**Course Time & Location:** M/W 12:00-1:15 **Course Credit:** 3 SCH

**Course Delivery Method:** Sync Online **Faculty:** Dr. Angela M. Sikorski

**Office:** UC 221 **Email:** [angela.sikorski@tamut.edu](mailto:angela.sikorski@tamut.edu)

**Office Hours:** By appointment via Zoom **Phone:** 903-223-3018

**Prerequisites:** MATH 1314 (College Algebra) or higher.

**Course Description:** This course will discuss the concepts and statistical procedures of data analysis used in the behavioral sciences. In the course students will learn ways to describe data (descriptive statistics) and methods of evaluating hypotheses and testing psychological theories (inferential statistics) using examples from the psychological literature. Statistical analyses include z-test, t-test, ANOVA, correlation, regression and non-parametric tests.

**Required Materials:**

Corty, E.W. (2016). *Using and Interpreting Statistics: A Practical Text for the Behavioral, Social and Health Sciences,* New York, NY: Worth Publishers.

Calculator

**Student-Learning Outcomes:** At the end of the course students will 1) understand the statistical vocabulary and techniques necessary to become statistically literate so that they can 2) evaluate the appropriateness of statistical methodology and results reported in behavioral research; 3) apply the general procedures for testing research hypotheses, and 3) understand the basic statistical concepts necessary to study more advanced statistical topics. Students will also demonstrate proficiency in performing statistical analyses by hand and using software.

**Attendance:** I do not take attendance in this course, but in order to be successful you must attend class regularly. The material covered during each class builds upon previous lessons and also provides a foundation for subsequent lessons.

**Course Evaluation:** Students may earn 1000 points in this course (600 from exams and 400 from assignments). The number of points associated with each letter grade is as follows: A=900-1000, B=800-899, C=700-799, D=600-699, F=below 600

**Exams: 50%** There are five non-cumulative in‐class examinations each worth 100 points (5 x 10 = 500 points). Exams will consist primarily of multiple choice items but may also include short answer, fill-in-the-blank, and other types of questions. Students may use a calculator and a one-sided 8.5” x 11” page of notes. All notes used for an exam must be hand written by the individual student. Font small enough that requires a magnifying glass is not acceptable. All notes used during the exam must be turned in with the exam with your name clearly printed on the top of the notes page.

**Final Exam: 10%** There is a comprehensive final exam worth 100 points. The format of the exam will be comparable to the non-cumulative exams and will consist of questions from the previous exams. Students may bring hand-written notes on both sides of an 8.5” x 11” page of paper.

**Take-home Assignments: 40%** There are five assignments each of which is worth 80 point (5 x 80pts = 400 pts). Assignments consist of problem solving and essay. To earn full credit on the assignments, students must *carefully and thoughtfully answer* the questions. I’m not just looking to see whether the answer is correct, but whether you can clearly articulate your understanding of the concept. If math is required to come to an answer, all work leading up to that answer must be demonstrated. The written portion of assignments must be typed, whereas any mathematical computations may be hand written. Assignments are due by at the beginning of class on the due date and are submitted via turnitin.com. While I encourage students to teach and learn from one another, I expect the work you submit to be your own. If cheating or plagiarism is suspected, you will be turned into the Associate Vice President of Student Affairs and may earn a 0 for that assignment or in the course.

**Extra Credit:** I do not offer extra credit. The grade you earn in this course is solely based on your performance on exams and assignments.

**Make-Up Policy:** Students are permitted to submit assignments late and make up exams ONLY if there is documentation of an emergency or illness, or if there is documented approval from me prior to the due date of the assignment / date of exam. All late assignments and make-up exams must be completed within one week from when the assignment / exam was originally due / scheduled. Make up exams must be completed in the testing center. To schedule a make-up exam you must make the arrangements by contacting Barbara Sears at 903-223-3072 or at [Barbara.sears@tamut.edu](mailto:Barbara.sears@tamut.edu). Please note the testing center requires a 24 hour notice when scheduling make-up exams.

**For University policies on Academic Integrity**, **A&M-Texarkana Email Address**, **and the** **Drop Policy, please refer to** [**Syllabus Policies**](http://tamut.edu/Admissions/Enrollment-Services/Registrar/syllabuspolicies.html)**\*.**

**For policies governing *all web-enhanced and online courses*, please refer to** [**Online Education**](http://tamut.edu/Academics/Online-Education/index.html)\*\*.

**Disability Accommodations:** The Americans with Disabilities Act (ADA) is a federal non-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this law requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact the Office of Student Life in UC room 126, or call (903)223-3116. For additional information visit [**Disability Services**](http://www.tamut.edu/Academics/Student-Support/Disability-Services/index.html)**\*\*\*.**

\* <http://bit.ly/TAMUT_SyllabusPolicies>

\*\* <http://bit.ly/TAMUT_OnlineEducation>

\*\*\* <http://bit.ly/TAMUT_DisabilityServices>

**Course Calendar:** *Schedule is tentative and instructor reserves the right to change it as needed.*

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| Dates: | Topics: | Assignments: |
| 1/20 | Course Introduction / Syllabus Review |  |
| 1/25 | Introduction to Statistics | Ch. 1 |
| 1/27 | Frequency Distributions | Ch. 2 |
| 2/1 | Measures of Central Tendency | Ch. 3 |
| 2/3 | Measures of Variability | Ch. 3 |
| 2/8 | **Exam 1: Chapters 1 - 3** | **Take home 1 due** |
| 2/10 | The Normal Distribution | Ch. 4 |
| 2/15 | The Normal Distribution, continued | Ch. 4 |
| 2/17 | Sampling and Probability | Ch. 5 |
| 2/22 | Introduction to Hypothesis Testing | Ch. 6 |
| 2/24 | Introduction to Hypothesis Testing, cont. | Ch. 6 |
| 3/1 | **Exam 2: Chapters 4 – 6** | **Take home 2 due** |
| 3/3 | Single sample t-test | Ch. 7 |
| 3/8 | Single sample t-test, continued | Ch. 7 |
| 3/10 | Independent samples t-test | Ch. 8 |
| 3/15 | Paired t-test | Ch. 9 |
| 3/17 | **Exam 3: Chapters 7 - 9** | **Take home 3 due** |
| 3/22 | One-Factor Between Subjects ANOVA | Ch. 10 |
| 3/24 | One-Factor Between Subjects ANOVA, cont. | Ch. 10 |
| 3/29 | One-Way Repeated Measures ANOVA | Ch. 11 |
| 3/31 | Two-Way ANOVA | Ch. 12 |
| 4/5 | Two-Way ANOVA, continued | Ch. 12 |
| 4/7 | **Exam 4: Chapters 10 – 12** | **Take home 4 due** |
| 4/12 | Correlation | Ch. 13 |
| 4/14 | Correlation | Ch. 13 |
| 4/19 | Regression | Ch. 14 |
| 4/21 | Nonparametric tests | Ch. 15 |
| 4/26 | **Exam 5: Chapters 13 – 15** | **Take home 5 due** |
| 4/28 | Semester Review via Zoom |  |
| 5/5 | **Cumulative Final Exam online – 10:30 – 12:30** |  |