Cañada College   Spring 2016

Statistics   Math 200 LA9   CRN 33472   4.0 units

Instructor: Yvette Butterworth
Text: *Essentials of Statistics*, Ed. 5, Mario F. Triola & MyStatLab/Course Compass & TI 83/84
Hours: 5:30pm - 9:30pm Th in 17-103
Office Hours: Hrs. TBA
                     By Appt on Skype (profbutterworth)
E-mail Address: butterworthy@smccd.edu
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Skype: profbutterworth
YouTube: profbutterworth's channel

Course Description:

An introduction to modern methods of descriptive statistics, including collection and presentation of data; measures of central tendency and dispersion; probability; sampling distributions; hypothesis testing and statistical inference; linear regression and correlation; use of microcomputers for statistical calculations. Illustrations are taken from the fields of business, economics, medicine, engineering, education, psychology, sociology and from culturally diverse situations. The prerequisites of this class are completion of Math 120 with a grade of C or better or appropriate score on the college placement test. **This class must be added by Tuesday, February 2.**

Student Learning Outcomes:

Upon successfully completing of Math 200, the student will be able to:

1. Define statistical terms.
2. Compute basic descriptive statistics.
3. Compute basic probability problems.
4. State the Central Limit Theorem and give examples of applications.
5. Given an inferential statistics problem, identify the appropriate hypothesis test, perform the hypothesis test, and interpret the results.

Required Materials:

Essentials of Statistics, Ed. 5, Mario F. Triola (physical or electronic copy)**;** Access to My Stat Lab (butterworth15905) , Reliable internet access and access to a computer with EXCEL, TI-83 or TI-84 Series Calculator**;** Pencils, Paper (for notes, quizzes and homework); a 3-ring binder (1.5in. or larger) is also a good idea.

Attendance:

Attendance is very important. You are expected to attend every class meeting. Class sessions will cover material from your book, but may also give a different perspective on the material in your book. A student who stops attending is not automatically dropped from class, although I reserve the right to drop a student who misses 3 class meetings. *Students on the final grade roster who have not dropped, and who do not show up for the final exam, automatically receive an F in the course – it is your responsibility to drop yourself from the class if you don't wish to continue.* Please contact the instructor or the Admissions and Records Office if you can't continue. The last day to **drop and receive a partial refund** of fees is Tues., 2/2. The **last day to add** is Tues., 2/2. The **NRS** drop deadline is Sun., 2/7. The last day to drop with a **"W"** is Thurs., 4/28.

Potential Extra Credit:

On our WebAccess site, I will create a Forum (discussion room) to house our Extra Credit Activities. These activities are about the Growth Mindset (relates to the last do NOT in the list of In-Class behaviors that impede learning and last in the list of Good Learning Environment). There are multiple parts to receive a 3% boost to your overall grade – 3 Forum Posts after reading and watching videos/articles and a 1 page, sited paper due by the day of the final. I have great faith in the Growth Mindset!

Applied Homework/Class Work & Participation:

Your first assignment will be a group assignment on the 1st day of class. You will be getting to know your fellow classmates and familiarizing yourself with the layout of my class. The assignment should be nearly complete by the time you leave class on the first day and then you will be required to take the handout to the Learning Center on the 2nd floor of Building 9, on your own time, and have it signed by a faculty or staff member. This assignment is due, by Thursday, January 28 or your second official class after enrollment. I will reduce the grade by 25% per class day for late work.

Your second & third assignment is to fill out a set of questions that I call an **Informative Questionnaire**, in a Google Doc (see link in WebAccess) about yourself and your reasons for taking this class. You will type your name as a verification that you have read and understand my syllabus and agree to the requirements set forth in my class. Successful completion of the entire Google Doc is required for credit. It is due by Thursday, February 4. This assignment can be accept late with a penalty of 25%. I really want this information and I am willing to accept between Feb 5 and March 17 for 75% credit (if it is complete).

I will assign problems to be worked for the next class during each session. Most of the time they will be from the book, but occasionally the problems will come in the form of a handout. You must be in class to get the exact homework (although you may find it posted on the Google Calendar for your class on your class webpage). These homework assignments will checked off by me, you will self-check and returned to me at the break/end of class for credit (you must turn it in for credit). Work is late after I have checked it off in class and can only receive up to 80% credit for completed work regardless of the reason for being late. In the event of an emergency take a picture and email it – keep in mind that I will always require a paper copy and a valid and verifiable reason upon return. An emergency situation will only be given attention 3 times.

A final component will be individual and group work. During these assignments, you will be given work that will use all your developing skills in a more real-world statistics scenario than problems you will be encountering in the book. You will need to be present in class to work on these assignments. You can't make up group work, but I will excuse 3 missed group work assignments with a verifiable excuse; you must come talk with me upon your return however.

This portion of your grade will comprise 10% of your grade.

Some final pointers about all work in my class: All work will be labeled with section and assignment (if from our book) and will be stapled in the upper left corner in sequential order and your name and date in the upper right. All problems must show the original problem, work and final answer to be considered complete. An answer only is never considered complete. Remember, if you don't do your homework on your own and in a timely manner, you are hurting no one but yourself – homework is a very valuable learning tool, and tests will let me know how much work you are doing on your homework! L**ate work may** **have repercussions** **or may** **not be accepted!**

Project:

The project counts for 15% your grade. This project will consist of 8 tasks. The first is to collect data. The second is a spot check of the data coding. The third is to input the collected data into a Google Doc. The fourth is to summarize the data. The fifth is to create confidence intervals. The sixth is to choose the "questions" you will answer. The seventh is to test each hypothesis you are answering, writing out all the steps you will learn (H_0 & H_A, Distribution, CV, TS, Decision & Conclusion). The eighth is to write a formal paper explaining the process and what you have learned. In addition to explaining the knowledge gained in a formal written manner, the paper will include appendices that give the original survey, the code key for the data, the summary statistics (visual & mathematical) for the data, the confidence interval(s) and the hypotheses. The Project Instructions will give a little more detail and this portion of the syllabus should not substitute reading the Project Instructions. The final paper will be due when you walk in the door to take your final. All other tasks will be given due dates in the Project Instructions.

Quizzes:

A quiz will be given on each chapter that we cover. These quizzes will be given in MyStatLab (Course Compass). You need to print the quizzes and show your supporting work. You will need the supporting work to get a password for making up the quiz if you score under a 80% the first time. You will need to pay close attention to Course Compass and in class to be aware when these quizzes will be available. They will only be open for about 3-5 day periods when they come available, opening with the completion of the material in class and closing before the next class.

If you do not receive an 80% the first time, you will have the opportunity to make corrections. Once corrections are done you will need to visit the learning center and have a tutor go over the corrections and sign-off the quiz. Once this process is complete, I will give you access to the make-up quiz on Course Compass. If you miss a quiz I'll give you access to the make-up if you come ask, but the max grade attainable for a missed quiz will be 80% (just like the make-up). Make-up quizzes will be due within 1 week of the in-class test covering the material. The quizzes will account for 20% of your grade.

Midterms:
The midterms will contain problems like those encountered in class, in homework, in practice exams, on Course Compass and other work done in class. The midterms will most likely cover Chapters 1-3/4 and Chapters 4/5-7. You may use the practice tests on my website as a tool for study. Problems will be graded based upon support for answers using formulas and pertinent statistical knowledge. All work will be required to be shown and a final answer given based upon work shown. Grading will be based upon correct use of statistical knowledge, work shown using correct formulas and knowledge and a correct of the final answer. The midterms will be given a percentage grade. It is possible that it will be curved. If you miss a midterm you will need to make it up in the Learning Center by the 2nd Friday following the midterm. There will be no exceptions. The final score would replace a missing midterm score. A make-up midterm will not receive a curve if one was given. The midterms, currently planned for Thursday, March 24 and Thursday, April 21, will be averaged and account for 25% of your grade.

You may bring an **8.5x11 note card** to each midterm. The card may contain formulas, steps for doing problems and using your calculator, and portions of a problem where you know you always have difficulty, but it **may never contain a complete problem/example**. You **must** staple the note card to the back of your test.

Final Exam:
The final will 30% of your grade. The final is cumulative, but will focus more attention on Chapters 5-10 than on 1-4. The final will be **Thursday, May 26 6-9 pm.** If you do not take a final you will receive an F in the class.

You may bring an **8.5x11 note card** to the final exam. The card may contain formulas, steps for doing problems and using your calculator, and portions of a problem where you know you always have difficulty, but it **may never contain a complete problem/example**. You **must** staple the note card to the back of your test.

Grades:

			Percentage Ranges for Letter Grades
Quizzes	=	20%	**A:** 91.45%↑ **A-:** 89.45%-91.44%
Project	=	15%	**B+:** 86.45% - 89.44% **B:** 81.45% - 86.44% **B-:**
HW/CW/Part	=	10%	79.45% - 81.44%
Midterms	=	25%	**C+:** 76.45 - 79.44% **C:** 69.45 - 76.44%
Final Exam	=	30%	**D:** 59.45% - 69.44%
Total	=	**100%**	**F:** 59.44% and below

Class Rules:
The rules of my classroom are pretty basic – Be respectful of others. This means that you should not interfere with anyone else's ability to learn. Ways in which you may interfere include talking during lecture, not participating in group activities, using electronic devices for music/texting/gaming during class, making any kind of disruptive noise during class, coming to class late and not making an effort to be as unobtrusive as possible, wearing a hat in class, etc. I will follow the policies outlined in the college catalogue in dealing with violations of the class rules. Note: If I see your cell phone out on a consistent basis and see you disrupting others through its use or if you are not focusing, you will be warned and following a warning asked to leave the classroom! Cell phones are not allowed on your person or desk during tests/exams! Having a phone out for any reason, without expression consent will be considered cheating (see below)! I know there are unexpected emergencies as well as times when we are expecting an important phone call, so I if the need arises (except during tests), please use your phone discreetly. Discreet phone use includes keeping it on silent mode and preferably in your pocket. Discreet use also means waiting to answer the phone until you've stepped outside, or if it can't be put off, answering with a quick whispered, "Hello, hold on for a second." Just so you know in advance, my cell phone is always on my desk because I use it as a time keeping device for breaks and end of class, and you can be assured that I will not be answering it unless it is an emergency – and I do have children that will from time to time be with a babysitter, so those can arise!

Student Honesty:

When doing homework I encourage students to work together and help one another. Students are expected to do their own work on tests and quizzes. I allow students to bring a 8.5x11 note card to the midterm and final. Cheating will not be tolerated! Talking to anyone but me, helping another student during an tests/quizzes, bringing more notes than authorized, copying information from another person's test or quiz, using external sources of information for which you were not explicitly given permission to use (including any calculating device not explicitly stated as appropriate, phones and pda's included) is considered cheating. Students caught participating in such activities will receive a zero on a quiz, violations on a midterm or final can also result in a drop from the course or a grade of an F in the course (regardless of class standing)! Cheating incidents will also be reported to the VP of Student Services and further action could be taken in accordance with school policy. For more information visit:
http://www.canadacollege.edu/inside/acad_integrity/

Student Grievances:

Please refer to the grievance policy in the college catalog if you have any questions.

Student Special Services:

Students requiring special services or arrangements because of hearing, visual, or other disabilities should contact their instructor, counselor, advisor, or Disabled Student Services Office by the end of their first week of instruction. I encourage all students with special needs to contact me after the first class meeting to arrange for any classroom assistance. Please contact Disabled Students Programs and Services:
http://www.canadacollege.net/student/disabledservices.html

Welcome to Statistics:

Welcome to Math 200! I am excited about the coming semester! I am here to help you learn about the exciting world of statistics and if there is anything that you think will make your learning experience more rewarding, please let me know (please do not make the mistake that this is an invitation for you to tell me how to run my class, this is merely on a one on one office hour basis). By now I expect that you realize that in order to be a successful mathematician it does take practice, but I will remind you! You should plan to spend **at least** 2 hours outside of class, for every hour in class, studying your notes, text and doing problems (this means **at least 8 hours per week**; it is not wise to assume it will all happen on the weekend). I would like to stress that any math class goes very quickly – please stay abreast of your work and don't neglect your study. Class participation and study/project groups are very important as well! We will have occasional class time for group study, but you should get the names and numbers of at least two fellow class members to call in case you miss a class or need to ask a quick question. Have a great spring semester at Cañada!

Additional Information:

I reserve the right to make changes or additions to my syllabus at any time during the quarter. I will notify you via class discussion of any changes or additions. The college catalogue overrides my syllabus at any time.

Additional Support

You may find that you need additional help outside of class. I strongly urge every student to begin getting extra support from the beginning. Some additional resources include:

The Learning Center
   Location: Bldg. 9 2nd Floor
   Phone: (650)306-3348
   Web:
http://www.canadacollege.edu/learningcenter/
       Hours: Monday-Thursday 8am – 9pm
               Friday 8am – 3pm
               Saturday 10am-2pm

Potentially Statistics Workshops
Monday-Friday Times Vary by Day

Professor Butterworth's Website
http://www.profbutterworth.com/canada/can_Stat.html
    Replacement for 1st Day Handouts
    Notes containing processes & examples
    Links to Video Lectures/Tutorials
Google Calendar for Important Info

Course Compass/My Stat Lab
http://coursecompass.com which will redirect to
http://pearsonmylabandmastering.com/?cc
  Quizzes
  Links to multimedia learning aides provided by Pearson
  Step-by-step guidance in completing problems
  Immediate feedback on completed problem
  Instruction sets for calculator & other handouts