

COURSE: **Statistics (Math 52)** - Section 2381, Fall 2001
PREREQ: Completion of Math 20 with a grade of C or better
OFFICE: Math 40V (formerly SV 40V)
HOURS: _____

PHONE: Voicemail (310) 434-4722

MAIL: Students may leave written material/messages in the campus mailroom in the Liberal Arts Bldg

email: manion_fran@smc.edu (I try to check my email each evening.)

WEB Sites: http://homepage.smc.edu/manion_fran/

The Website contains syllabus, tentative lecture schedule, homework assignments, unit objectives, sample tests, announcements and links to course-related materials.

http://homepage.smc.edu/mcgraw_colleen/math_52/calculatornotes.htm

Dr. McGraw, a statistics instructor at SMC, has prepared a set of excellent handouts on using the TI-83 for statistical applications. You can download the handouts at this location.

<http://voh.smc.edu/VOHWelcome.asp>

At this site you can send course-related questions for the instructor to answer. The assumption is that students often have many of the same questions. Any Math 52 student may view any posted/answered question. VOH provides a convenient mechanism for sharing answers. You may also access this site by clicking on the VOH link at Ms. Manion's Website. To post questions on the VOH Website you will need an SMC computer account. See p.7 for how to get an account.

<http://www.awlonline.com/triola>

The author of our textbook prepared this site. It includes several useful options including

- [Video clips](#) that reinforce some major topics in the book.
- [Tutorials](#) consisting of a set of exercises for the sections in your book with hints and instant feedback.
- [Internet Projects](#) which invite you to conduct experiments, view animations, and respond to discussion questions that reinforce key concepts in your book.
- [Quizzing](#) that assesses your understanding by taking a chapter quiz that will be graded for you.

RESOURCES: **Tutorial assistance**, both "drop-in" and by appointment is available in the SMC Math Lab located in MATH 34 (formerly SV34).

TEXT: [Elementary Statistics, 8th Ed](#) by Mario Triola, Addison Wesley Longman Publishers, 2001

TOOLS: Scientific calculator, preferably TI-83; EXCEL spreadsheet

OPTIONAL: [Student Solutions Manual, 8th Ed](#) by Peter Loyer

[TI-83 Plus Companion to Elementary Statistics, 8th Ed](#) by Larry Morgan

CONTENT

This course emphasizes the understanding and application of statistical methods. The major topics include frequency distributions, measures of central tendency, variation, sampling, correlation, probability and hypothesis testing. This class will use an "active learning" model wherein students will be required to participate in group activities.

COURSE OBJECTIVES

Upon completion of this course, students will be able to:

- Statistically describe sets of data.
- Apply basic laws of probability.
- Formulate a probability distribution.
- Formulate and test hypothesis 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 two variables.

REGULAR ATTENDANCE at class is required. Attendance will be taken at each class meeting. The instructor may drop any student who misses four class meetings. Well-prepared students will preview each day's lecture material by reading the appropriate section(s) in the text (see Tentative Lecture Schedule, p.4).

HOMEWORK assignments are listed with the tentative lecture schedule. Selected problems will be discussed in class. Practice with computational formulas, use of the calculator and the solution of application problems are critical to your success in this class. The majority of the problems assigned are odd-numbered exercises for which answers are provided in the back of the text. Homework assignments for each unit will be collected on the day of the exam for that unit. Late homework will not be accepted.

Homework problems should be presented on standard 8-1/2" x 11" paper. (Do not use paper ripped out of a spiral notebook!!!) Each new homework section should begin on a new page. Be sure to write your name, the text section number and the problem number(s) for the assignment on the upper right hand corner of the first page. Each homework assignment is worth 10 points. Homework will be evaluated on completeness and presentation of the work. Your homework also includes **reading** the sections scheduled for discussion at the next class. Frequent **QUIZZES** based on homework problems and lectures will monitor your understanding of the concepts, notation and terminology. Homework and quizzes will account for 10% of your final grade.

Unit **PROJECTS** selected from the textbook will account for 10% of your final grade. A list of suggested projects will be found on p.6.

Four **UNIT TESTS** will account for 60% of the final grade in the course. Topics included on each test are:

Unit 1 Test:	Sections 1.1-1.4, 2.1-2.7, 3.1-3.2
Unit 2 Test:	Sections 4.1-4.4, 5.1-5.5, 5.7,
Unit 3 Test:	Sections 6.1-6.6, 7.1-7.6
Unit 4 Test:	Sections 8.1-8.6, 9.1-9.4, 10.3, 11.1-11.2, 13.1-13.6

An average of the best three of your four test scores will be used in the calculation of your final grade. Missing a test will result in a grade of ZERO for that test. **No make-up tests will be given.**

A **COMPREHENSIVE FINAL EXAM** will be given according to the college final exam schedule and will account for 20% in the computation of the final grade. A student must receive a passing grade (D or better) on the final in order to pass the class.

LETTER GRADES on tests, quizzes, and the final exam will be assigned according to the following scale:

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

Your final grade will be calculated as a weighted average using the following formula:

$$\text{Final Grade} = .10*(\text{Hmwk \& Quizzes}) + .10*(\text{Project}) + .60*(\text{Test Average}) + .20*(\text{Final Exam})$$

You will be able to view your grades on-line after the first exam at Ms. Manion's Website.

Maintaining the appropriate **CLASSROOM CLIMATE** is the responsibility of each student.

- ✓ As a matter of courtesy, you should arrive on time for class.
- ✓ Pagers and cellular phones should be turned off or muted during class time to avoid creating a distraction.
- ✓ Food and beverages should be consumed outside the classroom.
- ✓ You are expected to be courteous to and respectful of your colleagues as well as the instructor.
- ✓ Talking during the lecture or announcements is a distraction to other students and the instructor and should be avoided.

Santa Monica College has a **STUDENT CONDUCT CODE** and may discipline students in accordance with its provisions. The College also has the authority to remove students from a class or program if they are disruptive of the instructional process, do not respect the civil rights of other students, cannot benefit from instruction, or present health and/or safety hazards in a class. Disciplinary sanctions include, but are not limited to, verbal or written reprimand, disciplinary probation, removal from class, ineligibility to participate in extracurricular activities, suspension, and expulsion.

Santa Monica College defines **ACADEMIC DISHONESTY** as the act of or assistance in deceiving, including fraud or deception, in any academic exercise. This includes, but is not limited to, the following actions not authorized by the instructor:

- ✓ Using testing aids such as calculators, tape recorders, or notes on any examination.
- ✓ Allowing another individual to assume one's identity for the purpose of enhancing one's grade in any of the following: testing, field trips, or attendance.
- ✓ Falsifying or attempting to falsify attendance records and/or grade rosters.
- ✓ Representing the words, ideas or work of another as one's own in any academic exercise (plagiarism), including the use of commercial term paper companies.
- ✓ Changing answers on a previously scored test, assignment, or experiment with the intent to defraud.
- ✓ Copying or allowing another student to copy from one's paper or answer sheet during an examination.
- ✓ Inventing information for the purpose of completing a laboratory exercise or case study with the intent to defraud.
- ✓ Giving and/or taking information during an examination by any means including sign language, hand signals, secret codes, or electronic transmission.

When taking a quiz or exam, you should keep your eyes on your own paper. Communicating (talk or body language) with another student during the exam without instructor permission is unacceptable. You are expected to do your own work on all quizzes and examinations. Students are encouraged to work together on the homework and review exercises. A first offense of academic dishonesty will result in a zero grade on that quiz or exam. A zero grade assigned as a result of academic dishonesty will NOT be dropped as the lowest score. In addition, a report will be filed with the Campus Disciplinarian.

For more detailed information, please refer to the **College Conduct Code** and **Academic Conduct Code** found posted in the classroom and in the *SMC Student Handbook/Guide*.

Lecture Schedule and Homework Assignments

Homework should be done as soon as possible after class. It is a good idea to review class notes before attempting the homework. Homework assignments for each unit will be collected on the day of the unit test.

Date	Text Sections	Homework
08/27	Ch. 1 – Introduction to Statistics	
08/29	2.1 Overview 2.2 Summarizing Data with Frequency Tables	p.40, #1,3,5,7,9,11,13,15,23,24
09/03	Labor Day Holiday	
09/05	2.3 Pictures of Data 2.4 Measures of Center	p.51, #1-4,5,10,13,15,19,20,23,31 p.65, #1,3,5,7,9,11,15,20,21
09/10	2.5 Measures of Variation	p.81, #1,3,5,7,9,11,15,17,19,21,23,25,27
09/12	2.6 Measures of Position 2.7 Exploratory Data Analysis	p.91, #1-39 odd p.102, #1,3,5,7,12
09/14	Last day to withdraw without receiving a “W”	
09/17	3.1 Overview 3.2 Fundamentals	p.123, #1,2,3,5,9,11,13,17,19,23,29 & handout
09/19	4.1 Overview 4.2 Random Variables 4.3 Binomial Probability Distributions	p.190, #1,3,5,9,11,13,15,17,19,21 p.201, #1-35 odd
09/24	Test #1	
09/26	4.4 Mean, Variance & St Deviation for Binomial Dist	p.207, #1-17 odd
10/01	5.1 Overview 5.2 The Standard Normal Distribution 5.3 Nonstandard Normal Distributions: Probabilities	p.239, #1-43 odd p.245, #1-24 odd
10/03	5.4 Nonstandard Normal Distributions: Values 5.5 Central Limit Theorem	p.252, #1-19 odd, 23 p.263, #1-19 odd, 22,23
10/08	5.7 Determining Normality	p.283, #1-13 odd
10/10	6.1 Overview 6.2 Estimating a Population Mean: Large Samples	p.309, #1-24 odd, 26, 27
10/15	Test #2	
10/17	6.3 Estimating a Population Mean: Small Samples 6.4 Determining a Sample Size	p.320, #1-24 odd, 25, 26 p.327, #1-12 odd
10/19	Last day to receive a “W” without a grade check	

10/22	6.5 Estimating a Population Proportion 6.6 Estimating a Population Variance	p.337, #1-34 odd, 37,41 p.351, #1-21 odd
10/24	7.1 Overview 7.2 Fundamentals of Hypothesis Testing 7.3 Testing a Claim about a Mean: Large Samples	p.378, #1-39 odd p.394, #1-27 odd
10/29	7.3 Testing a Claim about a Mean: Large Samples 7.4 Testing a Claim about a Mean: Small Samples	p.405, #1-27 odd
10/31	7.5 Testing a Claim about a Proportion 7.6 Testing a Claim about Variance or St Deviation	p.414, #1-23 odd p.421, #1-17 odd, 21
11/05	8.1 Overview 8.2 Inferences about 2 Means: Indep & Large Samples	p.444, #1-19 odd
11/07	Test #3	
11/12	Veterans' Day Holiday	
11/14	8.3 Inferences about 2 Means: Matched Pairs 8.4 Inferences about 2 Proportions	p.454, #1-15 odd p.466, #1-19 odd
11/16	Last day to receive a "W" with a grade check	
11/19	8.5 Comparing Variation in Two Samples 8.6 Inferences about 2 Means: Indep & Small Samples	p.476, #1-13 odd p.488, #1-15 odd, 16
11/21	9.1 Overview 9.2 Correlation 9.3 Regression	p.520, #1-21 odd p.535, #1-21 odd
11/26	9.4 Variation and Prediction Intervals 10.3 Contingency Tables	p.545, #1-19 odd p.598, #1-17 odd
11/28	11.1 Overview 11.2 One-Way ANOVA	p.626, #1-11 odd
12/03	13.1 Overview 13.6 Rank Correlation	p.726, #1-13 odd
12/05	Test #4	
12/10	Final Review	
12/12	Final Exam: 12:00 – 3:00pm	

Projects

Students will work in groups to prepare the five Cooperative Group Activities listed below. In addition, each student will complete three additional projects of their choice. The additional projects must be selected from three different units and may be done either individually or with up to two other students. For the projects, the total point count possible is 65.

Projects will be graded on the accuracy and the presentation of the work. Each project should include a statement of the problem to be addressed, the process followed and the conclusions derived. Make sure your work is legible. For a sample of a reasonable format, check Ms. Manion's Website.

<u>Unit</u>	<u>Project</u>	<u>Possible Points</u>	<u>Your Score</u>	<u>Due Date</u>
1	Statistics in the News, p.25	5	_____	Mon, 09/10
1	Cooperative Group Activity #1, p.107	10	_____	Mon, 09/17
2	Statistics in the News, p.215	5	_____	Wed, 10/03
2	From Data to Decision, p.220	5	_____	Wed, 10/03
2	Cooperative Group Activity #1, p.288	10	_____	Wed, 10/10
3	Cooperative Group Activity #1, p.358	10	_____	Wed, 10/24
3	Statistics in the News, p.425	5	_____	Wed, 10/31
3	Cooperative Group Activity #2, p.430	10	_____	Wed, 11/14
4	Cooperative Group Activity #1, p.498	10	_____	Mon, 11/26
4	From Data to Decision, p.500	5	_____	Mon, 12/03
4	Internet Project, p.501	5	_____	Mon, 12/03
4	Internet Project, p.570	5	_____	Mon, 12/03

SMC Computer Information for Students

(library.smc.edu/student_network_account.html). All web addresses are preceded with “http://”.

Student “email” accounts (probably more appropriately referred to as SMC Computer Accounts) are needed to retrieve SMC email, use on-campus computers, access Library Databases from off-campus (library.smc.edu) and use VOH. You can get an account by

- going to one of the campus computer labs or
- on-line at <http://www.accounts.smc.edu>.

You will need your name as in appears on your student ID card, your ID number and your birth date. Student email is accessed *via* the Internet from on or off campus at <http://student.smc.edu/exchange/logon.asp>

You should review the **Computer Use Policy** (http://student.smc.edu/student_email_policy.htm) before signing up for an account. This policy also appears under the email request form.

Information about **SMC’s Student Computer Labs** is on-line at <http://www.smc.edu/tech/acadcomp/main/labs.htm>. This page is also linked from the main SMC web page (<http://www.smc.edu>). Go to “Campus Resources” and then to “Student Computer Labs” (under the Learning and Teaching Resources heading). Lab hours are posted on the lab doors. You must have an SMC “email” account to use the computers on campus. Your log-in name and password are the same as for email. The labs listed below exist primarily as open labs for individual students to use although some of the labs may be reserved for classes at specified times.

- ◆ Business Computer Lab (Bus 231) • PC’s • priority to students in computer classes
- ◆ Business Tutoring Center (Bus 251) • PC’s • priority to CS, CIS, Business and Accounting students
- ◆ Cayton Computer Lab (Cayton 201/209) • PC’s and Macs • priority to students with ASB sticker
- ◆ Computerized Writing Lab (Tech 203) • PC’s • priority to English and ESL students
- ◆ Library and LRC Computer Lab (Lib 21) • PC’s • any currently enrolled student
- ◆ Science Computer Lab (Sci 240) • PC’s and Macs (in Sci 245) • priority to Life and Physical Science students