Course Syllabus MATH 1342 001 Spring 2022

Instructor: Chris Chappa Office: MLC (4th floor RBN) Phone: (903) 445-6510 (cell – texts preferred) Email: cchappa@uttyler.edu The best way to contact me is by text message. Office Hours: MW 3:30 – 4:00; other hours by appointment (may also meet virtually)

Course Overview: An in-depth exploration of the following concepts.

- Measures of central tendency and dispersion
- Sampling
- Probability
- Correlation and regression
- Estimation of population parameters
- Testing of hypotheses

Student Learning Outcomes: At the conclusion of this course, the student will be able to do the following.

- 1) Collect and describe various types of data.
- 2) Use various techniques and distributions to estimate population parameters.
- 3) Use various techniques and distributions to test population parameters.

Required Textbooks and Readings:

Statistics – Unlocking the Power of Data, Third Edition, Robin H. Lock, Patti Frazier Lock, Kari Lock Morgan, Eric F. Lock, Dennis F. Lock. ISBN: 978-1-119-67416-0

Special Course Notes:

1) Students are responsible for having a calculator, and knowing how to use it. Calculators should be brought to class daily.

2) Students are expected to complete a course project towards the end of the semester. Details will be provided after Test 2.

Assignments and weights/point values

Quiz Average – 10% Test 1 – 20% Test 2 – 20% Test 3 – 20% Course Project – 10% Final Exam – 20% <u>Grading Scale</u>: Your final grade for the class will be determined by a scale no harsher than the following.

Letter	Numerical grade range
Α	At least 89.5%
В	At least 79.5% but less than 89.5%
C	At least 69.5% but less than 79.5%
D	At least 59.5% but less than 69.5%
F	Less than 59.5%

Late Work and Make-Up Exams: Quizzes will be conducted in Canvas. Late quizzes *might* be made up if and only if the student contacts the professor *prior to the quiz deadline*.

Make-up exams *might* be provided, only if *all* of the following criteria are met.

- The student contacts the professor *before* the exam begins.
- The student has a *legitimate* reason for not being able to take the exam on the exam date. Legitimate reasons include, but are not limited to: university-related conflicts, illness, family emergencies. [Conflict with a job is *not* a legitimate reason.]
- The student provides *reasonable* documentation for not being able to take the exam on the exam date.
- The student completes the exam *before* exams are graded and returned. Once graded exams are returned, make-up exams are not allowed (unless medical reasons prevent a make-up exam in a timely manner, in which case arrangements will be made).

If a student anticipates missing an exam for a legitimate reason, and cannot complete a makeup exam under these criteria, the student may arrange to take the exam *prior* to the scheduled exam date.

<u>Attendance Policy</u>: I do not have a punitive attendance policy. You are adults. You should understand the value of attending class. If you choose not to attend class, you are responsible for the material covered on that day. If there is an in-class assignment on a day you miss, it is your responsibility to contact the professor concerning this assignment. This does not guarantee you will be able to make up that assignment.

UT Tyler does have a <u>Class Attendance policy</u> in the catalog.

Graded Course Requirements Information:

Quizzes: When a section of material is completed in class, a homework assignment will be given. Homework will *not* be collected. Instead, there will be a quiz in Canvas over the assignment. You are expected to use your completed homework assignment on the quiz.

- If the homework assignment is completed, the quiz will be quick (and hopefully easy).
- If the homework assignment is not completed, the quiz will take a long time.

Tests: Each test will cover two chapters. Test questions will come primarily from homework questions, although the professor reserves the right to change numbers and settings in problems.

Course Project: After Test 2, students will begin working on a course project. This project will require the student to find a statistic they want to test, gather data, and perform a hypothesis test. Details will be provided after Test 2.

Final exam: The final exam will be comprehensive. The main ideas from each chapter will be assessed. An optional final exam review session will be available on Study Day during Final Exam Week (Monday, April 25th, 2022).

Honor Code: The University of Texas at Tyler expects the highest levels of academic integrity from all of its students. Details can be found here: <u>honorcode.pdf (uttyler.edu)</u>.

As such, on each exam, students will be required to read and sign the following statement:

I have neither given nor received any unauthorized aid on this exam, except as I shall report to the professor. I understand that giving or receiving unauthorized aid on this exam can result in consequences ranging from a zero on the exam to withdrawal from the class.

Calendar of Topics, Readings, and Due Dates

Date	Topics/Reading	Location	Due Dates	
Week 1				
Monday, 1/10/22	1.1 The Structure of Data1.2 Sampling from a Population	In class	Quiz due 1/16/22	
Wednesday, 1/12/22	1.2 Sampling from a Population1.3 Experiments andObservational Studies	In class	Quiz due 1/16/22	
Sunday, 1/16/22	Quiz 1 due by 11:59 pm	Canvas		
	Week 2	•		
Monday, 1/17/22	No class (MLK Jr. Holiday)			
Wednesday, 1/19/22	2.1 Categorical Variables2.2 One Quantitative Variable: Shape and Center	In class	Quiz due 1/23/22	
Sunday, 1/23/22	Quiz 2 due by 11:59 pm	Canvas		
	Week 3			
Monday, 1/24/22	2.2 One Quantitative Variable: Shape and Center2.3 One Quantitative Variable: Measure of Spread	In class	Quiz due 1/30/21	
Monday, 1/24/22	LAST DAY TO DROP WITHOUT A "W" ON TRANSCRIPT			
Wednesday, 1/26/22	2.4 Boxplots and Quantitative/ Categorical Relationships	In class	Quiz due 1/30/21	
Sunday, 1/30/22	Quiz 3 due by 11:59 pm	Canvas		

Week 4			
Monday, 1/31/22	2.5 Two Quantitative Variables: Scatterplot and Correlation2.6 Two Quantitative Variables: Linear Regression	In class	Quiz due 2/6/22
Wednesday, 2/2/22	2.6 Two Quantitative Variables: Linear Regression Review for TEST 1	In class	Quiz due 2/6/22
Sunday, 2/6/22	Quiz 4 due by 11:59 pm	Canvas	
	Week 5		
Monday, 2/7/22	TEST 1 (Chapters 1 and 2)	In class	
Wednesday, 2/9/22	3.1 Sampling Distributions	In class	Quiz due 2/13/22
Sunday, 2/13/22	Quiz 5 due by 11:59 pm	Canvas	
	Week 6		
Monday, 2/14/22	3.2 Understanding and Interpreting Confidence Intervals	In class	Quiz due 2/20/22
Wednesday, 2/16/22	3.3 Constructing Bootstrap Confidence Intervals	In class	Quiz due 2/20/22
Sunday, 2/20/22	Quiz 6 due by 11:59 pm	Canvas	
	Week 7		I
Monday, 2/21/22	3.4 Bootstrap Confidence Intervals Using Percentiles	In class	Quiz due 2/27/22
Wednesday, 2/23/22	4.1 Introduction to Hypothesis Testing	In class	Quiz due 2/27/22
Sunday, 2/27/22	Quiz 7 due by 11:59 pm	Canvas	

Week 8			
Monday, 2/28/22	4.2 Measuring Evidence with P-Values	In class	Quiz due 3/6/22
Wednesday, 3/2/22	4.3 Determining Statistical Significance	In class	Quiz due 3/6/22
Sunday, 3/6/22	Quiz 8 due by 11:59 pm	Canvas	
	Week 9	1	
Monday, 3/7/22	SPRING BREAK (No class)		
Wednesday, 3/9/22	SPRING BREAK (No class)		
	Week 10	1	
Monday, 3/14/22	4.4 A Closer Look at Testing	In class	Quiz due 3/20/22
Wednesday, 3/16/22	Review for Test 2	In class	
Sunday, 3/20/22	Quiz 9 due by 11:59 pm	Canvas	
	Week 11	1	
Monday, 3/21/22	TEST 2 (Chapters 3 and 4)	In class	
Wednesday, 3/23/22	5.1 Hypothesis Testing Using Normal Distributions	In class	Quiz due 3/27/22
Sunday, 3/27/22	Quiz 10 due by 11:59 pm	Canvas	

Week 12			
Monday, 3/28/22	5.2 Confidence Intervals Using Normal Distributions	In class	Quiz due 4/3/22
Monday, 3/28/22	LAST DAY TO WITHDRAW		
Wednesday, 3/30/22	 6.1 Inferences for a Proportion Distribution Confidence Interval Hypothesis Testing 	In class	Quiz due 4/3/22
Sunday, 4/3/22	Quiz 11 due by 11:59 pm	Canvas	
	Week 13		I
Monday, 4/4/22	 6.2 Inferences for a Mean Distribution Confidence Interval Hypothesis Testing 	In class	Quiz due 4/10/22
Wednesday, 4/6/22	 6.3 Inferences for Difference in Proportions Distribution Confidence Interval Hypothesis Testing 	In class	Quiz due 4/10/22
Sunday, 4/10/22	Quiz 12 due by 11:59 pm	Canvas	
	Week 14		
Monday, 4/11/22	 6.4 Inferences for Difference in Means Distribution Confidence Interval Hypothesis Testing 	In class	Quiz due 4/17/22
Wednesday, 4/13/22	Review for TEST 3	In class	
Sunday, 4/17/22	Quiz 13 due by 11:59 pm	Canvas	

Week 15			
Monday, 4/18/22	TEST 3 (Chapters 5 and 6)	In class	
Wednesday, 4/20/22	Review for Final Exam	In class	
Week 16			
Monday, 4/27/22	Review for Final Exam (optional)	In class	
Wednesday, 4/29/22	FINAL EXAM (7:15 pm – 9:15 pm)	In class	