignments and labs, but all of the material that is turned in for grading must be produced individually. For example, students may form study groups and work out homework solutions together on a board or by each working separately and sharing what they have learned, but it would not be permissible for one student to produce a single homework assignment for the group that is then copied and distributed to other

group members. The goal of this policy is to encourage the use of homework as a learning aid. Homework and lab assignments will be posted at least a week before they are due (and usually earlier).

## Midterms

Three exams will be given, and the topics covered on each exam will be discussed in class. These exams are non-comprehensive, i.e., non-cumulative. *The lowest of the three exam scores will be dropped.* Therefore, no make-up midterm exams will be given, except in cases of widely accepted religious observance or other legitimate unavoidable conflicts related to university business. Students who must miss an exam for a religious observance or some foreseeable event must inform the instructor at least 14 days before the scheduled exam to make arrangements for taking the exam in advance. Exams must be taken on or before the scheduled exam date. These make-up exams may be in an alternative format, such as essay questions.

The tests will primarily consist of multiple-choice, true-false, fill-in-the-blank, and essay questions. I try to get graded tests back to you within one week. You'll get your score on the multiple-choice, true-false, and fill-in-the-blank questions immediately through Canvas.

For every midterm, as well as the final exam, you will be allowed to use one double-sided 8.5 x 11 sheet of paper with your own handwritten notes (write as small as you want!). You won't be allowed to refer to any other resources during the exam.

## Final exam

The final exam will be comprehensive, and everything covered during the semester is fair game.

## Quizzes

We will have 15 quizzes in class throughout the semester, each of which is worth 10 points. Some of these quizzes will be taken during class, and others will be taken on your own time. These are much smaller in scope than the exams, and tied to one or two class sessions' worth of material. Note that, unlike the exams, *the use of a handwritten note sheet is not allowed while taking a quiz.*

## Participation and Attendance

Participation and attendance will be evaluated based on periodic participation exercises. I'll be quite flexible with what "attendance" means in this unusual semester.

## Late Work

Assignments are due at the date and time indicated in Canvas. Set notifications if this will help you keep track. I understand that life happens. Each student may have up to three late days to be used throughout the semester for any lab or homework with no penalty. No more than two late days may be used at one time for any assignment. Once the three late days have been used, late homework will receive feedback, but will receive a grade of zero.

# Course Policies and Expectations

## Logging into Canvas

Students are expected to login regularly to check for course updates, announcements, emails, discussions, etc.

## Technical Requirements

You will be required to utilize a number of technical systems to accomplish your goals in this course. Most required hardware and software will be made available to you on the computers in the classrooms in the Westgate Building, but *I recommend bringing your own laptop to class*. There will be software for in-class activities as well as projects. It is not the responsibility of the instructor or teaching team members to troubleshoot your computer, your home network, or your software problems, and it will be impossible for us to do so at the last minute before a deadline. Please allow sufficient time to complete and submit an assignment with some “wiggle room” for technical errors or difficulties. Technical difficulties that prevent you from submitting an assignment on time will lead to late submission. Depending on the circumstances, this will require using a late day or may mean that you receive a zero for that assignment.

## How to Do Well in This Class

*Come to class regularly and participate in class activities:* As stated above, students who come to class and who engage during class do best in the course. Of course things come up. If you miss class, make sure you do the reading for the class that you missed AND discuss it with another student who was in class and who took good notes. Then at that point, if you still have questions or are confused about a topic, ask those specific questions to the teaching team. We are much more receptive to specific questions, rather than asking us to fill you in on everything you missed. It is your responsibility to keep up.

*Take notes:* Write notes during class. You can use the PowerPoint slides as a framework but add to them. Some people find it helpful to rewrite their notes after class.


*Prepare for class:* Read on the topic before class so you have primed yourself to understand the material in class. Even if you don't understand everything the first time you read it and the first time you hear it, you learn through multiple exposure in different ways.


*Do the labs and homework:* Sometimes if we are working with someone who is very good at the material, it becomes easy just to let them do the thinking and to mindlessly copy what that person wrote. Try to really understand and do the homework and labs yourself. We all need help from peers and mentors, but then go back and try to understand what you didn't before and see if you can do it on your own.

*Use available resources:* We will mention a lot of resources available to you at the College of IST and the University. These include peer tutoring sessions, LA support, instructor office hours, software

resources, and more. Keep in mind this full arsenal of resources that is available to you and use these tools as it makes sense to do so.

## Academic Integrity


Penn State and the College of Information Sciences and Technology are committed to maintaining [Penn State's policy on Academic Integrity](http://senate.psu.edu/policies-and-rules-for-undergraduate-students/47-00-48-00-and-49-00-grades/#49-20)  (<http://senate.psu.edu/policies-and-rules-for-undergraduate-students/47-00-48-00-and-49-00-grades/#49-20>) in this and all other courses. We take academic integrity matters seriously and expect you to become a partner to the University/College standards of academic excellence.

For more information, please review the [College of IST Academic Integrity Resources](https://ist.psu.edu/students/academic_integrity)  ([https://ist.psu.edu/students/academic\\_integrity](https://ist.psu.edu/students/academic_integrity)).




WARNING: In addition to other policies, using any material in any media format - from “answer sites” (such Course Hero, Chegg, and all others) and/or other type of sources - is considered CHEATING and will not be tolerated. Sanctions range from failure of the assignment or course to dismissal from the University. Contact your instructor with questions related to this topic.

## Counseling and Psychological Services

Many students at Penn State face personal challenges or have psychological needs that may interfere with their academic progress, social development, or emotional wellbeing. The university offers a variety of confidential services to help you through difficult times, including individual and group counseling, crisis intervention, consultations, online chats, and mental health screenings. These services are provided by staff who welcome all students and embrace a philosophy respectful of clients' cultural and religious backgrounds, and sensitive to differences in race, ability, gender identity and sexual orientation.

- [Counseling and Psychological Services at University Park \(CAPS\)](http://studentaffairs.psu.edu/counseling)  (<http://studentaffairs.psu.edu/counseling>): 814-863-0395
- Penn State Crisis Line (24 hours/7 days/week): 877-229-6400
- Crisis Text Line (24 hours/7 days/week): Text LIONS to 741741

## Educational Equity/Report Bias

Penn State University has adopted a [Protocol for Responding to Bias Motivated Incidents](http://equity.psu.edu/reportbias/reports/protocol-for-responding-to-bias-motivated-incidents)  (<http://equity.psu.edu/reportbias/reports/protocol-for-responding-to-bias-motivated-incidents>) that is grounded in the policy that the “University is committed to creating an educational environment which is free from intolerance directed toward individuals or groups and strives to create and maintain an environment that fosters respect for others.” That policy is embedded within an institution traditionally committed to [academic freedom](https://guru.psu.edu/policies/OHR/hr64.html)  (<https://guru.psu.edu/policies/OHR/hr64.html>). Bias motivated incidents include conduct that is defined in [University Policy AD 91: Discrimination and Harassment, and Related Inappropriate Conduct](https://guru.psu.edu/policies/ad91.html)  (<https://guru.psu.edu/policies/ad91.html>). Students, faculty, or

staff who experience or witness a possible bias motivated incident are urged to report the incident immediately by doing one of the following:

- Submit a report via the [Report Bias webpage](https://guru.psu.edu/policies/ad91.html) ➡ [\(https://guru.psu.edu/policies/ad91.html\)](https://guru.psu.edu/policies/ad91.html)
- Contact one of the following offices:
  - University Police Services, University Park: 814-863-1111
  - Multicultural Resource Center, Diversity Advocate for Students: 814-865-1773
  - Office of the Vice Provost for Educational Equity: 814-865-5906
  - Office of the Vice President for Student Affairs: 814-865-0909
  - Affirmative Action Office: 814-863-0471
- Dialing 911 in cases where physical injury has occurred or is imminent