East Texas A & M University

Math 1342.H0E: Elementary Statistical Methods
COURSE SYLLABUS: Spring 2025, 3 semester credit hours

INSTRUCTOR INFORMATION

Instructor: Shelby Brooks
Office Location: WHS Room 215
Office Hours: M, T, W, F 11:38-12:08, M 3:30-4:30
Office Phone: 903-839-5551 **Office Fax**: 903-886-5945
University Email Address: Shelby.Brooks@tamuc.edu
Preferred Form of Communication: Email
Communication Response Time: Within 48 hours, unless over a weekend, holiday, or during school cancellation, such as bad weather days.

COURSE INFORMATION

Materials – Textbooks, Readings, Supplementary Readings:

Text & Supplement: Textbook(s) Required: *Statistical Reasoning for Everyday Life, 6th edition,* by Bennett, Briggs, and Triola. Published by Pearson, 2018. ISBN-10 # **0-13-8030146**

Supplies Needed: A three-ring binder or folder for handouts. You may also want access to a scientific or graphing calculator, scissors, post-it notes, stapler, ruler, colored pencils, dice, coins, and a deck of cards. **Please also use only pencils (no pens) on all exams.** You may have a need during the semester to print something, so you'll need access to printing supplies/a printer.

Calculators: A calculator is recommended during this course. Some material may be worked best with a graphing calculator. **I highly recommend a TI-83 or TI-84** be used when appropriate throughout the course. If you choose to use a different calculator, please note that the instructor *will not be a good resource for you to be able to use your calculator.*

Course Description:

Collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals, and hypothesis testing. Appropriate technology will be used. **Prerequisites: TSI complete/College-Ready.**

Student Learning Outcomes: Upon successful completion of this course, students will:

- 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 simple linear regression and correlation problems.
- Perform basic hypothesis testing using statistical methods.

Core Objectives:

Critical Thinking. Students will be able to analyze, evaluate, or solve problems when given a set of circumstances, data, texts, or art. This common core learning objective will be assessed on the final exam using key questions that will fulfill these objectives.

Communication. In written, oral, and/or visual communication, Texas A&M University-Commerce students will communicate in a manner appropriate to audience and occasion, with an evident message and organizational structure. This common core objective will be assessed using class activities with class discussion of statistical identities, graphs, and application problems.

Empirical and Quantitative Skills. Students will be able to interpret, test, and demonstrate principles revealed in empirical data and/or observable facts. This common core learning objective will be assessed using in class discussion and projects, homework, and final exams.

COURSE REQUIREMENTS

Minimal Technical Skills Needed:

Students must have a minimal amount of technical skills to be successful in this course. Skills needed include, but are not limited to: using the online learning system (D2L) in MyLeo; using StatCrunch; using Microsoft Word, Excel, and PowerPoint; and the use of email.

Instructional Methods:

Instructional Methods: Instruction will include lectures, demonstrations and models, and some group and individual work, based on the time available throughout the semester. In particular, students will be expected to work on projects and activities that deal with statistical software (StatCrunch or Excel) and real world applications of the material learned.

Student Responsibilities/ Tips for Success in the Course:

Attendance/Participation: I will be taking roll every class. All students are expected to be present, and attendance will be reflected in your Daily Work grade. In addition, students must participate in class each day in order to receive full points for this category. If you miss a class, come see me for any missed assignments. **Please do not approach me as I am beginning a class period**, unless it is an emergency, so that we might start ON TIME. Please be in your seat and ready to work when class begins. **Class Participation:** In addition, students must participate in class each day in order to receive full points for this category. In some instances, logging into D2L and completing assignments will also be used to determine part of your attendance. Students need to actively participate in class and/or online to receive credit.

Amount of weekly study: The "rule of thumb" for a math class is that for every hour of class time, you should spend approximately 3 hours of study time outside of the classroom. This study time may include a variety of activities, including but not limited to: re-organizing notes; working on homework; participating in a study group, tutoring, workshops, or Supplemental Instruction session; attending review sessions; and studying for quizzes and exams.

GRADING

Grading Policy:

Type of Assessment:		Portion of the Grade:
Daily Work	(Attendance, Attendance-Based Activities, Homework, and Quizzes)	15%
Daily Work	(Projects/Activities)	10%
Tests	(a total of 3 in-class exams)	50%
Comprehensive Final Exam		25%

Grading Scale: Grades will be assigned using the standard scale:

A = 90-100+, B = 80-89.9, C = 70-79.9, D = 60-69.9, F = 59.9 or below

******According to the A&M-Commerce catalog, Math 1342 CANNOT BE DROPPED if it serves as your first college-level math course.******

Note: A grade of "D" is considered passing for this course, depending on your major, if this course serves only as your core math requirement, with no other math courses to build upon this course afterward.

Types of Grades/Assessments:

Daily Grades: The daily grade is composed of several categories of assessments, including attendance, participation, homework, quizzes, and REQUIRED tutoring.

Attendance/Participation: I will be taking roll every class. All students are expected to be present, and attendance will be reflected in your Daily Work grade; it is a total of 5% of your overall grade. In addition, students must ***participate*** in class each day in order to receive full points for this category.

Homework: Homework will be assigned most class periods. **It is extremely important for you to work all homework in order to be prepared for the exams.** We will also be working on certain supplemental assignments which will often have to be completed individually as homework, after I have begun the assignment with you in class. The total number of assignments that are completed and turned in (punctually) by the student will be reflected in the Daily Work grade. A grade will be taken on select problems from each homework assignment. **In general, late work will not be accepted without appropriate documentation of a University-accepted absence.** A missed homework assignment or two, due to legitimate absence, will not significantly adversely affect your grade as long as you have kept up with all other assignments. We intend to limit as much paper passing as possible. Therefore, students should scan and upload all homework into D2L, when instructed to do so by their instructor, as .pdf files. See information below about scan apps.

Quizzes: Both individual and group quizzes may be given occasionally. **In general, NO make-up quizzes will be given**. This class covers enough material that there is no time to be missed/away from the course that is a "good time", and each quiz will be over material to be emphasized on exams. Quizzes will be averaged into your Daily Work grade. In addition, please ensure that your name is written on all homework pages so that, when graded, you will receive proper credit for your work.

Tutoring: Please note that all students in an entering college-level math class are strongly encouraged to attend 10 hours of tutoring at a campus-provided tutoring center. These include the Math Skills Center, TRIO, Supplemental Instruction sessions, library walk-in tutoring, Math department workshops, instructor Office Hours, and the University – provided online tutoring (currently through tutor.com), as well as any other official tutoring sessions offered by the University.

Class Activities/Projects/Reflections: Problems in the course material that have interesting applications for the class and real life will be introduced periodically into the class discussion. Many of the projects will allow students to use their knowledge of the content from in-class discussions. Regular attendance will assist students with being able to participate in these activities and projects. These projects will vary in their scope and should be completed neatly and punctually.

Tests: Tests will be given after a complete chapter or subject area. These exams will be announced at least a week in advance. **CELL PHONES and other electronic devices must be turned off and stored out of the student's reach.** The only electronic device allowed during tests and quizzes is an approved stand-alone calculator, and only with the instructor's consent.

Note: Calculators that solve problems for students, including but not limited to the TI-NSpire, TI-89, Casio Prizm, Casio Touch, or higher, are **NOT** allowed to be used for exams.

There will be THREE "chapter" exams which may consist of a variety of problems and short answer questions. However, students should expect the bulk of the questions on each test to be problem solving. Partial credit may be given on exams IF all work is neatly shown so that I can easily determine the student's mistakes. When pictures are drawn, students should be careful that figures are clearly marked and easily understood. Explanations should be explicit and understandable to the audience given. Items should NOT need interpretation if full credit is to be given.

Tentative test dates (although not in stone) are: Week #4 (February 3-7), Week #8 (March 3-7), and Week #14 (April 21-25). See the schedule below for details.

Exams will be administered in class. Students are expected to take exams in class with their instructor. Any exceptions should be worked out with the instructor *in advance* of the scheduled exam. Details will be provided when/if necessary.

Replacing a Low Test Grade: I realize that at times throughout the semester, emergency situations may arise that affect a student's performance on an exam or even prevent a student from attempting a test. However, in general, **make-up exams will NOT be given unless confirmed ahead of time and accompanied by a documented, University excused absence**. Therefore, I am willing to replace the student's ONE lowest exam grade with the student's grade on the corresponding portion of the final exam, provided the grade on that section of the final exam is higher. This provision will only be applied to ONE exam, so students should make every effort to attempt and be well-prepared for all exams.

Final Exam: Our final is a REQUIRED comprehensive exam. We will take the final exam according to the published Class Schedule/Final Exam schedule, which gives the time to have our final exam as in class **May 7 & 8**. **Do not expect a makeup exam for the final exam.**

TECHNOLOGY REQUIREMENTS

Instructor Specific Technology Requirements:

- **Calculator:** A TI-83 or TI-84 calculator (or equivalent) is RECOMMENDED for this course.
- **Internet access is REQUIRED**. Projects, etc., may be given online. If you use the ebook, you will need to be able to access the site.
- **A webcam OR a built-in camera on a laptop/tablet/phone is REQUIRED.** Should our course be forced online due to the current public health setting, or should a student contract a communicable illness, students will need access to a laptop or other device where they can view materials online as well as attend online video chats, etc.; therefore, students should be prepared and have this equipment available for the semester.

- **Word processing software is REQUIRED.** (Microsoft Word preferred/compatibility required)

- **Email access is REQUIRED**. Please utilize your A&M-Commerce (____@leomail.tamuc.edu) email address.

- **Scanner:** A scanner or scan app MUST be used for uploading homework; **NOT just** the camera on your phone or tablet. Homework and other documents must be loaded as .pdf files, **NOT** as .jpg files. This allows for an easy upload and download and clean documents (no black outlines/edges, etc.) The department has experience with the free app Cam Scanner (a video will be available in the "content" page in D2L), but there are several apps available. Many are free, including the "basic" version of Cam Scanner, even if they ask for money… you should still be able to use the free version for this course. As long as it will load to MyLeo as a .pdf and there aren't a lot of dark edges, extra items in the background, or shadows on the pages, you should be okay.

MyLeo Online Learning Management System (LMS):

D2L in MyLeo: All course sections offered by Texas A&M University-Commerce have a corresponding course shell in MyLeo. Below are technical requirements

LMS Requirements:
https://community.brightspace.com/s/article/Brightspace-Platform-Requirements
LMS Browser Support:
https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

ACCESS AND NAVIGATION in MyLeo/D2L:

MyLeo Support: You will need your campus-wide ID (CWID) and password to log into your course in D2L. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu**.**

***Note*:** Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

Interaction with Instructor Statement:
Students will be expected to interact with the instructor(s) in class or via electronic means in an appropriate manner. All instructor contact information is listed on this syllabus and should be used. Please use email to facilitate a quick response.

Technical Support:
If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here: https://community.brightspace.com/support/s/contactsupport

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Specific Procedures/Policies:

Getting Help Outside of Office Hours: **The Math Skills Center**, located in Binnion 328, is open Monday and Wednesday, 10am – 8pm; Tuesday and Thursday, 10am – 6pm; and Friday, 10am – 2pm. For information on which tutors would be best to help, and when they are working, feel free to see me or the bulletin board outside the lab. **Mach III/TRIO Services,** located in the Halladay Student Services building, Room 300, is available to students who meet certain criteria, such as being a first-generation college student, etc. Contact TRIO at 903-886-5833. The **Academic Success Center** offers tutoring in the library, as well as Supplemental Instruction. Their hours can be found on the university web site. In addition, each student has available tutoring hours through the online tutoring service, tutor.com. Additional details can be found here: https://inside.tamuc.edu/campuslife/campusServices/academicSuccessCenter/tutorInfo/default.aspx

Comments: I will do my best to make a quality presentation each day and, in return, I expect that you will do your best to learn the material presented in class and in the text. This course will be taught as hands-on as possible, and student participation is necessary daily. It is important that you be actively engaged in any group activities. Questions are welcome in the classroom, and I will gladly schedule outside help sessions if necessary. I know that together, these efforts can contribute significantly to your education in this class.

Syllabus Change Policy:
The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance and given in writing.

University Specific Procedures:

Student Illness:

Students should not attend class when ill or after exposure to anyone with a communicable illness. Communicate such instances directly with your instructor. Faculty will work to support the student getting access to missed content or completing missed assignments.

Student Conduct:

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook (See link below). All students are expected to exercise self-discipline and respect for the rights of others at all times. Behavioral disruptions that interfere with the business of the "classroom" or with an individual's ability to learn may be referred to the Dean of Students. Courtesy to others is important. That means respecting the opinions of others, and in general, doing your part to make this a positive learning environment for all students. NOTE: This includes images and/or messages on face masks and/or facial coverings.

https://www.tamuc.edu/student-code-of-conduct/

Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: https://www.britannica.com/topic/netiquette

Appropriate classroom behavior is required to attend this class. *All cell phones and other such devices must be put on silent or turned off during class.* Phones are a distraction for me and the other students in the class. NOTE: THIS INCLUDES BLUETOOTH AND OTHER DEVICES THAT ARE PLACED IN THE EAR. All people will be treated with respect and I will not allow talking that will disrupt my lectures. If disruptions occur during class lectures, you will be asked to leave class and will earn a zero on any applicable grades for that class period. Serial disrupters will be asked dealt with individually, including referral to the Dean of Students. If you are withdrawn from this course as a result of disruptions, you will be withdrawn from school, entirely.

TAMUC Attendance Policy:

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

https://coursecatalog.tamuc.edu/undergrad/academic-procedures/

Academic Integrity:

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

As stated in the Student Handbook, academic dishonesty in the class will not be tolerated. If any materials or equipment are found to be available to the student at any time which is considered inappropriate by the instructor, the very fact that the materials are inappropriately available to the student is grounds for an accusation of academic dishonesty. The instructor reserves the right to fail the student for the assignment or the course, as well as report the student to the Academic Dean and/or the Dean of Students. They also have the ability to terminate the student's enrollment in the University. The instructor considers this an extremely serious matter. Please make sure you are not in a situation that could be viewed negatively.

I find that a majority of students are honest in doing their school work. However, we must take measures to protect the academic integrity of the classroom**. I have a NO TOLERENCE policy for cheating and if you are caught cheating, you will probably fail that portion of the course, as well as possibly the entire course.** Cheating in this course is defined as (but not limited to) the following:

- Giving or receiving answers during an exam or quiz.
- Viewing the exam or quiz answers of nearby classmates.
- Having notes/practice work/etc. available during quizzes or tests.
- Possession or access to test items before the test is given.
- Deception in getting an excused absence to obtain the undeserved opportunity to make-up work.
- Use of cell phones or text messaging technology/other devices during exams or quizzes. **You may not use the calculator on your cell phones.**
- Improper citations in written works, or using another person's ideas and words as your own without giving proper credit.
- **Any** method, no matter how well rationalized or accepted, which gives an unfair advantage and/or improves a person's grade by any means other than study and skillful performances on exams and/or other assignments.

Students found guilty of an act of academic dishonesty in this course will be subject to receiving an "F" in this course, as well as the below-mentioned disciplinary actions, as deemed appropriate.

Specific additional disciplinary action for these offenses may include any combination of the following:

Point deduction of an assignment
Failure of an assignment
A grade of zero for an assignment
Failure of this course
Referral to the Academic Integrity Committee or department head for further action
Referral to the Dean of the College of Science and Engineering, and other Deans as appropriate
Referral to the University Discipline Committee

Students with Disabilities -- ADA Statement:
The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Library, Room 162
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148

Email: StudentDisabilityServices@tamuc.edu
Website: https://www.tamuc.edu/student-disability-services/

Counseling Center:
The Counseling Center at A&M-Commerce, located in the Halladay Building, Room 203, offers counseling services, educational programming, and connection to community resources for students. Students have 24/7 access to the Counseling Center's crisis assessment services by calling 903-886-5145. For more information regarding Counseling Center events and confidential services, please visit: https://www.tamuc.edu/counseling-center/

Non-Discrimination Notice:
Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information, or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Artificial Intelligence Statement:

Texas A&M University-Commerce acknowledges that there are legitimate uses of Artificial Intelligence, ChatBots, or other software that has the capacity to generate text, or suggest replacements for text beyond individual words, as determined by the instructor of the course.

Any use of such software must be documented. Any undocumented use of such software constitutes an instance of academic dishonesty (plagiarism).

Individual instructors may disallow entirely the use of such software for individual assignments or for the entire course. Students should be aware of such requirements and follow their instructors' guidelines. If no instructions are provided the student should assume that the use of such software is disallowed.

In any case, students are fully responsible for the content of any assignment they submit, regardless of whether they used an AI, in any way. This specifically includes cases in which the AI plagiarized another text or misrepresented sources.

13.99.99.R0.03 Undergraduate Academic Dishonesty
13.99.99.R0.10 Graduate Student Academic Dishonesty

Concealed Carry Statement:
Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the Carrying Concealed Handguns On Campus document and/or consult your event organizer.

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903-886-5868 or 9-1-1.

COURSE OUTLINE/CALENDAR

Topics Covered (tentative schedule):

- Week #1 (**Jan. 13 - 17**) - Syllabus, Introduction and Getting Started/What is Statistics? What is Data?
- Week #2 (**Jan. 20 – 24**) - **MLK DAY** (school closed Monday) & Sampling Strategies
- Week #3 (**Jan. 27 – 31**) - Surveys & Types of Studies (Observational Studies and Experimental Design) & Validity of Studies, and Margin of Error
- Week #4 (**Feb. 3 – 7**) - Review and **Exam 1**; Project #1 due
- Week #5 (**Feb. 10 – 14**) - Frequency Tables, Graphical Summaries of Data, Misleading Graphs, and Collecting Data and Numeric Summaries of Data (mean, median, mode, range, intro to "normal")
- Week #6 (**Feb. 17 –21**) - Creating Box/Whiskers and Stem/Leaf, Variation and Standard Deviation
- Week #7 (**Feb. 24 – 28**) - "Normal" data and Distributions and Standard Deviation; Project #2 due
- Week #8 (**March 3 – 7**) - Review and **Exam 2**

  *****SPRING BREAK – NO CLASSES (March 10 – 14) *****
- Week #9 (**March 17 – 21**) - Wrap up "normal" data and begin Hands-on Probability (dice, cards, coins, spinners, etc.)
- Week #10 (**March 24 – 28**) - Theoretical vs. Empirical Probability – Unions and Intersections
- Week #11 (**March 31 – April 4**) - Correlation and Simple Linear Regression and Line of Best Fit; Project #3 due
- Week #12 (**April 7 – 11**) - Sampling Distributions/Sampling Distribution of the Sample Mean; Calculating Confidence Intervals
- Week #13 (**April 14 – 18**) - Hypothesis Testing/Inferences to the Population from the Sample; Project #4 due
- Week #14 (**April 21 – 25**) - Review for Exam 3 & **Exam 3**
- Week #15 (**April 28 – May 2**) - REVIEW WEEK FOR FINAL EXAM
- Week #16 (**Week of May 5–9**) – **Final Exam** (SEE DATES ABOVE – NOTE: SPECIAL DATES AND TIMES!!)

Remaining enrolled in this course constitutes acceptance of all policies contained in this syllabus.

Any changes to this syllabus and/or schedule will be communicated directly to you in class by the instructor. You are responsible for being aware of any such changes.

Good luck and work hard!!