Arts and Sciences Division

Statistical Methods I Syllabus

Any changes to the syllabus will be posted in the College's Learning Management System prior to implementation of change.

Course Information

- **Course**: MAT-152-YMD19 (121176) Statistical Methods I
- **Course Hours**: Contact hours 5; Credit Hours 4
- **Term**: Fall 2017
- **Meeting Times**:
- **Prerequisites** DMA 010-050 and DRE 098
- **Co-requisites**: MAT 001S may be required
- **Course Description *per catalog***: This course provides a project-based approach to introductory statistics with an emphasis on using real-world data and statistical literacy. Topics include descriptive statistics, correlation and regression, basic probability, discrete and continuous probability distributions, confidence intervals and hypothesis testing. Upon completion, students should be able to use appropriate technology to describe important characteristics of a data set, draw inferences about a population from sample data, and interpret and communicate results. This course has been approved for transfer under the Comprehensive Articulation Agreement as a general education course in Mathematics (Quantitative)
- **Text:** Triola, *Elementary Statistics Using Excel*, 6th Edition, ISBN: 0134763785 9780134763781 05/11/2017 AS
- **Supplies/Materials**: A graphing calculator is required. Students may only use calculators that have been approved by their instructors for exams. TI-83/84 series are pre-approved for all courses. Calculators with a CAS system are not approved.
- **Access Code: *Online homework is required for all students*** Students have the option of a textbook with the access code or a standalone access course for the course. Both options come with an e-book.
- **Course ID:** illenye41242

Instructor Information

- **Instructor Name**: Kory Illenye
- **Email Address:** korydillenye@abtech.edu

Learning Outcomes/Objectives

Upon successful completion of the course, the student will be able to:

- Organize, display, calculate, and interpret descriptive statistics
- Apply basic rules of probability
- Identify and apply appropriate probability distributions
- Perform regression analysis
- Analyze sample data to draw inferences about a population parameter
- Communicate results through a variety of media

*This course, and assignments therein, may be used to assess General Education Core Competencies or Program Student Learning Outcomes.

Evaluation Criteria

Table 1 Course Grading Breakdown

Grade Break Down	**Percentage**
Homework	15%
Tests	45%
Labs/Quizzes	20%
Final Assessment	20%
Total:	100%

Final Assessment or Exam: Each instructor will schedule a comprehensive final course assessment at some point during the last five days of the semester or the last two days of the class. The assessment may consist of one or multiple components or methods. The course schedule will indicate the date(s) and method(s) of evaluation. If the final evaluation is given prior to the last day of class, the schedule will reflect the class activities to take place after the final evaluation. Students are required to take their final examinations at the time(s) and place(s) scheduled. Conflicts may be resolved by arrangement with the faculty member. Three assessments scheduled for the same day is considered a conflict.

Grading System

Grade Letter	Associated Percentages
A	90-100
B	80-89
C	70-79
D	60-69
F	Below 60

Participation Requirements

It is mandatory that the student attend each course at least once during the first 10% of the course, or in the case of online courses, a graded activity must be submitted during the first 10% of the course. Each online course syllabus must identify the activity to be completed prior to the 10% point of the course and the date by which the activity must be completed. For hybrid courses, the student must attend the classroom portion of the course or complete an online graded activity prior to the 10% point. Failure to attend or complete the activity prior to the 10% point will result in the student being dropped from the course. The student will not be allowed to continue in the course or receive a refund.

Regular and punctual class participation is required of all students and essential for success, which is dependent upon active involvement in all instructional activities. To receive a passing grade, students must participate in 80% of the contact hours of the course. Active participation, regardless of course format (seated, online, hybrid), includes submission of completed assignments by the posted due dates and timely completion (as specified by the instructor) of any other course requirements: tests and exercises, discussion board entries and other group work, lab participation, and any other activities assigned in the course syllabus, discussed in class, or described in online instructional materials as contributing to the final grade.. If a student does not meet the requirement of 80% active participation, the student may be assigned an F grade for the course.

College Policies and Procedures

College policies and procedures may be found on A-B Tech's Policies website at the following link: Policies and Procedures.

The Student Rights, Responsibilities, and Due Process policies and procedures, including the Code of Classroom Conduct and Code of Student Conduct, may be found at the following link: Student Rights, Responsibilities, and Due Process.

Mathematics Department Policies and Expectations:

Email:

A-BTech student email is to be used for official school business. Students are held responsible for any information emailed. Emails should adhere to professional standards. This is the best way to communicate with your instructor. Expect a response **no later** than 48 hours from the time the email was sent. Any email that is not written in a professional tone will **not get a reply**, but returned to the student. This will give the student the opportunity to rewrite the email and get a response

Grades
Your final grade in this course will be determined by the grades posted and calculated in Moodle. Instructors do not accept additional assignments or make-up work after the final assessment has been given in the course.
Expectations:
You will come to class prepared. This means you need to read through sections and examples before class. You need to have any assignments due ready at the beginning of class. You are expected to arrive on time and check your A-B Tech student email regularly. Be attentive during class by taking good notes, asking questions, and not being distracted by technology.
Assessments:
Any assessment submitted for grading must by created by the student for the current course. Submitting *any work* from a previous course will result in an automatic grade of zero.

Course Requirements and Expectations

Census Activity:

Excel: Lab assignments will require the use of MicroSoft Excel.
Make-Up Policy:
In order to make up a missed assignment all previous assignments must be complete. If the missed assignment is a test or quiz you must seek instructor approval. If you know that you will miss a day where a quiz or test is given contact the instructor via email and arrangements can be made to take the quiz or test early/later. All assignments that are not approved prior to the due date of the assignment will incur a -15% penalty. There are exceptions to every policy, if life happens contact the instructor and accommodations can be made.
Important Dates:
First Day of Class: August 14th
Last date to withdraw (W): Novemeber 3rd
Holidays/breaks: November 21st thru November 23rd
Last Day of Class: December 15th
Activity Days: November 30th

Course Content:

MODULE ONE:

1.1 Statistical and Critical Thinking

1.2 Types of Data

1.3 Collecting Sample Data

1.4 Introduction to Excel

2.1 Frequency Distribution

2.2 Histograms

2.3 Statistical Graphics

2.4 Scatter Plots and Correlation

3.1 Measures of Center

3.2 Measures of Variation

3.3 Measures of Relative Standing and Boxplots

MODULE TWO:

4.1 Basics of Probability

4.2 Addition and Multiplication Rules

4.3 Complements. Conditional Probabily and Bayes Theorem

4.4 Counting

4.5 Probabilities Through Simulations

5.1 Probability Distributions

5.2 Binomial Probability Distributions

5.3 Poissonl Distributions

MODULE THREE:

6.1 The Standard Normal Distribution

6.2 Real Applications of the Normal Distribution

6.3 Sampling Distributions and Estimators

6.4 The Central Limit Theorem

6.5 Assessing Normality

6.6 Normal as Approximation to Binomial

7.1 Estimating a Population Proportion

7.2 Estimating a Population Mean

7.3 Estimating a Population Variance and SD

MODULE FOUR:

8.1 Basics of Hypothesis Testing

8.2 Testing a Claim About a Proportion

8.3 Testing a Claim About a Mean

8.4 Testing a Claim About Variance or SD

10.1 Correlation

10.2 Regression

MODULE FIVE:

11.2 Contingency Tables

14.1 Control Charts for Mean and Variation

15.1 Projects

Course Schedule

- **Course**: MAT-152-YMD19 (121176) Statistical Methods I
- **Term**: FALL
- **Meeting Times**: 3:00 PM to 4:50 PM, Tuesday and Thursdays

Date	Class Content	Assignment
18-Oct	Chapter 1, 2.3	Homework, Quiz
23-Oct	2.1-2.2, 3.1, Lab	Homework, Quiz
25-Oct	3.2-3.3	Homework, Quiz
30-Oct	TEST (1-3)	Labs Due
1-Nov	4.1-4.2, Lab	Homework, Quiz
6-Nov	4.3-4.4, Lab	Homework, Quiz
8-Nov	5.1-5.2, Lab	Homework, Quiz
13-Nov	TEST (4-5)	Labs Due
15-Nov	6.1-6.3	Homework, Quiz
20-Nov	6.4, 7.1	Homework, Quiz
22-Nov	Holiday	None
27-Nov	7.2-7.3	Homework, Quiz
29-Nov	TEST (6-7), 8.1	Homework, Quiz
4-Dec	8.2-8.3	Homework, Quiz
6-Dec	10.1-10.2, 14	Homework, Quiz
11-Dec	TEST (8-10), Projects	Projects
13-Dec	Projects	Projects Due

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