Math 11/11L, Elementary Probability and Statistics

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Office: 6111 Applied Physics and Mathematics
Office Hours: Mondays 4:00-5:00 PM, Wednesdays 3:00-4:00 PM
Prerequisites: Math 10AB or 20AB

Material Covered: We will cover most of chapters 1-27 of the textbook. This will include material on descriptive statistics, probability theory, and statistical inference. Because Math 11 students have seen calculus, we will also cover some material on continuous probability that is not in the textbook. A list of what topics will be covered each day is on the course web page.

Math 11L: All students who enroll in Math 11 must enroll in the one-unit lab course Math 11L, and vice versa. No exceptions will be made. Math 11L computer assignments will require knowledge of the material being taught concurrently in Math 11, while Math 11 exams may test some material covered in Math 11L (such as how to interpret computer output). Computer lab sections will be held each Thursday in APM B432. Students must attend the section in which they are enrolled because the university has only 35 MINITAB licenses.

Statistical Software: Students will complete the assignments for Math 11L using the statistical software MINITAB. This software has been installed on the computers in the ACMS labs in rooms B325, B349, and B432 in the basement of the Applied Physics and Mathematics building. You can purchase the textbook from the bookstore bundled with MINITAB, which will allow you to use the student version of MINITAB from home if your computer runs Windows. You can also rent MINITAB for six months from e-academy (see the link on the Math 11L web page).

Graphing Calculators: Although a graphing calculator is not required for the course, it is likely to be helpful. Having a graphing calculator avoids the need to use tables for statistical inference. Graphing calculators will be permitted on exams. The TI-83 is recommended for Statistics, but other calculators such as the TI-89 are fine also.

Homework: Homework assignments will be announced on the course web page. Homework is a very important part of the course. You should do each assignment neatly and carefully, and show the steps in your calculations, not just the final answer. Homework assignments will be due on Wednesdays. You may either turn in your homework in class, or place it in your TA’s mailbox before 1:00 PM on the due date.

Computer Labs: There will be eight computer assignments associated with the course Math 11L. These assignments will usually be due on Fridays. You will have a chance to ask questions about them in your lab section the previous Thursday. Lab sections will meet every Thursday of the quarter except for April 22 and May 20. You should submit your completed assignments online using WebCT. Instructions are available on the Math 11L web page.
**Exams:** There will be two midterm exams and a final exam. The midterm exams will be held during class on Friday, April 22 and Friday, May 20. The final exam will be held from 8:00-11:00 AM on Monday, June 6. You will be permitted to use a calculator during the exams. You will not be permitted to use notes or your book, but you will be provided with a list of formulas. Please bring your student ID to the exams.

**Grading:** You will receive separate grades for Math 11 and Math 11L. However, to receive a passing grade in either Math 11 or Math 11L, you must be enrolled in the other. Your Math 11L grade will be obtained from your scores on 8 computer lab assignments. Your Math 11 average will be calculated as follows (except that your best midterm counts 30% and your weakest midterm counts 10%):

\[(.20)\text{(Homework)} + (.20)\text{(First Midterm)} + (.20)\text{(Second Midterm)} + (.40)\text{(Final Exam)}\]

After your average is calculated, letter grades will be assigned based on your performance relative to the class in such a way that the average grade for the course is likely to be a B-. *The 2 lowest labs and homeworks will be dropped.*

**Make-up Exams:** Make-up midterm exams will not be given. However, if you miss a midterm exam because of extraordinary circumstances, such as a serious illness or family emergency, and document the circumstances, then you may substitute your final exam score for the missed exam.

**Late Homework:** Late homework assignments will not be accepted. Computer labs will be accepted one day late with a 3-point penalty but will not be accepted more than one day late. Exceptions are the first lab (which can be submitted up to five days late with a 1-point penalty) and the last lab (which will not be accepted late). Other accommodations will be made on homework and computer labs only under extraordinary circumstances. Please understand that accepting late work in less extreme cases is unfair to other students.

**Suggestions:** Below are some suggestions that I hope will help you to succeed in this course.

1. **Spend sufficient time on the course.** According to the policy of UCSD’s Academic Senate, “The value of a course in units ... shall be reckoned at the rate of one unit for three hours’ work per week per quarter on the part of the student.” You will receive a total of 5 credits for Math 11 and Math 11L, so you should be willing to spend about 15 hours per week on the course.

2. **Get started on the computer lab assignments before your Thursday lab section.** This will enable you to make the most of your section time by coming prepared with specific questions.

3. **Try doing odd-numbered problems before even-numbered homework problems.** Most even-numbered end-of-chapter problems are similar to the preceding problem, so if you are stuck on problem 24, try problem 23, and check your answer against the back of the book.

4. **After your homework is returned to you, check your answers against the solutions posted on the course web page to make sure you are approaching the problems correctly.**
Math 11/11L, Academic Integrity Policy

It is essential that all students adhere to the UCSD Policy on Integrity of Scholarship. Cases of academic dishonesty will be reported to the Academic Integrity Coordinator. Students are expected to obey the following rules:

**Exams:** On exams, you will be allowed to use a calculator, but you will not be permitted to use any books or notes. All devices that can be used for communication or internet access must be put away and out of view during the exam.

**Homework and Computer Labs:** You may consult other students, the instructor, or TAs while working on homework assignments. However, the following rules apply:

1. You must write up your final solutions independently.
2. You may not copy solutions from another student or from any other source.
3. If you consult any sources other than your textbook or discuss the problems with anyone other than the instructor or TA, you must acknowledge this on your homework or lab.
4. Your lab write-ups must be based on calculations that you carried out in MINITAB yourself. Never send your MINITAB graphs, or the text of your lab solutions, to another student.
5. You may look at old exams posted on the course web page, but you may not look at other materials (such as homework or computer lab solutions) from previous Math 11 classes.
6. You may look up general course topics on the internet, but you may not look for solutions to specific homework problems on the internet.
7. You may not look at the Instructor’s Edition of the textbook, or any other source (besides the course web page) containing answers to even-numbered problems in the textbook.

**Examples of Acceptable Behavior**

- You forget how to find a regression line in MINITAB. You ask a classmate, who reminds you where the regression menu is. You go back to your computer and do the regression.
- You solve most of the homework problems yourself but get stuck on two of them. You explain your difficulties to your classmate, who points out your mistakes. You go home and write up correct solutions, including a note acknowledging your classmate’s help.

**Examples of Unacceptable Behavior**

- Your classmate forgot to make one of the graphs in MINITAB that he needed, so you send him yours by email. (Both you and your classmate are violating rule 4, even if your classmate includes his own write-up to go along with the graph that you sent him.)
- A friend who took Math 11 last year shows you his homework or computer lab solutions to help you with a few problems on which you are stuck. (This violates rule 5.)
- Your classmate has finished her homework and shows you her solutions. You base your solutions on hers, making changes to the wording. (This violates rules 1 and 2. Never look at another student’s solutions while writing yours.)
- Three people work on a homework assignment together. They all contribute and acknowledge one another’s help. Because they wrote up the problems together, their solutions are nearly identical. (This violates rule 1. Final solutions must be written independently.)