McLennan COMMUNITY COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

INTRODUCTION TO STATISTICS

MATH 1342.90

Dr. Deanna Barnes

NOTE: This is a 16-week Online course.

COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website at https://www.mclennan.edu/crisis-management/coronavirus-updates/index.html on any changes to these guidelines.

Course Description:
Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Use of appropriate technology is recommended. TI-84 Graphing calculator **required**.

Prerequisites and/or Corequisites:
TSI math complete or MATH 0308, or completion of college-level math course or consent of division chair. Semester Hours 3 (3 lec)

Course Notes and Instructor Recommendations:
Math 1342 in an online format involves optional meetings during office hours and mandatory online discussions. Students must complete all homework online, using ALEKS online homework assignments which may be found by logging in at www.aleks.com. Homework and exams will be available at this site. Class notes, instructor videos, and discussions will be available in Brightspace.

Instructor Information:
Instructor Name: Deanna R. Barnes
MCC E-mail: dbarnes@mclennan.edu
Office Phone Number: 254-299-8810
Cell Phone Number: 713-459-5045
(Text first, then I will call back. Be sure to tell me who you are and which class you are in. Be sure to include the SECTION NUMBER for your class. For example, 1342.90.)
Office Location: MATH 218
Office Hours: Office hours are available by appointment
Link to Zoom Meeting Room: Personal ID Number 2542998810

Required Text & Materials: ALEKS access code
Title: *Elementary Statistics*
Author: Navidi, Monk
Edition:4th edition
Publisher: McGraw Hill
ISBN: 9781265425043
Required graphing calculator – TI-83, TI-83 Plus, TI-84, or TI-84 Plus

MCC Bookstore Website: http://www.mclennan.edu/bookstore/

Methods of Teaching and Learning:
The best way to approach this course is to work throught the material in the order it is presented inside the Component Checklists. Each component is "unlocked" by checking off every item in the preceeding checklist, starting with the Orientation Checklist. Students may choose to preview/review videos for further learning enhancement. All students will be required to submit homework in ALEKS (detailed below in the Course Grading Information section). Be sure to work through material in the order it appears in each component in the Calendar. Also make note of the times when the workload is heavier than usual and plan accordingly. See the Orentiation Document in Brightspace for more detailed information.

Course Objectives and/or Competencies:

Upon completion of Math 1342, the students should be able to:

1. Explain the use of data collection and statistics as tools to reach reasonable conclusions.
2. Recognize, examine and interpret the basic principles of describing and presenting data.
3. Compute and interpret empirical and theoretical probabilities using the rules of probabilities and combinatorics.
4. Explain the role of probability in statistics.
5. Examine, analyze and compare various sampling distributions for both discrete and continuous random variables.
6. Describe and compute confidence intervals.
7. Solve linear regression and correlation problems.
8. Perform hypothesis testing using statistical methods.

Course Outline or Schedule:

Below is the name associated with each section covered in the course. Only the section numbers are used in the course calendar below.

Week	Sec.	*Topic*	Week	Sec.	**Topic**
1	1.1	Sampling			**Exam 2**
	1.2	Types of Data	9	7.1	The Standard Normal Curve
2	1.3	Design of Experiments		7.2	Applications of The Normal Distribution
	1.4	Bias in Studies		7.3	Sampling Distribution & Central Limit Theorem
	2.1	Graphical Summaries for Qualitative Data	10	7.4	The Central Limit Theorem for Proportions
	2.2	Frequency Distributions & Their Graphs		7.6	Assessing Normality
3	2.3	More Graphs for Quantitative Data			**Exam 3**
	2.4	Graphs Can Be Misleading	11	8.1	Confidence Intervals for Mean σ-Known
4	3.1	Measures of Center		8.2	Confidence Intervals for Mean σ-Unknown
	3.2	Measures of Spread	12	8.3	Confidence Intervals for Proportions
	3.3	Measures of Position		8.4	Confidence Intervals for Standard Deviations
		Exam 1		8.5	Determining Which Method to Use
5	4.1	Correlation	13	9.1	Basic Principles of Hypothesis Testing
	4.2	The Least-Squares Regression Line		9.2	Hypothesis Tests for Mean σ-Known
	4.3	Features & Limitations of LSR Line	14	9.3	Hypothesis Tests for Mean σ-Unknown
6	5.1	Basic Concepts of Probability		9.4	Hypothesis Tests for Proportions
	5.2	The Addition Rule & Rule of Compliments		9.5	Hypothesis Tests for Standard Deviations
7	5.3	Conditional Probability & Multiplication Rule		9.6	Determining Which Method to Use
	5.4	Counting	15		**Exam 4**
8	6.1	Random Variables			**Review for Final Exam**
	6.2	Binomial Distribution			**Final Exam (Comprehensive)**

Use the calendar below, along with the assignment table above, to see what problems you will turn in for homework. Objectives, Chapter Homework and Exams will be completed in ALEKS. Discussion will be completed in Brightspace.

Component Due Date	Assignments Due by 11:00pm CST	Component Due Date	Assignments Due by 11:00 pm CST
Component 1 January 14	**Discussion 1,** Objectives 1.1 & 1.2	Component 9 March 18	**Discussion 9,** Objectives 7.1 – 7.3, **Chapter 7A Homework**
Component 2 January 21	**Discussion 2,** Objectives 1.3 & 1.4, **Chapter 1 Homework,** Objectives 2.1 & 2.2**	Component 10 March 25	**Discussion 10,** Objectives 7.4 & 7.6, **Chapter 7B Homework** Exam 3 (Covers Ch. 7)
Component 3 January 28	**Discussion 3,** Objectives 2.3 & 2.4, **Chapter 2 Homework**	Component 11 April 1	**Discussion 11,** Objectives 8.1 & 8.2, **Chapter 8A Homework**
Component 4 February 4	**Discussion 4,** Objectives 3.1 – 3.3**, **Chapter 3 Homework,** Exam 1 (Covers Ch. 1 – 3)	Component 12 April 8	**Discussion 12,** Objectives 8.3 – 8.5**, **Chapter 8B Homework**
Component 5 February 11	**Discussion 5,** Objectives 4.1 – 4.3 **Chapter 4 Homework**	Component 13 April 15	**Discussion 13,** Objectives 9.1 & 9.2, **Chapter 9A Homework**
Component 6 February 18	**Discussion 6,** Objectives 5.1 & 5.2** **Chapter 5A Homework**	Component 14 April 22	**Discussion 14,** Objectives 9.3 – 9.6**, **Chapter 9B Homework** Exam 4 (Covers Ch. 8 & 9)
Component 7 February 25	**Discussion 7,** Objectives 5.3 & 5.4** **Chapter 5B Homework**	Component 15 April 29	**Final Exam**
Component 8 March 4	**Discussion 8,** Objectives 6.1 & 6.2, **Chapter 6 Homework,** Exam 2 (Covers Ch.4 – 6)	May 3	Grades due to Registrar

**These objectives cover more topics than usual. Plan accordingly.

Course Grading Information:

Your course average can be found in Brightspace under "Assessments" and will be calculated as follows:

Discussion Board	20%
Homework (ALEKS)	20%
Objectives (ALEKS)	20%
Exams (4)	20%
Final Exam	20%

I will drop your lowest discussion, homework, and exam grade. The comprehensive final exam will NOT be dropped.

ALEKS Homework and Objectives:
Each week, you will have to complete work in ALEKS over the textbook sections, in the form of both objectives and homework. See the videos in Brightspace to learn more about ALEKS. You can earn 5 Bonus Points on each exam if all Objectives and Homework covered on the exam are completed on time.

Objectives: These are adaptive and you will be given credit for any material that you already know based on your Initial Knowledge Check. You must learn at least 70% of the topics in each ALEKS objectives and complete them by the due date in order to earn the bonus points on Exams. As you work in ALEKS, you will periodically receive knowledge checks to help you retain what you have learned and also to

personalize reviews of these topics throughout the course. Try your best on the Knowledge Checks. If you miss problems that you had previously "mastered" you will be given additional topics to practice until they are mastered. You have to get three probles in a row correct in order to "pass" an objective.

Homework: Homework complements the work done in objectives. You will want to make sure you have mastered the objectives associated with a chapter ***before*** you attempt the homework. Due dates are listed on each assignment. In order to earn bonus points, you must complete the work on time. You may be dropped for lack of participation if you fall more than two components behind on work.

Having someone else do your online homework assignment and cheating on a test are both violations of the academic integrity policy and either may result in failing grades and/or being dropped from the class. Infractions such as these will be reported to the administration for tracking and possible disciplinary action.

Late Work, Attendance, and Make Up Work Policies:

In order to get the most out of this class and not get confused, it is important that you not fall behind. I will not deduct points for late work but all work must be completed by the last day of class. Any missing work will be recorded as a zero. I will update grades in Brightspace (your official course grade) based upon the due dates. I will record a zero for any missing work but will update your score with what you earn the next time I update grades.

You may be dropped from the course (without further warning) for lack of online participation if you fall more than two components behind on course work. Consequently, you should plan on working in ALEKS daily. Research shows that successful students spend approximately 2 hours working outside of class (homework, reading, review) for every one hour in class. Since our class is a 3 hour class, you should expect to work an additional 6 hours per day outside of class time if you want to be successful. **I am able to track the time you spend working in ALEKS.**

Student Behavioral Expectations or Conduct Policy:

Online students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular discussion participation, and an attitude that seeks to take full advantage of the education opportunity.

Click Here for the MCC Attendance/Absences Policy
(https://www.mclennan.edu/highlander-guide/policies.html)

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

McLennan COMMUNITY COLLEGE

ACADEMIC RESOURCES/POLICIES

Accommodations/ADA Statement:
Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu
254-299-8122
Room 319, Student Services Center

Title IX:
We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting http://www.lighthouse-services.com/mclennan/.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Student Support/Resources:
MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at http://www.mclennan.edu/campus-resource-guide/

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:
Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

MCC Academic Integrity Statement:
Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

Minimum System Requirements to Utilize MCC's D2L|Brightspace:
Go to https://www.mclennan.edu/center-for-teaching-and-learning/Faculty-and-Staff-Commons/requirements.html for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Minimum Technical Skills:
Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:
In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Email Policy:
McLennan Community College would like to remind you of the policy (http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails.

Instructional Uses of Email:
Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:
The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

Forwarding Emails:
You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

Disclaimer:
The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.