Basic Applied Statistics- STAT 0200

University of Pittsburgh Department of Statistics

The Basics

Class:	1100 (10378)	
Lecture:	Monday, Tuesday, Wednesday, Thursday 10:00am – 11:25am	
Lecture Locat	on: 5108 WWPH (Posvar Hall)	
Instructor:	Zi Wang, Third-year PhD in Statistics	
Email:	ziw43@pitt.edu	
Office Hours:	Monday 3pm – 4pm Wednesday 3pm – 4pm Or by appointment Office hours will be via Zoom (https://pitt.zoom.us/j/97568648451)	
TA:	Wenlong Jiang Email: wej24@pitt.edu Office Hours: Wednesday 2-3 pm Office hours will be via Zoom (https://pitt.zoom.us/j/99816256502)	

What is the course about?

This course teaches methods of descriptive and inferential statistics. Topics include data collection and description, correlation and regression, hypothesis testing, analysis of variance, and contingency tables. Emphasis will be placed on the statistical reasoning underlying the methods. Students will also become proficient at the use of a statistical software package, MINITAB.

How will this course work?

Each week you will have lecture and recitation. See the Semester Schedule for details on what will be covered.

Lecture: Monday, Tuesday, Wednesday, Thursday 10:00am – 11:25am

Lecture will be offered in person. Lecture slides will be available on Canvas prior to the class meeting.

Recitation: Two recitations with different topics each week.

Monday/Wednesday 12:00pm – 12:55pm LAWRN 232

You will have two recitation sections per week (this does not include Monday on week 1). Recitation will be offered in person in the above classroom. Information and materials for recitation will be posted on Canvas.



What materials and resources do you need?

a Safe & healthy environment:

It can be challenging to do your best in class if you have trouble meeting basic needs. This includes making sure to take care of both your <u>physical health</u> and your <u>mental</u> <u>health</u>.

Physical health:

- If you have difficulty accessing food or a safe shelter, please don't hesitate to reach out to me and I will help put you in touch with resources to assist you.
- If you are sick and unable to complete assignment on time, contact me.

Mental health:

This is likely going to be a strange and stressful semester. Do your best to maintain a healthy lifestyle this semester by eating well, exercising, avoiding excess drugs and alcohol, getting enough sleep, and taking time to relax. Despite what you might hear, using your time to take care of yourself will actually help you achieve your academic goals more than spending too much time studying. All of us benefit from support and guidance during times of struggle. There are many helpful resources available at Pitt. An important part of the college experience is learning how to ask for help. Take the time to learn about all that's available and take advantage of it. Ask for support sooner rather than later – this always helps. If you or anyone you know experiences any academic stress, difficult life events, or difficult feelings like anxiety or depression, we strongly encourage you to seek support. Consider reaching out to a friend, faculty or family member you trust for assistance connecting to the support that can help.

The University Counseling Center is here for you: call 412-648-7930 and visit their website.

If you or someone you know is feeling suicidal, call someone immediately, day or night: University Counseling Center (UCC): 412 648-7930 University Counseling Center Mental Health Crisis Response: 412-648-7930 x1 Resolve Crisis Network: 888-796-8226 (888-7-YOU-CAN)

If the situation is life threatening, call the Police: On-campus: Pitt Police: 412-268-2121 Off-campus: 911

• There is a list of resources on Canvas that includes Apps, Websites, and other ideas to help take care of yourself.

a Textbook:

Statistics: Learning from Data, 2nd Edition, by Roxy Peck, Tom Short.

 Offered ONLINE. See instructions in Canvas under Modules on how to access or opt out.

a Software:

Throughout the semester we will use the statistical software package MINITAB.

MiniTab Online:

For access to the Minitab online site visit this website: <u>https://app.minitab.com/</u>

- At the moment it appears that Firefox is not a supported browser
- User will need to sign in with their primary Pitt email address
- At the next screen they will need to select University of Pittsburgh SSO



• Then sign in through Pitt Passport

Communication: how to ask and who to ask questions

Questions about specific course material like homework, lecture slides?

- Check the Canvas and access course materials.
- Email me or your TA Wenlong Jiang
- Go to Office Hours

Questions about missed work, absences, other personal issues?

- Email me
- Go to Office Hours



The work: assignments and grading

Extra Credit

Attendance in lecture is not mandatory. However, 2% (1%) extra credit will be offered by attending at least 7 (4) recitations.

Homework:

There will be several homework sections which tightly related with course materials each week. Each homework section could be submitted at most five times, and the last one submission will be graded.

Examinations:

The three exams will be given online on Canvas or via a written version during lecture times.

- You are expected to follow the rules for Academic Integrity and will be asked to certify that the work is yours and yours alone.
- It is recommended that you have a prepared sheet readied with equations and other information you think you may need to complete the exam. You will be allowed one 8.5" x 11" sheets of equations and notes.
- While the exams will be focused on the most recent material, they are cumulative in nature as the material is cumulative in nature.
- The exams will be graded accordingly: midterm exam 1 and 2 will be worth 15% of the final grade while the final exam will each be worth 30% of the final grade.
- Each exam will take place during class time and will be offered online and in person. Make-ups and time changes will be allowed only on a case-by-case basis and must be okayed by me.

Course Grades:

90 – 100%	А
80 – 90%	В
70 – 80%	С
60 – 70%	D
<60%	F

- Plusses are assigned to the students at the top of each grade
- Minuses to the students at the bottom dependent on the distribution of grades.

Course Policies

Late Assignments:

Late assignments will be accepted if okayed by me.

Academic Integrity

Students in this course will be expected to comply with the University of Pittsburgh's Policy on Academic Integrity. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University Guidelines on Academic Integrity. This may include, but is not limited to, the confiscation of the examination of any individual suspected of violating University Policy. Furthermore, no student may bring any unauthorized materials to an exam, including dictionaries and programmable calculators. To learn more about Academic Integrity, visit the Academic Integrity Guide for an overview of the topic. For hands-on practice, complete the Understanding and Avoiding Plagiarism tutorial.

Copyright Notice

These materials may be protected by copyright. United States copyright law, 17 USC section 101, et seq., in addition to University policy and procedures, prohibit unauthorized duplication or retransmission of course materials. See Library of Congress Copyright Office and the University Copyright Policy.

Diversity and Inclusion

The University of Pittsburgh does not tolerate any form of discrimination, harassment, or retaliation based on disability, race, color, religion, national origin, ancestry, genetic information, marital status, familial status, sex, age, sexual orientation, veteran status or gender identity or other factors as stated in the University's Title IX policy. The University is committed to taking prompt action to end a hostile environment that interferes with the University's mission. For more information about policies, procedures, and practices, see: http://diversity.pitt.edu/affirmative-action/policies-procedures-and-practices.

Everyone in the class should strive to help ensure that other members of this class can learn in a supportive and respectful environment. If there are instances of the aforementioned issues, please contact the Title IX Coordinator, by calling 412-648-7860, or e-mailing titleixcoordinator@pitt.edu. Reports can also be filed online:

https://www.diversity.pitt.edu/make-report/report-form. You may also choose to report this to a faculty/staff member; they are required to communicate this to the University's Office of Diversity and Inclusion. If you wish to maintain complete confidentiality, you may also contact the University Counseling Center (412-648-7930).

Disability Services

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and Disability Resources and Services (DRS), 140 William Pitt Union, (412) 648- 7890, drsrecep@pitt.edu, (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course.

If you are allotted extra time on exams this will be available online or, if the assignment is in person, you will need to schedule an exam time with DRS.

Accessibility

The Canvas LMS platform was built using the most modern HTML and CSS technologies, and is committed to W3C's Web Accessibility Initiative and Section 508 guidelines. Specific details regarding individual feature compliance are documented and updated regularly.

Health and Safety Statement

In the midst of this pandemic, it is extremely important that you abide by public health regulations and University of Pittsburgh health standards and guidelines. While in class, at a

minimum this means that you must wear a face covering and comply with physical distancing requirements; other requirements may be added by the University during the semester. These rules have been developed to protect the health and safety of all community members. Failure to comply with these requirements will result in you not being permitted to attend class in person and could result in a Student Conduct violation. For the most up-to-date information and guidance, please visit coronavirus.pitt.edu and check your Pitt email for updates before each class.

Semester schedule

Week 1 (Monday 5/15, Tuesday 5/16, Wednesday 5/17, Thursday 5/18)

Introduction Chapter 1: Collecting Data in Reasonable Ways Chapter 2: Graphical Methods for Describing Data Distributions Chapter 3: Numerical Methods for Describing Data Distributions

Week 2 (Monday 5/22, Tuesday 5/23, Wednesday 5/24, Thursday 5/25)

Chapter 3: Numerical Methods for Describing Data Distributions Chapter 4: Describing Bivariate Numerical Data Thursday: Midterm Exam 1

Week 3 (Tuesday 5/30, Wednesday 5/31, Thursday 6/1)

Monday: No classes Chapter 5: Probability Chapter 6: Random Variables and Probability Distributions

Week 4 (Monday 6/5, Tuesday 6/6, Wednesday 6/17, Thursday 6/8)

Chapter 7: An Overview of Statistical Inference—Learning from Data Chapter 8: Sampling Variability and Sampling Distributions Chapter 9: Estimating a Population Proportion Thursday: Midterm Exam 2

Week 5 (Monday 6/12, Tuesday 6/13, Wednesday 6/14, Thursday 6/15)

Chapter 10: Asking and Answering Questions About a Population Proportion Chapter 11: The Difference Between Two Population Proportions Chapter 12: Asking and Answering Questions about a Population Mean Chapter 13: Asking and Answering Questions About the Difference Between Two Means

Week 6 (Tuesday 6/20, Wednesday 6/21, Thursday 6/22)

<u>Monday: No classes</u> Chapter 14: Learning from Categorical Data Chapter 15: Understanding Relationships—Numerical Data Thursday: Final Exam