BADM 220 – Business Statistics, 3 credits
Dakota State University
Spring 2020, Section D01
East Hall, Room 201, Tues/Thurs, 11:00 – 12:15
Last Day to Drop Course without transcript entry – January 22, 2020
Last Day to Drop Course with a "W" – April 6, 2020

Contact Information
Dr. Rob Girtz
Office: East Hall, Room 308
Office Hours: Tues/Thurs 2:30 – 4:00, Wed 10:00 – 1:00 and 2:00 – 4:00
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Course Description (from catalog)
This course introduces students to basic statistical methods. Topics, with computer applications, include: descriptive statistics, probability, distributions, sampling, estimation and index numbers with emphasis on applications in business and economics.

Course Prerequisites
MATH 114 – College Algebra

Description of Instructional Methods
Lecture

Supplemental Instruction (SI)
This section of BADM 220 is unique. There is a supplemental instruction (SI) leader involved in this course. SI is utilized in traditionally difficult courses at DSU, such as this one. Our SI leader has successfully finished BADM 220 already, and will hold weekly sessions out of class to help you work through homework (and other) problems, understand concepts, and prepare for exams. The leader will also be in class with you, taking notes and following along. Your participation in SI is voluntary, however I highly recommend participating, as students typically/historically fare better when they use the SI services.

Materials Needed
1. Textbook: David R. Anderson et. al, *Statistics for Business and Economics,* 13th Edition [ISBN-10: 1337094161]
2. Computer Software: Minitab 19
you will need to rent a personal copy, which is available at: http://www.onthehub.com/minitab/
3. Scientific calculator (non-phone and non-graphing)
4. The resources to capture and send images (via smartphone or via scanner)

Options for textbook acquisition: You may choose to obtain the textbook via a subscription platform called Cengage Unlimited. This is a product that allows you semester-long access to (nearly) all Cengage published textbooks, for a flat fee.
https://www.cengage.com/unlimited

Or, you can choose to obtain just the textbook. If you can find a used copy, that's fine with me

Course Goals

Course-specific Learning Outcomes

Student Learning Outcome #1: Explain data and basic descriptive statistics numerically, tabularly, and graphically.

Student Learning Outcome #2: Explore basic probability concepts including: combinations, permutations, union, intersection, and conditional probability.

Student Learning Outcome #3: Examine discrete probability distributions including: binomial and Poisson.

Student Learning Outcome #4: Examine continuous probability distributions including: normal, standard normal, and uniform.

Student Learning Outcome #5: Explore sampling methods and sampling distributions.

Student Learning Outcome #6: Create and interpret one-sample interval estimations involving means and proportions.

Student Learning Outcome #7: Apply the usage of Minitab to each of the six previously mentioned learning outcomes. Be able to coherently interpret and explain Minitab results.

Evaluation Procedure for all Course-specific Learning Outcomes: Students will demonstrate each learning outcome through completion of topically relevant in-class exams and homework assignments

Grading

Grades will be allocated using the following weights:

Exams: 80%
Homework Assignments: 20%

Note: Each item from a category will carry equal weight. Example: There are five assignments. Each assignment is worth 4% of your grade.

Grade Distribution

A   90 – 100
B   80 – 89
C   70 – 79
D   60 – 69
F   0 – 59

Exams
In this class you will take five (5) regular exams. These regular exams are not technically comprehensive, although previous material will typically be necessary to understand material for a specific exam. You will also take a comprehensive final exam (**on Thursday, May 7, 10:30 – 12:30, East Hall, Room 201**)

All exams will include a mixture of question types, including: multiple choice, short answer, statistical calculation, and statistical interpretation. The final exam is comprehensive.

Exams are taken in class and are taken using only a pencil/pen and a scientific calculator. Relevant formulas and statistical tables will be provided on the exam itself. No other materials are allowed to be used during exams.

I will drop your lowest exam score. This can include an exam you may have missed due to the attendance and make-up policies listed below. The final exam can be dropped.

Each exam is worth the same percentage of your total grade. Since five of the six exams count towards your grade, this means that each grade relevant exam is worth 16% of your overall grade.

Homework Assignments
You will complete five (5) homework assignments. These assignments will include a blend of "by-hand" problems, and Minitab applications.

There will be a corresponding dropbox folder in D2L for each homework assignment.

Homework assignments will be due two days before a given exam, at 10:00 PM. Example: Assignment #1 will be due two days before Exam #1. If Exam #1 is on a Tuesday, then the assignment is due the Sunday before by 10:00 PM.

You will be expected to submit multiple files to the dropbox for each assignment, including some or all of the following: (a) the Minitab project file that shows the commands that the student used to have Minitab conduct the statistical analysis, as well as the Minitab output and (b) a document containing answers to the questions included in the assignment. This document should typically be done in MS Word. For statistical calculations, you can handwrite your work, and then take quality photos (or scan the handwritten work) and include them in the document.

Grading of Homework Assignments

Homework Assignments will be graded on a 2-point scale. You will receive either a 0, 1, or 2 on each homework assignment. I will also usually provide written feedback on each assignment in addition to the numerical grade. Keys will be provided for each assignment that you turn in. If you do not turn in an assignment, you will not receive a key. If you turn in an assignment late, you will not receive a key.

Interpretation of Homework Grades

0 points: The assignment either wasn't turned in or was turned in but shows zero (or, roughly zero) effort and understanding
1 point: The assignment is turned in, but effort and understanding appears relatively low. (example: not showing work on several parts of the assignment)
2 points: The assignment is turned in and satisfactory levels of effort and understanding are shown

Important HW Note: If you skip any question (even a portion of a question), your homework assignment score will default to a zero.
Another important HW Note: If you fail to submit a Minitab project file, or any other required file, your homework assignment score will default to a zero.

My advice is to be descriptive and complete in all that you do on homework assignments. The penalty is harsh for not doing so.

There will sometimes seem to be "gray areas" between the scores of 0, 1, and 2. Additionally, there is some interpretation that I must do in terms of effort, where I decide whether it is zero, low, or satisfactory. You may contact me with questions about your grade, but I'd only do so if you *truly believe* that you deserve a different score than what you received.

Distribution of Class Notes and Study Guides

PowerPoint slides will be posted in D2L before we begin a chapter. These slides/notes are meant to be a guide for you as you attend class and take additional notes. These notes are subject to change somewhat between the time I post them and the time I cover them in class.

Study guides will also be posted in D2L. I will generally post these about one week before a given exam.

Communication and Feedback

Preferred Email Contact Method

I prefer for you to email me at my regular DSU email address: robert.girtz@dsu.edu

Email Response Time

I tend to respond to email well within 24 hours. Weekends can sometimes take longer.

Feedback on Assignments and Exams

I attempt to grade and return graded items within ten days of the due date. I post keys and feedback to your homework assignments in the dropbox folder where you submitted your

assignment. Be sure to look there before contacting me.

Class Policies

Attendance Policy
I do not formally require attendance. However, it is to your benefit to attend class regularly. This class can easily become very difficult if you miss multiple class sessions. I also may occasionally give out some bonus points for those in attendance.

Make-up Policy
If you miss an exam and you do not notify me prior to your absence, you will not be allowed to make up the exam. You will receive a score of zero for that exam. This same rule applies to missed homework assignments. In addition, this rule applies to late submissions of homework assignments. I do not accept late work. If you attempt to submit something late via the D2L dropbox, or email, I will not grade the item, and you will receive a zero.

Accessibility Statement
Dakota State University strives to ensure that physical resources, as well as information and communication technologies, are accessible to users in order to provide equal access to all. If you encounter any accessibility issues, you are encouraged to immediately contact the instructor of the course and Dakota State University's ADA Office, which will work to resolve the issue as quickly as possible.
DSU's ADA Office is located in the Learning Engagement Center and can be contacted by calling 605-256-5121 or emailing dsu-ada@dsu.edu. Students seeking ADA accommodations (such as non-standard note taking or extended time and/or a quiet space taking exams and quizzes) can log into the DSU portal to access https://portal.sdbor.edu/dsu-student/student-resources/disability-services/Pages/default.aspx/ for additional information and the link to the Disability Services Request Form. You will need to provide documentation of your disability and the ADA Coordinator must confirm the need before officially authorizing accommodations.

Academic Honesty Statement
Cheating and other forms of academic dishonesty run contrary to the purpose of higher education and will not be tolerated in this course. Please be advised that, when the instructor suspects plagiarism, the Internet and other standard means of plagiarism detection will be used to resolve the instructor's concerns. DSU's policy on academic integrity ([DSU Policy 03-22-00](#)) is available online.
All forms of academic dishonesty will result in no credit on the graded item in question. If you copy from another or allow another to copy from you, you have cheated. A formal acknowledgement that you violated academic integrity policies will be placed in your permanent academic records. If there is a second offense by the same student(s), they will fail the course.

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 course of study. It has always been the policy of Dakota State

University to allow students to appeal the decisions of faculty, administrative, and staff members and the decisions of institutional committees. 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 contact the dean of the college which offers the class to initiate a review of the evaluation.

Student Support

DSU Knowledge Base
The DSU Knowledge Base contains links and resources to help students by providing information about the following topics: User Accounts & Passwords, Academic Tools & Resources, Software & Apps Support, WiFi & Network Access, Campus Emergency Alert System, Campus Printing, IT Security & Safe Computing, and the Support Desk (which is there to help both on and off-campus students). The Knowledge Base can be accessed through the link below:
https://support.dsu.edu/TDClient/KB/

D2L Support for Students
The D2L Support for Students site is designed to provide DSU students a D2L support resource center that contains user guides, tutorials, and tips for using the D2L learning environment. The D2L Support for Students site can be accessed through the link below:
https://d2l.sdbor.edu/d2l/home/606414

Writing Center
https://dsu.edu/academics/academic-support-advising/writing-center.html

Tutoring
https://dsu.edu/academics/academic-support-advising/tutoring.html

IT Help Desk
https://support.dsu.edu/TDClient/Home/

Tentative Course Outline

Chapter	Title
1	Data and Statistics
2	Descriptive Statistics: Tabular and Graphical Displays
	Exam 1
3	Descriptive Statistics: Numerical Measures
	Exam 2
4	Introduction to Probability
5	Discrete Probability Distributions
	Exam 3
6	Continuous Probability Distributions
	Exam 4
7	Sampling and Sampling Distributions
8	Interval Estimation
	Exam 5
	Final Exam (May 7, 10:30 – 12:30, East Hall, Room 201)

Note: There will also be one homework assignment included with each exam chapter group.

Disclaimer: I reserve the right to alter the course schedule, be it through addition, deletion, or rearrangement of course topics/chapters. If any of these situations occur, you will be given sufficient notice.