Syllabus
STAT 516 Spring 2016
Basic Probability and Applications

Time and Location: 4.30pm-5.45pm TTh REC 309

Instructor: Professor Michael Levine
Office: HAAS 154
Office Hours: TTh 10.30am-11.30 am
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Textbook: (Required) Introduction to Mathematical Statistics (7th Edition) by Hogg, McKean, Craig

Course Coverage: Chapters 1-3, some topics from Chapter 4, Chapter 5.


Objective: By the end of this course, students should be comfortable with probability distributions and random variables. They are also expected to master many of the distribution finding techniques, such as transformation and moment generating methods, know a number of specific distributions (e.g. Bernoulli, Binomial, Poisson, Normal, t-, F-distributions etc.), and understand order statistics, law of large numbers and the central limit theorem.

Prerequisites: MA 261, 172, or equivalent

Lectures: The online notes will be made available to you on the class web page. You can print them to facilitate taking notes in class.

Final Grade: Your final grade will be based on the following components: homework (35%), midterm (35%), and final exam (30%). The percentage grades needed to achieve an A, B, C, or F will follow approximately the following scale: 85 – 100 = A, 70 – 84 = B, 55 – 69 = C, 40 – 55 = D, anything below 40 means F. This course has "+" and "-" scores.
**Examinations:** There will be one midterm examination and one final examination. The final examination will be cumulative (i.e., it will cover the entire course) with an emphasis on the later part of the course. Contact me as soon as possible if you are unable to take an exam at the scheduled time. Students having exam conflicts or requesting special accommodations (these should be documented) must inform me as early as possible so that alternative plans may be arranged. It is YOUR responsibility to contact me IN ADVANCE to check if a make-up is possible. You may use a calculator during all exams if you wish. The exams are closed book/open notes. You can bring one standard size cheat sheet of paper, written on both sides, to the midterm. The allowance goes up to two cheat sheets (also written on both sides) for the final exam.

**Homework:** The homework will be assigned approximately one week before its due date and will also be posted on the class web page. The homework must be finished (written) independently. Discussion is okay, but identical copies are not acceptable since your homework must reflect YOUR understanding of the material. If identical solutions are found, all the parties involved will receive a 0 on that assignment. *Late homework will not be accepted under any circumstances (late = during the class meeting on the due date).* Usually, homework solutions will be posted on the class web page shortly after the due time. To allow for illness, family emergencies, etc., two lowest homework scores will be dropped at the end of the fall semester. Homework must always be stapled if it is longer than one page. The first page of each homework set handed in *must* contain the following information:

i. your name

ii. the number of the homework set (e.g., Homework #2)

iii. the due date

iv. Stat 516

This information is necessary to ensure that your grades are recorded correctly and that your homework is returned to you promptly.

**Re-grading:** Since all humans make mistakes (including the professor and the grader), errors will occur in the grading. The following procedure is required if you want your assignment re-graded.

1. Attach a new piece of paper to the *front* of the work to be re-graded which contains the following information:

   a) The word “Re-grade” displayed prominently.

   b) Your name

   c) The name of course - STAT 516. Be sure that this is clear so we know which course you are enrolled in.

   d) Which homework or exam is involved (e.g., HW 1)

   e) The relevant problem number(s) (e.g., problem 2a) or “Addition error”
f) A detailed explanation of the suspected error (“Please look at problem 4” is NOT considered a detailed explanation) or provide the total number of points which you calculated if the assignment was added incorrectly

g) Date of resubmission

2. Print out the solutions from the web page (at least the relevant portions) and circle the relevant piece of the solution. Attach this _behind_ the work to be re-graded. (This is not required if you think that the points were added incorrectly.)

3. Give this packet to me, or put it in my mailbox.

**Rules of Politeness:**

1. No food, open laptops, texting, IM’ing etc. during the class. Coffee or a soft drink are ok
2. Barging in late into the class is very disruptive and rude. Please try to be on time for class as much as possible.

**Academic Dishonesty:** Penalties for academic misconduct range from a 0 on the assignment to failure in the course with referral to the Dean of Students for further sanctions. _Note that we punish not only the person who cheats but also the person who enables the cheater._

**Grief Absence Policy for Students:** Purdue University recognizes that a time of bereavement is very difficult for a student. The University therefore provides the following rights to students facing the loss of a family member through the Grief Absence Policy for Students (GAPS). GAPS Policy: Students will be excused for funeral leave and given the opportunity to earn equivalent credit and to demonstrate evidence of meeting the learning outcomes for missed assignments or assessments in the event of the death of a member of the student’s family.

**Students with Disabilities:** Purdue University is required to respond to the needs of the students with disabilities as outlined in both the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 through the provision of auxiliary aids and services that allow a student with a disability to fully access and participate in the programs, services, and activities at Purdue University. It is the student's responsibility to notify the Disability Resource Center of an impairment/condition that may require accommodations and/or classroom modifications. University wide disability resources can be found at [http://www.purdue.edu/odos/drc](http://www.purdue.edu/odos/drc)

**Emergencies:** in the event of a major campus emergency or other circumstances beyond the instructor’s control, course requirements, deadlines and grading percentages are subject to changes that may be necessitated by a revised semester calendar. Relevant changes to this course will be posted onto the course website; you can also e-mail me at mlevins@purdue.edu with any questions you may have if/when this happens.