

STA 701.01  
Probability  
Fall Semester, 2014  
TR 9:30 AM–10:45 AM  
Room 335 MDS

Instructor: Ruriko Yoshida  
Office: 325D Multidisciplinary Science Building (MDS) Building  
E-mail: ruriko.yoshida@uky.edu  
Office hours: TR 11:00-11:50 AM  
(I'm usually available to talk whenever I'm in my office so  
feel free to drop in, except two minutes before class starts.)  
Text: TBA

**Overview:** Basic concepts of decision theory sufficiency and completeness; completeness of multiparametric exponential family; unbiasedness and invariance of decision rules; Bayes minimax and invariant estimators; testing of hypotheses and optimality properties.

**Course Website:** All course materials (including the homework assignments) will be posted on the class website,

<http://polytopes.net/courses/STA701F14/>

**Homework:** Assignments will be weekly, handed out on Thursday and due back the next Thursday. Typically these assignments contain 5 or 6 regular problems. assignments will be graded and returned and credits will be given **only** if an answer is completely correct. If you have an incorrect answer, the problem will be returned to you with some hints and you will be required to turn it in again with the next set of homework. This will be repeated until the answer is correct.

While you are welcome to work together on the assignments, the final writeups should be your own. In the writeups, indicate your calculations and reasoning for all the work submitted. For numerical answers, draw a box around your answer and use four significant figures for approximations unless the answer is an integer, or instructed otherwise in the problem statement.

Homework will be graded on a ten point scale 0 meaning that you did not turn in the homework and 10 meaning that Athena, goddess of wisdom could not have completed the assignment any better. **ALSO-LUTELY NO LATE homework.**

Before handing in your homework paper, please **staple** all papers together and clearly write your name and the assignment number on the first page. Turn in papers held together by paper clips or origami at your own risk.

The lowest homework score of each semester will be thrown out. This is basically to handle those emergencies where you are unable to complete an assignment for external reasons. I strongly recommend you save this freebie as long as possible and do not blow off an early assignment.

**Tests:** There will be 1 midterm during the semester in class. They will test your ability to recall key definitions and theorems from the class, and apply them to simple problems. In addition, there will be a final exam roughly twice the length of the midterms.

**Grading:** The regular problems of the homework are worth 30% of your grade, midterm is 30%, and the final will be 40%.

**Schedule:** The following is a tentative schedule. This is atemporary so it might be changed (with a high probability).

Midterm: Thurs October 28th 2014; Final: 10:30AM Mon December 15th 2014.