Angelina College – Division of Science and Mathematics
MATH 1342 – Elementary Statistics
Instructional Syllabus – Spring 2023 (TR)

The instructor may modify the provisions of the syllabus to meet individual class needs by informing the class in advance as to the changes being made.

BASIC COURSE INFORMATION

MATH 1342 – Elementary Statistics: Three semester hours credit. Collection, analysis, presentation, and interpretation of data, and probability. Analysis includes descriptive statistics, correlation and regression, confidence intervals, and hypothesis testing. Use of appropriate technology is recommended.

Instructor: Kelly Ward Office Location and Hours: Meeting location and time by appointment
Phone: 409.224.0272 Email Address: kward@angelina.edu or kward@brookelandisd.net

INTENDED STUDENT OUTCOMES

Core Objectives Required for this Course

Core objectives will be assessed with projects, essays, embedded test questions and/or other assignments.

- ✓ Critical Thinking: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
- ✓ Communication: to include effective development, interpretation and expression of ideas through written, oral and visual communication
- ✓ Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Course Learning Outcomes for this Course

Course objectives will be assessed with projects, essays, embedded test questions and/or other assignments.

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

COURSE REQUIREMENTS AND POLICIES

Required Textbooks, Materials, and Equipment

- ✓ *Elementary Statistics Picturing the World* by Larson and Farber (Pearson ISBN 978-0-13-468341-6), 7th Edition (hardcopy or ebook) with access to Pearson's MyLab Statistics system. The access code is included with a new book purchased at the AC bookstore, or the access code may be purchased separately at the bookstore or on the MyLab website. An electronic copy of the text is provided as part of the MyLab access.
- ✓ Graphing calculator: A graphing calculator is required. The TI-84 graphing calculator will be used by the instructor in classroom demonstrations.

EVALUATION AND GRADING

Your grade will be assessed by the following:

- ✓ Four tests valued at 100 points each for a total of 400 points. No make-up tests are authorized. The final exam grade will be used a second time to replace any one missed test or the lowest test grade during the semester.
- ✓ Pearson MyLab assignments valued at 100 points.
- ✓ Project valued at 50 points.
- ✓ A comprehensive final examination valued at 100 points.

Letter grades will be assigned as follows:

- ✓ A = 90% - 100%
- ✓ B = 80% - 89%
- ✓ C = 70% - 79%
- ✓ D = 60% - 69%
- ✓ F = Below 60%

Course Outline and Assignments

- ✓ See Course Content and Topics for course schedule. See MyLab for assignment due dates.

Course Policies: This course conforms to the policies of AC as stated in the Angelina College Handbook.

- ✓ Educational Accommodations - If you have a disability (as cited in Section 504 of the Rehabilitation Act of 1973 or Title II of the Americans with Disabilities Act of 1990) that may affect your participation in this class, you may fill out the Educational Accommodations application within your AC Portal (students tab > access & inclusion > educational accommodations application). A Student Affairs team member will contact you once the application is received. At a post-secondary institution, you must self-identify as a person with a disability in order to receive services; for questions regarding the application process you can visit the Office of Student Affairs or email access@angelina.edu. To report any complaints related to accommodations, you should contact Renee McCain, Manager of Disability Services and Tutoring, in the Library. You may also contact Ms. McCain by calling (936) 633-4504 or by emailing rmccain@angelina.edu. To report discrimination of any type, contact Tifini Whiddon, Senior Director of Human Resources, at (936) 633-4555 or twhiddon@angelina.edu.
- ✓ Attendance: Attendance is required per Angelina College Policy and will be recorded every day. Any student with three (3) consecutive absences or four (4) cumulative absences or who misses 12% or more of the course's scheduled meeting time may be dropped from the class. Records will be turned in to the Registrar's Office at the end of the semester. Do not assume that non-attendance in class will always result in an instructor drop. You must officially drop a class or risk receiving an F. This is official Angelina College Policy.
- ✓ See the Concourse Syllabus inside Blackboard for institutional policies.

MATH 1342 COURSE CONTENT AND TOPICS

Recommended: Read each assigned section or review content in MyLab BEFORE arriving to class to prepare for the lecture. We will connect on Blackboard Collaborate on Tuesdays and Thursdays from 8-9:20am.

Lesson	Date	Sections	Description
1	1.17	Intro 1.1 1.2	Syllabus; Blackboard content; MyLab Setup; eTextbook; Folder contents An Overview of Statistics Data Classification Due 1.30.23; Late 2.6.23
2	1.19	1.3 2.1	Data Collection and Experimental Design Frequency Distributions and Their Graphs Due 1.30.23; Late 2.6.23
3	1.24	2.1 2.2	Frequency Distributions and Their Graphs More Graphs and Displays Due 1.30.23; Late 2.6.23
4	1.26	2.3	Measuring Central Tendency Due 1.30.23; Late 2.6.23
5	1.31	2.4	Measures of Variation Due 2.6.23; No Late Option
6	2.2	2.5	Measures of Position Due 2.6.23; No Late Option
Test 1	**2.7**		**Test 1: 1.1-1.3, 2.1-2.5**
7	2.9	3.1 3.2	Basic Concepts of Probability and Counting Conditional Probability and the Multiplication Rule Due 2.13.23; Late 3.1.23
8	2.14	3.3 3.4	The Addition Rule Due 2.27.23; Late 3.1.23 Additional Topics in Probability and Counting
9	2.16	4.1	Probability Distributions Due 2.27.23; Late 3.1.23
	2.21 2.23		**Brookeland Winter Break**
10	2.28	4.2	Binomial Distributions Due 3.1.23; No Late Option
Test 2	**3.2**		**Test 2: 3.1-3.4, 4.1-4.2**
11	3.7	5.1	Introduction to Normal Distributions and the Standard Normal Distribution Due 3.20.23; Late 3.29.23
12	3.9	5.2 5.3	Normal Distributions: Finding Probabilities Normal Distributions: Finding Values Due 3.20.23; Late 3.29.23
	3.14 3.16		**Apple Springs and Angelina Spring Break**
13	3.21	5.4	Sampling Distributions and the Central Limit Theorem Due 3.27.23; Late 3.29.23
14	3.23	5.5 6.1	Normal Approximations to Binomial Distributions Confidence Intervals for the Mean (σ Known) Due 3.27.23; Late 3.29.23
15	3.28	6.2 6.3	Confidence Intervals for the Mean (σ Unknown) Confidence Intervals for Population Proportions Due 3.29.23; No Late Option
Test 3	**3.30**		**Test 3: 5.1-5.5, 6.1-6.3**

16	4.4	7.1	Introduction to Hypothesis Testing; Review Flowchart Due 4.17.23; Late 4.26.23
17	4.6	7.2	Hypothesis Testing for the Mean (σ Known) Due 4.17.23; Late 4.26.23
	4.11 **4.13**		**Brookeland Spring Break**
18	4.18	7.3 7.4	Hypothesis Testing for the Mean (σ Unknown) Hypothesis Testing for Proportions Due 4.24.23; Late 4.26.23
Project			**Project opens 4.19.22; Due 5.1.22**
19	4.20	8.1 8.2	Testing the Difference Between Means (σ Known) Testing the Difference Between Means (σ Unknown) Due 4.24.23; Late 4.26.23
20	4.25	8.3 8.4	Testing the Difference Between Means (Dependent Samples) Testing the Difference Between Proportions Due 4.26.23; No Late Option
Test 4	**4.27**		**Test 4: 7.1-7.4, 8.1-8.4**
21	5.2	9.1	Correlation Due 5.8.23; No Late Option
22	5.4	9.2 9.3	Linear Regression Measures of Regression Due 5.8.23; No Late Option
Final	**5.9**		**Final: Test 1-4 Material, 9.1-9.3**