STA 2023 – ELEMENTARY STATISTICS
SYLLABUS
SPRING 2023

INSTRUCTOR:	Travis Short
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TEXTBOOK OPTIONS: Essentials of Statistics with MyLab Access by Triola (7th Edition)

Required: (select one)

First Day Option (course materials charged to student's account at a reduced cost)
MyLab 18-week Access Card with Triola e-book: ISBN: 9780137465712

This course is participating in the First Day Program, which means that you will have access to the course materials through my\|Courses at a 20%-50% reduced cost. The First Day price for your course materials will be billed by the bookstore to your student account approximately 2-weeks after the course begins. You have the option to Opt-out of the First Day program within the first 10-days of the course, but acquiring course materials elsewhere will likely lead to a higher cost.

PREREQUISITE: MAT 1033 or MAT 1100 or appropriate score on Mathematics Placement Test.
Calculator: A calculator with the square root function will be required. A TI-83 or TI-84 is recommended.

Website: https://mycourses.spcollege.edu/ (your log-in is your student ID # and your password is the one you created for your *MySPC* account at the college.)

Syllabus Addendum: Please refer to the syllabus addendum for all institution wide policies.
http://www.spcollege.edu/addendum/

COURSE DESCRIPTION

This course includes concepts taken from topics which include descriptive statistics, measures of central tendency and dispersion, probability, probability distributions, relative frequency distributions, sampling distributions, binomial distribution, normal distribution, the student's t distribution, the Chi-square distribution, estimation using confidence intervals, hypothesis testing, linear regression, correlation, and nonparametric statistics. Three credit hours.

MAJOR LEARNING OUTCOMES

1. The student will utilize descriptive statistics.
2. The student will utilize probabilistic theory to make statistical inferences.
3. The student will utilize fundamental concepts of random variables and sampling distributions as they apply to statistical inferences
4. The student will apply fundamental concepts of confidence intervals and hypothesis tests to practical problems in today's society.
5. The student will apply the basic principles of simple linear regression and correlation as well as their applications to practical problems in today's society.
6. The student will apply basic principles of nonparametric tests.
7. The student will synthesize and apply concepts to make data driven decisions.
8. The student will communicate statistical results.

-IMPORTANT DATES

January 17	Classes Begin
January 20	Last Day to Drop
March 12-18	Spring Break – college closed
March 29	Last Day to Withdraw with a grade of W
May 8–11	Finals

COURSE EXPECTATIONS

Understanding the material in this course is essential and all calculations need to be routine before moving on to Statistical Methods II. I will make every effort to thoroughly cover all concepts during lecture and be available outside of class to address any questions or concerns about the material. The assessments created for this course are challenging so that you receive accurate feedback on the extent to which you have mastered the material. It is important that you practice effective and efficient study habits in order to keep up with the material contained in this course, as well as more difficult courses to come.

-ASSESSMENT

There will be four (4) unit tests over the course of the semester and a mandatory comprehensive final exam and final project. **ALL MAKE-UP TESTS MUST BE Pre-ARRANGED AND COMPLETED BEFORE THE NEXT CLASS MEETING;** otherwise a zero will be recorded. The lowest unit test grade will be replaced by the grade on your final exam if it is beneficial to your grade. The section HW and chapter quizzes for the course are administered via MYLAB. The use of calculators, *specifically the TI-83 and TI-84,* are permitted and may be helpful for each assessment. Formula sheets will also be provided for use on each test and can be found posted on my|Courses.

-GRADING POLICY

Each of the 4 unit tests, the final, the project, the combined homework, and the combined quizzes will be equally weighted and will each count for 12.5% of the overall grade. Therefore, you may calculate your current grade by averaging:

Test1 , Test2 , Test3 , Test4 , Final Exam , Final Project, HW Average, Quiz Average

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

EXTRA HELP

All students are encouraged to seek additional help during my office hours, which are posted on my instructor page and office door. I am there for your benefit; you can also make appointments to meet with me besides the hours posted, if necessary. Tutoring is available from the Learning Support Center, which is located on the second floor of the Library. Students are also strongly encouraged to form study groups with other members in this class (or other classes) to gain additional understanding. The use of additional resources such as textbooks and videos may also be helpful.

ATTENDANCE

Excluding any special circumstances. students are required to attend class. Missing class is a substantial disadvantage as important information is discussed in each class day. Due to the rapid pace and cumulative nature of this course, missing class typically causes students to lag behind in concepts and connections of course material. If, for any reason, a student is absent, the course is set-up to be completed independently.

SPECIAL ACCOMMODATIONS

If you wish to receive special accommodations as a student with a documented disability, please make an appointment with the Clearwater Campus Learning Specialist in SS 110 at 727-791-2710. If you have a documented hearing loss, please contact the Program for the Deaf/Hard of Hearing, SS101, phone 727-791-2628. If you will need assistance during an emergency evacuation, please contact your campus Learning Specialist immediately about arrangements for your safety.

SEXUAL PREDATORS

Federal and State laws require a person designated as a "sexual predator or offender" to register with the Florida Department of Law Enforcement (FDLE). The FDLE then is required to notify the local law enforcement agency where the registrant resides, attends or is employed by an institution of higher learning. Information regarding sexual predators or offenders attending or employed by an institution of higher learning may be obtained from the local law enforcement agency with jurisdiction for the particular campus, by calling the FDLE hotline (1-888-FL-PREDATOR) or (1-888-357-7332), or by visiting the FDLE website at www.fdle.state.fl.us/Sexual_Predators. If there are questions or concerns regarding personal safety, please contact the Provost, Associate Provost, Campus Security Officer or Site Administrator on your Campus.

ACADEMIC HONESTY

Academic dishonesty, plagiarism or cheating of any kind will not be tolerated. Academic dishonesty is a violation of St. Petersburg College's Academic Honesty Policy and will be treated accordingly.

STUDENT EXPECTATIONS

All non-academic electronic devices such as cell phones and related devices are to be turned off prior to entering the classroom. The use of these devices will not only impede your performance but is also distracting to other students who are trying to learn.

Each student's behavior in the classroom is expected to contribute to a positive learning environment, respecting the rights of others and their opportunity to learn. No student has the right to interfere with the teaching/learning process, including the posting of inappropriate materials on chat-room or Web page sites.

The instructor has the authority to ask a disruptive student to leave the classroom, lab, or Web course and to file disciplinary charges if disruptive behavior continues.

LEARNER SUPPORT

View Free Tutoring site.

View the Accessibility Services site.

View the Academic Support site.

View the On-Campus and Online Support site.

View the Student Services site.

As an SPC student it's vital that you know Titans Care. You can access resources through SPC's Student Assistance Program (SAP) (https://mycoursessupport.spcollege.edu/student-assistance-program), a collaborative resource for students with mental health or general life issues. SAP provides help and education in suicide prevention, mental health, substance abuse awareness and more. It is SPC's belief that supporting mental wellness is everyone's charge and that one loss as a result of substance abuse, mental illness, or suicide is one too many. If you or a loved one are considering suicide, please call the National Suicide Prevention Lifeline at 1-800-273-8255.

STA 2023 – ELEMENTARY STATISTICS COURSE GOALS

1. **The student will utilize descriptive statistics by:**
   a. developing basic statistical literacy.
   b. using samples to make inferences about populations.
   c. identifying the most commonly used data collection techniques and sampling methods.
   d. constructing and interpreting graphical displays of data.
   e. calculating and interpreting measures of central tendency, dispersion, and relative standing.
2. **The student will utilize probabilistic theory to make statistical inferences by:**
   a. employing basic terminology of probability.
   b. applying basic rules of probability.
   c. constructing a sample space to find probabilities of a given simple or compound event.
   d. calculating probabilities of simple and compound events.
3. **The student will utilize fundamental concepts of random variables and sampling distributions as they apply to statistical inferences by:**
   a. identifying a random variable as being discrete or continuous.
   b. calculating probabilities of given events which follow binomial and normal distributions.
   c. applying the Central Limit Theorem.
4. **The student will apply fundamental concepts of confidence intervals and hypothesis tests to practical problems in today's society by:**
   a. estimating population parameters with confidence intervals using the student t distribution applied to population means.
   b. estimating population parameters with confidence intervals using the normal distribution applied to population proportions.
   c. conducting a hypothesis test using the student t distribution applied to population means.
   d. conducting a hypothesis test using the normal distribution applied to population proportions.
   e. conducting a hypothesis test using the chi-square distribution.
   f. interpreting Type I (alpha) and Type II (beta) error.
5. **The student will apply the basic principles of simple linear regression and correlation as well as their applications to practical problems in today's society by:**
   a. constructing and interpreting scatterplots.
   b. computing and interpreting the least squares regression equation, the Pearson product moment correlation coefficient and the coefficient of determination.
   c. using a linear regression equation to appropriately predict the value of a response variable.
6. **The student will apply basic principles of nonparametric tests by:**
   a. recognizing the conditions for appropriate usage.
   b. conducting a hypothesis test.
7. **The student will synthesize and apply concepts to make data driven decisions by:**
   a. collaborating on service projects to analyze existing data for different disciplines or departments.
   b. conducting research based on data collection, analyzing data, interpreting results with respect to the initial hypothesis.
8. **The student will communicate statistical results by:**
   a. writing technical reports of statistical results and interpretations.
   b. making oral presentations of statistical results and interpretations.

ELEMENTARY STATISTICS

Weekly Schedule

All quizzes and Homework will be due at 6:00 AM on the following Monday of their assigned week.

Week	Start Date	Sections Covered	Graded Assignments	Due Date	Unit
1	**Monday** 1/16	1.1		**Sunday**	
2	1/23	1.2, 1.3 2.1, 2.2	HW 1.1, 1.2, 1.3 Chapter 1 Quiz	1/29	1
3	1/30	2.3, 2.4 3.1	HW 2.1, 2.2, 2.3, 2.4 Chapter 2 Quiz	2/5	
4	2/6	3.2, 3.3	HW 3.1, 3.2, 3.3 Chapter 3 Quiz	2/12	
5	2/13	**Unit 1 Test** 4.1		2/19	
6	2/20	4.2, 4.3 5.1, 5.2	HW 4.1, 4.2, 4.3 Chapter 4 Quiz HW 5.1, 5.2 Chapter 5 Quiz	2/26	2

7	2/27	6.1, 6.2	HW 6.1, 6.2	3/5	
8	3/6	6.3, 6.4 **Unit 2 Test**	HW 6.3, 6.4 Chapter 6 Quiz	3/12	
9	3/13	SPRING	BREAK		
10	3/20	7.1	HW 7.1	3/26	
11	3/27	7.2 8.1	HW 7.2 Chapter 7 Quiz	4/2	
12	4/3	8.2, 8.3	HW 8.1, 8.2, 8.3 Chapter 8 Quiz	4/9	3
13	4/10	**Unit 3 Test** 10.1		4/16	
14	4/17	10.2 11.1	HW 10.1, 10.2 Chapter 10 Quiz	4/23	
15	4/24	11.2 **Unit 4 Test**	HW 11.1, 11.2 Chapter 11 Quiz	4/30	4
16	5/1	**Presentations**			
17	5/8	**Final Exam**			F

Note the above schedule is tentative and will be changed, as some material will be covered more quickly while other topics may require more time to cover in sufficient detail.