Introduction to Statistics
STAT 117
Section 008, Spring 2026

Instructor

Dr. Seth Harris
Hall of Sciences 303
Email: sharris2@drew.edu
Phone: (973) 408-3401

Class Meetings

Monday, Wednesday 9:00 AM – 10:15 AM
Learning Center 28

Zoom (when necessary)

This is an in-person course. It is possible that, when necessary, we may hold class online on Zoom.

Zoom link: https://drew.zoom.us/j/832546884

Meeting ID: 832 546 884

Office Hours

Monday 1:15 PM – 2:30 PM
Tuesday 10:30 AM – 11:30 AM
Wednesday 10:30 AM – 11:30 AM
or by appointment

Office hours will typically be held in person whenever Drew classes are meeting in person. However, you may always request to meet online during these times. Occasionally I will hold office hours online only.

Office hour Zoom link: https://drew.zoom.us/s/284748767

Office hour meeting ID: 284 748 767

Course Description

Introduces statistics needed for data analysis and to understand statistical content in the media. Uses a widely-used software application for statistics. May include graphical and tabular presentation of data, measures of central tendency, dispersion, and shape, linear transformations of data, correlation, regression, basic probability, and the normal probability model, sampling, hypothesis testing t-tests, and one-way analysis of variance.

Optional Textbook

Statistics Using IBM SPSS, 3rd Edition, by Sharon Weinberg and Sarah Abramowitz, ISBN 9781107461222.

The text includes indexed chapters and exercises and a URL where you may access online solutions. There is a copy of the text available on reserve at the library if you prefer to use that. You do not need to bring your copy of the text to class because the required exercises are available online. You do not need to purchase the text unless reading the content is helpful. Some students find it helpful to use it as a reference because all of the content is indexed. Most students just need the exercises and solutions, which are available for free online.

Moodle

The course Moodle site will be used to post all course material and grades. You should check Moodle frequently.

Laptop Computer and Statistical Software

We will be using the statistical software SPSS. In a usage article (http://r4stats.com/articles/popularity/, updated June 2023), SPSS was reported to be commonly used in job advertisements, cited more than any other software package in scholarly articles, and used by 30% of data scientists. Familiarity with SPSS is a skill worth putting on your resume.

The required software for these courses is IBM SPSS Statistics version 29 or 30 GradPack. It is available for Windows or MacOS and will run on any laptop that meets Drew requirements (see https://drew.edu/about/technology-resources/university-technology/laptop-program/). SPSS is not available for ChromeOS or iPadOS. You must have a Windows or Macintosh computer.

Our recommendation is that you rent the **IBM SPSS Statistics Grad Pack 31.0 BASE 6 month** with this link: https://studentdiscounts.com/product/ibm-spss-statistics-grad ($35.00). If you want to purchase with other options, please double check with me first, as SPSS has many different versions and not all of them are suitable for the course.

Datasets

Datasets used for the course will be shared on Moodle. You need to download a dataset first and open it in SPSS. To make sure that you are using the correct dataset for quizzes and exams, I strongly recommend that you never save a modified dataset. You could also re-download a dataset before a quiz or an exam. I emphasize that it is your responsibility to use the correct dataset, and "my dataset is different" is not a legitimate reason for an incorrect answer under any circumstance.

Electronic devices

You are expected to bring a working laptop to each lecture. *If your computer has issues, know that your course performance will be heavily affected* as everything (homework, quizzes, exams) require the use of SPSS. It is your responsibility to avoid this situation and solve any computer issues in time.

You are allowed to use an iPad (or similar devices) for class-related activities (such as taking notes). You are prohibited from using cell phones, headphones, and earbuds during all lectures. You are also prohibited from using electronic devices for unrelated activities, such as browsing internet, messaging, gaming, working on assignments from a different course, etc.

Attendance

You are expected to attend every class unless you have a legitimate excuse, such as illness, family emergency or participation in a college sponsored event. Attendance is mandatory for successful completion of the course. Regardless of reason, it is your responsibility to make up course material covered during absences.

Absence Policy Statement

In addition to the course attendance policy, students should be aware of their rights and responsibilities regarding absences for legitimate reasons as described in the Absence Policy: Student Rights and Responsibilities, which is located in the Academic Policy section of Drew's course catalog under Attendance. Legitimate planned absences may include religious holidays, NCAA-sanctioned competition, academic conference or some Drew-sanctioned events. Students need to inform the faculty member of planned absences in the first week of the semester. For unforeseen extended health issues please see the academic accommodations statement.

Late work and missed assignments

There are no make-ups in this class, even for excused absences. Instead, your two lowest quiz grades and two lowest assignment grades are dropped. If you have excused absences for the course, these are included in your dropped grades. All absences will result in a grade of zero on assignments and quizzes, but as long as these absences are not excessive, these zero grades will be dropped. If you have an excused absence for an exam, I will use your performance on the final exam in place of the missing exam grade. If you know in advance that you will miss a quiz or exam, you may be able to take it early by making appropriate arrangements with me.

Homework

Textbook problems and solutions can be found on Moodle. Homework exercises are selected from the textbook and the list is posted on Moodle. Homework is not collected in this class, but it is *required* for you to do these problems. It is possible that materials from the homework appear on quizzes and exams, even if they do not appear in the lecture.

Grading

10% Assignments (in-class and take-home, lowest 2 dropped)
During the semester, we'll do a few in-class activities and take-home assignments that will count toward your grade. Since these assignments are not announced ahead of time, your regular attendance is important. You are also expected to actively participate during lectures and group activities.

17% Quizzes (lowest 2 dropped)
To make sure you are not falling behind, there will be a quiz *at the beginning* of (almost) every Wednesday. The quiz will be on Moodle. There is no make-up quiz and you will not be allowed extra time if you join the class late, *even if you have excused reasons*, but your two lowest grades will be dropped. Note that the last quiz on ANOVA (see below) does not fall in this category and therefore cannot be one of the two drops.

3% ANOVA grade
You can get this grade by (1) taking the last quiz ("ANOVA quiz") OR (2) taking the ANOVA portion on the final exam. If you take both, this grade will be the higher of the two.

45% Three in-class exams

- 15% Exam 1, Wednesday, February 18
- 15% Exam 2, Wednesday, March 25
- 15% Exam 3, Monday, April 27

There will be three in-class exams. You are encouraged to make a reference sheet for each exam: An 8.5 by 11 inch (or A4) piece of paper with whatever you want on it, double-sided. In addition to being useful during the exam, creating this sheet is a good way to study and prepare for the exam. You can use these same sheets for the final exam.

25% (Optional) Final Exam

There is an optional final exam, currently scheduled on Monday, May 11 from 8:30–11:30 AM. I will provide you with your course grade before the final, and you can choose to accept that grade and skip the final.

The final exam is cumulative. You are encouraged to bring four reference sheets to the final exam: Four 8.5 by 11 inch (or A4) pieces of paper with whatever you want on it, double sided.

You can choose to do only the ANOVA portion of the final exam for the ANOVA grade. In this case, you are essentially still skipping the final and will not get a final exam grade.

A Second Chance. If you take the final exam, you will earn two sets of grades. The exam consists of four parts. Parts 1 through 3 roughly correspond to the same material as exams 1 through 3, respectively, while part 4 covers new material learned after the third exam.

- The first final exam grade considers the total number of points earned on the exam, and is your final exam score counting for 25% of your final grade.
- The other set of final exam grades is a score for each of parts 1 through 3 of the final exam. For each of these parts, if the final exam grade is higher than what you scored on the corresponding midterm exam, we will raise your score on that midterm exam. The new score on the midterm will be the average of the original score and the score on that part of the final. If your final exam performance is not higher, the original midterm score is left unchanged.

Grade Cutoffs

We will use the following scale in determining your course grade from your course average. The course grades are not curved. A = 94 to 100; A- = 90 to 93; B+ = 87 to 89; B = 83 to 86; B- = 80 to 82; C+ = 77 to 79; C = 73 to 76; C- = 70 to 72; D+ = 67 to 69; D = 63 to 66; D- = 60 to 62; F = 0 to 59.

Student Learning Outcomes

By the end of the course, students will be able to:

- Select, create, and interpret appropriate graphical displays, descriptive statistics, and inferential statistics. They will apply the concepts of robustness and model validation;
- Analyze real data within authentic applications;
- Assess the quality of a statistical argument;
- Use a professional statistical software package;
- Interpret results in language that is both statistically correct and understandable by someone who has not taken a course in statistics;
- Apply statistical reasoning in broad areas of application including the social, biological, and physical sciences.

Academic Accommodations

Your experience in this class is important to me. If you have already established accommodations with the Office of Accessibility Resources (OAR), please provide me with a copy of your accommodation letter at your earliest convenience so we can discuss your needs in this course.

If you have not yet established services through the Office of Accessibility Resources (OAR), but have a temporary health condition or permanent disability that requires accommodations (conditions include but not limited to: mental health, attention-related, learning, vision, hearing, physical or health impacts), you are encouraged to contact OAR. OAR offers resources and coordinates reasonable accommodations for students with disabilities and/or temporary health conditions.

Although a disclosure may take place at any time during the semester, students are encouraged to do so early in the semester, because, in general, accommodations are not implemented retroactively.

Office of Accessibility Resources contact information:
Director: Dana Giroux
Location: Brothers College, Room 119B
Phone: 973-408-3962
Email: dgiroux@drew.edu, disabilityserv@drew.edu

Academic Integrity

All students are required to uphold the highest academic standards. Any case of academic dishonesty will be dealt with according to the guidelines and procedures outlined in Drew University's Standards of Academic Integrity: Guidelines and Principles, which is located in the academic policies section of the catalog.

Artificial Intelligence

You are not allowed to use artificial intelligence (AI) tools for any quizzes or exams. Use of any AI tools without permission is unacceptable and will be reported as an academic integrity violation. If you have any doubts about what is acceptable please discuss them with the professor.

Supporting Student Success, Center for Academic Excellence

All Drew students can access subject tutoring, writing support and academic coaching free of charge in the Center for Academic Excellence (CAE), located in the library. Seeking help through learning support resources in the CAE can help you achieve your academic goals. To access the appointment schedule, please visit drew.mywconline.com and follow the instructions on the landing page; if a tutor is not available, please submit the Tutor Request form. For any other questions, email cae@drew.edu

Final Exam Policy Statement

If extenuating circumstances occur, students may submit a Final Exam Reschedule request for review by the Associate Provost. Students may not negotiate a make-up date directly with the course instructor. Students may request to reschedule an exam under the following circumstances:

1. Two final exams scheduled at the same time;
2. Three finals are scheduled in one calendar day; one of the exams will be rescheduled at the convenience of the instructor and the student;
3. Serious illness, or personal emergency; the student is required to present documentation to validate.

The final exam schedule is visible on the Registrar's website by the beginning of each semester. Students are expected to schedule travel plans for AFTER their final exams.

Preliminary Schedule (subject to change)

Week Starting	Contents	Notes
1/19	Ch1: Introduction	
1/26	Intro to SPSS; Ch2: Univariate distribution	Quiz 1 (Wed)
2/2	Ch3: Location, spread, and skewness	Quiz 2 (Wed)
	Last day to drop without "W" is Tue 2/3	
2/9	Ch4: Transformation	Quiz 3 (Wed)
2/16	Ch5: Bivariate relationships	**Exam 1 (Wed)**
2/23	Ch5: Bivariate relationships (cont'd)	Quiz 4 (Wed)
3/2	Ch5: Bivariate relationships (cont'd)	Quiz 5 (Wed)
3/9	Spring Break - No Class	
3/16	Ch6: Simple linear regression	Quiz 6 (Wed)
3/23	Ch7: Basic probability	**Exam 2 (Wed)**
3/30	Ch8: Normal distribution	Quiz 7 (Wed)
4/6	Ch9 & Ch10: Central Limit Theorem, statistical inference	Quiz 8 (Wed)
4/13	Ch11: One-sample inference	Quiz 9 (Wed)
4/20	Ch11: Paired and independent samples	Quiz 10 (Wed)
	Last day to drop with "W" is Tue 4/21	
4/27	Ch13: ANOVA	**Exam 3 (Mon)**
5/4	Summary and course evaluations	ANOVA Quiz (Mon)
5/11	**Final Exam, Monday 5/11, 8:30–11:30 AM**	