McLennan
COMMUNITY
COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

Elementary Statistical Methods

Math 1342 Section F2

Mark Crenwelge, M.A.

NOTE: This is an 8-week course.
NOTE: This is an Online 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.

Provides a study of statistical description of frequency distributions; sampling; elementary principles of probability distributions, both binomial and normal; estimation of parameters; tests of hypotheses; linear regression and correlation; independence of variables by Chi Square analysis; and an introduction to a statistics software package.

Prerequisites and/or Corequisites:
TSI Math Complete or Math 0308 or credit for a college-level math course or consent of division chair.

Course Notes and Instructor Recommendations:
This is an online course which means students will need to budget their time to complete the necessary work for the class.
There will be a ZOOM session on the first day of class to discuss the course procedures and how to register for MyMathLab. The ZOOM ID is my phone number: 254 299 8874. Watch your email for details of time.
If a student cannot be present on the ZOOM it will be recorded and posted in Brightspace. It will be required that each student view this to get the information needed for the class.
I recommend that each student logs in each week at a minimum of 6 hours to watch the videos and complete the assignments for the week. I also strongly encourage each student to email me or ZOOM into my office hours when there are questions.

Instructor Information:

Instructor Name:	Mark Crenwelge, M.A.
MCC E-mail:	mcrenwelge@mclennan.edu
Office Phone Number:	254-299-8874
Office Location:	MWF 221
Office/Teacher Conference Hours:	Posted in Brightspace under Contact Information
Other Instruction Information:	Email is the best way to communicate with me.

Required Text & Materials:

Title: MyStatLab Student Access Kit (Standalone)

Optional materials:

TI 83/84 Graphing Calculator

Microsoft Office 365 which includes the latest versions Word, Power Point, and Excel is available on all on campus computers. Students may download this software to a personal computer using MCC studentID and following instructions under <Software for Students, Faculty & Staff> at the following website:
https://www.mclennan.edu/tech-support/software.html

Optional Text:

Title:	Elementary Statistics
Author:	Triola
Edition:	13th
Publisher:	Pearson
ISBN:	9780134462455

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

Methods of Teaching and Learning:

The following methods for teaching and learning will be used:
online video lecture, online homework, online exams, and tutorial software.
A three pronged approach is used in this course.
For each instructional unit a video recording of the lecture will be available on the Pearson site.
There will be a scheduled ZOOM at the beginning of the semester which will be recorded and posted in Brightspace. This Zoom will discuss the procedures for the class as well as how to register for MyMathLab where all the course materials will be found.

Course Objectives and/or Competencies:

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

Course Outline or Schedule:

Wk 1	Intro
	1.1 Statistical and Critical Thinking
	1.2 Types of Data
	1.3 Collecting Sample Data
	2.1 Frequency Distributions for Organizing and Summarizing Data
	2.2 Histograms
	2.3 Graphs that Enlighten and Graphs that Deceive
	2.4 Scatterplots, Correlation and Regression

	3.1 Measures of Center
	3.2 Measures of Variation
	3.3 Measures of Relative Standing and Boxplots
Wk 2	TEST 1 Online
	4.1 Basic Concepts of Probability
	4.2 Addition Rule and Multiplication Rule
	4.3 Complements, Conditional Probability, and Baye's Theorem
	4.4 Counting
	4.5 Probabilities through Simulations
Wk 3	5.1 Probability Distributions
	5.2 Binomial Probability Distributions
	5.3 Poisson Probability Distributions
	TEST 2 Online
Wk 4	6.1 The Standard Normal Distribution
	6.2 Real Applications of Normal Distributions
	6.3 Sampling Distributions and Estimators
	6.4 The Central Limit Theory
	6.5 Assessing Normality
	6.6 Normal as Approximation to Binomial
Wk 5	7.1 Estimating a Population Proportion
	7.2 Estimating a Population Mean
	7.3 Estimating a Population Standard Deviation or Variance
	TEST 3 Online
Wk 6	8.1 Basics of Hypothesis Testing
	8.2 Testing a Claim About a Proportion
	8.3 Testing a Claim About a Mean
	9.1 Two Proportions
	9.2 Two Means: Independent Samples
	9.3 Two Dependent Samples (Matched Pairs)
Wk 7	10.1 Correlation
	10.2 Regression
	11.1 Goodness-of-Fit
	TEST 4 Online
Wk 8	FINAL EXAM

Grading in this course will be based on assignments, tests, and a comprehensive final exam according to the following percentages.

Assignment average: 40%
Test average: 40%
Final exam: 20%

Assignments include all homework online in MyMathLab. These assignments will have a due date corresponding to the date they are tested. They will still be available to complete after that date with a 10% penalty for late work. Assignments may also include any other activities which will be assessed in these three areas which will use the following rubrics for scoring:

• Communications: Students participate in assignments involving topics related to Statistics or other mathematics. They then share their results with their instructor and/or colleagues in class via written, oral, and visual methods.

• Critical Thinking: Critical thinking is the essence of all mathematical studies. Through inductive and deductive reasoning, students explore probability and statistics problems using the logical process of inquiry, analysis, evaluation, and synthesis.

• Empirical and Quantitative Skills: Students work on various mathematical problem solving skills throughout the course. The course focuses on the analysis of numerical data as presented in application problems. Students use simulation and apply statistical principles to demonstrate their ability to reach informed conclusions.

Communication Assignment Rubric

	4	3	2	1
IN WRITTEN LANGUAGE	Student demonstrates **full knowledge with no mistakes** and **elaborates** on mathematical concepts.	Student demonstrates **good knowledge** but does **not elaborate.**	Student demonstrates **limited knowledge** but makes **several mistakes**.	Student does **not have a grasp** of the mathematical information.
IN ORAL LANGUAGE	Student uses **fluent and accurate** words to describe mathematical concepts and processes.	Student uses **somewhat appropriate** words to describe mathematical concepts and processes.	Student uses **vague words** to describe mathematical concepts and processes.	Student uses **incorrect and confusing words** to describe mathematical concepts and processes.
IN VISUAL RESENTATION	Student uses **appropriate and accurate** visual representation of mathematical concepts and processes.	Student uses **somewhat appropriate** visual representation of mathematical concepts and processes.	Student uses **some inaccuracy in** visual representation of mathematical concepts and processes.	Student uses **total inaccuracy in** visual representation of mathematical concepts and processes.

Tests will be given online with no make-up available. They will be scheduled within a time period of a few days so it should be easy to take them. If there is a problem with one of the test dates please make arrangements before the test is given. I will replace the lowest test score with whatever you make on the Final Exam if it is higher.

The Final exam is cumulative and is required. It will also be givien online.

Late Work, Attendance, and Make Up Work Policies:

Due dates are set for all homework and test dates are scheduled. If students do not make the deadlines, those grades become zero. Homework can be completed after the due date with a 10% penalty. If a test is missed, the grade is zero. It is my policy to replace a student's lowest test grade with their final exam if it is higher at the end of the semester.

Instructor has the right to make adjustments to this policy under special circumstances.

Attendance will be based on participation in the course. You should have activity in MyMathLab (homework or test) in the course each week. A report will be run each week (on Monday) to determine activity in the course. Any week in which no work is logged, will count as an absence. **You are allowed TWO weeks (25% of the course) of inactivity, before you can be dropped**. You will receive an email when you are on the Inactivity report in any week.

Student Behavioral Expectations or Conduct Policy:

Students are expected to maintain online decorum that includes respect for other students and the instructor. Students are expected to participate in the class by having activity in the assignments and tests each week. Students should demonstrate 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. Guidelines specific to this course are listed above.

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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.