

# McLennan

C O M M U N I T Y

# COLLEGE

WACO, TEXAS

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**INSTRUCTOR PLAN**

**INTRODUCTION TO STATISTICS**

**MATH 1342-L90**

**Yumei Wu**

**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.

AN EQUAL OPPORTUNITY INSTITUTION

Spring 2022

# INTRODUCTION TO STATISTICS

1342.L90

Greetings Statistics Students! On the next pages you will find the syllabus.

Please read it carefully. Try to complete the steps below by 4:00pm Monday January 10, 2022

Step	Action
1.	Insure that you correspond with me using your MCC email address. Any trouble to access, please contact MCC tech support 254-299-9077 or <a href="mailto:helpdesk@mclennan.edu">helpdesk@mclennan.edu</a>
2.	Access the online website Brightspace via <a href="http://www.mclennan.edu">www.mclennan.edu</a> .
3.	Now you are in the website, click your Math1342-L90, Elementary Statistical Methods, click each item on the first row, such as, Announcement, Content, Discussion, Classlist, Assessment, and more. Find To-Dos in Announcement weekly, access Content, where you shall visit and work all the time for homework, grades, quizzes, videos, and more. Discussion, you work on the signed discussion. Classlist, where to find your classmates. Assessment, and more.
4	For all assignments, go to Content-MyLab Statistics Students Link-MyLab Statistics All Assigenmts, you may start to work on the first one. Quizzes are also posted there when the time comes.
5	<p>Send an email from your mcc email to my email address <a href="mailto:ywu@mclennan.edu">ywu@mclennan.edu</a> with the <b>Subject: your name and 1342-L90</b></p> <p>Verify the following:</p> <ol style="list-style-type: none"><li>1. Check if you have successfully enrolled in the course at the website.</li><li>2. Watch the orientation video in the announcement in Brightspace.</li><li>3. Introduced yourself on the discussion tab.</li><li>4. Understand the due dates do not mean you should start the assignments on that day but complete them by then.</li><li>5. Understand the build in opportunities for managing your grade-such as taking the unit tests twice, working homework problems as much as needed until you make 100%, but you must complete up to at least 70% the assignment in order to access the next assignment.</li><li>6. Know you will use the Zoom program to have your video conference or office hours and that this require WiFi access and a computer with camera and mic or a smart phone or tablet or a campus visit.</li><li>7. Complete the Online Homework Orientation found under the content of BS.</li><li>8. Tell me – the time you will visit me for office hours in Zoom – Zoom meeting ID: 2542998809.</li><li>9. Begun Lesson by clicking on the Lesson tab in Brightsppace(BS).</li></ol>

# INTRODUCTION TO STATISTICS

1342.L90

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## **Course Description:**

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. Graphing calculator required. Prerequisite: MATH 0311 or THEA math score of 270 or higher or equivalent score on approved alternative test, or consent of the division chair. Semester Hours 3.

## **Prerequisites and/or Corequisites:**

Prerequisite: 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-L90 in an Online format involves optional meetings during office hours, and mandatory online discussions. Videos are done by instructor lecture videos. Class notes and lecture videos will be available in Content-Brightspace to assist student success. Online homework assignments will be located at the link MyLab & Mastering Links in the very first page of the course: Pearson link in <https://brightspace.mclennan.edu/d2l/home/52187>

I shall post To-Dos List every Sunday through Announcement. So make sure you read my announcement each Sunday, where you shall receive the To-Dos list for the week activities. You shall find the pattern to work on the course: Find the time during the week to complete the task from To-Dos List. Try to watch my videos in the way like you are in the classroom.

## **Instructor Information:**

Instructor Name: Yumei Wu

MCC E-mail: [ywu@mclennan.edu](mailto:ywu@mclennan.edu)

Office Phone Number: 254-299-8809

Cell Phone Number: 254-3667857 (Text your name, course, and question. I will respond ASAP.)

Office Location: Math212

Office Hours: Tuesday & Thursday 1pm -3pm via Zoom. Other time is possible by making appointments by sending me e-mails.

## **Required Text & Material:**

Title: *Elementary Statistics*

Author: Mario F. Triola

Edition: 13<sup>th</sup> edition

Publisher: Pearson

# INTRODUCTION TO STATISTICS

1342.L90

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Required graphing calculator – TI-83, TI-83 Plus, TI-84, or TI-84 Plus



TI 83/84 Graphing Calculator Required

[MCC Bookstore Website](http://www.mclennan.edu/bookstore/) <http://www.mclennan.edu/bookstore/>

**MCC Bookstore Website:** <http://www.mclennan.edu/bookstore/>

## **Methods of Teaching and Learning:**

Online class is great for disciplined students who need the flexibility working on the course when their schedule allows. Online course is taught by going section by section each week via online. Students receive and return assignments via email or an online course management such as mymathlab through Brightspace. Students may be required to engage with the instructor and other students through discussion boards, email, chat group or video conferencing. The course video lectures, video notes and problem solving will be provided. Pearson <https://brightspace.mclennan.edu/d2l/login>

Homework will be done online in this environment. Lecture notes, reference materials, and videos are available there as well.

Students will be required to read section or chapter prior to the homework. The PowerPoint is posted in <https://brightspace.mclennan.edu/d2l/login>. Students may choose to view videos from <https://brightspace.mclennan.edu/d2l/login> for further review and learning enhancement. All students will be required to submit homework on MyMathLab (must score at least 70% to receive credit). Reviews are provided for exams, but they are optional. There is no extra credit. Active participation in the course (asking questions, answering questions based on reading and lecture through internet) leads to improved test scores, rendering extra credit unnecessary.

## **Course Objectives and/or Competencies:**

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

1. Analyze data graphically and numerically to determine and interpret patterns and departures from patterns (1, 2, 4, 5, 6),

# INTRODUCTION TO STATISTICS

1342.L90

2. Summarize the center, spread, and position of distributions of univariate data (1, 2, 4),
3. Solve problems using the rules of elementary probability (1, 2, 3, 4, 8, 9),
4. Create probability models of real-world situations (1, 2, 4, 6, 8),
5. Compute expected value, variance, standard deviation of probability models and real- world data sets (1, 2, 4),
6. Verify properties of normally distributed populations and use normal distributions to solve application problems, including applications of the Central Limit Theorem (1,2,4,5,6,9) ,
7. Construct confidence intervals and perform significance tests for a population parameters, including both independent and paired data (1, 2, 3, 4, 5, 8, 9),
8. Use Correlation and regression to analyze data (1, 2, 3, 4, 5, 6, 9).
9. Recognize appropriate times for using Normal, Student - t or Chi-square distributions to solve problems (1, 2, 4, 5, 6, 8, 9),
10. Input data into a statistical program and interpret/analyze output (1, 2, 4, 5, 9).

## Course Outline or Schedule:

In order to be successful in this course, I strongly urge you to do the following each week:

1. Go to Brightspace, click on the Component you are working on.
2. Follow the steps in the To-Dos list in the order they appear. Do not try to skip around or work out of order. The course is designed to help you move through the material as efficiently as possible.
3. Give yourself enough time for the videos and homework, never last minutes.
4. Make sure you do not miss tests and quizzes.
5. Pay attention to the weekly To-Dos list. Begin each component by opening the Checklist. **Be sure to check off items as you complete them.**
6. Remember **Due Dates are NOT Start Dates**. Each component represents what would normally be assigned for one Week during a long semester.
7. It is always easier to keep up than to catch up. Consequently, you may want to work ahead to build in a buffer for when “life happens”, as it usually does, at the most inopportune time.

## Course Outline or Schedule:

Week	Sec.	Topic	
1	1.1	Statistical and Critical Thinking	
	1.2	Types of Data	
	1.3	Collecting Sample Data	
		Quiz 1	
2	2.1	Frequency Distributions	

# INTRODUCTION TO STATISTICS

1342.L90

	2.2	Histograms	
	2.3	Graphs That Enlighten & Graphs That Deceive	
	2.4	Scatterplots, Correlation and Regression	
		Quiz on Ch.2	
3	3.1	Measures of Center	
	3.2	Measures of Variation	
	3.3	Measures of Relative Standing & Boxplots	
4		Quiz on Ch.3 & Review for Exam 1	
		<b>Exam 1 (Chapters 1, 2 3)</b>	
5	4.1	Basic Concepts of Probability	
	4.2	Addition Rule and Multiplication Rule	
	4.3	Complements, Conditional Probability & Bayes's Theorem	
	4.4	Counting	
6	5.1	Probability Distributions	
	5.2	Binomial Probability Distributions	
	5.3	Parameters for Binomial Distributions	
7		<b>Quizzes, Review Exam 2 &amp; T2 ((Ch 4 &amp; 5)</b>	
8	6.1	The Standard Normal Distribution	
	6.2	Real Applications of Normal Distributions	
	6.3	Sampling Distributions and Estimators	
9	6.4	The Central Limit Theorem	
	6.5	Assessing Normality	
	6.6	Normal as Approximation to Binomial	
10	7.1	Estimating a Population Proportion	
	7.2	Estimating a Population Mean	
	7.3	Estimating a Population Std. Dev. or Variance	
11		<b>Quizzes, Review Exam 3 &amp; T3 (Ch 6 &amp; 7)</b>	
12	8.1	Basics of Hypothesis Testing	
	8.2	Testing a Claim about a Proportion	
13	8.3	Testing a Claim about a Mean	
	8.4	Testing a claim About a Standard deviation or Variance	
14	9.1	Two Proportions	
	9.2	Two Means: Independent Samples	
	9.3	Two Dependent Samples (Matched Pairs)	
	9.4	Two Variances or Standard Deviations	
15		<b>Quizzes, Review and Exam 4 (Ch 8 &amp; 9)</b>	
16		Catch up to 100 for all Homework and Final Test	
		Review for Final Test	
		<b>Final Exam Monday 12/6/21 at 8am in classroom</b>	

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

# INTRODUCTION TO STATISTICS

1342.L90

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## **Course Grading Information:**

Give details about how students' grades will be calculated in your courses. Include all areas from which the course grade is derived and how much impact each area has on the students' final grades. Describe grading methods such as the use of a point system or weighted/percentage grades.

In courses with performance or skill assessments, explain the primary components that contribute to the student's earning a particular grade or attach actual grading sheet or scoring rubric. Include penalties for violations of academic integrity and define those (i.e., give your definition of "cheating", "plagiarism", etc.)

- 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

Course name/number/section: Student name/number: Type of Communication Event: ___ Personal interview ___ Case study presentation ___ Poster board project presentation ___ Small group presentation ___ Online presentation
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The final class average will be determined by the following guidelines:

4 major examinations .....	40%
Quizzes .....	15%
Discussion Board .....	3 %

## INTRODUCTION TO STATISTICS

1342.L90

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Semester (comprehensive) examination . . . . .	17%
Homework.....	25 %

### **Late Work, Attendance, and Make Up Work Policies:**

There will be no makeup exams. But by the end of the semester, the lowest grade of the tests shall be dropped. If you miss an exam, MyMathLab shall grade it as zero. Then this is the one you drop by the end of the semester. If you know in advance you will be gone on exam day, please make arrangements to take the exam before you leave. By the end of the semester, two lowest quiz grades will be dropped. There is a homework with one set of questions for each section. You need to gain at least 70% of the credit in order to work on the next section. Each homework has the same due day: 5/01/2022. You always access Pearson in <https://brightspace.mclennan.edu/d2l/login> for the homework and help. You are required to score at least 70% of the homework on the chapters to take the test which covers the chapters. And three lowest homework grades will be dropped by the end of the semester.

It should be noted that enrollment in this course does not guarantee advancement to the next course level. The final responsibility for learning lies with the student.

### **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.” Our class is online, still we need to follow the regulations to respect each other.

\* [Click Here for the MCC Academic Integrity Statement](#)

([www.mclennan.edu/academic-integrity](http://www.mclennan.edu/academic-integrity))

The link above will provide you with information about academic integrity, dishonesty, and cheating.

It is expected that all work submitted for a grade represents your own effort. While collaboration on daily assignments is encouraged and expected, exams are to be the work of individual students. Cheating will not be tolerated in this class. If you are caught cheating, you will be removed from this class, given an F for the course, and disciplinary action (suspension) will be recommended to the Vice President of Instruction.

### **Instructor Attendance Policy:**

Make attendance a priority. If absence is unavoidable, YOU are responsible for getting class notes, reading the assigned text, and completing assignments. Attendance is very important in this class.



## INTRODUCTION TO STATISTICS

1342.L90

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In order to receive credit for the course, you must be in attendance at least 75% of the time scheduled for the class. However, many students find that missing just one class meeting puts them at a distinct disadvantage. If you miss a class and get behind, it is easy to get discouraged and give up. When you are in class, you have the opportunity to ask questions and get help immediately.

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

(<https://www.mclennan.edu/highlander-guide/policies.html>)

Click on the link above for the college policies on attendance and absences. Regular and punctual attendance is expected of all students, and each instructor will maintain a complete record of attendance for the entire length of each course, including online and hybrid courses. Students will be counted absent from class meetings missed, beginning with the first official day of classes. Students, whether present or absent, are responsible for all material presented or assigned for a course and will be held accountable for such materials in the determination of course grades. In the case of online and hybrid courses, attendance will be determined in terms of participation, as described in the course syllabus.

*\* You will need to access each link separately through your Web browser (for example: Mozilla Firefox, Chrome, Microsoft Edge or Safari) to print each link's information.*

# McLennan

C O M M U N I T Y

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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](http://www.mclennan.edu/disability).

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

[disabilities@mclennan.edu](mailto: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](mailto: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/](http://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](mailto: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](https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf).

**MCC Academic Integrity Statement:**

Go to [www.mclennan.edu/academic-integrity](http://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](mailto: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.