

Probability and Statistics/ Probabilty and Statistics for Teachers
Math 333/503

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Office Hours: Mon, Tues, Thurs, Fri 10:00-11:00, Thurs 1:00-2:00 or by appointment.

I Textbook

Probability and Statistics for Engineering and the Sciences by Jay L. Devore 9th Edition

II Prerequisite

MATH 311

III Catalog Description

This course is designed for mathematics education majors to provide a rigorous one-semester study of probability, distribution theory and the basics of statistical inference. Topics to be covered include probability, expectation, discrete and continuous distributions, descriptive statistics and both estimation and hypothesis testing for one and two-sample problems.

IV Course Objective

- Provide students with a basic understanding of probability theory.
- Provide students with thorough training in distribution theory for both discrete and continuous random variables.
- Cover the basics of descriptive statistics including graphical approaches to data description and exploratory data analysis.
- Cover the basics of statistical inference including estimation and hypothesis testing for both one and two-sample inference for means and proportions. The theory and practical interpretation of statistical inference will be discussed.
- Provide Mathematics Education majors with some guidelines for teaching probability and statistics.
- Provide students with an introduction to statistical computing.

V Grading

This course is meant to be a learning endeavor, not a punitive process; however, we still need to have some sort of meaningful way to evaluate your progress in the material. To that end, the breakdown of how you can earn your grade this semester is given in the following table:

Quizzes	25%
Test 1	20%
Test 2	20%
Final Exam (Cumulative)	25%
R Programming Projects	10%

VI Grading Scale

- A: 90-100
- B: 80-89
- C: 70-79
- D: 60-69
- F: 59 and down

VII Quizzes

I am aware that a solution manual exists for the textbook. The existence of this solution manual essentially makes homework an ineffective way to measure your learning of the material. So, we will not have collected homework. Instead, I will choose a few problems from each section for you to work on, so you can get a feel for the material. We will have weekly quizzes over the material covered.

VIII Electronics

You (or your parents) are paying a lot of money to take this course. It is a waste of your time (and mine) if you sit on your phone or laptop during class. This is a distraction that neither you nor I need while I am trying to teach you something. So, leave the electronics, save for calculators, in your bags. No phone calculators will be allowed on any quiz or exam.

IX Attendance and Late Assignment Policy

Attendance is expected at each class session. If you must miss a quiz or an exam, you must notify me **PRIOR** to missing the assignment. You must have an excused absence with appropriate documentation (such as for a medical reason) to take a make-up assignment. If you have an excused absence for a quiz, you have **AT MOST** one week to make it up, as the solutions will be posted at that time. There are circumstances where the solutions need to be posted as soon as possible (such as immediately prior to an exam); in those circumstances, we can work out an alternative makeup. If you miss a quiz or an exam without an excused absence, you will receive a 0 on the assignment.

X Academic Honesty

Academic honesty is fundamental to the activities and principles of a university. Students are expected to adhere to the code of academic conduct as defined on the Millersville website. Any effort to gain an advantage not given to all the students is dishonest whether or not the effort is successful. If it is determined that a student has cheated, he or she will be given zero points on the assignment and be reported for the action.

More information can be found here: [Academic Integrity Policy and Academic Honesty Policy PDF](#)

XI Accessibility and Accommodations

It is Millersville University policy to provide reasonable accommodations to students with disabilities. Please contact The Office of Learning Services to discuss your needs: Learning.Services@millersville.edu

You must meet with me to discuss any accommodations. Accommodations cannot be granted unless you meet with me and cannot be granted retroactively.

XII Title IX

Millersville University and its faculty are committed to assuring a safe and productive educational environment for all students. In order to meet this commitment, comply with Title IX of the Education Amendments of 1972, 20 U.S.C. §1681, et seq., and act in accordance with guidance from the Office for Civil Rights, the University requires faculty members to report to the University's Title IX Coordinator incidents of sexual violence shared by students. The only exceptions to the faculty member's reporting obligation are when incidents of sexual violence are communicated by a student during a classroom discussion, in a writing assignment for a class, or as part of a University-approved research project. Faculty members are obligated to report to the person designated in the University Protection of Minors policy incidents of sexual violence or any other abuse of a student who was, or is, a child (a person under 18 years of age) when the abuse allegedly occurred. Information regarding the reporting of sexual violence, and the resources that are available to victims of sexual violence, is available at www.millersville.edu/titleix

XIII More Info

Please see the provost's web page <https://www.millersville.edu/provost/index.php> for more information on the university's policies for Attendance, Inclusion, Land Acknowledgement, Delays and Cancellations, Preferred Names, FERPA, and the student conduct handbook.