

Statistics for Engineers

STAT 380

I. Course Information

Title: Statistics and Applications

Prefix and Number: STAT 380

Semester/Term: Spring 2021

Meeting Days and Times: Online

Location and/or Format: Online

II. Instructor/Contact Information

Name: Lizzie Sharkey

Email Address: lsarkey2@huskers.unl.edu

Office Hours: Available by email

III. Course Material

Textbook: *Probability and Statistics for Engineers and Scientists* 9th Edition, Walpole et al.

Canvas:

Each chapter has a module in Canvas. Exams will have their own modules.

Chapter 1 Module: Module 1 contains Chapter 1 PowerPoint. This is a review chapter and there will not be a quiz in this module. Students are expected to read and understand the contents of this chapter.

This module also contains a list of suggested practice problems and solutions for the entire semester. These problems are not required and will not be graded by the instructor. It is the student's responsibility to complete these problems as needed for their own understanding.

Module 2 and beyond: Within the following modules, students will find PowerPoints, "notebooks", videos, and occasionally links. The "notebook" contains solutions to the PowerPoint exercises/examples. The videos explain the examples and exercises as well as sets expectations for quizzes and exams.

IV. ACE Outcome 3

Use mathematical, computational, statistical, or formal reasoning (including reasoning based on principles of logic) to solve problems, draw inferences, and determine reasonableness. The reinforced skills for STAT 380 are Writing and Critical Thinking. STAT 380 will provide the student opportunities to achieve this learning outcome through readings, quizzes and small group activities/discussion. These assignments (together with exams) will be used by the instructor to assess achievement of the

outcome. A standardized, Canvas assessment will be used by the Department of Statistics to carry out an overall assessment of STAT 380, and the course's effectiveness at assisting students in achieving Outcome 3.

V. Student Responsibilities

Student responsibilities include (but are not limited to):

- Completing quizzes and exams by their due date. If a quiz or exam is missed, the student will receive a 0%. There will be no make-ups.
- Going through PowerPoints, watching videos, and reading the textbook as needed. Note that PowerPoints and videos are intended to supplement the text.
- Checking email and Canvas daily.
- Dedicating an adequate amount of time to master material.
- Email to Instructor: Students should email the instructor via their UNL email address with course name (STAT 380) and description in subject line. Note that the instructor checks email Monday-Friday from 8AM-5PM. Students should not expect a response on weekends, holidays, or after 5PM on a work day.

VI. Course Assignments

- **Homework:** Instructor will provide students with a list of suggested homework problems from the book. Solutions to problems are posted in the Chapter 1 Module. *The problems will not be collected or graded.* Completion of these problems are designed to prepare you for quizzes and exams.
- **Quizzes:** There will be 9 quizzes. The quizzes will be completed through Canvas. Quizzes are open-note, open-book. Students will have 60 minutes to complete their quiz. Communication with anyone other than the instructor is prohibited. The use of the internet is prohibited except for accessing links the instructor has embedded within Canvas. See the schedule below for quiz dates and times.
- **Exams:** There will be three exams. The exams will be completed through Canvas. Exams are open note, open book. Students will have 90 minutes to complete their exams. Communication with anyone other than the instructor is prohibited. The use of the internet is prohibited except for accessing links the instructor has embedded within Canvas. See the schedule below for exam dates and times.

- **Rounding on Quizzes & Exams:** Quizzes and exams will prompt students to type in numeric values. Due to the functionality of Canvas, solutions will be entered as decimals or whole numbers. Instructions will frequently say, “round to three decimal places as needed.” This means, if your solution is “1.5”, you should enter “1.5”. If your solution is “0.3456789”, you should enter “0.346”. If your solution is “5”, you should enter “5”. If your solution is “0.0396”, you should enter “0.04” or “0.040” (recall sig figs). Make sure you are rounding correctly as there is no “grace” in the system. Meaning, if your solution is “0.3456789” and you enter “0.345” you will receive 0 points on that question.
- **Grade Calculation:**
Exam 1: 25%
Exam 2: 25%
Exam 3: 25%
Quizzes: 25%
- **Grading Scale:**
A: 90-100
B: 80-89
C: 70-79
D: 60-69
F: 59 and below

VII. Course Policy Information

- **Late or missed work:** There will be no make-up assignments (quizzes or exams). Late work earns 0%.
- **Online Learning Policy:** Reading the PowerPoints and watching the videos is equivalent to attending class. Before emailing instructor with questions, please watch all videos and review published material.
- **Grade Appeals:** In the event of a dispute involving Statistics course grades, the student must first appeal to his or her instructor and, failing resolution with the instructor, to the Department Curriculum Committee, and then to the Department Chair in writing (in that order). If a satisfactory solution is not achieved at the department level, the student may appeal his or her case through the appropriate College Grade Appeals Committee using that body’s process. Students appealing either a policy decision or course grade must do so within one semester following the decision or grade.
- **Students with Disabilities:** Students with disabilities are encouraged to contact the instructor for a confidential discussion of their individual needs for academic

accommodation. It is the policy of the University of Nebraska-Lincoln to provide flexible and individualized accommodation to students with documented disabilities that may affect their ability to fully participate in course activities or to meet course requirements. To receive accommodation services, students must be registered with the Services for Students with Disabilities (SSD) office, 132 Canfield Administration, 472-3787 voice or TTY.

- **Academic Dishonesty:**

Academic dishonesty can involve cheating; fabrication or falsification of information; plagiarism; destroying, defacing, stealing, or making inaccessible library or other academic resource material; complicity in the academic dishonesty of others; falsifying grade reports; or misrepresenting illness, injury, accident, etc., to avoid or delay an examination or the timely submission of academic work.

Consequences of academic dishonesty in Statistics courses, depending on the degree of severity as interpreted by an instructor, may range from a warning to assigning an F for the course. The instructor might also choose to assign a zero or partial credit for a specific assignment, quiz, examination or laboratory report in which dishonesty was involved. In all cases the instructor must document the instance(s) of student activity which constitutes academic dishonesty.

Documentation must be kept by the instructor for a minimum of one year and must be made available to appropriate department, college, and UNL authorities if cases of academic dishonesty result in disciplinary hearings and/or appeals at those levels. When an academic sanction beyond giving a score of zero on an assignment or exam is imposed, the Statistics Curriculum Committee will be informed. Further, the instructor may recommend the institution of CASNR, Arts and Sciences, or UNL disciplinary proceedings against the student for violation of the Student Code of Conduct if the instructor, in the exercise of his or her professional judgment, believes that such action is warranted. If a student facing sanctions due to academic dishonesty in a Statistics Department course wishes to appeal such a sanction, the following process must be followed. First is an appeal to the chief instructor of the course. Failing this appeal, next is an appeal (in writing) to the Department Curriculum Committee, then to the Department Chair (in that order). If a satisfactory solution is not achieved at the department level, the student may then appeal through the appropriate CASNR, Arts and Sciences, or UNL appeal process, subject to the process and requirements of those bodies.

- **Academic Integrity Statement:** Students are expected to adhere to guidelines concerning academic dishonesty outlined in the University's Student Code of

Conduct (<http://stuafs.unl.edu/ja/code>). Students are encouraged to contact the instructor for clarification of these guidelines if they have questions or concerns.

- **Emergency Response:**

Fire Alarm (or other evacuation): In the event of a fire alarm: Gather belongings (Purse, keys, cellphone, N-Card, etc.) and use the nearest exit to leave the building. Do not use the elevators. After exiting, notify emergency personnel of the location of persons unable to exit the building. Do not return to the building unless told to do so by emergency personnel.

Tornado Warning: When sirens sound, move to the lowest interior area of the building and seek shelter. Stay away from windows and stay near an inside wall when possible.

Active Shooter:

- Evacuate: if there is a safe escape path, leave belongings behind, keep hands visible and follow police officer instructions.
- Hide out: If evacuation is impossible secure yourself in your space by turning out lights, closing blinds and barricading doors if possible.
- Take action: As a last resort, and only when your life is in imminent danger, attempt to disrupt and/or incapacitate the active shooter.

UNL Alert: Notifications about serious incidents on campus are sent via text message, email, unl.edu website, and social media. For more information go to: <http://unlalert.unl.edu>.

Additional Emergency Procedures can be found here:

http://emergency.unl.edu/doc/Emergency_Procedures_Quicklist.pdf

Tentative Schedule

Week	Chapter	Items to Complete
1: January 25 – January 31	2	Quiz 1: 2.1-2.3 Quiz 1 will open on 01/29 at 8:00AM Quiz 1 will close on 01/31 at 11:59PM
2: February 1 – February 7	2	Quiz 2: 2.4-2.7 Quiz 2 will open on 02/05 at 8:00AM Quiz 2 will close on 02/07 at 11:59PM
3: February 8 – February 14	3	
4: February 15 – February 21	3	Quiz 3: Chapter 3 Quiz 3 will open on 02/19 at 8:00AM Quiz 3 will close on 02/21 at 11:59PM
5: February 22 – February 28		Exam 1: Chapters 2&3 Exam 1 will open on 02/26 at 8:00AM Exam 1 will close on 02/28 at 11:59PM
6: March 1 – March 7	4	
7: March 8 – 14	4	Quiz 4: Chapter 4 Quiz 4 will open on 03/12 at 8:00AM Quiz 4 will close on 03/14 at 11:59PM
8: March 15 – March 21	5	Quiz 5: Chapter 5 Quiz 5 will open on 03/19 at 8:00AM Quiz 5 will close on 03/21 at 11:59PM
9: March 22 – March 28	6	Quiz 6: Chapter 6 Quiz 6 will open on 03/26 at 8:00AM Quiz 6 will close on 03/28 at 11:59PM
10: March 29 – April 4		Exam 2: Chapters 4-6 Exam 2 will open on 04/02 at 8:00AM Exam 2 will close on 04/04 at 11:59PM
11: April 5 – April 11	8	Quiz 7: Chapter 8 Quiz 7 will open on 04/09 at 8:00AM Quiz 7 will close on 04/11 at 11:59PM

12: April 12 – April 18	10	
13: April 19 – April 25	10	Quiz 8: Chapter 10 Quiz 8 will open on 04/23 at 8:00AM Quiz 8 will close on 04/25 at 11:59PM
14: April 26 – May 2	9	Quiz 9: Chapter 9 Quiz will open on 04/30 at 8:00AM Quiz will close on 05/02 at 11:59PM
15: May 3 – May 7		Exam 3: Chapters 8,10,&9 Exam 3 will open on 05/03 at 8:00AM Exam 3 will close on 05/07 at 11:59AM

Disclaimer: Information contained in this syllabus was, to the best knowledge of the instructor, considered correct and complete when distributed at the beginning of the term. However, this syllabus should not be considered a contract between UNL and any student. The instructor reserves the right, acting within the policies and procedure of UNL, to make changes in course content or instructional technique without notice or obligation.