

MA341/441 PROBABILITY - FALL 2009

Instructor: Louis Friedler
Office: 112A Boyer Hall **Telephone:** (215) 572-4092
Office Hours: M,W 2:50-3:50 **e-mail:** friedler@arcadia.edu
Other hours as posted

Text: Hogg and Tanis, *Probability and Statistical Inference, 8th Ed.*, Prentice-Hall (2010)

Related (non-required) texts:

1. *Probability for Risk Management*, Hassett and Stewart, Actex Pub.
2. *Introduction to Probability*, Grinstead and Snell, American Math Society
http://www.dartmouth.edu/~chance/teaching_aids/books_articles/prbability_book/book.html
3. *Mathematical Statistics with Applications*, Wackerly, Mendenhall, and Schaeffer, Duxbury Press
4. *A First Course in Probability*, Ross, Macmillan Pub.

Objectives: The objective of this course is to introduce the student to the methods and theory of probability. We will take a problem-solving approach to the material; the theory will be developed from examples. The student will be expected to solve various types of problems and be familiar with the related theory. The student will be expected to be familiar with a standard deck of 52 cards and with a pair of dice.

The instructor will occasionally send emails to the class regarding added problems, reminders of exams, etc. The student should check his/her Arcadia email daily.

Help: Help is available from me during office hours or by appointment. Although I have a busy schedule, and students have busy schedules, if you need help and cannot make my office hours, I will try to find a mutually convenient time--so don't hesitate to ask.

Grading: There will be three one-hour exams, a cumulative final exam, and a weekly 10-15 minute quiz. Questions on the quizzes will be similar to the easier homework problems. Students who regularly do homework should find the quizzes relatively easy. The lowest quiz (but not the lowest exam) will be dropped. If you miss a quiz (with or without an acceptable excuse) that quiz is the one which will be dropped. If you miss a second quiz and have an acceptable excuse, then your quiz will be calculated as the average of those you take. **You may not make up quizzes.** Make-ups of hour exams are at the discretion of the instructor and require prior approval and a

written, acceptable medical excuse.

Grades will be based on 600 points.

Quizzes.....100 points

3 one-hour exams.....300 points

Final exam.....200 points

Total possible.....600 points

Points (not letter grades) from quizzes and exams (including the final) will be totaled and then a letter grade will be assigned. A letter grade will also be assigned for the final exam. Your final course grade will be the higher of the two letter grades.

There is a small chance that we will have only two exams instead of three. If that happens, grades will be based on 500 points, but will be calculated the same way.

Honesty: Students are expected to follow principles of academic honesty. The procedures specified in the Student Handbook will be followed. My policy is that the first violation of these principles will result in a zero on that quiz or exam. The second violation will result in an F for the course.

Student Athletes:

Student athletes should identify themselves at the end of the first class. Each student athlete should give the instructor a copy of the semester's games/meets. The instructor will make every effort to schedule the three hour exams on dates with no conflicts with games/meets. A student athlete who misses a quiz because of a game/meet (but not practice) will be treated as if he/she were sick (see grading policies.)

Jewish Holiday There will be no class Monday, September 28th.

MA341 PROBABILITY ASSIGNMENTS - FALL 2009

Instructor: Louis Friedler **Office:** 112A Boyer Hall
email: friedler@arcadia.edu **Telephone:** (215) 572-4092

Text: Hogg and Tanis, *Probability and Statistical Inference, 8th Ed.*, Prentice-Hall (2010)
Each assignment is due the next class after the material has been covered.

Chapter 1 -- Probability

Supplementary Sheet - Algebra of sets

1.1—2,4 (calculator), 9

1.2—1,2,5,8,11,14,17

1.3—2,3,5,8,9,11,13,14,15,17,19,20

1.4—1,2,4,5,6,7,8,9,17,18

1.5—1,2,5,7,10,11,12,16,19

1.6—1,2,4,6,10,11

Chapter 2—Discrete Distributions

2.1 -- 1, 3, 5, 7a, 8, 9,14

2.2 -- 5,6, 7,8,14

2.3 -- 1,3, 4, 5, 10ab, 15ab,19

2.4 -- 3,4,7abc,11,15,16,18,19

2.5 -- 2(parts i, ii only), 3, 5, 9, 10, 11abc, 12,15,16,19

2.6—2,3,5,9,10,11a,20. (In #9 show satisfies Poisson assumptions)

Chapter 3-- Continuous Distributions

3.3 -- 2, 8, 9, 12, 13, 15, 21,23,24a

3.4 -- 4, 5,6abc,8,11,14,18, 23

3.5 -- 1,4,5,7ab,10,14,15

3.6—1,3,7,8,14,18,27

Chapter 4 --Multivariable Distributions

Supplementary problems will be assigned from distributed notes

4.1 -- 1,2,9,10,11,12,14

4.3 -- 2,11,14a-f,16

4.6—5,7,9, 10,11,12,22,24

4.2 -- 7,8abc,9, 10ab, 13a-h.

Chapter 5-- Sampling Distribution Theory

5.1—1,6,10,13, + others tba

5.2—to be assigned

5.3—1,5,8

5.4—3,4,6,7,16

5.5—1,3,4,5,7,10,12,14

5.6—to be assigned