McLennan
COMMUNITY
COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

INTRODUCTION TO STATISTICS
MATH 1342.L09

Dr. Deanna Barnes

NOTE: This is a 16-week Linked course.

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 a face-to-face format involves class meetings as well as homework assignments. Students must complete all homework online, using ALEKS online homework assignments which may be found by logging in at www.aleks.com. Homework and publisher videos will be available at this site. Class notes, instructor videos, and exam reviews 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 what class you are in.)
Office Location: MATH 218
Office Hours: Office hours are available by appointment
Link to Zoom Meeting Room: Personal ID Number 2542998810

Required Text & Materials:

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:

Students are expected to attend every lecture and take notes. Lecture videos will be available in Component Checklists in Brightspace. 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. There is no extra credit. Active participation in class (asking questions, answering questions based on reading and lecture) leads to improved test scores, rendering extra credit unnecessary.

INTRODUCTION TO STATISTICS

MATH 1342.L09

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:

The schedule is subject to change. Should a change become necessary, students will be notified about changes verbally, during class.

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 August 27	**Discussion 1,** Objectives 1.1 & 1.2	Component 9 October 22	**Discussion 9,** Objectives 7.1 – 7.3, **Chapter 7A Homework**
Component 2 September 3	**Discussion 2,** Objectives 1.3 & 1.4, **Chapter 1 Homework,** Objectives 2.1 & 2.2**	Component 10 October 29	**Discussion 10,** Objectives 7.4 & 7.6, **Chapter 7B Homework** Exam 3 (Covers Ch. 7)
Component 3 September 10	**Discussion 3,** Objectives 2.3 & 2.4, **Chapter 2 Homework**	Component 11 November 5	**Discussion 11,** Objectives 8.1 & 8.2, **Chapter 8A Homework**
Component 4 September 17	**Discussion 4,** Objectives 3.1 – 3.3**, **Chapter 3 Homework,** Exam 1 (Covers Ch. 1 – 3)	Component 12 November 12	**Discussion 12,** Objectives 8.3 – 8.5, **Chapter 8B Homework**
Component 5 September 24	**Discussion 5,** Objectives 4.1 – 4.3 **Chapter 4 Homework**	Component 13 November 19	**Discussion 13,** Objectives 9.1 & 9.2, **Chapter 9A Homework**
Component 6 October 1	**Discussion 6,** Objectives 5.1 & 5.2** **Chapter 5A Homework**	Component 14 November 26	**Discussion 14,** Objectives 9.3 – 9.6, **Chapter 9B Homework** Exam 4 (Covers Ch. 8 & 9)
Component 7 October 8	**Discussion 7,** Objectives 5.3 & 5.4** **Chapter 5B Homework**	Component 15 December 3	**Final Exam**
Component 8 October 15	**Discussion 8,** Objectives 6.1 & 6.2, **Chapter 6 Homework,** Exam 2 (Covers Ch.4 – 6)	December 7	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.

Objectives: These are adaptive and you will be given credit for any material that you already know. You must learn at least 70% of the topics in each ALEKS objectives before the next one will open up. The course calendar is an excellent resource to use for pacing (e.g. it is expected that Section 1.1. and 1.2 will be completed in Week 1, etc. to ensure you are prepared for each test – see calendar above), but the final due date for objective completion is December 3. 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.

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. Pacing dates are listed on each assignment, but the final due date for all homework will be December 3. However, 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. All assignments are to be done outside of class. In order to be prepared for lecture, you need to keep up with the due dates in the calendar above. 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 will be dropped for excessive absences if you miss more than 25% of the lectures. You will be dropped for lack of 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 week 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:

"Students are expected to maintain classroom decorum that includes respect for other students and the instructor, prompt and regular attendance, 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.

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ACADEMIC RESOURCES/POLICIES

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.

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.

Minimum System Rquirements to Utilize MCC's D2L|Brightspace:
Go to https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

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.

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

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.

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.