

Math 4610 Syllabus - Fall 2011

Meets: MW 2:00-3:20 in Lang 316

Instructor: Dr. Pieter Allaart

Office: GAB, Room 415; Phone: 369-7313

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Office Hours:

- Mon-Thu 1-2 (tentative)
- By appointment
- I will usually also be available to answer questions for a few minutes after class.
- You are also welcome to drop by outside office hours without an appointment. However, there will be occasions when I will be busy, and I may ask you to wait or to come back later.

Book: Probability, by J. Pitman.

Prerequisite: Math 2730.

Grading: Grades will be based on three regular exams, homework, and a final exam. Each regular exam is worth 100 points, but your worst of three regular exams only carries half weight. Thus, out of the three exams you can get a maximum total of 250 points. The homework is worth 150 points total, and the final is worth 200 points. This gives you a total of 600 possible points. To earn an A it is sufficient to make a total of 540 points, 480 for a B, 420 for a C, and 360 for a D. In fact, the grading scale may be slightly lower than the numbers indicated, depending on the level of difficulty of the exams.

Regular Exams: The regular exams will be given in class on September 28, October 26 and November 28. (There is a slight chance that these dates will change). The final exam will be on Wednesday, December 14 at 1:30 pm.

Homework: Homework will be assigned at the end of each class period, and is due at the beginning of class on the first Wednesday following the day it is assigned. (Exception: homework assigned on the last Wednesday before Exam 1 or Exam 2 is due the first Monday after it is assigned). Homework must be written neatly and legibly. Homework consisting of multiple pages must be stapled together. A selection of the problems will be graded and your work will be returned with brief comments. However, for more elaborate feedback I recommend that you come to my office. Homework which is messy or difficult to read will not be graded! Your two lowest homework grades will be dropped. In view of this, **late homework will not be accepted**, regardless the reason.

You should expect to spend at least two hours on work for the course outside class for every class hour. That makes six (6) hours per week! If you could not come to class, and missed the assignment, it is your responsibility to find out what the assignment is.

Web page: Homework assignments and other important information will also be posted on the web at <http://www.math.unt.edu/~allaart/classes.html>. Whenever you miss class, check this page to find out about assignments that you missed.

Attendance: Attendance is not required for this class. However, you are strongly urged to come to class each class day, in order to keep track of what is going on and not to fall behind.

Extra credit: Do not expect to be able to do some extra work to help your grade either before or after the final exam. There will be no extra credit other than perhaps an extra problem on an exam. Your best bet to help your grade is to do the required work at the time it is assigned.

Disabilities: It is the responsibility of students with certified disabilities to provide the instructor with appropriate documentation from the Dean of Students Office.

Cheating: No cheating will be tolerated. Anyone caught cheating will be subject to any penalty the instructor deems appropriate, up to and including an automatic F for the course. Furthermore, a letter will be sent to the appropriate dean.

List of topics and tentative schedule:

Lecture	Section(s)	Topic(s)
1	1.1-1.3	Equally Likely Outcomes, Interpretations of Probability, Distributions
2	1.3, 1.4	Distributions, Conditional Probability and Independence
3	1.4, 1.5	Independence, Bayes' Rule
4	1.5, 1.6	Bayes' Rule, Sequences of Events
5	2.1, 2.2	The Binomial Distribution, Normal Approximation: Method
6	2.2, 2.4	Normal Approximation, Poisson Approximation
7	2.5, 3.1	Random Sampling, Introduction to Random Variables
8	-	Review
9	-	Exam 1
10	3.2	Expectation
11	3.3	Standard Deviation and Normal Approximation
11	3.4	Discrete Distributions
12	3.5	The Poisson Distribution
13	4.1	Probability Densities
14	4.1, 4.2	Probability Densities, Exponential Distribution
15	4.5	Cumulative Distribution Functions
16	-	Review
17	-	Exam 2
18	4.4	Change of Variable
19	5.1	Continuous Joint Distributions: Uniform Distributions
20	5.2	Joint Densities
21	5.3	Independent Normal Variables
22	5.4	Distributions of sums, products, ratios
23	6.1, 6.2	Conditional Distributions and Conditional Expectation: Discrete Case
24	6.3	Conditioning: Density Case
25	-	Review
26	-	Exam 3
27	6.4	Covariance and Correlation
28	6.5	Bivariate Normal