Course Syllabus Fall 2015
Palomar College Math Department
Math 120 — Elementary Statistics (4 units)

Professor Tim Busken	**Section 30101**	**Section 30102**
Email: tbusken@palomar.edu	**MTWF 9 - 9:50 am**	**MWThF 11 - 11:50 am**
Course Home Page:	**Room: NS-358 on MWF**	**Room: NS-358 on MWF**
timbusken.com/statistics.html	**Lab: Tues. 9 - 9:50 am** **in F-8** **Final: 5/18 Wed. 10-11:50am**	**Lab: Thurs. 11 - 11:50 am** **in F-8** **Final: 5/23 Mon. 10-11:50am**

Textbook: Elementary Statistics 6e, Larson and Farber

ISBN: 9780321911216 , Publisher: Pearson.

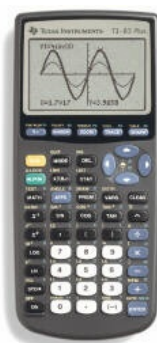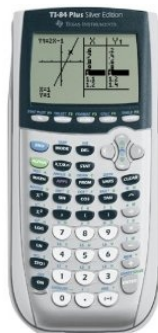This course covers Chapters 1 – 10

<u>**Required Materials**</u>:

- ▢ Textbook or ecopy of the textbook.
- ▢ Statcrunch OR mystatlab
- ▢ TI83, TI83+, TI84 or TI84+ Graphing Calculator

Grading:

Homework	15%
Labs	10%
Tests	50% (best 3 of 4)
Mandatory Final Exam (yes, it's cumulative)	25%

TI–83 plus   TI–84 plus

<u>**Calculator**</u>: The Texas Instruments TI-83 plus or TI-84 plus **graphing calculator is required**. (I've seen the TI-83 plus and TI-84 plus calculators on www.rentcalculator.org for $9/month) **Bring your calculator to all on-campus exams and classes.** Students may not share calculators during exams. Phones are not allowed.

<u>**Labs**</u> are worth 15% of your overall grade. You will need the Statcrunch software to complete these lab assignments. There will be 6 to 12 technology labs. The main purpose of these labs is to teach you the procedures for utilizing both Statcrunch and the TI83/84 for performing the necessary statistical computations. I do not accept late labs. Labs are due at the beginning of class on the due date.

Note: This instructor reserves the right to add, change or modify the syllabus and calendar, including test days, by announcing such changes in class. This course adheres to the policies outlined in the Palomar College catalogue. For further information, see Academic Policies stated in the catalogue.

Homework: You can either complete homework (1) online through MyStatlab or (2) with the textbook, your choice. The homework sets are equivalent. Either way, expect to do homework continuously for sixteen weeks. Getting behind on HW is just about the WORST thing a student can allow to happen. SEE ME if you do. EXPECT to work hard on homework and to study hard for exams and quizzes. Expect to seek help from tutors, from fellow students, and/or from me.

Do you want to complete and submit homework online through MyStatlab or would you rather complete the homework on paper and physically turn it in? If you decide to use MyStatlab and its homework submission service, then your required course materials are: 1) MyStatLab (it comes with the StatCrunch software and an ecopy of the textbook and student solutions manual) and 2) the TI-84+ graphing calculator. If, on the other hand you are completing the homework on paper, then your required course materials are 1) the textbook, 2) Statcrunch ($14) and 3) the graphing calculator. Alternatively, you could purchase MyStatlab (it comes with Statcrunch) and use the ecopy of the textbook to complete homework if you want.

Tests: There will be **no makeup tests**. There will be 4 tests and a mandatory, cumulative final exam. I will drop your lowest test score, making your best three test scores worth 16.66% each. I will not drop your final exam score. I recommend that you make it to every class. If you miss no more than 4 classes and you are not disruptive in class, I will add 10% to your final exam score.

If doing HW Online: A MyStatlab Course Id was given to you in class. Assignments and due dates will show when you login to MyStatlab. Homework is due the day of the test. If a due date has already passed you may get credit for finishing or redoing problems you didn't do or couldn't complete before the deadline.

If doing Textbook HW: The homework list can be found on the course website. Homework is due on the day of the test. After homework is graded and given back, you are allowed to make corrections and can redo parts you did incorrectly. Corrections are not due until the day of the final exam. Focus on keeping up with new HW. Show all work, use a pencil and write legibly. Don't turn in paper with a jagged edge. Staple assignments so I can see you work and any other information (section numbers, you name...). **Write the section of HW and assignment at the top of the page (e.g. Section 1.2 pg 9, 2-26 even)**. Work turned in must be your own. Don't copy from someone else, the back of the book, or solutions manual. However, it is okay and a good idea to work on HW with classmates or to ask tutors or your instructor for help. I grade the heck out of corrections, so again, do not try to turn in a copy of the answers from the back of the book.

Homework Note: If you choose to do homework from out of the textbook and find that you want to switch to doing homework online or vice versa, you may switch to doing homework online (or out of the textbook), but you must communicate and discuss this with me first, because I keep the grade book in two different online locations and I have to be able to track your progress.

GRADEBOOK: I keep two gradebooks. If you are doing homework online, your gradebook is nested within mystatlab. If you are doing homework out of the textbook and physically turning

that in on the day of the exam, then I will keep your gradebook on blackboard.

WARNING: Many math students suffer from the "**What the WHAT?**" syndrome, character-ized by a complete lack of understanding of material presented in a given class period. To prevent that from happening:

- **READ AHEAD** so that you will be familiar with terms/procedures when you see them in class.
- **ORGANIZE** your study time – plan on studying and doing hw for at least an average of 8 hours per week
- **STUDY PROPERLY**. Rewrite notes, read the textbook, do your homework, organize a study group, take advantage of the free tutoring, make a list of questions to ask in the next class period...
- **PAY FULL ATTENTION** in class. This does not mean merely copying everything I say and write on the board. It means at least making an attempt to wrap your brain around concepts we discuss in class.

Accommodation: Any student who may need an academic accommodation should discuss the situation with me during the first week of class. Students with disabilities who may need accom-modations in this class are encouraged to contact Disability Resource Center (DRC) early in the semester so that reasonable accommodations may be implemented as soon as possible. Students may contact DRC in person or by phone at 760-744-1150 ext. 2375.

Mathematics Learning Center: The Math Center now has a new home. They are located in MC building (MC-1) across from NS building. The Math Center will be open

Monday – Thursday from 8am – 8pm, Friday 8am - 2pm, and Saturday 9am-12pm.

Students will need to enroll in N BASC 204 (Class #33820) prior to receiving any tutoring services in the Math Center. This is a 0 unit, 0 credit course so it will not affect a students GPA nor will it cost them anything. **Students can enroll online through student e-services**. Please sign up for N BASC 204 if you are going to use the services at the Math Center.

The Math Learning Center dedicated statistics tutor: Jake Coulumbe. There are also other statistics tutors at the MLC. In addition, Prof. Tracy Johnston (who also teaches from the same stats book as me) tutors at the MLC on Mondays 12-3pm and Fridays 11am-2pm. You can also get free, walk-in tutoring on the first floor of the library from Greg Thomas, who is an instructional aide for the college.

Course Description: The use of probability techniques, hypothesis testing and predictive tech-niques to facilitate decision-making. Topics include descriptive statistics, probability and sam-pling distributions, statistical inference, correlation and linear regression, analysis of variance, chi-square and t-tests, and application of technology for statistical analysis, including interpreta-tion of the relevance of the statistical findings. Applications using data from disciplines including business, social sciences, psychology, life science, health science and education.

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Course Objectives:

1. Distinguish among different scales of measurement and their implications;

2. Interpret data displayed in tables and in graphs;

3. Apply concepts of sample space and probability;

4. Calculate measures of central tendency and variation for a given data set;

5. Identify the standard methods of obtaining data and identify advantages and disadvantages of each;

6. Calculate the mean and variance of a discrete distribution;

7. Calculate probabilities using normal and t-distributions;

8. Distinguish between sample and population distributions and analyze the role played by the Central Limit Theorem;

9. Construct and interpret confidence intervals;

10. Determine and interpret levels of statistical significance including p-values;

11. Interpret the output of a technology-based statistical analysis;

12. Identify the basic concept of hypothesis testing including Type I and Type II errors;

13. Formulate hypothesis tests involving samples from one and two populations;

14. Select the appropriate technique for testing a hypothesis and interpret the result;

15. Use linear regression and ANOVA analysis for estimation and inference and interpret the associated statistics;

16. Using applications from business, social sciences, psychology, life science, health science and education apply appropriate statistical techniques to draw conclusions.

Academic Integrity Cheating is considered fraud. If you are caught cheating, you may be given a grade of "F" for the assignment or exam. Students should be familiar with the college's Statement on academic integrity.

Classroom Conduct: Class time is valuable. You are expected to be courteous to each other and to the instructor. You will be asked to leave the class for display of behavior the instructor deems as disruptive to the class environment. This includes the use of your cell phone. If you are disruptive in class (after being warned), you could be suspended from the course for up to 2 days. **Comments about another's race, ethnicity, accent, appearance, intelligence, or sexual orientation will not be tolerated on any level.** Students should be familiar with the college's "Student Discipline Procedures."

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Class Attendance: Class attendance is an integral part of the learning process for this course. Students are expected to attend class regularly, as well as to arrive and depart on time. Students with excessive absences (including tardiness) may be withdrawn from the class. Note that although college policy provides for a certain number of class absences, that number covers all types of absences, including absences such as those due to documented illness or other emergency; absences for illness or emergencies are not accommodated in addition to those allowable under the attendance policy. Students may be withdrawn after more than two weeks absence of any kind.

Disruptions: Your demeanor should support and respect the environment of learning inside the classroom. Movement and chitchat in the classroom disrupts your classmates and the instructor. This includes leaving class, coming in late, passing notes, texting and chatting with the person next to you about non-math related topics. It is very important that all students be respectful of those trying to learn. This is as important in the back row, as it is in the front row. Again, I encourage you to ask questions in class. Just know that if you have a question related to the class, someone else is certain to be wondering the same thing. So please ask! Talk/text on your phone and attend to your personal needs before or after - but not during class. When you enter the classroom, turn off cell phones, pagers, and all other communication devices. In times of family crisis, you may set your cell phone on vibrate. If you must arrive late or leave early, take the first seat near the door.

Grading:

90% — 100%	A
80% — 89%	B
70% — 79%	C
60% — 69%	D
below 60%	F

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