IMPERIAL VALLEY COLLEGE
MATH 119 – ELEMENTARY STATISTICS WITH APPLICATIONS
Course Syllabus – Spring 2013

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Office Hours: Mondays and Wednesdays from 7:00 to 7:30 AM.
                     Tuesdays and Thursdays from 9:45 to 10:15 AM and 11:40 AM to 12:40 PM.

Class Meetings: Mondays and Wednesdays from 5:30 PM to 7:35 PM in room 313A.
Class Code: CRN 20297
Units: 4.0
MathXL Code: XL13-81V0-601Y-1WT2

Textbook: Essentials of Statistics, Triola, Mario F., Fourth edition, Addison-Wesley, ISBN 0-321-64149-3.

Prerequisite: Math 091 with a grade of "C" or higher.

Course Philosophy:
Graphical

Measurable Course Objectives and Minimum Standards for Grade of "C"
Upon satisfactory completion of the course, students will be able to:
1. Students will distinguish the various ways of organizing, displaying, and measuring data.
2. Students will derive the numerical relationship that exists between Bivariate Data.
3. Students will demonstrate an understanding of the theory of probability and proficiency in solving problems of this nature.
4. Students will compute and interpret expected value and variance, and learn about the various types of distributions for discrete random variables.
5. Students will compute and interpret expected value and variance, and learn about the normal distribution for continuous random variables.
6. Students will examine the joint probability structure of two or more random variables and understand the limiting behavior of the sum of independent random variables as the number of the sample becomes larger.
7. Students will use the various types of distributions that are derived from the normal distribution.
8. Students will calculate and interpret confidence intervals for a population mean to show how probability connects to this type of statistical inference.
9. Students will use hypothesis testing as a formal means of distinguishing between probability distributions on the basis of random variables generated from one of the distributions.
10. Students will compare the means of the data from experiments involving more than two samples.
11. Students will fit a straight line to the given data in graphical form.
12. Students will make use of Chi-square distributions to analyze counts.

INSTITUTIONAL LEARNING OUTCOMES (ISLOs):

1. Communication Skills
2. Critical Thinking Skills
3. Personal Responsibility
4. Information Literacy
5. Global Awareness

Student Learning Outcomes (SLOs)
Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Identify, compare, and contrast two articles that include both descriptive and inferential statistics on the same topic.
2. Apply their knowledge of basic descriptive statistics.
3. Apply knowledge of statistical inferences to conduct formal significance tests concerning single populations.
4. Apply techniques of linear modeling to explore the relationship between two numerical variables.

Grading Criteria
Course must be taken on a "letter-grade" (LG) basis only.

Grading Policy
The student's grade will depend on the following areas(not on total points):

Semester Tests: 60%

> There will be <u>3</u> tests, each worth 20%. There will be no makeup exams given. Zeros will be given for all missed tests.

Final Exam: 25%

> A score of 0 will be given if the final is missed.

Homework   15%

> Refer to the homework section.

Extra Credit: 0%

> **There will be no extra credit. You must learn the material to pass this course.**

All grades are calculated by using the standard scale of:

A = 100-90%	**B = 89-80%**	**C = 79-70%**
D = 69-60%	F = 59% and below	

Class Rules and Expectations
1. Failure is not a good choice, so apply yourself, study, do not give up on the first try, attend class regularly, ask for help when needed, and always do your best!
2. The student is expected to attend class meetings regularly. After the <u>SECOND</u> absence, if the student does not drop the class via Webstar, he/she will receive an "F" as final grade; so it is the student's responsibility to drop before the deadline.

3. What constitutes an absence? Not showing up to class during a regular class meeting, or arriving more than 20 minutes after the beginning of the class, or leaving more than 20 before the end of the class.
    a. Example: Class starts at 10:00 AM and ends at 12:00 PM. If you arrive after 10:20 AM you are absent. If you leave before 11:40 AM you are marked absent. If you leave the room for more than 20 minutes for whatever reason, you are absent.
4. What constitutes a tardy? Arriving within the first 20 minutes after the beginning of the class or leaving within the last 20 minutes before the end of the class (3T = 1A).
    a. Example: Class starts at 10:00 AM and ends at 12:00 PM. If you arrive between 10:01 AM and 10:20 AM you are marked tardy. If you leave between 11:41 AM and 12:00 PM you are marked tardy as well as if you "disappear" from the room for no more than 20 minutes (i.e. having lunch). If you need to use the restroom, you are expected to return within a reasonable time period.
5. If a student reaches the third absence after the deadline, his/her grade will be reduced one letter grade for each subsequent absence.
    a. Example: your current grade is a "B." On the 3rd absence you will get a final grade of "C;"on the 4th one, your grade is "D;" and on the 5th one, your final grade is "F." Exceptions include-for example- hospitalization for several days and with appropriate documentation.
6. Deadline to drop the class with a "W" is *April 13, 2013.* Late drops on graded classes will require that the student receive an F.
7. Class materials such as a notebook or binder with lined paper, pen, pencil, scientific or graphing calculator, and the textbook will be brought to every class meeting. You may use any other source of technology such as Excel, Minitab, etc.
8. It is up most important that students review the material to do well on exams.
9. Students are encouraged to form study groups to meet regularly to keep up with assignments and to study for tests and the final exam.
10. Late homework assignments are not be accepted because MATHXL automatically will block past due assignments, so it is student's responsibility to complete them by the deadlines.
11. Students will not be allowed to make up a test or exam or final exam, so plan on being present those days.
12. No photocopied textbooks are allowed. No audible pagers or cell phones allowed. You will be dropped on your second offense for disturbing the class in this manner.
13. No food or drinks are allowed in the classroom other than bottled water (no substitutes please!).
14. No children are allowed in the classroom.
15. Absences attributed to the representation of the college at officially approved conferences and contests and attendance upon field trips will not be counted as absences (this includes sports). However, the student is responsible for notifying the instructor and for the work done in class. If your absence coincides with an exam, it is student's responsibility to contact the instructor via e-mail or by phone before the following class meeting to make it up. Failure to do so will result in a "zero" for that particular exam.
16. Discipline: you need to understand that this is a college class, the "good high school days are gone." Appropriate behavior is expected at all times (i.e. not speaking out of turn, raise your hand to talk and wait until acknowledged, paying attention, avoid side comments, not answering your cell phone in class, working in assignments for another class, etc.). For this reason, no discipline problem will be tolerated.
    a. First offense: warning.
    b. Second offense: student will immediately be dropped from the class.
17. Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP & S) office as soon as possible. DSP&S, Room 2117, Health Sciences Building, (760) 355-6312.

18. **Homework**: The purpose of homework is to provide students with sufficient practice to master all topics and to do well on tests and the final exam. Use MathXL (all assignments are listed online as well as deadlines). It is student's responsibility to complete them on or before the deadline regardless whether he/she is absent. Please keep in mind that after the deadline you will not be able to work on that specific assignment because the program will lock it automatically. Each assignment must be at least 90% complete to get full credit for that particular HW (10/10 points). However, you will receive partial credit for HW. For example: if you score 70% = 7/10 points, 54%=5/10 points, etc.

19. **Calendar** (It may be subject to modification according to students' needs)

WEEK #	CORE CONTENT	ASSIGNMENTS – TESTS
1-January 14	Syllabus Introduction to Statistics	Chapter 1
2-January 21	Summarizing and graphing data	Chapter 2
3-January 28	Statistics for describing, exploring, and comparing data	Chapter 3
4-February 04	*Test # 1*	Chapters 1-2-3
5-February 11	Probability	Chapter 4
6-February 18	Discrete probability distributions	Chapter 5
7-February 25	Normal probability distributions	Chapter 6
8-March 04	*Test # 2*	Chapters 4-5-6
9-March 11	Estimates and sample sizes	Chapter 7
10-March 18	Hypothesis testing	Chapter 8
11-March 25	Inferences from two samples	Chapter 9
April 01	*SPRING BREAK*	
12-April 08	Correlation and regression	Chapter 10
13-April 15	*Test # 3*	Chapters 7-8-9-10
14-April 22	Chi-square and analysis of variance	Chapter 11
15-April 29	Review for final exam (all chapters)	Chapters 1-11
16-May 06	Final Exam-All Chapters (Day one) Grades and questions (Day two)	Final Exam: All chapters