Syllabus

Course info

	Day	Time	Location
Section 1	Mon & Wed	8:30 am - 10:00 am	SHDH 1206
Section 2	Mon & Wed	10:15 am - 11:45 am	SHDH 1206
Section 3	Mon & Wed	1:45 pm - 3:15 pm	SHDH 1206

Learning objectives

By the end of the semester, you will be able to...

- understand data manipulation, and find basic summaries
- reason under uncertainity
- make predictions
- understand probability
- communicate results from statistical analyses to a general audience.

Community

Wharton's Code of Conduct

As a student in this course, you have agreed to uphold the Wharton's Student Code of Conduct as well as the practices specific to this course.

Inclusive community

My goal as your lecturer is to help you accomplish or discover your passion and find your spark. You all belong here. It is also my intent that students from all diverse backgrounds and perspectives be well-served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that the students bring to this class be viewed as a resource, strength, and benefit. It is my intent to present materials and activities that are respectful of diversity and in alignment with Diversity, Inclusion and Belonging at the Wharton School. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally, or for other students or student groups. Please feel free to leave anonymous comments in my mailbox on the 4th floor of the Academic Research Building.

Furthermore, I would like to create a learning environment for my students that supports a diversity of thoughts, perspectives and experiences, and honors your identities. To help accomplish this:

- If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. If you prefer to speak with someone outside of the course, your academic dean is an excellent resource.
- I (like many people) am still in the process of learning about diverse perspectives and identities. If something was said in class (by anyone) that made you feel uncomfortable, please let me or a member of the teaching team know.

Accessibility

If there is any portion of the course that is not accessible to you due to challenges with technology or the course format, please let me know so we can make appropriate accommodations.

The Weingarten Center is available to ensure that students are able to engage with their courses and related assignments. Students should be in touch with the the Weingarten Center to request or update accommodations under these circumstances; it can take up to 4 weeks to review documents and get approval.

Communication

All lecture notes, assignment instructions, an up-to-date schedule, and other course materials may be found on the course website at stats1010-f22.github.io/website.

I will regularly send course announcements via email and canvas, make sure to check one or the other of these regularly. If an announcement is sent Monday through Thursday, I will assume that you have read the announcement by the next day. If an announcement is sent on a Friday or over the weekend, I will assume that you have read it by Monday.

Where to get help

- If you have a question during lecture, feel free to ask it! There are likely other students with the same question, so by asking you will create a learning opportunity for everyone.
- The teaching team is here to help you be successful in the course. You are encouraged to attend office hours to ask questions about the course content and assignments. Many questions are most effectively answered as you discuss them with others, so office hours are a valuable resource. Please use them!
- Outside of class and office hours, any general questions about course content or assignments should be posted on the course forum INSET FORUM HERE. There is a chance another student has already asked a similar question, so please check the other posts in Conversations before adding a new question. If you know the answer to a question posted in the discussion forum, I encourage you to respond!
- Emails should be reserved for questions not appropriate for the public forum. **If you email me, please include "STA 1010" in the subject line.** Barring extenuating circumstances, I will respond to STA 1010 emails within 48 hours Monday - Friday. Response time may be slower for emails sent Friday evening - Sunday.

Check out the Support page for more resources.

Textbooks

While there is no official textbook for the course, we will be assigning readings from the following textbooks.

- R for Data Science by Garret Grolemund and Hadley Wickham
- Introduction to Modern Statistics by Mine Çetinkaya-Rundel and Johanna Hardin
- Statistics for Business by Robert Stine and Dean Foster

Lectures

The goal of the lectures is for them to be as interactive as possible. My role as instructor is to introduce you new tools and techniques, but it is up to you to take them and make use of them. A lot of what you do in this course will involve writing code, and coding is a skill that is best learned by doing. Therefore, as much as possible, you will be working on a variety of tasks and activities throughout each lecture and lab. You are expected to attend all lecture and meaningfully contribute to in-class exercises and discussion. Additionally, some lectures will feature application exercises that will be graded. In addition to application exercises will be periodic activities to help build a learning community. These will be short, fun activities that will help everyone in the class connect throughout the semester.

You are expected to bring a laptop to each class so that you can take part in the in-class exercises. Please make sure your laptop is fully charged before you come to class as the number of outlets in the classroom will not be sufficient to accommodate everyone. If you are in need of a loaner laptop please seek support here.

Teams

You will be assigned to a team at the beginning of the semester. You are encouraged to sit with your teammates in lecture. All team members are expected to contribute equally to the completion of the labs and project and you will be asked to evaluate your team members throughout the semester. Failure to adequately contribute to an assignment will result in a penalty to your mark relative to the team's overall mark.

Name tags

Every one of you are important to me. To facilitate interactions, I would like to learn your names. To help with this, please wear name tags in class that include pronouns so that I can call you by your name and begin to connect with each of you.

Assessment

Assessment for the course is comprised of five components: application exercises, homework assignments, exams, projects, and teamwork.

Application exercises

Parts of some lectures will be dedicated to working on Application Exercises (AEs). These exercises which give you an opportunity to apply the statistical concepts and code introduced in the readings and lectures. These AEs are due within three days of the corresponding lecture period. Specifically, AEs from Monday lectures are due Thursday by 11:59 pm ET, and AEs from Wednesdays lectures are due Saturday by 11:59 pm ET.

Because these AEs are for practice, they will be graded based on completion, i.e., a good-faith effort has been made in attempting all parts. Successful on-time completion of at least 80% of AEs will result in full credit for AEs in the final course grade.

Homework

In homework, you will apply what you've learned during lecture and lab to complete data analysis tasks. You may discuss homework assignments with other students; however, homework should be completed and submitted individually. Similar to lab assignments, homework must be typed up using Quarto and submitted as a PDF in Canvas.

One homework assignment will be dedicated to a *statistics experience*. The statistics experience is an opportunity to engage with statistics and data science outside of the classroom through podcasts, books, seminars, data analysis competitions, and other activities. As you complete these experiences, the goal is to consider how the material you're learning in the course connects with society more broadly.

The lowest homework grade will be dropped at the end of the semester.

Exams

There will be four exams consisting of multiple choice questions. Through these exams you have the opportunity to demonstrate what you've learned in the course thus far. The exams will focus on the conceptual understanding of the content. The content of the exam will be related to the content in the prepare, practice, and perform assignments. More detail about the exams will be given during the semester.

The lowest exam grade will be dropped at the end of the semester.

Project

The purpose of the project is to apply what you've learned throughout the semester to analyze an interesting, data-driven research question. The project will be completed with your teams, and each team will present their work. More information about the project will be provided during the semester.

Grading

The final course grade will be calculated as follows:

Category	Percentage
Application exercises	7%
Homework	35% (7% x 5)
Project	15%
Lab	14% (2.33% x 6)
Exam 01	10%

Category	Percentage
Exam 02	10%
Exam 03	10%
Teamwork	13%

The final letter grade will be determined based on the following thresholds:

Letter Grade	Final Course Grade
A	>= 93
A-	90 - 92.99
B+	87 - 89.99
B	83 - 86.99
B-	80 - 82.99
C+	77 - 79.99
C	73 - 76.99
C-	70 - 72.99
D+	67 - 69.99
D	63 - 66.99
D-	60 - 62.99
F	< 60

Five tips for success

Your success on this course depends very much on you and the effort you put into it. The course has been organized so that the burden of learning is on you. Your TA and I will help you be providing you with materials and answering questions and setting a pace, but for this to work you must do the following:

1. Complete all the preparation work before class.
2. Ask questions. As often as you can. In class, out of class. Ask me, ask the TA, ask your friends, ask the person sitting next to you. This will help you more than anything else. If you get a question wrong on an assessment, ask us why. If you're not sure about the homework, ask. If you hear something on the news that sounds related to what we discussed, ask. If the reading is confusing, ask.
3. Do the readings.
4. Do the homework and lab.The earlier you start, the better. It's not enough to just mechanically plow through the exercises. You should ask yourself how these exercises relate to earlier material, and imagine how they might be changed (to make questions for an exam, for example.)

5. Don't procrastinate. If something is confusing to you in Week 2, Week 3 will become more confusing, Week 4 even worse, and eventually you won't know where to begin asking questions. Don't let the week end with unanswered questions. But if you find yourself falling behind and not knowing where to begin asking, come to office hours, and let me help you identify a good (re)starting point.

Course policies

Academic integrity

TL;DR: Don't cheat!

All students must adhere to Wharton's Code of Academic Integrity: Wharton is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, and accountability. Citizens of this community commit to reflect upon these principles in all academic and non-academic endeavors, and to protect and promote a culture of integrity.

Regardless of course delivery format, it is your responsibility to understand and follow Wharton policies regarding academic integrity, including doing one's own work, following proper citation of sources, and adhering to guidance around group work projects. Ignoring these requirements is a violation of the Wharton Community Standard. If you have any questions about how to follow these requirements, please contact Julie Nettleton, Director of the Center for Community Standards and Accountability (CSA).

Collaboration policy

Only work that is clearly assigned as team work should be completed collaboratively.

- The homework assignments must be completed individually and you are welcomed to discuss the assignment with classmates at a high level (e.g., discuss what's the best way for approaching a problem, what functions are useful for accomplishing a particular task, etc.). However you may not directly share answers to homework questions (including any code) with anyone other than myself and the teaching assistants.
- For the projects, collaboration within teams is not only allowed, but expected. Communication between teams at a high level is also allowed however you may not share code or components of the project across teams.

Policy on sharing and reusing code

I am well aware that a huge volume of code is available on the web to solve any number of problems. Unless I explicitly tell you not to use something, the course's policy is that you may make use of any online resources (e.g. RStudio Community, StackOverflow) but you must explicitly cite where you obtained any code you directly use (or use as inspiration). Any recycled code that is discovered and is not explicitly cited will be treated as plagiarism. On individual assignments you may not directly share code with another student in this class, and on team assignments you may not directly share code with another team in this class.

Late work policy

The due dates for assignments are there to help you keep up with the course material and to ensure the teaching team can provide feedback within a timely manner. We understand that things come up periodically that could make it difficult to submit an assignment by the deadline. Note that the lowest homework and lab assignment will be dropped to accommodate such circumstances.

- Homework and labs may be submitted up to 3 days late. There will be a 5% deduction for each 24-hour period the assignment is late.
- There is no late work accepted for application exercises, since these are designed to help you prepare for labs and homework.
- The late work policy for the project will be provided with the project instructions.

Waiver for extenuating circumstances

If there are circumstances that prevent you from completing a lab or homework assignment by the stated due date, you may email dr. sturdevant before the deadline to waive the late penalty. In your email, you only need to request the waiver; you do not need to provide explanation. This waiver may only be used for once in the semester, so only use it for a truly extenuating circumstance.

If there are circumstances that are having a longer-term impact on your academic performance, please let your academic dean know, as they can be a resource. Please let dr. sturdevant know if you need help contacting your academic dean.

Regrade request policy

Regrade requests must be submitted on Gradescope within a week of when an assignment is returned. Regrade requests will be considered if there was an error in the grade calculation or if you feel a correct answer was mistakenly marked as incorrect. Requests to dispute the number of points deducted for an incorrect response will not be considered. Note that by submitting a regrade request, the entire question will be graded which could potentially result in losing points.

No grades will be changed after the final project presentations.

Attendance policy

Responsibility for class attendance rests with individual students. Since regular and punctual class attendance is expected, students must accept the consequences of failure to attend. More details on Wharton attendance policies are available here.

However, there may be many reasons why you cannot be in class on a given day, particularly with possible extra personal and academic stress and health concerns this semester. All course lectures will be recorded and available to enrolled students after class. If you miss a lecture, make sure to watch the recording and review the material before the next class session. Given the technologies we use in the course, this is straightforward to do asynchronously. If you know you're going to miss a class and you're feeling well enough to do so, notify your teammates ahead of time. Overall these policies are put in place to ensure communication between team members, respect for each others' time, and also to give you a safety net in the case of illness or other reasons that keep you away from attending class.

Attendance policy related to COVID symptoms, exposure, or infection

Student health, safety, and well-being are the university's top priorities. To help ensure your well-being and the well-being of those around you, please do not come to class if you have symptoms related to COVID-19, have had a known exposure to COVID-19, or have tested positive for COVID-19. If any of these situations apply to you, you must follow university guidance related to the ongoing COVID-19 pandemic and current health and safety protocols. If you are experiencing any COVID-19 symptoms, contact student health at 215-898-0300. To keep the university community as safe and healthy as possible, you will be expected to follow these guidelines. Please reach out to me and your academic dean as soon as possible if you need to quarantine or isolate so that we can discuss arrangements for your continued participation in class. For the safety of all students, ***I require that students wear masks in class***.

Inclement weather policy

In the event of inclement weather or other connectivity-related events that prohibit class attendance, I will notify you how we will make up missed course content and work. This might entail holding the class on Zoom synchronously or watching a recording of the class.

Policy on video recording course content

All lectures will be recorded and available on INSERT LINK HERE, so students should not need to create their own recordings of lectures. If you feel that you need record the lectures yourself, you must get written permission from me ahead of time and these recordings should be used for personal study only, not for distribution. The full policy on recording of lectures falls under the University of Pennsylvania's V.L. Policy on Unauthorized Copying of Copyrighted Media, available at https://catalog.upenn.edu/faculty-handbook/v/v-l/. Unauthorized distribution may result in a civil suite, criminal charges, and/or penalties and fines.

Learning during a pandemic

I want to make sure that you learn everything you were hoping to learn from this class. If this requires flexibility, please don't hesitate to ask.

- You *never* owe me personal information about your health (mental or physical) but you're always welcome to talk to me. If I can't help, I likely know someone who can.
- I want you to learn lots of things from this class, but I primarily want you to stay healthy, balanced, and grounded during this crisis.

Note: If you've read this far in the syllabus, post a picture of your pet if you have one or your favourite meme to the discussion forum!

Important dates

- **August 30:** First day of classes
- **September 5:** Labor Day holiday, no classes are held
- **September 13:** Course Selection Period ends
- **October 6 - 9:** Fall term break, no classes are held
- **October 10**: Drop period ends
- **October 10**: Indigenous People's Day (classes in session)
- **October 28**: Grade Type Change Deadline
- **November 7**: Last day to withdraw from a course
- **November 22-23**: Thur-Fri class schedule on Tue-Wed

- **November 24-27**: Thanksgiving Break
- **December 12**: Last day of classes
- **December 13-14**: Reading Days
- **December 15 - 22**: Final exams
- **December 22:** Fall term ends

Click here for the full University of Pennsylvania academic calendar.