Stat 281—Introduction to Statistics
Summer 2021

South Dakota State University
Department of Mathematics and Statistics

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Office hours: Office hours by appointment on Zoom, after 3 pm and before 9 am central time work best. I will be checking my e-mail and the discussion board around 8 am and after 3 pm central time and other times throughout the day. I will also have weekly help sessions where you can meet with me too.

Course:
Delivered through the internet. You will be working in groups throughout the course; you should put yourself in a group on D2L. After reading through the "Getting Started" document and the syllabus, you should fill in the learning guides found under "Content" on D2L, then do the homework and quizzes found on the WebAssign homework site. I will also be posting videos to help with the assignments periodically. The best way to communicate is through e-mail, discussion board, online office hours, or call during office hours. I will check the Discussion Board and my email every day, so you should expect a response in approximately 24 hours. In this course the following sections will be covered in our textbook, *Statistics: Learning from Data* - 2e Peck and Short, Ch. 1 – 13.

Description:
This class will introduce students to large data sets from various fields. They will study descriptive statistics including graphs, measures of central tendency and variability and an introduction to probability theory, sampling, and techniques of statistical inference with an emphasis on statistical applications. They will also use Excel to learn how to simplify the calculations and graphs involved.

Prerequisites:
Math 114, College Algebra (or one course from Math not including 021, 101, 102, 100T and 104)

Teaching Method: Online.

Textbook: *Statistics: Learning from Data 2nd Edition* by Roxy Peck. You will get access to an online version of the book when you register for the homework. You may just choose to use that one if you like. (SDSU also has a loose leaf version at university bookstore.)

Graphing Calculator: A graphing calculator is recommended, but not required. The TI-83 or TI-84 is best for statistics.

System Goal #5: This class will satisfy the Board of Regents Goal #5. Specifically, *students will understand and apply fundamental mathematical processes and reasoning.* This goal will be achieved through meeting the following **Student Learning Outcomes**.

1. *Use mathematical symbols and mathematical structure to model and solve real world problems.*
   Students will use standard statistical symbols and formulas to
   a. generate descriptive statistics.
   b. calculate discrete and continuous probabilities.
   c. formulate point estimates and confidence intervals.
   d. carry out hypothesis testing
   e. create a linear model using real-world data of the type that are normally encountered in industry, science, and the media, etc. This will be assessed through homework, labs, and tests.

2. *Demonstrate appropriate communication skills related to mathematical terms and concepts.*
Students will appropriately use statistical vocabulary in answering questions about the problem scenarios presented to them, and discuss statistical problems in class with the opportunity to demonstrate proper use of terms and concepts. This will be assessed through homework, labs, and tests.

3. Demonstrate the correct use of quantifiable measurements of real world situations.
Students will collect or simulate data, generate descriptive and/or inferential statistics, and draw conclusions. This will be assessed through homework, labs, and tests.

Grading:
Your grades will be posted on our **WebAssign** homework site**.** They will be determined by **your performance** on-line homework, three in-class exams, quizzes, discussion board posts, projects, and a comprehensive final exam. We plan to get tests graded within a week of their due dates. It will be weighted as follows:

EXAM 1 (Wednesday June 23rd from 5:00 – 6:00 pm CST in NPB 024 or with a proctor.)	18%
EXAM 2 (Wednesday July 7th from 5:00 – 6:00 pm CST in NPB 024 or with a proctor.)	18%
EXAM 3 (Monday July 26th from 5:00 – 6:00 pm CST in NPB 024 or with a proctor.)	18%
FINAL (Friday August 6th from 3:00 – 5:00 pm CST in NPB 024 or with a proctor)	20%
WebAssign Homework	8%
WebAssign Quizzes	6%
Projects	6%
Labs	4%
Class Participation (Reading Guides and Introduction)	2%

The grading scale is 90%-100% A, 80%-89% B, 70%-79% C, 60%-69% D, below 60% F.

Testing:
There will be 3 exams and a comprehensive final exam. There will be a take home part that you will take on WebAssign that you will need Excel for, and another part that you will need to have a proctor for. If you are in the Brookings area you should take it with me on campus; otherwise, you can look at the proctor form and use an approved proctor. The times are listed in the grading portion of the syllabus. The location will be announced later.

Homework:
Homework will be submitted on-line using Cengage. You will get access to an electronic textbook. The access fee is direct billed to your student account, so you do not need to purchase this separately. You do not have to purchase a physical textbook.

You can follow the Webassign link on the front page of D2L to connect to the Webassign section. You do need the Class Key **sdstate 1280 7792** in order to find and register for the course. (Since you were charged directly for access, you should NOT need to purchase a separate access code; let me know if you have questions). Just click on "Enter a Class Key" after you click on the link: http://webassign.net/

Homework can be completed on any computer that has internet access. You will get up to 10 attempts on the homework problem except for the multiple choice ones which may only give you one try. Although your homework is done on the computer, it is recommended that you have pencil and paper while doing the assignments. Each assignment has a due date and **you are responsible for completing your homework by the due date**. The best way to prepare for quizzes and exams is to DO YOUR HOMEWORK. Your **two lowest homework scores** will be dropped.

Quizzes:
These will be like the homework, but they will be timed. You will have 30 minutes to complete it and you cannot logout. You will only get 1 try for each of these. They will be just like the problems that you worked on in that homework section. Your **two lowest quiz scores** will be dropped.

Class Participation (Reading Guides, Discussion Board Posts):
There are reading guides listed under Content on D2L. These will help you will the homework and tests. You should do these first. You will submit the reading guides to the Dropboxes on D2L. Ch. 1 – 4 on the date of the first test, Ch. 5 – 6 on date of second test, Ch. 7 – 10, and 12 on date of third test, and Ch. 11, 13, and 6.6 on date of the final. There is also a discussion board on D2L where there will be required posting and group projects during the semester. There will be specific information on D2L.

Labs:
There are labs listed on D2L under Content. Some of these labs will be graded. You will need to work on them with your project groups. Each of you will need to post on the Discussion Board for that particular lab at least 24 hours before the assignment is due or you will only get 75% of the points available. This will generally be sometime on Thursdays. Everyone in the group needs to submit a lab on the D2L Dropbox. I will randomly pick one of those to grade, and everyone in the group will get that grade. If you don't submit a lab, you won't get any of the points. There are several other labs that we go over during the lecture classes. We will not have enough time to grade all of these during the Summer, so I am posting these labs and keys for you to practice on to get ready for projects and tests.

Projects:
There will be two projects that you will work on in groups. You will put yourself in groups at the beginning of the semester. There will be guidelines and rubrics for the projects on D2L. To help ensure a good group experience, you will also be filling in group self evaluation forms that will be used to help determine your project grades. These are posted on D2L. If you are having issues with your group, let me know, and I can help you find another one if need be.

Student Academic Integrity and Appeals:
The University has a clear expectation for academic integrity and does not tolerate academic dishonesty. University Policy 2.4 sets forth the definitions of academic dishonesty, which includes but is not limited to, cheating, plagiarism, fabrication, facilitating academic dishonesty, misrepresentation, and other forms of dishonesty relating to academics. The Policy and its Procedures also set forth how charges of academic dishonesty are handled at the University. Academic Dishonesty is strictly proscribed and if found may result in student discipline up to and including dismissal from the University.

ADA Statement:
South Dakota State University strives to ensure that physical resources, as well as information and communication technologies, are reasonably accessible to users in order to provide equal access to all. If you encounter any accessibility issues, you are encourage to immediately contact the instructor of the course and the Office of Disability Services (Phone: 605-688-4504; Fax: 605-688-4987; E-mail: Nancy.Crooks@sdstate.edu or SDSU.Disabilityservices@sdstate.edu; Address: Room 271, Box 2815, University Student Union, Brookings, South Dakota 57007)

Freedom in Learning Statement:
Students are responsible for learning the content of any course of study in which they are enrolled. Under Board of Regents and University policy, student academic performance shall be evaluated solely on an academic basis and students should be free to take reasoned exception to the data or views offered in any courses of study. Students who believe that an academic evaluation is unrelated to academic standards but is related instead to judgment of their personal opinion or conduct should first contact the instructor of the

course. If the student remains unsatisfied, the student may contact the Department Head, Dean, or both, of the college which offers the class to initiate a review of the evaluation.

Smarthinking Online Tutoring:

- Synchronous tutoring
  - The hours for synchronous, live drop-in, varies by subject. The hours can be found online at http://www.pearsoned.com/higher-education/products-and-services/services-and-solutions-for-higher-ed/services/smarthinking/how-it-works/hours-of-service/
- Asynchronous tutoring
  - Questions can be submitted 24 hours a day, 7 days a week. Response time is within 24 hours.
- Writing Center
  - The Writing Center is available to assist with all papers in all subjects.
  - Papers can be submitted 24 hours a day, 7 days a week. Response time is typically within 24 hours.
- Archived Sessions and Submissions
  - Students can access these 24 hours a day, 7 days a week.

Academic Success/Early Alert

* As your professor, my goals are to support your success in this course and provide a meaningful learning experience. For that reason, if there are academic performance concerns that may impede your success, I will communicate with you and those dedicated to supporting your success using ConnectState. Notifications will be sent to your jacks email account and can be reviewed in the ConnectState platform. If you receive a notification, please come see me or seek assistance from your advisor, the Student Success Center, or other campus resources.

* Access to ConnectState is found on the MyState dashboard page and uses the same login credentials as MyState.

Important Dates:

Friday June 6th is the last day to drop a course without charge.
Friday, July 19th is the last day to drop a course.

General Statement on COVID-19 Pandemic:

Participants in this course are subject to, and expected to comply with, the policies, procedures, rules, and regulations of the SDBOR and SDSU as modified throughout the duration of the course. Due to the current COVID-19 Pandemic, the SDBOR and SDSU have adopted provisions to minimize COVID-19 exposure to the SDSU community that are compliant with changing CDC and SD DOH guidelines. These guidelines apply to all classes and activities held by SDSU. Anyone who does not comply with these important provisions may be subject to the SDSU Student Conduct Code 3:1 and other applicable policy provisions found in SDBOR and SDSU policies. Current information concerning SDSU updates to the provisions applicable during the COVID-19 Pandemic may be viewed online at the https://www.sdstate.edu/jacksrback and https://www.sdstate.edu/covid-19 webpages. Please check these sites frequently for updates.

For more details regarding attendance policies, see the *SDSU Class Attendance Policy (SDSU Policy 2:5)* and the Student Conduct Code (SDSU Policy 3:1). For details regarding what to do in case of a suspected or known COVID-19 infection, visit the What if I Get Sick? page located on the JacksRBack Students page: Please note that a student must submit the COVID19 Notification Form upon experiencing symptoms or having a presumptive or confirmed COVID-19 test.

South Dakota State University Virtual Classroom Use and Etiquette Statement:
This course will be using a virtual classroom environment (e.g. Zoom) to meet synchronously online, as part of the course engagement this semester. Students are strongly encouraged to have a webcam and microphone, along with a computer, to be able to participate fully when joining this course's virtual classroom. (Cell phones may also be used with some virtual classroom mobile Apps, but students may not get the full benefit of viewing the content being shared on the screen.) Students are expected to be present and active participants in the virtual classroom. To ensure students are fully prepared to be an active participant in this course, South Dakota State University has prepared an Etiquette for the Virtual Classroom resource to support student learning. Additionally a Preparing for Face-to-Face, Online and Hybrid Learning resource has been developed to support student success in this course. If there are additional questions or concerns please contact the instructor of this course immediately.