

STATISTICS 512 - TECHNIQUES OF MATHEMATICS FOR STATISTICS

Course Information

Instructor: Professor Doug Wiens
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Lectures: TR 9:30 - 10:50, CAB 457
Office hours: whenever I'm in my office,
or by appointment

Recommended text

Advanced Calculus with Applications in Statistics; A.I. Khuri, 2nd edition. (This text has been around for a while and there are now quite inexpensive copies available from a variety of outlets - Google it.)

Assessment

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|---------------|-----------------------------|
| Assignments: | 40% |
| Midterm exam: | 20% (Closed book, no notes) |
| Final exam: | 40% (Three hours) |

Implementing the grading system

At the end of term I will have a record of each student's raw grades for all assignments, projects and exams. I will then compute a term results summary based on these raw grades, and rank everyone in order of merit. After deciding whether the class as a whole is average, above average or below average, I shall determine what percentage of the class should fall into each of the possible grades, and assign the grades accordingly. These grades will reflect my judgements, which will be based on my assessments of both absolute achievement and relative performance in the class.

There is no pre-determined algorithm for converting raw scores to grades. However, **active participation in classroom discussions, including asking and answering questions, is expected of all students. The extent to which this has been achieved will be considered when scores are converted to grades.**

There is another benefit to class participation, beyond its intrinsic value. I am regularly asked to write letters on behalf of students who are applying for awards, or for admission to further study. If I have had no interaction with you, I can report only your grade, and that beyond that I know nothing about you. Such a letter will surely not be very helpful.

WARNING: *This course is meant to hone, and perhaps to refresh, your mathematical skills in a context of statistical applications. It is certainly not meant to develop these skills for the first time. If you have very little background in mathematics, consider a course like STAT 312.*

Course web site

Lecture notes, assignments and other materials are posted on the course web site. Go to my home page <http://www.stat.ualberta.ca/~wiens/>, then to the teaching links.

General comments

This is a graduate course in which mathematical techniques and statistical applications are blended at a relatively high level. Some possibly helpful tips:

- Rewrite your notes as soon as possible after each lecture. Writing up material in one's own words is the best way to see if the material has been understood.
- If you find that you don't understand what has gone on in class, *see me right away*. Don't start drifting from one lecture to another, understanding less each time.
- On assignments: Don't hand in your rough work! Do the assignment and then rewrite it at least once - neatly, with an adequate amount of clear explanation. The rewriting stage is the most important one for finding errors in one's work, and for deepening one's understanding of it. A description of a calculation can be more informative to a reader than the calculation itself. *Assignments are graded not only for technical correctness, but for elegance of presentation as well.*

PLEASE FILL OUT THIS PAGE AND RETURN IT TO ME

NAME:

DEGREE PROGRAM:

AREA OF SPECIALIZATION:

Please list the STAT and MATH courses you have previously taken. Include the names or topics of the courses, if they were not taken here.

Please list the STAT and MATH courses you are taking this year.

Why are you taking this course? In particular, what areas of mathematics would you most like to learn more about?