Santa Monica College --- Spring 2020
Department of Mathematics
MATH 54(#2842)—Elementary Statistics (4 units)
Friday 8:00am – 12:05pm, Location: MC 66

Instructor: Melanie Xie

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Office Hours: Friday, 6:50 am – 7:55am, in MC 66

Email: xiemc2@gmail.com or xie_melanie@smc.edu. When email me, please put your name and section number in the subject heading.

Prerequisite: Completion of Math 20, Math 18, Math 49, or Math 50, or equivalent, with a grade of C or better

Required Text and Tools:

1. <u>Text</u>: "*Elementary Statistics*" by Mario Triola, Published by Pearson, 13th edition or the California edition.

2. <u>TI 84 Calculator is required</u> (The TI 84 has specific statistical functions not found on other graphing calculators). You are expected to bring the calculator to each class. We will go over the how to use the calculator in class, however, as the course is quite fast paced our time is limited, you will need to use the calculator on your own in order to be successful in this course. If you choose not to use a version of the TI-84 please be warned that it may take you longer to complete assignments and exams and I will not be able to show you how to use your calculator. I will be assuming that you are using a version of the TI-84. You will not be allowed to use cell phones as a calculator during any exam

3. <u>Formula Card</u> <u>and Tables.</u> You will need to get a complete copy of the formula card and tables to use for all exams. There is a copy inside of new copies of the book. You must make a copy of the formula card. If you want to be able to use a formula card and table on exams you must bring a copy with you. You will not be allowed to share formula card and tables.

Tutoring and additional help: Tutors are available through the math lab which is located behind the math department in MC 84. There is drop-in tutoring and appointments available. You may also email me for help. It is in your best interests to ask for help as soon as needed.

Content: Emphasis is on understanding statistical methods. The major topics include descriptive statistics, measure of location and dispersion, sampling and sampling distribution, correlation and regression, confidence interval, hypothesis testing, test of independence, and analysis of variance.

Objectives: Statistically describe sets of data , Apply basic laws of probability, Formulate a probability distribution, Formulate and test hypotheses testing of one, two, and more than two populations, Formulate and analyze point and interval estimates for parameters, Find the correlation between two variables and the linear regression equation describing the relation between the two variables.

Attendance: Regular attendance is a requirement to remain enrolled. I expect you to attend the entire class, not to arrive late or leave early. Students are responsible for all announcements made in class regardless of their presence. Students are responsible for official withdraws from the class through admission office, if you stop attending it is still your responsibility to withdraw yourself from the class. If you do not withdraw yourself you may receive either a F or a W in the course, neither is a guaranteed. **If you miss 2 or more classes during the semester, you may be dropped from the course for non-attendance.**

Classroom Behavior and Participation: You are expected to arrive to class on time and be prepared. This means having your chapter outlines, your calculator, formula sheets and any other course handouts. Talking on a cell phone or checking messages is inappropriate at all times during class time. I expect you to show respect to your fellow classmates by not talking in class unless, of course, you have a question. If you choose to text during class you risk being asked to leave for the remainder of the class.

Collected Work: Each week, you will work on handouts as homework. Handouts will be collected at the beginning of the class they are due; If you plan to miss a class, you may submit your homework via emails before 8am. No late assignments will be accepted.

Textbook Homework: It is highly recommended that students practice the problems from the textbook. I will not collect them for grade.
Note: In addition to completing homework problems, students are responsible for reading the text. The pace of the course is quite rapid, so it is in your best interests to be caught up with the schedule of assignments. You should plan on completing each assignment before the next section of material is covered. To be successful in the course, I strongly suggest keeping up with the homework and seeking help as soon as you need help.

Projects: Group projects will be assigned starting week #4 with all details.

Weekly quizzes: Problems on the quizzes will come from previous day's lectures and assignments. I usually give quizzes at the beginning of the class. If you are late for the quiz, then you will have shorter time for the quiz. If you arrive after I collect the quiz, then you will receive 0 for that quiz. **No make up quizzes.**

Exams: Four exams are scheduled for the class (the dates are included on the tentative schedule). You are expected to take the exams on the scheduled date. **No make-up exams**. If you miss one exam, the grade on the final will be substituted for the grade on the missed exam. If you have taken all scheduled exams, you may substitute the grade on the final if it is higher, for the grade on the single lowest exam. If you miss 2 exams, you will have a grade of 0% for the second regardless of the reason. **Note**: no exams scores are dropped.
NOTE:
1. You will only be allowed to use a formula card and tables for the exams if you bring one.
2. Bring your own calculator to each exam (no sharing during exams)
3. You may be asked to move your seat at any time during the test.
4. The usage of smart watches, cellphones, tablets, laptops, or PDAs will not be permitted.
5. Any breach during an exam will be reported. Going into your bag, using a non-approved calculator, any talking, looking at another person's exam, passing a note, writing on your desk etc… cheating of any kind, will not be tolerated and will be immediately reported to the campus authorities

Final Exam: A cumulative final exam will be given during finals week, during the scheduled time slot. Everyone must take the final exam, no one is excused from the final exam.

Method of Evaluation:

Exams (4)..40%
Daily Quizzes 15%
Collected work...14%
Projects 6%
Final 25%

Grading System:

A: 90% - 100%
B: 80% - 89.9%
C: 70% - 79.9%
D: 60% - 69.9%
F: below 60%

Students are bound by the **Code of Academic Conduct and Reporting Policy** that addresses issues of academic dishonesty. If you are caught cheating on an exam, you will receive a grade of ZERO for that exam and the incident will be reported and become part of your permanent record.

There is and will be **_no negotiating for grades_** at the end of the term, that means your grade will be calculated as indicated above. There will be no extra credit, or any "deals" made regardless of how well you may think you can perform on the final exam. Do not even think of contacting me at the end of the term with such inquiries. I view emails, calls, office visits with such requests as harassment and will deal with them accordingly. **There is will be no extra credit, do not email me with your personal stories about how your life will be ruined if I do not give you a certain grade. You will receive the grade you earn.**

Entry Level Skills: Skills you need to have known prior to enrollment in this course
1. Solve linear and non-linear equations.
2. Simplify advanced numerical expressions (order of operations).
3. Plot and interpret points on Cartesian coordinate system.
4. Plot linear equations using slope-intercept method.
5. Translate verbally stated problems into appropriate mathematical forms.
6. Solve absolute value equations and inequalities in a single variable.
7. Evaluate an exponential function.
8. Evaluate simple expressions involving sigma notation.
9. Solve literal equations for designated variables.
10. Evaluate complex numerical expressions.
11.Given the description of a line, write the equation of the line.
12. Express the solution to an inequality using interval notation.

Exit Level Skills: Skills to be learned during this course
1.Statistically describe mathematically sets of data.
2. Apply basic laws of probability.
3. Formulate a probability distribution.
4. Formulate and test null hypothesis of one, two or more populations.
5. Make point and interval estimates of parameters.
6. Identify correlation between two variables and linear relation between them.
7. Use statistical functions on a calculator.
8. Critically evaluate statistical claims.

Student Learning Outcome(s):

1. Given a data set, students will analyze the data set and design a presentation of the information using tables, graphs and statistical calculations.
2. Given sample data, students will decide on and use appropriate estimation strategies to make inferences about the important characteristics of population data, including the mean, proportion and variation.
3. Given sample data, students will decide on and use an appropriate test to reach conclusions about a hypothesis made about a population parameter.

Important dates:

- Last Day to Withdraw to Avoid a "W": 03/01/2020
- Last Day to Withdraw to Guarantee a "W": 05/16/2020
- Flex Day 03/06/2020
- Spring Break: 04/13/2020 -04/17/2020

Week	Friday
	Spring 2020 -- Math 54 **Tentative Schedule**
Week	**Friday**
1	**2/21/2020** **Introduction** **Chapter 1**
2	**2/28/2020** **Chapter 2, 3.1**
3	**3/6/2020** **Flex Day -- No class**
4	**3/13/2020** **Chapter 3**
5	**Test #1, 4.1, 4.2**
6	**3/27/2020** **4.3, 5.1, 5.2**
7	**4/3/2020** **6.1, 6.2**
8	**4/10/2020** **Test #2, 6.3, 6.4**
	4/17/2020 **Spring Break**
9	**4/24/2020** **7.1, 7.2, 7.3**
10	**5/1/2020** **8.1, 8.2**
11	**5/8/2020** **Test #3, 8.3, 8.4**
12	**5/15/2020** **9.1, 9.2**
13	**5/22/2020** **9.3, 10.1**
14	**5/29/2020** **Test #4** **10.2, 11.1**
15	**6/5/2020** **12.1, review**
Final	**Final (06/12/2020)** **8:00 - 11:00am**

Disclaimer: All information in this syllabus is subject to change, including, but not limited to lecture material and exam/quiz dates. All changes will be announced and students are responsible for knowing all changes.