



# MATH1342.002 Introductory Statistics

Spring 2024

**Instructor:** Qiuchen Hai

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**Class Time & Place:** MW 8:00 am - 9:15 am; Classroom Hall 204

**\*Recitation Time & Place:** Monday 9:30 am - 10:20 am, Classroom Hall 204

**Office:** Classroom Hall 3rd Floor, room 334 or online at <https://tamusa.zoom.us/j/86535545562>

**Office hours (help session with me):** Friday 9 – 10 am; 4:00 pm – 5:30 pm (in person); Tuesday & Thursday 1:00 pm – 3:00 pm (**online via ZOOM**); \*\* other times available by appointment (*I am here to help!*)

**Credit hours:** 3 credits

**Course Overview:** Students will study the collection, analysis, presentation and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals and hypothesis testing. Appropriate technology used. This course meets the standards for the mathematics category of courses under the core curriculum. **Prerequisite:** Evidence of math equivalent to High School Algebra II (“C” or higher) or placement.

## Course Materials

**REQUIRED:** Online access code for Fundamentals of Statistics: Informed Decisions Using Data by Michael Sullivan, III (6<sup>th</sup> edition). Pearson Education with ISBN 9780136807346. (E-book included with access code)

\*\*Access codes are available in Blackboard, through the Brytewave link

**Calculators:** A graphing calculator (Ex: TI-84 preferred, but TI-83 will also work) is needed and allowed on all exams. No cell phone or internet enabled calculator will be allowed, and online math utilities (e.g., Desmos) are also not allowed.

## Student Learner Objectives:

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

**List of Topics:** Topics to be covered include but are not limited to the following:

Chapter 1: 1.1-1.6 Data Collection

Chapter 2: 2.1-2.4 Descriptive Statistics

Chapter 3: 3.1-3.5 Numerically Summarizing Data

Chapter 5: 5.1-5.5 Probability

Chapter 6: 6.1-6.3 Discrete Probability Distributions

Chapter 7: 7.1-7.3 The Normal Probability Distribution

Chapter 8: 8.1 Sampling Distributions

Chapter 9: 9.1-9.2 Estimating the Value of a Parameter

Chapter 10: 10.1, 10.3 Hypothesis Tests Regarding a Parameter

Chapter 11: 11.1, 11.3, 11.2\*\* Inference on Two Population

Parameters

- Chapter 1. Data Collection (introduction, sampling methods, bias in sampling...)
  - Chapter 2. Organizing and Summarizing Data (organizing qualitative/quantitative data by different displays, Graph misrepresentation of data...)
  - Chapter 3. Numerically Summarizing Data (measures of central tendency, dispersion, position, outliers, five-number summary, and boxplots)
  - Chapter 5. Probability (different probability rules, counting techniques...)
  - Chapter 6. Discrete Probability Distributions (discrete random variables, Binomial, ...)
  - Chapter 7. Normal Probability Distributions (properties of the normal distribution, applications, assessing normality...)
  - chapter 8. Sampling distribution (distribution of sample mean and sample proportion)
  - Chapter 9. Estimating the Value of a Parameter (population proportion, population mean, standard deviation)
  - Chapter 10 Hypothesis Test Regarding a Parameter (a population mean, Type I or Type II errors)
  - Chapter 11 Inference on Two population parameters (two means for independent samples or dependent samples...)
- \*\*The instructor reserves the right to modify/update the topics as appropriate.*

**GRADING POLICY**

Graded Course Elements	Percentage
Homework (completed on MyStatLab)	10%
Quizzes (completed on MyStatLab)	10%
3 Unit Tests (in class)	50%
Group Project	10%
Final Exam (in class)	20%
Total	100%

**Grade Scale for MATH 1342: 90 – 100% = A; 80 – 89% = B; 70 – 79% = C; 60 – 69% = D Below 60% = F**  
**Grade Scale for MATH support portion: 60 – 100% = CREDIT; Below 60% = NO CREDIT**

- \*No late homework or quizzes will be allowed, and individual make-up exams will be given in rare cases and only with instructor approval.
- \*The lowest quiz grade will be dropped at the end of the semester.
- \*The final examination is a comprehensive exam and is **required** of all students. The final exam may also replace a low or missing test grade.
- \*The grading policy may be amended during the semester at the instructor’s discretion.

**Course Requirements and Expectations**

**Class Attendance:** Attendance will be tracked by each class(including recitation) via a sign-in sheet that I will pass around. Absences due to illness, observance of a religious holy day, or an officially approved trip will be excused only after you have provided suitable **written documentation** from university officials/health care providers. Whether an absence due to other reasons is excused or unexcused is determined solely by me.

Students are expected to attend every lecture. Be aware of what has been covered in every class and any announcements and course policy changes made in class. You are welcome to ask questions during my office hours; however, it is your responsibility to learn the material.

**Homework & Quizzes:** All homework and quizzes will be completed online on MyLab Statistics (Pearson). You will need an access code that can be obtained via the Brytewave online after you log into Blackboard. Read the announcements in Blackboard for all instructions. All due dates are listed in Mylab Statistics. You can complete the

assignments until 11:59 pm of the due date listed. The homework may be attempted multiple times in order to increase your homework grade. Quizzes may be attempted four times. Only the highest score will be counted. No late assignments and quizzes will be accepted, nor make-ups allowed.

**Tests(closed books & notes):** Three unit tests are scheduled during the semester and a comprehensive final exam. All tests will be taken in class, and you will show your work in order to get full credit for the problems. Students will be allowed to use a graphing calculator on the tests(*NO sharing of calculators during exams! Doing so will result in a 0*). In case you miss an exam or find out that you will miss an exam, you should contact me either in person or by e-mail, **at least one week in advance of the exam** for non-emergency cases or within 24-hrs of the scheduled exam date for emergency cases. Any missed exam counts as a 0 unless the student has a valid documented excuse and contacts me as soon as possible after the excuse for missing the test arises. Examples of valid documented excuses are sickness documented with a doctor's note, death in the family documented with a copy of the death notice, attending university-sponsored events with a Dean's excuse, etc. Minor headaches or attending sports events (without Dean's excuse) are not examples of emergency situations. Other than described above, no make-up exams will be given, but the final exam can replace your lowest test grade. Test dates are listed below. Please contact me ASAP if you have concerns about the testing dates.

**In-Class Unit Exam 1, Wednesday, February 28, 8:00 am - 9:15 am CT**

**In-Class Unit Exam 2, Wednesday, March 27, 8:00 am - 9:15 am CT**

**In-Class Unit Exam 3, Wednesday, April 24, 8:00 am - 9:15 am CT**

**Final Exam, Scheduled May 1-7, 2024; Exam Date & Time, Room to be announced later**

**Final Exam:** In order to pass this class students must take a comprehensive final exam scheduled during Finals Week. Final exams cannot be rescheduled or missed (for dire and unforeseen medical or family emergencies, students must consult with me). The final exam will also be taken in class with work submitted to justify your solutions. The final exam may be used to replace your lowest regular exam grade. **The final exam must be completed by the announced date, time, and location. No exceptions.**

**Gradebook:** The gradebooks in MyLab Statistics and in Blackboard keep a running average of your grade.

## **CLASS RULES**

1. **Regular attendance and participation is VERY IMPORTANT in this class!** Please expect to work on your math work very frequently. Assignments will be due throughout the week – watch deadlines closely. Failure to complete work in each unit will result in a lower grade. Please do not ask me to extend the due dates. Work ahead on the assignments instead (remember... if something can go wrong, it will).
2. If you need additional help, please ask! I am available to help, and students also have access to free online tutoring through Jaguar Tutoring in the ALC. I will be available during my office hours. We can talk by phone if necessary. The best way to contact me is via email, [ghai@tamusa.edu](mailto:ghai@tamusa.edu)
3. It is the student's responsibility to drop a course. The instructor may not automatically drop you. Please check the academic calendar webpage of TAMU-SA for the last day to drop a course or withdraw from the university. Please contact the Welcome Center at 784-1300 if you desire to drop the course.
4. **Office hours - This time is set aside for you.** You are not "bugging" or interrupting me when you pop in or set up a time to meet with me during these hours. Rather, you are making good use of a resource! You should feel free to use this time as you need — ask me a question, review notes, brainstorm ideas, consider future plans, etc. I'm also happy to meet in small groups.

**Civility in the Classroom:** Students are expected to be supportive and encouraging to other students to help create a positive learning environment. Thus I respectfully ask that you not use cell phones, laptops, or other electronic devices in class for any non-course related purposes. Doing so is distracting to you, to me, and to your fellow students. Please make every effort to avoid situations that require you to leave before the end of class. However, in the event that you

must leave class early please inform your instructor in advance. Cell phones should be put away during exams and quizzes.

### **IMPORTANT UNIVERSITY POLICIES AND RESOURCES**

University Email Policy and Course Communications: All correspondence between professors and students must occur via University email accounts. You must have your Jaguar email account ready and working. If it is not working, contact the help desk at [helpdesk@tamusa.edu](mailto:helpdesk@tamusa.edu) or at 210-784-HELP (4357). If you don't hear back within 48 hours, contact them again. They have many requests during the first part of the semester, so you may need to follow up with them.

Academic Accommodations for Persons with Disabilities: The Americans with Disabilities Act Amendments Act (ADAAA) of 2008 and the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights protection for persons with disabilities. Title II of the ADAAA and Section 504 of the Rehabilitation Act require that students with disabilities be guaranteed equal access to the learning environment through the provision of reasonable and appropriate accommodation of their disability. If you have a diagnosed disability that may require an accommodation, please contact Disability Support Services (DSS) for the coordination of services. DSS is located at the Main Campus on the 2nd floor of the Central Academic Building in suite 210. The phone number for DSS is (210) 784-1335 and email is [dsupport@tamusa.edu](mailto:dsupport@tamusa.edu).

Academic Learning Center: All currently enrolled students at Texas A&M University-San Antonio can utilize the Academic Learning Center for subject-area tutoring. The Academic Learning Center is an appointment-based center where appointments are made through the Navigate platform. Students access Navigate through Jagwire in the Student Services tab. The Center is active on campus outreaching to students to highlight services offered. You can contact the Academic Learning Center by emailing [tutoring@tamusa.edu](mailto:tutoring@tamusa.edu) or calling (210)-784-1332. The ALC is located on the second floor of Central Academic Building (CAB) in room 202. Online tutoring is also available for after hours and weekend assistance.

While tutoring hours may change based on tutor schedules and availability, the current tutoring hours for MATH in the ALC are as follows:

	<b>Appointments available</b>	<b>Walk in Tutoring – No appointment needed</b>
MONDAY	9 am – 6 pm	11 am – 6 pm
TUESDAY	8 am – 6 pm	10 am – 6 pm
WEDNESDAY	8 am – 4 pm	8 am – 6 pm
THURSDAY	8 am – 6 pm	8 am – 6 pm
FRIDAY	11 am – 3 pm	11 am – 3:30 pm

Counseling Resources: As a college student, there may be a time when personal stressors interfere with your academic performance and/or negatively impact your daily functioning. If you or someone you know is experiencing life stressors, emotional difficulties, or mental health concerns at A&M-SA, please contact the Office of Student Counseling & Wellness Services (SC & WS) located in Madla 120 or call 210-784-1331 between the hours of 8:00 AM and 5:00 PM. All mental health services provided by SC & WS are free, confidential (as the law allows), and are not part of a student's academic or university record. SC&WS provides brief individual, couples, and group therapy, crisis intervention, consultation, case management, and prevention services. For more information, please visit [www.tamusa.edu/studentcounseling](http://www.tamusa.edu/studentcounseling). In a crisis, please walk-in to the SC & WS services between 8:00 AM and 5:00 PM to be seen by a licensed clinician. After hours, please contact UPD at 911 or text "HOME" to 741-741 24/7/365 to connect with a trained crisis counselor. The National Suicide Prevention hotline also offers a 24/7/365 hotline at 1-800-273-8255

Emergency Preparedness: JagE Alert is Texas A&M University-San Antonio's mass notification. In the event of an emergency, such as inclement weather, students, staff and faculty, who are registered, will have the option to receive a text message, email and/or phone call with instructions and updates. To register or update your information visit: <https://tamusa.bbcportal.com/>. More information about Emergency Preparedness and the Emergency Response Guide can be found here: <http://www.tamusa.edu/riskmanagement/index.html>.

Financial Aid and Verification of Attendance: According to the following federal regulation, 34 CFR 668.21: U.S. Department of Education (DoE) Title IV regulation, a student can only receive Title IV funds based on Title IV eligibility criteria which include class attendance. If Title IV funds are disbursed to ineligible students (including students who fail to begin attendance), the institution must return these funds to the U.S. DoE within 30 days of becoming aware that the student will not or has not begun attendance. Faculty will provide the Office of Financial Aid with an electronic notification if a student has not attended the first week of class. Any student receiving federal financial aid who does not attend the first week of class will have their aid terminated and returned to the DoE. Please note that any student who stops attending at any time during the semester may also need to return a portion of their federal aid.

Jaguar Writing, Language, and Digital Composing Center (WLDCC): The Jaguar Writing Center provides writing support to graduate and undergraduate students in all three colleges. Writing tutors work with students to develop reading skills, prepare oral presentations, and plan, draft, and revise their written assignments. The Writing Center has both online and in person appointments. Students can schedule appointments with the Writing Center in JagWire under the student services tab. Students wanting to work in realtime with a tutor can schedule an "Online Appointment." Students wishing to receive asynchronous, written feedback from a tutor can schedule an "eTutoring" appointment. More information about what services we offer, how to make an appointment, and how to access your appointment can be found on our website at <https://www.tamusa.edu/student-resources/writing-center/index.html>. The Writing Center can also be reached by emailing [writingcenter@tamusa.edu](mailto:writingcenter@tamusa.edu).

Meeting Basic Needs: Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students ([DOS@tamusa.edu](mailto:DOS@tamusa.edu)) for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources they may possess.

Military Affairs: Veterans and active-duty military personnel are welcomed and encouraged to communicate, in advance if possible, and special circumstances (e.g., upcoming deployment, drill requirements, disability accommodations). You are also encouraged to visit the Patriots' Casa in-person room 202, or to contact the Office of Military Affairs with any questions at [military@tamusa.edu](mailto:military@tamusa.edu) or (210)784-1397.

Religious Observances: Texas A&M University-San Antonio recognizes the diversity of faiths represented among the campus community and protects the rights of students, faculty, and staff to observe religious holidays according to their tradition. Under the policy, students are provided an opportunity to make up any examination, study, or work requirements that may be missed due to a religious observance provided they notify their instructors before the end of the second week of classes for regular session classes.

Respect for Diversity: We understand that our students represent diverse backgrounds and perspectives. When we are equity-minded, we are aware of differences and inequalities and are willing to discuss them so we can act to resolve them. The University is committed to building cultural competencies, or the attitudes, skills, and knowledge that enable individuals and organizations to acknowledge cultural differences and incorporate these differences in working with people from diverse cultures. Respecting and accepting people different than you is vital to your success in the class, on campus, and as a future professional in the global community. While working together to build this community we ask all members to:

- Share their unique experiences, values, and beliefs.
- Be open to the views of others.
- Honor the uniqueness of their colleagues.
- Value each other's opinions and communicate respectfully.
- Keep confidential discussions that the community has of a personal (or professional) nature.

- Use this opportunity together to discuss ways in which we can create an inclusive environment in this course and across the A&M-San Antonio community.

The Six-Drop Rule: Students are subject to the requirements of Senate Bill (SB) 1231 passed by the Texas Legislature in 2007. SB 1231 limits students to a maximum of six (6) non-punitive course drops (i.e., courses a student chooses to drop) during their undergraduate careers. A non-punitive drop does not affect the student's GPA. However, course drops that exceed the maximum allowed by SB 1231 will be treated as "F" grades and will impact the student's GPA.

Statement of Harassment and Discrimination: Texas A&M University-San Antonio is committed to the fundamental principles of academic freedom, equality of opportunity and human dignity. To fulfill its multiple missions as an institution of higher learning, A&M-San Antonio encourages a climate that values and nurtures collegiality, diversity, pluralism and the uniqueness of the individual within our state, nation, and world. All decisions and actions involving students and employees should be based on applicable law and individual merit. Texas A&M University-San Antonio, in accordance with applicable federal and state law, prohibits discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status. Individuals who believe they have experienced harassment or discrimination prohibited by this statement are encouraged to contact the appropriate offices within their respective units.

Students' Rights and Responsibilities: The following statement of students' rights and responsibilities is intended to reflect the philosophical base upon which University Student Rules are built. This philosophy acknowledges the existence of both rights and responsibilities, which is inherent to an individual not only as a student at Texas A&M University-San Antonio but also as a citizen of this country.

#### *Students' Rights*

1. A student shall have the right to participate in a free exchange of ideas, and there shall be no University rule or administrative rule that in any way abridges the rights of freedom of speech, expression, petition and peaceful assembly as set forth in the U.S. Constitution.
2. Each student shall have the right to participate in all areas and activities of the University, free from any form of discrimination, including harassment, on the basis of race, color, national or ethnic origin, religion, sex, disability, age, sexual orientation, or veteran status in accordance with applicable federal and state laws.
3. A student has the right to personal privacy except as otherwise provided by law, and this will be observed by students and University authorities alike.
4. Each student subject to disciplinary action arising from violations of University Student Rules shall be assured a fundamentally fair process.

#### *Students' Responsibilities*

1. A student has the responsibility to respect the rights and property of others, including other students, the faculty and University officials.
2. A student has the responsibility to be fully acquainted with the published University Student Rules and to comply with them, as well as federal, state, and local laws.
3. A student has the responsibility to recognize that student actions reflect upon the individuals involved and upon the entire University community.
4. A student has the responsibility to maintain a level of behavior that is consistent in supporting the learning environment of the institution and to recognize the University's obligation to provide an environment for learning.

Electronic Devices: The use of phones or other electronic devices for non-class related activities is not allowed. Anyone who is observed text messaging or using an electronic device during class for a non-class related purpose will be given a warning, and as a further action that person will be asked to drop the class. Devices should be turned off and put away during exams and quizzes.

#### Important Dates:

January 16	First day of classes
January 31	Census Date
March 11-17	Spring Break - No classes

March 29	Study day - No classes
<b>April 13</b>	<b>Last day to drop with an automatic grade "W"</b>
April 20	Last day to withdraw from the University
<b>April 29</b>	<b>Last day of classes</b>
April 30	Study day – No classes
<b>May 1-7</b>	<b>Final exams</b>
May 7	End of term

The complete academic calendar is available online: <https://catalog.tamusa.edu/undergraduate/academic-calendar/>

### AI policy

Math 1314 assumes that all work submitted by students will be generated by the students themselves, working individually or in groups. Students should not have another person/entity do the writing of any portion of an assignment for them, which includes hiring a person or a company to write assignments and/or using artificial intelligence (AI) tools. Use of any AI-generated content in this course qualifies as academic dishonesty and violates Texas A&M-San Antonio's standards of academic integrity.

### COVID-19 SYLLABUS STATEMENT

The safety of our campus community is paramount to our ability to provide our students, faculty, and staff with a productive and secure learning and working environment. We encourage you to wear a mask when the situation warrants doing so or if you remain unvaccinated. Everyone should wash their hands frequently and avoid close contact and large crowds. The university maintains a covid-19 web-site with current data, safety protocols, and reporting guidelines at <https://www.tamusa.edu/community-safety-together/index.html>.