Math 1342
Elementary Statistics

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Office: MCS 209

Office Hours: MWF- 1030AM-1230PM, T-TR 9AM-11AM or by appointment.

Course Information

Textbook

Assignments
You will be assigned daily homework assignments which are generally due the next class day. I will not accept late assignments, however, I will drop two of your lowest homework grades. If you miss a test (an excused absence) I will replace the missing test grade with the final exam grade. I will only do this for one exam. Any other missing exams will be given a zero grade. Exam dates are: Feb 4, Mar 3, Apr 7, and the final on May 5. The final exam is mandatory.

Class rules
I keep a record of student attendance but your grade is not directly affected by absences, lateness, etc. Also, no cell phone use or eating is allowed in class.

Grading

Evaluation and Grades
Course grades will be determined as indicated in the table below.
<table>
<thead>
<tr>
<th>Assessment</th>
<th>Percent of Total Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>homework</td>
<td>40</td>
</tr>
<tr>
<td>EXAMS</td>
<td>60</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
</tr>
</tbody>
</table>

**Grading System**

Course grades will be dependent upon completing course requirements and meeting the student learning outcomes.

The following grading scale is in use for this course:

- **A** = 90.00-100 points
- **B** = 80.00-89.99 points
- **C** = 70.00-79.99 points
- **D** = 60.00-69.99 points
- **F** = 0-59.99 points

(Grades are not rounded up)

**General Policies Related to This Course**

All students are required to follow the policies and procedures presented in these documents:

- [Angelo State University Student Handbook](#)
- [Angelo State University Catalog](#)

**Academic Integrity**

Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU.

The College of Science and Engineering adheres to the university’s [Statement of Academic Integrity](#).

**Accommodations for Students with Disabilities**

ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.
Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford  
Director of Student Disability Services  
Office of Student Affairs  
325-942-2047  
dallas.swafford@angelo.edu  
Houston Harte University Center, Room 112

**Incomplete Grade Policy**

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures for more information.

**Student Absence for Observance of Religious Holy Days**

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.

**Title IX at Angelo State University**

The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.
Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
michelle.boone@angelo.edu

You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.

Course Schedule

All items contained in this syllabus are subject to change as the semester progresses. Students will be notified in advance of any changes.

Course Content

1. Students will demonstrate factual knowledge including the mathematical notation and terminology used in this course. Students will read, interpret, and use the vocabulary, symbolism, and basic definitions used in statistics including definitions of measures of central tendency; standard deviation; standardized variable; regression line; coefficient of determination; normally distributed variable; sampling distribution of the mean; sampling distribution of the proportion; point estimate; confidence interval estimate; null hypothesis; alternative hypothesis; critical value; and test statistic.

2. Students will describe the fundamental principles including the laws and theorems arising from concepts covered in this course. Students will identify and apply the laws and formulas that result directly from the definitions; for example, calculation of measures of central tendency; standard deviations; coefficients of determination; critical values and test statistics.

3. Students will apply course material along with procedures and techniques covered in this course to solve problems. Students will use the facts, formulas,
and techniques learned in this course to find regression equations for data collected; use regression equations to make predictions; calculate probabilities; find confidence intervals for means and proportions; and perform a variety of hypothesis tests.

4. **Students will develop specific skills, competencies, and thought processes sufficient to support further study or work in this field or related fields.** Students will acquire a level of proficiency in the fundamental concepts and applications necessary for further study in academic areas requiring statistics as a prerequisite, or for work in occupational fields requiring a background in statistics. These fields might include education, business, finance, marketing, computer science, physical sciences, and nursing, as well as further study in other statistics courses.

The following chapters including the particular sections listed are covered.

1. **The Nature of Statistics.** Classifying statistical studies; sampling procedures.

2. **Organizing Data.** Grouping data; graphs and charts; distribution shapes; misleading graphs.

3. **Descriptive Measures.** Mean; median; mode; standard deviation; quartiles; percentiles; deciles; boxplots.

4. **Descriptive Methods in Regression and Correlation.** Regression equation; coefficient of determination; linear correlation.

5. **Probability and Random Variables.** Rules of probability; discrete random variables; probability distributions.

6. **The Normal Distribution.** Areas under the standard normal curve; normally distributed variables.

7. **The Sampling Distribution of the Mean.** Sampling error; mean and standard deviation of the sampling distribution of the mean.

8. **Confidence Intervals for One Population Mean.** Calculate confidence intervals for the mean; margin of error; sample size.

9. **Hypothesis Tests for One Population Mean.** Set up hypothesis tests; errors; perform hypothesis tests.

11. **Inferences for Population Proportions.** Calculating confidence intervals for one population proportion; performing hypothesis tests for one population proportion.
12. **Chi-Square Procedures.** Chi-Square Goodness-of-Fit Test.

### Schedule

**Course**  **Day**  **Subject**
1       Introduction
2       Statistics Basics, Sampling
3       Variables and Data
4       Data, Qualitative Data
5       Quantitative Data
6       Distribution Shapes
7       Measures of Center
8       Measures of Variation
9       Five-Number Summary
10      Populations and Samples
11      Probability Basics, Events
12      Test 1
13      Rules of Probability
14      Discrete Random Variables
15      Discrete Random Variables
16      Normal Distribution
17      Standard Normal Curve
18      Normally Distributed Variables
19      Assessing Normality
20      Sampling Error, Distributions
21      Sample Mean
22      Sample Mean
23      Estimating a Population Mean
24      Test 2
25      Confidence Intervals
26      Margin of Error
27      Confidence Intervals
28      Confidence Intervals
29      Hypothesis Tests
30      Hypothesis Tests
31      Hypothesis Tests
32      Hypothesis Tests
33      Hypothesis Tests
34      Hypothesis Tests
35      Hypothesis Tests
36      Test 3
Chi-Square
Chi-Square Goodness-of-Fit
Linear Equations
The Regression Equation
Linear Correlation
Review
test

1 https://www.angelo.edu/student-handbook/
2 https://www.angelo.edu/catalogs/
3 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
4 https://www.angelo.edu/services/disability-services/
5 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
6 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of