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Cuyamaca College
Math 160

Instructor: Bryan Elliott

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ELEMENTARY STATISTICS

Section 5592

M & W 8 am – 9:50 am H133

Section 7486

M & W 11am – 12:50 pm H134

WELCOME: If you invest in financial markets, you may want to predict the price of a stock in six months from now on the basis of company performance measures and other economic factors. As a college student, you may be interested in knowing the dependence of the mean starting salary of a college graduate, based on your GPA. These are just some examples that highlight how statistics are used in our modern society. To figure out the desired information for each example, you need data to analyze. The purpose of this course is to introduce you to the subject of statistics as a science of data. There is data abound in this information age; how to extract useful knowledge and gain a sound understanding in complex data sets has been more of a challenge. In this course, we will focus on the fundamentals of statistics, which may be broadly described as the techniques to collect, clarify, summarize, organize, analyze, and interpret numerical information. This course will begin with a brief overview of the discipline of statistics and will then quickly focus on descriptive statistics, introducing graphical methods of describing data. You will learn about combinatorial probability and random distributions, the latter of which serves as the foundation for statistical inference. On the side of inference, we will focus on both estimation and hypothesis testing issues. We will also examine the techniques to study the relationship between two or more variables; this is known as regression. By the end of this course, you should gain a sound understanding about what statistics represent, how to use statistics to organize and display data, and how to draw valid inferences based on data by using appropriate statistical tools.

TEXTBOOK: We are using a FREE textbook from OpenStax called Introductory Statistics by Illowsky and Dean..

It is free at <https://openstax.org/details/books/introductory-statistics> ([Links to an external site.](#))

- You can download the book PDF so that it will always be on your computer or you can view it online. The online version is more interactive with its examples and with video links.
- You can buy a physical book for under \$60 if you like (but it is not required to buy a physical book.)

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REQUIRED MATERIALS:

- Lecture note packet
- MyStatLab access code
- Graphing Calculator** **I HIGHLY recommend anything from the TI83/84 family of calculators
- Grossmont or Cuyamaca College ID

CLASS POLICIES:

In this class we function as a team, teaching and learning together. Sometimes we will work in small groups and sometimes in a traditional lecture format. Because of this you will find that you will become invested in your fellow students success almost as much as your own. As a result, when you arrive to class late or return after an absence, your colleagues will have to work extra hard to “catch you up” rather than moving forward with the lesson of the day. Hence, your presence in class at the appropriate time and each and every day is very important. Your commitment to this will be appreciated and you will reap the rewards. To encourage you in this process I reserve the right to initiate an instructor drop if you miss the equivalent of 8 hours of class.

CATALOG DESCRIPTION: The use of probability techniques, hypothesis testing, and predictive techniques to facilitate decision-making. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests; and application of technology for statistical analysis including the interpretation of the relevance of the statistical findings. Applications using data from disciplines including business, social sciences, psychology, life science, health science, and education.

COURSE OBJECTIVES: This is an introductory course and as a consequence there is emphasis on terminology as well as basic concepts. Common sense and intuition will be nearly as useful as experience and background. The material presented relies on concepts already completed in Intermediate Algebra, so a thorough understanding is expected. A grade of C or better in Intermediate Algebra is prerequisite. Formula use and formula manipulation play a large part in the course. Statistics used to describe (descriptive), statistics used to predict (inferential), and probability are three major themes in this course.

MATERIAL COVERED: Chapters 1-12 will form the core of the course.

STUDENT HOURS: My office hours are MW 730am-8am and 10am-11am;. I am also available by appointment. Please be sure to message me through CANVAS if you are going to miss class to get the homework assignment so you can be prepared for the next class.

STUDENT LEARNING OUTCOMES

Upon successful completion of the course the student will be able to:

1. Use analytical, numerical, and graphical methods to solve statistics problems
2. Solve multi-disciplinary application problems and interpret the results in context
3. Perform statistical analysis using technology such as SPSS or other equivalent statistical software.

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IMPORTANT DATES

1st day of Instruction	Late Add Deadline	Deadline to drop class with no record & receive refund	Deadline to file for Pass/No Pass grading option	Deadline to drop with a "W" grade (withdraw)
8/19	9/1	9/1	9/20	11/7

Labor Day---September 2

Veteran's Day—November 11

Thanksgiving break—November 28-29

Outside of class work: Outside of class work will be completed using Knewton. You will access this through our course page inside of Canvas. Knewton is a web based homework system. It adapts to your answers. The software can determine if you know the material so it will give you less problems. It will also determine that are missing some knowledge and will provide you material to fill in the gaps in your knowledge. It adapts to what you know or don't know.

An important tip about Knewton - **Do NOT guess**. It actually goes faster to use the help tools first to figure out how to do the problem.

The due dates will be one week after a section is covered completely in class. Out of class work is NOT for collecting points. Out of class work is to assist you in your understanding of the relevant concepts and practices you need to succeed in statistics. Out of class work simply needs to be completed by the assigned due date. **Regular practice is essential for success in mathematics; you should be prepared to spend at least two hours studying outside of class for each hour of in-class time.**

ONLINE QUIZZES: Online quizzes will be assigned for each chapter. The due dates will be one week after the completion of each chapter. There are an unlimited number of attempts on each quiz and only the highest score will be counted. Quizzes will be worth 10 points each. The in-class unit exams will occur on the due date of the quizzes.

EXTRA HELP: Statistics is a challenging subject, but the methods for success are simple: read the text, participate in class, and keep up on assignments. Many students find that forming study groups with other students is a very effective way for them to master mathematics.

To support your efforts to succeed in this class, I refer you to Supervised Tutoring services that are available. You can make half-hour appointments with tutors. Just call or stop by the front desk of the STEM center(619-660-4396) to set up your appointment. You will need your student ID to do this. All supervised tutoring sections are FREE to you. You need only enroll to receive services- no units or grades are given. The Math Study Center is just outside!! **You may also come to me for help at any time.**

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GRADING:

- There will be 4 unit exams. Each exam will cover 1-2 chapters and will be worth 100 points
- Online quizzes are assigned for most every chapter. They are worth 10 points each.
- In class quizzes may be given. Sometimes announced and sometimes a surprise.
- There will be 8 or 9 technology labs. These will be completed and submitted through Canvas. They will be worth 5 points each. The main purpose of these labs is to teach you the procedures for utilizing both StatCrunch and the TI83/84 for performing the necessary statistical computations.
- Knewton out of class assignments will be worth about 150 points. Due to the number of assignments I will be dropping up to 10 of these from your final computation.
- The final exam will be worth about 150 points. (Final exam will be comprehensive)

I will provide an updated breakdown by percentages of these categories during the course. I need to get it setup inside of the Canvas gradebook system.

The following grading scale will be used:

90-100%	A	Excellent Achievement of Course Objectives
80-89%	B	High Achievement of Course Objectives
70-79%	C	Satisfactory Achievement of Course Objectives
60-69%	D	Minimal Achievement of Course Objectives
below 60%	F	Failure

MAKEUP TESTS: If you are having any issues regarding course expectations, due dates, my door is open to you. You may find me asking for a meet up just to give some encouragement and/or to inquire in to any situations that are keeping you from your full potential.

TEST CORRECTIONS: No one is perfect and we all have bad days. I will be providing the opportunity to those who need it to learn from our mistakes by fixing them. This opportunity will be available on most of our in class tests.

A student with a verified disability may be entitled to appropriate academic accommodations. Please contact the instructor and/or the Disabled Students Program and Services Office for further information.

CELL PHONES: To promote a learning environment where each group member is fully engaged in the process of learning, cell phone use during the lesson is not allowed. However, in addition to our regular break, I will offer a few “mini-breaks” where you can check in with your social media/send messages.

ACADEMIC INTEGRITY: Any student found to be cheating on an assignment will receive a zero for that assignment and be suspended from class for 3 Three days.

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MATH 160 TENTATIVE SCHEDULE (subject to change)

THIS WILL BE CHANGING!!!

Week 1	Intro, Chap 1 & 2
Week 2	Chap 2
Week 3	Chap 2, review
Week 4	Test 1(C1 & 2) Chap 3
Week 5	Chap 3
Week 6	Chap 4
Week 7	Chap 4, review, Chap 5
Week 8	Test 2(C 3 & 4)Chap 6
Week 9	Chap 6, Chap 7
Week 10	Chap 8
Week 11	Chap 8, review
Week 12	Test 3(C 5-8), Chap 9
Week 13	Chap 9
Week 14	Chap 12
Week 15	Chap 11/13 Test 4(C9 & 12)
Week 16	Instructors choice, review
Week 17	FINAL EXAMS

Section 5592 (MW 8-10 class) Final exam is December 11 @ 8am-10am

Section 7486 (MW 11-1 class) Final exam is December 11 @ 1030am-1230pm

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