Course Syllabus MATH 1343 001 Spring 2022

Instructor: Chris Chappa Office: MLC (4th floor RBN)

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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.

• Perform χ^2 tests for categorical variables

- Use ANOVA to compare means
- Perform inferences for a simple regression
- Use a multiple regression
- Perform inferences for a multiple regression

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

- 1) Perform a goodness of fit test for a single categorical variable
- 2) Perform a test for association between two categorical variables
- 3) Use one-way and two-way analysis of variable to test multiple population means
- 4) Perform post-ANOVA analysis to estimate and test means
- 5) Make inferences about slope and correlation for a simple regression
- 6) Construct prediction intervals for a simple regression
- 7) Build and use multiple regressions

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. Details will be provided after Test 1.

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%
С	At least 69.5% but less than 79.5%
D	At least 59.5% but less than 69.5%
F	Less than 59.5%

<u>Late Work and Make-Up Exams</u>: 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: There will be three tests, scheduled on 2/7, 3/2, and 4/13.

Course Project: After Test 1, 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 1.

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).

<u>Honor Code</u>: 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</u> (uttyler.edu).

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	Discussion and Survey about MATH 1342	In class		
Wednesday, 1/12/22	Review z- and t-distributions	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	Review confidence intervals	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	Review hypothesis tests	In class	Quiz due 1/30/21	
Monday, 1/24/22	LAST DAY TO DROP WITHOUT A "W" ON TRANSCRIPT			
Wednesday, 1/26/22	Review hypothesis tests	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	Review hypothesis tests	In class	Quiz due 2/6/22		
Wednesday, 2/2/22	Review for TEST 1	In class			
Sunday, 2/6/22	Quiz 4 due by 11:59 pm	Canvas			
	Week 5				
Monday, 2/7/22	TEST 1 (MATH 1342 Review)	In class			
Wednesday, 2/9/22	7.1 Testing Goodness-of-Fit for a Single Categorical Variable	In class	Quiz due 2/13/22		
Sunday, 2/13/22	Quiz 5 due by 11:59 pm	Canvas			
	Week 6	1			
Monday, 2/14/22	7.2 Testing for an Association between Two Categorical Variables	In class	Quiz due 2/20/22		
Wednesday, 2/16/22	8.1 Analysis of Variance (Course Project Assigned)	In class	Quiz due 2/20/22 (Project due 3/2/22)		
Sunday, 2/20/22	Quiz 6 due by 11:59 pm	Canvas			
	Week 7				
Monday, 2/21/22	8.2 Pairwise Comparisons and Inferences after ANOVA	In class	Quiz due 2/27/22		
Wednesday, 2/23/22	Two-Way ANOVA	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	Review for Test 2	In class	
Wednesday, 3/2/22	TEST 2 (Chapters 7 and 8) Course Project Due	In class	
	Week 9	<u>I</u>	
Monday, 3/7/22	SPRING BREAK (No class)		
Wednesday, 3/9/22	SPRING BREAK (No class)		
	Week 10	1	
Monday, 3/14/22	2.5 Two Quantitative Variables: Scatterplot and Correlation	In class	Quiz due 3/20/22
Wednesday, 3/16/22	2.6 Two Quantitative Variables: Linear Regression	In class	Quiz due 3/20/22
Sunday, 3/20/22	Quiz 8 due by 11:59 pm	Canvas	
	Week 11		
Monday, 3/21/22	9.1 Inference for Slope and Correlation	In class	Quiz due 3/27/22
Wednesday, 3/23/22	9.2 ANOVA for Regression	In class	Quiz due 3/27/22
Sunday, 3/27/22	Quiz 9 due by 11:59 pm	Canvas	

Week 12				
Monday, 3/28/22	9.3 Confidence and Prediction Intervals	In class	Quiz due 4/3/22	
Monday, 3/28/22	LAST DAY TO WITHDRAW			
Wednesday, 3/30/22	10.1 Multiple Predictors	In class	Quiz due 4/3/22	
Sunday, 4/3/22	Quiz 10 due by 11:59 pm	Canvas		
	Week 13			
Monday, 4/4/22	10.2 Checking Conditions for a Regression Model	In class	Quiz due 4/10/22	
Wednesday, 4/6/22	10.3 Using Multiple Regressions	In class	Quiz due 4/10/22	
Sunday, 4/10/22	Quiz 11 due by 11:59 pm	Canvas		
Week 14				
Monday, 4/11/22	Review for TEST 3	In class		
Wednesday, 4/13/22	TEST 3 (Chapters 9 and 10)	In class		

Week 15			
Monday, 4/18/22	Review for Final Exam	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 (5:00 pm – 7:00 pm)	In class	