

Syllabus – Spring 2009

STA 4321 – Introduction to Probability

STA 5325 – Fundamentals of Probability

Instructor: Arthur Berg

The best way to reach me outside of class is by email. I will always be available right after class and during office hours should you wish to speak with me in person.

- **Email:** berg@ufl.edu

Please include "STA 4321" or "STA 5325" in the subject line.

- **Office:** 408 McCarty Hall C

My office hours are during period 8 (3-3:50) on Wednesdays and Thursdays.

TA: Che-Shun Chang

The TA will have office hours on Mondays period 7 (1:55-2:45) and Fridays period 4 (10:40-11:30) in his office, 427 McCarty C. The TA's email address is jshun@ufl.edu.

Class Info

- Section #5672 (STA 4321) #5677 (STA 5325), MWF, 4:05–4:55 pm (period 9), FLO 100

Class Webpage

- <http://www.stat.ufl.edu/~berg/sta5325>

You can access the homework assignments, lecture notes, datasets, and other relevant course material from the course website.

Textbook

Introduction to Probability and Its Applications, 2nd edition (2009), by Scheaffer and Young.

This book has not yet been published. However, a photocopied version will be available for purchase at University Copy and More starting from noontime on Thursday, January 8. A convenient supplementary textbook is here.

Prerequisites

MAC 2311-2313 or equivalent (Calculus I–III) and one introductory statistics course. It is important that you satisfy these prerequisites.

Course Description

This course is a calculus based introduction to probability theory.

Topics Covered

We will for the most part follow the organization of the textbook. The topics include standard distributions (like Binomial, Geometric, Poisson, Hypergeometric, Uniform, Gamma, Exponential, Chi-Square, Normal, and Beta), counting rules, conditional probability and independence, rules

of probability, discrete random variables and probability functions, continuous random variables and density functions, expected value and variance, moment generating functions, multivariate distributions, covariance and correlation coefficient, conditional expectation, functions of random variables, order statistics, the weak law of large numbers, and the central limit theorem.

Software

The freely available, open-source statistical software package R will be utilized to illustrate concepts.

Grading Policy

Course averages of at least 90%, 80%, and 70% will guarantee the passing grades of A, B, and C, respectively. Course averages below 70% are candidates for the failing grades of D and E. If your course average starts to fall into an undesirable (or catastrophic) category, it is your responsibility to counsel with me about what your options are, and what you might realistically be able to get.

Projects	9%	A	90%—100%	C	70%—75%
Quizzes	2×5%	B+	85%—90%	D	60%—70%
Tests	3×17%	B	80%—85%	E	<60%
Final	30%	C+	75%—80%		

Assignments

Reading Textbook reading should be kept up with the lectures. The lectures will closely follow the reading material and you will undoubtedly do much better in the class having kept up with the reading.

Projects A few individualized take-home projects will be assigned and graded that may involve using the software package R.

Homework Homework will be assigned periodically, but will not be collected or graded.

Quizzes Two quizzes will be administered throughout the semester. The quizzes will be approximately 25 minutes long. The dates of the quizzes will **not be announced**, so be sure to come to class everyday and be prepared!

Exams

- Your top 3 tests (out of four) will each count 17%.
- You will need a calculator for the exams; any calculator should do.
- All exams are closed-book.
- Some formulas may be given to you with the exam, and you may be informed of these formulas in advance of the exam.
- The final will cover material from the entire course.
- You should review the lectures, homework and textbook readings in preparation of the exams.
- No make-up exams will be given with the exception of documented medical emergencies.

Changes to the Syllabus

I reserve the right to change the syllabus as circumstances necessitate, but no new policy will be enforceable until after you have been notified in class.