DAKOTA COLLEGE AT BOTTINEAU

COURSE SYLLABUS

Course Prefix/Number/Title: MATH 210 – Elementary Statistics

Number of Credits: 4

Course Description:
An introduction to statistical methods of gathering, presenting and analyzing data. Topics include probability and probability distributions, confidence intervals, hypothesis testing, and linear regression and correlation.

Pre-/Co-requisites:
ASC 94 with a grade of C or higher, or appropriate Math Placement test score

Course Objectives:
Upon completion of the course the learner will be able to

- Students will be able to use statistical methods of gathering, presenting and analyzing data
- Students will be able to work with probability and probability distributions and their applications
- Students will be able to work with confidence intervals and their applications
- Students will be able to work with hypothesis testing
- Students will be able to work with linear regression and correlation and its applications

Instructor: Tracy Chisholm

Office: Nelson Science Center, Room 111

Office Hours: online through Blackboard messages or via email

Phone: (701) 228-5424

Email: tracy.chisholm@dakotacollege.edu

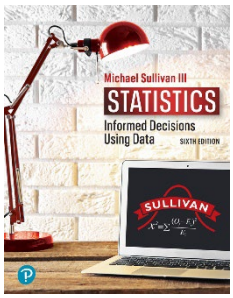
Lecture/Lab Schedule: online through Blackboard

Textbook(s):

Optional: *Statistics: Informed Decisions Using Data Sixth edition* by Michael Sullivan III. Pearson Publishing

Required: MyMathLab online learning software

You will also need a TI-83 or TI-84 graphing calculator



Course Requirements:
Participation is expected. Learning takes place through participation and engagement in the material and the course, and thus, it is essential that you attend and actively participate in class on a regular bases. Read, log on, do the problems, interact with your peers, the material, and me, the instructor. If, by chance, an emergency requires that you miss a substantial amount of class, please let me know so we can make arrangements. I understand that life happens, so please be honest and let me know if you run into a problem.

Interaction in an online course is different than in an in-person class. Use the discussion feature in Blackboard to ask me and your classmates questions. I expect you to ask questions, be curious, have fun, be challenged, and interact so that your learning experience is maximized. I also hope that you will interact with your peers. Working with others to discuss the material will help you gain a better understanding of it.

As part of an online course, you will spend more time teaching yourself concepts than you may be used to doing. Thus, you may have to read and reread sections of the text book and the online notes. Read slowly, take notes, try the examples, try and retry problems using the online resources, or try odd problems in the text so you can check your answers. When you get stuck, work problems online in one of the tutorials, watch the online videos, ask another student, or call or email me after you have given it your best shot.

This course is schedule-driven, not self-paced. Thus, you must keep up and hand in assignments every week. In order to succeed you will have to work extremely hard! You will need to spend at least 1-2 hours each day reading the section and working problems (at least 8-10 hours/week or more). If you cannot commit this much time, please do not take the course because you will most likely not be successful.

Homework:
Homework is an important part of this course. It is extremely important for you to read and do the homework every day! I will assign weekly homework problems. These problems are the minimum amount of homework that you should complete. If you need to do more problems to understand the material, then you should do so.
Weekly homework starts on Monday at 12:00 a.m. and is due no later than 11:59 p.m. the following Sunday (except the first week when you get an extra week in case you don't have course access right away). You get two attempts at each problem so you can learn from your mistakes, but not just repeatedly guess until you get the correct answer. Keep track of your individual assignment scores inside MyLab/Mastering.
The MyLab/Mastering page is loaded with tools to help you learn - videos, animations, the book in an online format, StatCrunch (a statistical software program that is easy to use), a calculator, and other materials. Use these materials to your advantage. When working homework problems in MyLab/Mastering, you will notice icons on the side; you can click on these to pop-up videos, the calculator, StatCrunch, similar examples, and other helpful materials. Make sure you click around inside MyLab/Mastering so you can use it to its full potential.
It is up to you to keep up and not fall behind. If you do not read the text and work problems, it is highly unlikely that you will be successful in this course. You must do the homework in a timely fashion and ask questions when you get stuck. Math can be frustrating, especially when you are working on it without a face-to-face classroom for lecture, interaction, and discussion, but you cannot give up. Those who are successful in math persist through frustration, but still ask questions after giving it their best try.

Discussions:
There are 9 discussion questions/problems that are assigned throughout the course. Some of them are only available for one week, some are available for two weeks. Please watch due dates carefully! All discussions are to be completed in the Blackboard course. Late discussions will not be accepted. You must also respond to at least one other member's response no later than the due date of that chapter's discussion.

For maximum participation points, you are expected to post at least twice throughout the discussion; first to introduce your thoughts, opinions, ideas, or response to the question/problem posed and second, in response to at least one comment made by a fellow student (15 points for your initial response to the questions posed + 5 points for your reply to a fellow student = 20 possible points). I strongly encourage you to send your first post early in the week, and then return a couple of days later to post your response to your classmates' ideas. The discussion will end at 11:59 pm Sunday, and you will no longer be able to add comments after that day. **Each post should be well thought out, written using complete sentences and proper grammar, and should include not only your thoughts, opinions, or ideas, but also your reasons for why you feel the way you do for each initial and follow-up post.**

Tests:
Four proctored unit tests will be given during the semester. Exams will be sent to an accepted proctor and must be emailed, faxed, or returned by mail postmarked no later than the due date of the exam. You must complete a proctor form and return it to me within the first two weeks of the course. I reserve the right to reject any proctor that I deem unacceptable. I will provide you with formula sheets to use on tests. You should use a TI-83 or TI-84 calculator on all tests. *The TI-89, TI-Nspire or any other calculator that is a symbolic manipulator is not allowed on any tests.* If for some reason you have to miss a test, arrangements satisfactory to the instructor must be made prior to the test to schedule a make-up (or as soon thereafter as possible for an unforeseen occurrence). If you fail to contact me within 24 hours of the test, you will receive a zero on that test.

A = 90-100% B = 80-89% C = 70-79% D = 60-69%

Tentative Course Outline:
This schedule is designed to give you an idea of where you should be in the course. A more detailed schedule is provided in the online course in Blackboard.

Chapter	***Topic***	***Dates***
Chapter 1	Data Collection	Week 1
Chapter 2	Organizing and Summarizing Data	Week 2
Chapter 3	Numerically Summarizing Data	Weeks 3
Chapter 4	Describing the Relation between Two Variables	Week 4
Chapter 5	Probability	Week 5
Chapter 6	Discrete Probability Distributions	Week 6
Chapter 7	The Normal Probability Distribution	Weeks 7-8
Chapter 8	Sampling Distributions	Week 9
Chapter 9	Estimating the Value of a Parameter	Week 10
Chapter 10	Hypothesis Tests Regarding a Parameter	Week 11
Chapter 11	Inferences on Two Samples	Weeks 13-14
Chapter 12	Inference on Categorical Data	Week 15
Chapter 13	Comparing Three or More Means	Week 16
Chapter 14	Inference on the Least-Squares Regression model & Multiple Regression	Week 16

General Education Competency/Learning Outcome(s) OR CTE Competency/Department Learning Outcome(s):

General Education Competency 3: Demonstrates mathematical understanding.

Learning Outcome 1: Utilizes appropriate mathematical techniques

Learning Outcome 2: Employs critical thinking skills

Relationship to Campus Focus:
The student will use the graphing calculator and StatCrunch to model application problems in nature, economics, science, psychology, etc. Communication with others will be emphasized.

Classroom Policies:

- Regular participation is expected. This includes participation in course discussions, completing the homework and tests, and responding to emails from the instructor in a timely manner.
- The course "week" runs Monday starting at 12:00am through Sunday at 11:59pm. All work for the week is due at 11:59pm on Sunday. Discussions posted after the due date will receive a 0 (since they are discussions and discussions don't work well after the due date occurs).
- Learning activities and evaluation will occur in the MyMathLab learning system and requires Internet connectivity.

Student Email Policy:
Dakota College at Bottineau is increasingly dependent upon email as an official form of communication. A student's campus-assigned email address will be the only one recognized by the Campus for official mailings. The liability for missing or not acting upon important information conveyed via campus email rests with the student.

Academic Integrity:
According to the DCB Student Handbook, students are responsible for submitting their own work. Students who cooperate on oral or written examinations or work without authorization share the responsibility for violation of academic principles, and the students are subject to disciplinary action even when one of the students is not enrolled in the course where the violation occurred. The Code detailed in the Academic Honesty/Dishonesty section of the Student Handbook will serve as the guideline for cases where cheating, plagiarism or other academic improprieties have occurred.

Disabilities or Special Needs:
Students with disabilities or special needs (academic or otherwise) are encouraged to contact the instructor and Disability Support Services.

Title IX:
Dakota College at Bottineau (DCB) faculty are committed to helping create a safe learning environment for all students and for the College as a whole. Please be aware that all DCB employees (other than those designated as confidential resources such as advocates, counselors, clergy and healthcare providers) are required to report information about such discrimination and harassment to the College Title IX Coordinator. This means that if a student tells a faculty member about a situation of sexual harassment or sexual violence, or other related misconduct, the faculty member must share that information with the College's Title IX Coordinator. Students wishing to speak to a confidential employee who does not have this reporting responsibility can find a list of resources on the DCB Title IX webpage.

AI Student Policy:
Unless otherwise indicated in the course syllabus, or in individual instructions for course assignments, or in the absence of the express consent of the course instructor, students are not allowed to utilize generative AI to help produce any of their academic work. Any violation of this policy will be considered an act of academic dishonesty as outlined within the Dakota College Code of Student Life.

RESPONSIBILITIES

Students	• Responsible to follow the syllabus and assignment instructions regarding use of generative AI for all academic work. • Obtain permission of the instructor prior to the use of generative AI that is outside of the syllabus or assignment instructions. Provide appropriate rationale for how the use of generative AI will enhance the learning experience for the assignment. • In instances where generative AI is permissible, appropriately cite the generative AI program used and indicate where in the assignment it was used, in a brief submission statement.
Faculty	• Determine if the use of generative AI could enhance student learning in any assignment of project. • Clearly indicate in all course syllabi if generative AI is allowable for any academic work. • If allowable, give specific parameters for how and when generative AI may be used. • If a violation of generative AI for the individual course/syllabus is suspected, discuss the concern with the student. If violation is still suspected, inform the appropriate semester coordinator/program director.