St. Petersburg College
Course Syllabus
STA 2023 Elementary Statistics, Class Number 5171, Fall, 2015

Instructor: Tony Long   **Office:** SA 241

E-mail: long.tony@spcollege.edu   **Office hours:**   MW 4:00-6:05PM, 8:35-8:45PM

                                                TTh 7:00-8:00AM, 10:15-11:00AM, 1:00-2:00 PM,

                                                       3:45-6:05PM, 8:35-8:45PM

Department: Mathematics (SA 215)   **Campus:** St. Pete/Gibbs

Department Chair: David Kolonoski   **My Office Phone:** (727) 341-4618

Dean of Mathematics: Jimmy Chang   **Math Office Phone:** (727) 341-3573

Class Meeting Time: 2:00-3:45 PM TTh   **Class Location:** SA 240

STA 2023 (Elementary Statistics) is a very practical course that teaches students to think critically in addition to learning about statistics. A grade of "C" or better in STA 2023 fulfills three credits of the math requirement for graduation.

Syllabus Addendum: Information contained at http://www.spcollege.edu/central/asa/addendum.htm supersedes anything published in this syllabus.

Prerequisite: MAT 1033 or appropriate score on the SPC mathematics placement test.

Important Dates: Class Begins – Ends: September 14, 2015 – December 11, 2015

                               Last day to withdraw with a refund: September 18, 2015

                               Last day to withdraw with a "W": November 2, 2015

Attendance: Student success is directly tied to the level of student involvement in a course, so students are required to attend class regularly and on time. Attendance will be recorded at the start of each period. Students who arrive late are responsible for signing in at the end of the class to avoid being counted absent. Except in an emergency, a student who needs to leave early should notify the instructor at the beginning of class. When absent, it is the student's responsibility to learn what was missed (assignments, handouts, due dates, etc). Students missing class are strongly encouraged to contact the instructor promptly to avoid an unexcused absence. Documentation will be required in order to excuse an absence. Students will be awarded points for attendance, with a reduction for arriving late or leaving early. These points will combine with the quiz score to make up the participation score (see below). A student who has not attended for at least the two full weeks prior to **November 2, 2015** will be considered to be no longer actively participating in the course, and may be administratively dropped from the course with a grade of WF.

SPC Withdrawal Policy: If a student wishes to withdraw from a course, it is the responsibility of the student to withdraw either online through MySPC or with the help of an advisor in the registration office. If the withdrawal is completed by **November 2, 2015**, and the student is not attempting the class for the third time (or more), a grade of "W" will be recorded which does not impact the student's GPA. If the withdrawal occurs after **November 2, 2015**, the student will receive a grade of WF (withdraw-failing). The WF grade is punitive; it has the same impact on the GPA as an F. Students in the third attempt of a course who withdraw will receive a WF regardless of the date of withdrawal. Students who do not attend during the first two weeks of classes will automatically be withdrawn from the course by the college and will still be responsible for the tuition and fees. Also, students who do not show sufficient active participation (i.e. completion of tests and quizzes and regular attendance) in the course for the one full week prior to **November 2, 2015**, will be administratively withdrawn by the college and receive a WF. Students who withdraw from all classes may be required to repay some or all of the financial aid received for the term. Should you consider totally withdrawing from all classes before **November 2, 2015** (for the fall session) it is important that you consult the Scholarships & Student Financial Assistance office on your home campus to understand your options and the consequences of total withdrawal. You are also strongly encouraged to contact your instructor before withdrawing from the class so that we can discuss all your options and you can make an informed decision.

EARLY ALERT GATEWAY COURSE

St. Petersburg College seeks to maximize student success by utilizing Early Alerts for students whose progress is unsatisfactory so intervention may occur to help students succeed.

The Early Alert Policy for this course is as follows:

1. A student who misses more than three classes in a row will have their name referred to an Early Alert Advisor unless they contact Professor Long by e-mail or phone with a reasonable excuse for the absences.

2. A student whose overall course grade falls below a 70% (as evidenced by exam scores, quiz scores or participation scores) will have their name referred to an Early Alert Advisor.

Referrals will be sent each time either indicator occurs. Students who desire NOT to be referred to Alert Advisors should work proactively with Professor Long. If you meet either criterion noted above, you should discuss your situation with Professor Long immediately.

Grading: The class grade will be determined by a weighted average of test scores, class attendance and participation, quizzes and the final exam.

Participation points will be awarded for each class that a student attends. If a student attends and participates constructively in the class, 2 points will be awarded for that day. If a student comes to class tardy, leaves early, or disrupts class, only one point will be awarded for that day. Absences will be awarded no points, but may be excused at the discretion of the instructor. At the end of the semester all the quiz scores and the class attendance score will combine to make the participation score, which will count about half of one test score. The participation score will be derived by adding up the number of points earned by the student and dividing by the total number of possible points to get a percentage.

Homework is assigned but not collected. It is imperative that students do all assigned homework in order to prepare adequately for tests and quizzes.

Quizzes may be given at any time, either announced or unannounced. They will count as part of the class attendance and participation score. **Make-up quizzes will not be given for any reason.**

The final exam will be combined with the tests and participation to give the class grade. All tests will be graded on a percentage basis. **Make-up tests will not be given for any reason.** The lowest regular test grade will be dropped. **Students who arrive on a test day after the first student has turned in the test and left the room will not be allowed to take the test and will get a grade of 0 for that test.** A student who has exemplary test scores and regular attendance may, at the discretion of the instructor, exempt the final exam. Eligibility for exemption begins with an "A" average, but also requires instructor approval. The final grade will be a weighted average, and will be computed as follows:

Test 1 – Test 5 (highest 4)	17% each
Participation	10%
Final Exam	22%

Students should bring their own paper and a writing utensil to class each time, especially on test days. Do not use red ink for quizzes or tests.

Final grades will be based on the following scale: (final grades will be rounded to the nearest integer)

90	–	100%	=	A,
80	–	89%	=	B,
70	–	79%	=	C,
60	–	69%	=	D,
0	–	59%	=	F

Academic Honesty: St. Petersburg College has an Academic Honesty policy. It is your responsibility to be familiar with the policies, rules, and the consequences of violations. There is no tolerance for cheating and academic dishonesty. Discipline can range from a zero on a specific assignment to expulsion from the class with a grade of F. Note that copy/pasting published information, whether it's from your textbook or the Internet, without citing your source is plagiarism and violates this policy. Even if you change the words slightly, the ideas are someone else's so you still have to cite your sources. Cheating, plagiarism, bribery, misrepresentation, conspiracy, and fabrication are defined in Board Rule 6Hx23-4.461. Student Affairs: Academic Honesty Guidelines, Classroom Behavior.
http://www.spcollege.edu/webcentral/catalog/current/stu_affairs_honesty.htm

Special Accommodations: If you wish to request accommodations as a student with a **documented** disability, please make an appointment with the Learning Specialist on campus. If you have a documented hearing loss, please contact the Program for the Deaf/Hard of Hearing at 791-2628. If you will need assistance during an emergency classroom evacuation, please contact your campus learning specialist immediately about arrangements for your safety. The Office of Services for Students with Disabilities can be reached at 341-4758, or on the web at http://www.spcollege.edu/webcentral/catalog/Current/ossd.htm.

Emergency Preparedness: In the event that a hurricane or other natural disaster causes significant damage to St. Petersburg College facilities, you may be provided the opportunity to complete your course work online. Following the event, please visit the college Web site for an announcement of the college's plan to resume operations.

You should familiarize yourself with the emergency procedures and evacuation routes located in the buildings you use frequently. Located in each classroom is an Emergency Response Guide (flip-chart) that contains information for proper actions in response to emergencies. You should be prepared to assess situations quickly and use good judgment in determining a course of action. You should evacuate to assembly areas in an orderly manner when an alarm sounds or when directed to do so by college faculty or staff or emergency services personnel. You may access additional emergency information by going to www.spcollege.edu/security. In face to face courses your instructor will review the specific campus plans for emergency events.

Campus Safety and Security: For information on campus safety and security policies please contact **791-2560**. If there are questions or concerns regarding personal safety, please contact the Provost, Associate Provost, Campus Security Officer, or Site Administrator on your campus. http://www.spcollege.edu/tsc/security.htm

Course Goals:

1. The student will understand the methods for organizing and describing sets of data.

2. The student will understand how probability is used to make statistical inferences.

3. The student will be familiar with the fundamental concepts of random variables as they apply to statistical inferences.

4. The student will understand how sampling distributions are used in making statistical inferences.

5. The student will be familiar with the fundamental concepts of statistical inference as they apply to problems found in other disciplines.

6. The student will understand the basic principles of simple linear regression and correlation and their applications to practical problems in today's society.

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 and correlation.

Materials: The text for this course is Elementary Statistics: Picturing the World (6th Edition), by Larson and Farber (The ISBN is 978-0321911216). A graphing calculator is also required. The Texas Instruments TI-83+ or TI-84+ is recommended. Students should bring their own paper and a writing utensil to class each time, especially on test days. Do not use red ink for quizzes or tests.

Help: I hope that you will come see me if you need any help with this class. Also, St. Petersburg College provides free tutoring in the Academic Resource Commons, located in TE 200. The Academic Resource Commons is available Monday through Saturday. More information about the Academic Resource Commons is available at 727-341-3512 or online at http://www.spcollege.edu/spg/arc/ .

Tentative Schedule

Date	Chapter	Topic
9/15	1.1	Overview of Statistics
	1.2	Data Classification
	1.3	Data Collection and Experimental Design
9/17	2.1	Frequency Distributions and Their Graphs
	2.2	More Graphs and Displays
	2.3	Measures of Central Tendency
9/22	2.4	Measures of Variation
	2.5	Measures of Position
9/24		**Test 1**
9/29	3.1	Basic Concepts of Probability and Counting
	3.2	Conditional Probability and the Multiplication Rule
10/1	3.3	The Addition Rule
	3.4	Additional Topics in Probability and Counting
10/6	4.1	Probability Distributions
	4.2	Binomial Distributions
10/8		**Test 2**
10/13	5.1	Introduction to Normal Distributions and the Standard Normal Distribution
10/15	5.2	Normal Distributions: Finding Probabilities
10/20	5.3	Normal Distributions: Finding Values
	5.4	Sampling Distributions and the Central Limit Theorem
10/22	9.1	Correlation
	9.2	Linear Regression
10/27		**Test 3**
10/29	6.1	Confidence Intervals for the Mean (σ known)
	6.2	Confidence Intervals for the Mean (σ unknown or $n < 30$)
11/2		**Last day to withdraw with a grade of "W"**
11/3	6.3	Confidence Intervals for Population Proportions
	7.1	Introduction to Hypothesis Testing
11/5	7.2	Hypothesis Testing for the Mean (σ Known)
11/10	7.3	Hypothesis Testing for the Mean (σ Unknown or $n < 30$)
11/12	7.4	Hypothesis Testing for Proportions
11/17		**Test 4**
11/19	8.1	Testing the Difference Between Means (Independent Samples, σ_1 and σ_2 Known)
	8.2	Testing the Difference Between Means (Small Independent Samples, σ_1 and σ_2 Unknown)
11/24	8.3	Testing the Difference Between Means (Dependent Samples)
	8.4	Testing the Difference Between Proportions
12/1	10.1	Goodness-of-Fit Test
	10.2	Independence
12/3		**Test 5**
12/9		**Final Exam**

Homework Assignments

	Chapter	Assignment
For Test 1	1.1	#1-43 odd
	1.2	#1-31 odd
	1.3	#1-35 odd
	2.1	#1-45 odd
	2.2	#1-35 odd, 37-41 all
	2.3	#1-59 odd, 63
	2.4	#1-47 odd
	2.5	#1-57 odd, 58
For Test 2	3.1	#1-81 every other odd
	3.2	#1-31 odd, 39
	3.3	#1-25 odd
	3.4	#1-53 odd
	4.1	#1-37 odd
	4.2	#1-31 odd
For Test 3	5.1	#1-56 all
	5.2	#1-20 all
	5.3	#1-39 all
	5.4	#1-37 odd
	9.1	#1-20 all, 21-29 odd
	9.2	#1-35 odd
For Test 4	6.1	#1-55 odd
	6.2	#1-37 odd
	6.3	#1-23 odd
	7.1	#1-59 odd
	7.2	#1-41 odd
	7.3	#1-29 odd
	7.4	#1-17 all
For Test 5	8.1	#1-29 odd
	8.2	#1-25 odd
	8.3	#1-23 odd
	8.4	#1-21 odd
	10.1	#1-17 odd
	10.2	#1-21 odd