MATH 54—Elementary Statistics
Course Syllabus—Fall 2014

M W 12:45 – 2:50 PM    MC67
Instructor:  Gail Edinger
Office:     MC 59
E-mail: edinger_gail@smc.edu
Office Number: (310) 434 – 3972
Office Hours: Monday 7 – 8 AM
              Tuesday 11 AM – 12 PM
              Thursday 9:30 – 10:30 AM
Math Lab Hour: Monday 9:30 – 10:30 AM MC84B (Statistics Workshop)

Prerequisite: Completion of Intermediate Algebra (Math 20), or equivalent, with a grade of C or better.

Textbook: Statistics: Informed Decision Using Data, 4th edition, by Michael Sullivan III. To access the online portion of our class you will need a MyMathLab/MyStatLab student access code. Open your MyMathLab/MyStatLab Student Access Kit and follow the direction (http://pearsonmylabandmastering.com/). Use the FILL THIS IN. Registration within MyStatLab is required within the first three days of class.

Calculator: TI-83 Plus / TI-84 Plus is required. I will be using the TI-84 Plus in class demonstrations. You may NOT use a cell phone or any other device that contains a calculator for quizzes and exams. Your calculator must be just that, a calculator. Calculators may not be shared.

Course Description: This course covers concepts and procedures of descriptive statistics, elementary probability theory and inferential statistics. Course material includes: summarizing data in tables and graphs; computation of descriptive statistics; measures of central tendency; variation; percentiles; sample spaces; classical probability theory; rules of probability; probability distributions; binomial, normal, T, Chi-square and F distributions; making inferences; decisions and predictions. This course develops confidence intervals for population parameters, hypothesis testing for both one and two populations, correlation and regression, ANOVA, test for independence and non-parametric method. This course develops statistical thinking through the study of applications in a variety of disciplines. The use of a statistical/graphing calculator or statistical analysis software is integrated into the course.

Course Content:
- Descriptive Statistics
- Probability
- Probability Distributions
- Estimation
- Hypothesis Testing – One and Two Populations
- Correlation and Regression
Student Learning Outcomes (SLOs):

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.

Attendance: Regular attendance is required. You are expected to attend the entire class, not to arrive late or leave early. You are responsible for any announcements that I make in class, including any changes to the schedule. A student may be dropped for excessive absences, 3 or more unexcused absences. If you decide to drop this class, it is your responsibility to withdraw yourself from the class through the Admissions Office.

Homework: The homework exercises are online; available from any computer, any time, as long as the MathXL plugin is installed. You will probably spend 3 – 6 hours each day on homework, some more, some less. Try to spread it out over the week, rather than do it all the night before. The homework is interactive, meaning you can get help, view an example, and see the solution worked out in detail, step by step. There are also instructional videos available of an instructor giving lectures and working out problems from all topics we cover in the class. It’s like having “a professor in your computer.” The work you need to do to complete your online homework should be neatly written in your notebook together with the title, section and the grade you earn. Absolutely no late homework will be accepted. Your notebook is due on the day of the exam.

Projects: There will be two projects, a short one for the first part of the term and a longer one due towards the end of the term.

Quizzes: There will be 10 quizzes as listed in the course schedule. If you do your homework, you should do well on all your quizzes. There will be no makeup quizzes. Your lowest quiz scores will be dropped.

Exams: There will be 3 exams and a comprehensive final exam. All exams are closed notes and books. No make-ups will be given for any reason. If for any reason you miss one exam, your final exam grade will replace the missed exam. Your final exam grade may also replace your lowest exam score provided that you did not miss any exam. You cannot miss final exam. The final must be taken in order to pass this class. Do not plan vacations that will require missing this day and time – no exceptions can be given.

Grading Policy:
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<tr>
<th>Component</th>
<th>Weight</th>
<th>Grade Range</th>
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<tbody>
<tr>
<td>Homework</td>
<td>4%</td>
<td>A: 90% - 100%</td>
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<tr>
<td>Projects</td>
<td>3%</td>
<td>B: 80% - 89%</td>
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<td>Quizzes</td>
<td>8%</td>
<td>C: 70% - 79%</td>
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<td>Exams (3 and 20% each)</td>
<td>60%</td>
<td>D: 60% - 69%</td>
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<td>Final Exam</td>
<td>25%</td>
<td>F: Below 60%</td>
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**Students with Disabilities:** Santa Monica College accommodates students with disabilities. If you qualify for any special accommodations due to a disability, you need to officially process your request through the Disabled Students Programs and Services (DSPS) office as close to the beginning of the semester as possible. If you believe you have a learning disability that has not yet been documented, please see me and make an appointment at the DSPS office for assistance. The DSPS office is located in the Admissions/Student Services Complex, Room 101, and the phone numbers are (310) 434-4265 and (310) 434-4273 (TDD). Scheduling of accommodated exams will be arranged on a case-by-case basis.

**Academic Honesty:** Honest and ethical students are protected in this class. It is your responsibility to familiarize yourself with The Code of Academic Conduct, which is printed in the General Catalog. Other guidance is also available online:

Student responsibilities:
http://www.smc.edu/StudentServices/StudentJudicialAffairs/Pages/What-you-should-know.aspx

Honor Council website:
http://www.smc.edu/StudentServices/HonorCouncil/Pages/Honor-Code.aspx

Administrative Regulation 4412:
http://www.smc.edu/ACG/AcademicSenate/Documents/AR%204412.pdf

Please be extremely careful that you do not engage in any behavior that could even be construed as cheating. **Violations could result in failing grades, reports to the Campus Disciplinarian, and subsequent academic disciplinary action.** Examples of behaviors that are not permitted include but are not limited to: Copying another student's homework, inappropriate language or physicality in the classroom, and inappropriate behaviors during an exam (talking with another student, looking at or copying from another student's paper, using a disallowed PDA or calculator, using disallowed notes, leaving the room without prior permission, removing exam materials from the classroom).

**Attendance, Drops and Withdrawal Policy:** Students are expected to attend all class sessions. Lectures and other class-work will not be recreated for individual students. You are responsible for notifying me, the instructor, in advance of any absence or scheduling conflict, via email or telephone. You may be dropped from the class if you miss more than three classes without notifying me.

Although I retain the right to drop you given the above circumstances, it is nevertheless your responsibility as a student to withdraw from class if you do not intend to complete it. Students must NOT expect faculty to initiate withdrawal procedures for them. If you wish to drop this class, you may do so through Corsair Connect. Students may process a drop for themselves through 75% of the class, which is through the 12th week in a regular semester. Withdrawal dates for each class are provided within each student’s individual Corsair Connect account.
General information regarding drop dates, withdrawals, and other enrollment matters may be found at the Admissions section of the SMC website:
http://www.smc.edu/EnrollmentDevelopment/Admissions/Pages/default.aspx

In this course, “on time” attendance means arriving within the first 10 minutes of class, according to the clock in the room. “Present” means staying in class for the entire period; if you leave early, it will be counted as an “absence.”

**Extra Credit Policy:** Extra Credit is not available for this class.

**Class Policies:**
- **Food and Drink:**
  Food or drink is prohibited in the classroom with the exception of water bottles, which are permitted as long as they remain closed when not in active use, and are kept away from all equipment.
- **Cellphones, tablets, laptops and other devices:**
  --Electronic device use is permitted in this class. Devices must be kept on the desk—not in your lap. Activities using these devices must be limited to activities supporting concurrent class topics. Students using devices for other purposes will lose the privilege of device use during class.
  --Cell phone and iPod etiquette: Place your phone on vibrate mode upon entering the class. Do not answer texts or calls during class time, unless it appears that it is urgent. If you get an urgent text or call, simply step into the hallway, take care of business and then quietly reenter the classroom.
- **Classroom conduct:**
  Please conduct yourself as you would in a business environment: on-time attendance, respect for others, respectful language and personal integrity. Private conversations with the instructor should be held in office hours, not during class time. Here is a link to the Student Code of Conduct (.pdf file, AR 4410):
  http://www.smc.edu/StudentServices/StudentJudicialAffairs/Documents/AR4410.pdf
- **Emergency Procedures**
  In case of an emergency, yes even a smoke alarm, we will all exit the building. We must reconvene at the gate by the football field between the MC building and the gym and take roll before anyone is excused.

**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.
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.

Course Objectives:
Upon completion of the course students will be able to:

A. Summarize and interpret data.
B. Analyze and interpret graphical presentations of data.
C. Find and interpret measures of central tendency and dispersion.
D. Solve basic probability problems.
E. Analyze and interpret probability distributions.
F. Formulate test, and interpret a hypothesis made about one-population parameters.
G. Solve basic probability problems.
H. Formulate, test, and interpret a hypothesis made about the difference between the means and proportions of two populations.
I. Formulate and analyze point and interval estimates for the difference between the means and proportions of two populations.
J. Formulate test, and interpret a hypothesis of independence between two variables.
K. Formulate test, and interpret for equality of three or more population means using ANOVA.
L. Find and interpret the correlation between two variables.
M. Find the regression line, interpret associated values in context, and evaluate the goodness of fit of the regression model.
N. Use the calculator and/or statistical analysis software to effectively implement the above objectives.

Tutoring and Addition Help: Tutors are available through the Math Lab in MC 84. There is drop-in tutoring and appointments available. I am also available during my office and math lab hours, if you are unable to make those times we can arrange another time.

Comments:
- Ask questions. No teacher expects students to understand every problem right away. When questions come up please ask them.
- Do your homework and do it on time. It is very difficult to succeed in a class when you are constantly trying to catch up on homework.
- Find some people in class to study with. The best way to learn a subject is to teach it.

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<td>2/17</td>
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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.