Statistics 426: Introduction to Theoretical Statistics, Section 3,
Winter 2015, 2:40-4:00 pm, MW EH 1372.

- **Instructor:** Dr. Shuheng Zhou  
  Office: 445B West Hall  
  Email: shuhengz@umich.edu  
  Office Hours: Tuesday from 5:00 – 6:00 pm (starting March 10) and Wednesday from 4:00 – 5:00 pm. Thursday from 5:00 – 6:00 pm ends by February 26.

- **Grader:** Seyoung Park  
  Office: Science Learning Center, 1720 CHEM  
  Email: pseyoung@umich.edu  
  Office Hours: Monday Friday 9:00 am – 10:30 am.

- **Textbook:** *Mathematical Statistics and Data Analysis* by J. Rice, 3rd edition

- **Lecture notes, handouts, some solutions:** will be posted on Ctools

- **Homework assignments:** Due Mondays in class at 2:40 pm. Late homework is not accepted. The lowest two homework grades will be dropped. If a homework is not turned in due to illness or travel, then this homework grade will be one of the two dropped grades.

- **Exams:** The two in class exams and the final exam are closed book. You may bring a 8.5 by 11 sheet of handwritten notes with you to each exam.
  
  - The dates of the two in class exams are **Feb. 18 (Wed.) and March. 25 (Wed.).** Both exams will take place in **Dennison 170.**
  
  - The final is on **Thursday, April 30, 10:30am - 12:30pm in Dennison 296.**

- **Grading:**
  
  - The best two of the three grades (homework grade, two in class exams) are retained and counted 33% each. If an exam is missed due to illness or travel, then this exam grade will be the dropped grade. The final counts for 33% of the total grade.

- **Topics to be covered:**
  
  1. Probability Review; Random Variables; Joint Distributions; Expectation; Law of Large Numbers; Central Limit Theorem (Chapters 1-5 except sections 4.5 and 4.6))
  
  2. Distributions Derived from the Normal Distribution (Chapter 6)
  
  3. Estimation of Parameters: Method of Moments; Maximum Likelihood; Cramer-Rao Lower Bound; Sufficiency (Chapter 8 except section 8.6)
  
  4. Hypothesis Testing Concerning Parameters; Neyman-Pearson Lemma; Hypothesis Tests via Confidence Intervals; Likelihood Ratio Tests (9.1-9.5)

- **Collaborations:** Collaboration with fellow students on homework is permitted, but they must be written up independently. Collaboration on written exams is not permitted.
• **Other dates:** Jan. 27th is the last day of regular drop/add period. **Attending all class sessions is mandatory in order to be added to the class by this date.**

• **Academic integrity and LS&A student academic affairs:** I expect that everyone will act with integrity. See the following link if you have questions:

http://www.lsa.umich.edu/academicintegrity/

More information on LS&A Student Academic Affairs:

http://www.lsa.umich.edu/facstaff/saa

The College expects students to attend all class sessions, but we know that illnesses do occur. Please check out rules on *Student Class Attendance* and *report my illness*. 