FARIBORZ MASEEH
DEPARTMENT OF
MATHEMATICS + STATISTICS

STAT 361 Introduction to Statistical Methods

*This course uses Canvas as the main learning platform. If you haven't used Canvas before, I recommend you take the PSU Learning Center's **remote readiness course** this week. If you've used Canvas and you just need occasional technical support, contact the **OIT Helpdesk**. If they can't help you, please let me know.*

Instructor: Nadeeshani Jayasena, Ph.D. (Preferred: Nadee, Pronouns: Sher/Her) (nadeej2@pdx.edu)

Students Drop-in Hours: 11:30 am – 12pm and 1:00 – 1:30pm on Tuesday and Thursday, or by appointment in **FMH460L**

Class Meeting: Tuesday and Thursday, 2:00 – 3.50pm **in FMH 417**

Midterm Exam: 2:00 – 3:50pm on Tuesday, Feb 1 in FMH 417

Final Exam: **10:15am – 12:05pm on Monday, March 14 in FMH 417**

Textbook: Walpole, Myers, Myers and Ye, *Probability & Statistics for Engineers & Scientists*, 9th Edition, 2016, Pearson/ Prentice Hall

We will cover selected topics from chapters 1-6, 8, 9.

Course Description: This is a calculus-based introductory statistics course. The topics include: Introduction to probability concepts (random variables, probability distributions, expectation, variance, covariance) and statistical concepts (fundamental sampling distributions and data descriptions, one-sample estimation and testing problems).

Credits: 4

Prerequisites: MTH 252

Course Objectives: To provide the core probability and statistics concepts to get prepared for more advanced courses, the key roles of probability and statistics in modern life, how to correctly evaluate many news reports of statistical studies that you encounter in their daily life, which will help them form opinions and evaluate the importance of results of these studies.

Learning Outcomes: Upon completion of this course, you will have the ability to:

1. Compute descriptive statistics of data sets.
2. Calculate and assess uncertainties of occurrences and express uncertainty in terms of probabilities.
3. Understand essential theoretical concepts (and logic behind them) including common discrete and continuous probability distributions, sampling distributions and data description techniques, and estimation & hypothesis testing problems.
4. Recognize a classical distribution model when they are presented with details of an experiment, translate a research question into a logical probability statement in terms of a mass/density probability function, perform calculations, and comment on the result.
5. State a one-sample hypothesis testing (or estimating) problem (out of the ones considered in the course) for a given research question, perform testing (construct the corresponding confidence interval) and draw statistical inferences.
6. Prepare professional summaries of statistical data sets and communicate knowledge from statistical analysis to professionals in multiple disciplines.

Evaluation:

Evaluation methods are a means to learning. They are not the goal. Learning is the goal. We evaluate in order to measure progress, and then we use the measurements to adjust and to make sure we are on track to our goals. You are allowed to use a scientific calculator to complete the assignments.

1. **Homework:** A set of homework problems from the textbook and other resources will be assigned according to tentative schedule below. You are encouraged to work on homework together in your study groups. **Homework is posted in Canvas/Assignments and the completed homework must be submitted as a single PDF to the same Assignments folder or in-person by the due time.** You are not required to type the answers. **Please don't email the assignment to instructor. The feedback for a completed homework is provided through Canvas and Answers are not posted.**

   - The work you turn in must be your own (unless the assignment specifically states otherwise).
   - Main steps of work are expected.
   - Selected few or all the questions will be graded.

2. **Exams**: There are 2 mandatory exams during the term. The exams are delivered **in-person NOT through Canvas**.

   The exams are the main "check points" of your progress in the course and contain problems similar to the ones solved in class or assigned for homework. All the exams will be as in the tentative schedule below. Instructor has right to provide different questions to different students on the exam. Exams are closed book and closed class notes. **A calculator and one page of notes (typed or handwritten) including both front and back are allowed.**

   To better prepare for each exam, a set of practice problems and the answer key will be posted in Canvas before each Exam. You are encouraged to try these problems and then compare with answer key. No credit given for completing practice problems.

I am interested in your learning and your approach to problems. Therefore, partial credit will be given when you have solved parts of the problem correctly. Showing your work allows me to assess whether you are on the right track. **Be able to show complete work when completing Homework and Exam.**

Grading Policy and Conversion Guidelines for % Grade to Letter Grade:

Homework	**40%**
Midterm Exam	**30%**
Final Exam	**30%**
Total	100%

- In order to receive a Pass with the Pass/No Pass option, a grade of C or better *must* be earned. A grade of C- is *NOT* a passing grade.
- Based on the overall grade (%) the letter grade will be assigned according to Table 1 after rounding your grade properly.
- The up-to-date overall grade appears in **Canvas/ Grades,** and it updates automatically.

Table 1 (PSU Grading System and Drop, Withdraw and Cancellations)

Score (%)	Letter Grade	Score (%)	Letter Grade	Score (%)	Letter Grade	Score (%)	Letter Grade
93-100	A	87-89	B+	77-79	C+	67-69	D+
90-92	A-	83-86	B	73-76	C	63-66	D
		80-82	B-	70-72	C-	60-62	D-
						0-59	F

Course Policies and Academic Support:

Course Attendance and Make-up Policies

This is **an in-person or On-Campus course**. The zoom meetings are scheduled in Canvas/Zoom for those who cannot attend in-person due to various reason. To **join zoom class meetings, always go to the course in Canvas,** click **Zoom** and then click **Join** next to the scheduled date**.** Attendance is expected in all lectures. The recorded zoom lectures will be posted in Canvas. If there is an emergency, please notify the instructor to arrange the necessary support and provide a valid document when appropriate. Attendance includes your showing up to class meetings and meeting the instructor during office hours. If you are unable to complete assignments by their due dates you **must email me before the due date** to ask for an extension. If you believe you have extenuating circumstances, please email me as well.

Disturbances:

Classroom disturbances that impede on other students' opportunity to learn will not be tolerated. Disturbers will first be asked to stop. If the disturbance continues, the student will be asked to leave the class.

Academic Integrity Policy:

Students are expected to adhere to guidelines concerning academic dishonesty outlined in University's Student Code of Conduct. Students are encouraged to contact the instructor for clarification of these guidelines if they have questions or concerns.
You (students) are encouraged to work together on homework and worksheet problems, but the work you turn in must be your own (unless the assignment specifically states otherwise). Work on exams must be your own. **Any act of academic dishonesty will result in a score of zero on the item in question and notification of department and university officials.** Further action may be taken as warranted. Subsequent offenses will result in an F in the class. You are capable of meeting my expectations for this course. If you are concerned about how well you are doing in this course, please come speak with me instead of considering academic misconduct.

Disability Service:

PSU values diversity and inclusion; we are committed to fostering mutual respect and full participation for all students. My goal is to create a learning environment that is equitable, useable, inclusive, and welcoming. If any aspects of instruction or course design result in barriers to your inclusion or learning, please notify me. The Disability Resource Center (DRC) provides reasonable accommodations for students who encounter barriers in the learning environment.

If you have, or think you may have, a disability that may affect your work in this class and feel you need accommodations, contact the Disability Resource Center to schedule an appointment and initiate a conversation about reasonable accommodations. If you already have accommodations, please contact me to make sure that I have received a faculty notification letter and discuss your accommodations. Students who need accommodations for tests and quizzes are expected to schedule their tests to overlap with the time the class is taking the test.

Mental Health and Counseling Services:

All of us need a support system, and many students benefit from the use of counseling services. The SHAC at PSU works with students to identify and address issues related to personal growth, self-confidence, anxiety, depression, eating disorders, academic difficulties, and career indecision. PSU provides counseling services to students at no cost and are offering virtual appointments to students during this time. For urgent mental health needs, students should call or walk into the student health center, which is still open to support students' mental and physical health.

Title IX Reporting Obligations:

As an instructor, one of my responsibilities is to help create a safe learning environment for my students and for the campus as a whole. As a member of the university community, I have the responsibility to report any

instances of sexual harassment, sexual violence and/or other forms of prohibited discrimination. If you would rather share information about sexual harassment, sexual violence or discrimination to a confidential employee who does not have this reporting responsibility, you can find a list of those individuals. For more information about Title IX, please complete the required student module "Creating a Safe Campus: Preventing Gender Discrimination, Sexual Harassment, Sexual Misconduct and Sexual Assault" in the "All Courses" section of Canvas.

Safe Campus Statement

Portland State University desires to create a safe campus for our students. As part of that mission, PSU requires all students to take the learning module entitled **Creating a Safe Campus: Preventing Gender Discrimination, Sexual Harassment, Sexual Misconduct and Sexual Assault**. If you or someone you know has been harassed or assaulted, you can find the appropriate resources on **PSU's Enrollment Management & Student Affairs: Sexual Prevention & Response website**.

Classroom Requirements for All Students and Faculty Due to Covid-19

The University has established rules and policies to make the return to the classroom as safe as possible. It is required for everyone to follow all the Return to Campus rules and policies. To participate in this class, PSU requires students to comply with the following.

Masks Required at all Times in Classroom

- **Wear a mask or face covering indoors** at all times. Your mask or face covering must be properly worn (fully covering nose and mouth and tight fitting). Mesh masks, face shields, or face covering that incorporates a valve designed to facilitate easy exhalation are not acceptable. **Because a mask must be worn in the classroom, there should be no eating or drinking in the classroom.** If you have a medical condition or a disability that prevents you from wearing a mask or cloth face covering, you must obtain an accommodation from the **Disability Resource Center (DRC)** to be exempt from this requirement.
- CDC, State, and County guidance does not limit class size for in-person instruction or require physical distancing.

Vaccination

- Be vaccinated against COVID-19 and complete the **COVID-19 vaccination attestation** form. Those students with medical or nonmedical exemptions or who will not be on campus at all must complete the process described on "COVID-19 Vaccine Exemption Request Form" to establish those exemptions.

Health Check, Illness, Exposure or Positive Test for COVID-19

- Complete the **required self-check for COVID-19 symptoms before coming to campus each day**.
- If you are feeling sick or have been exposed to COVID-19, do not come to campus. Call SHAC to discuss your symptoms and situation (503.725.2800). They will advise you on testing, quarantine, and when you can return to campus.
- If you test positive for COVID-19, **report your result to SHAC** and do not come to campus. SHAC will advise you on quarantine, notification of close contacts and when you can return to campus.
- Please notify me, (i.e. your instructor), should you need to miss a class period for any of these reasons so that we can discuss strategies to support your learning during this time.
- If I become ill or need to quarantine during the term, either I or the department chair will notify you via PSU email about my absence and how course instruction will continue.

Failure to Comply with Any of these Rules

As the instructor of this course, the University has given me the authority to require your compliance with these policies. If you do not comply with these requirements, I may ask you to leave the classroom or I may need to cancel the class session entirely.

In addition, failure to comply with these requirements may result in a referral to the Office of the Dean of Student Life to consider charges under PSU's Code of Conduct. A student found to have violated a university rule (or rules) through the due process of student conduct might face disciplinary and educational sanctions (or consequences). For a complete list of sanctions, see Section 14 of the **Student Code of Conduct & Responsibility**.

Guidance May Change

Please note that the University rules, policies, and guidance may change at any time at the direction of the CDC, State, or County requirements. Please review the University's main **COVID-19 Response** webpage and look for emails from the University on these topics.

Incomplete Policy

Students do not have a right to receive or demand an Incomplete grade. The option of assigning an Incomplete grade is at the discretion of the instructor when the following criteria are met. For the full Incomplete Policy see **here**.

Eligibility Criteria:

1. Required satisfactory course completion/participation.
2. Reasonable justification for the request.
3. Incomplete grade is not a substitute for a poor grade.
4. Written agreement. (See **Incomplete Grade Contract**)
5. Resolving the Incomplete.

Flexibility Statement

As the instructor, I reserve the right to modify course content and/or substitute assignments and learning activities in response to institutional, weather, or class situations.

Tentative Course Schedule

Date	Week	Besides reading textbook, Tasks to be completed
Jan 3 – Jan 9	1	Review Homework on Friday
Jan 10 – Jan 16	2	Homework 1 on Friday
Jan 17 – Jan 23	3	Homework 2 on Friday
Jan 24 – Feb 30	4	Homework 3 on Friday
Jan 31 – Feb 6	5	**Midterm Exam on Tuesday from Week 1-4 materials**
Feb 7 – Feb 13	6	
Feb 14 – Feb 20	7	Homework 4 on Friday
Feb 21 – Feb 27	8	Homework 5 on Friday
Feb 28 – Mar 6	9	Homework 6 on Friday
Mar 7 - Mar 13	10	Homework 7 on Friday
Monday, March 14	**11**	**Final Exam from Week 5-10 materials**