

Math 12640: Advanced Theory of Statistics
Fall 2017

Lectures: Monday 10:10–12:00 noon, odd Wednesday 8:00–9:50 am, 108 Classroom Building 3

Instructor: Wei Lin (weilin@math.pku.edu.cn)

Office hours: Monday 1:30–3:00 pm or by appointment, 1547 Science Building 1

Teaching Assistant: Huiming Zhang (zhanghuiming@pku.edu.cn)

Description:

This is a core course in statistical theory for beginning graduate students in statistics, probability, or related fields where a sound understanding of statistical principles is essential.

Required Text:

Mathematical Statistics (2nd ed.), by J. Shao

Supplementary Texts:

1. *Mathematical Statistics: Basic Ideas and Selected Topics*, Vol. I (2nd ed.), by P. J. Bickel and K. A. Doksum
2. *Theory of Point Estimation* (2nd ed.), by E. L. Lehmann and G. Casella
3. *Testing Statistical Hypotheses* (3rd ed.), by E. L. Lehmann and J. P. Romano
4. *Advanced Mathematical Statistics* (Chinese), by X. Chen

Topics:

Fundamentals of statistics, point estimation, hypothesis tests, confidence sets, asymptotic theory.

Homework:

Homework assignments are due every other Monday starting Week 3. If you missed the class, contact the TA to turn in your homework by the end of the day. No late homework will be accepted.

Exams:

There will be a midterm exam on Monday, November 6 in class and a final exam TBA, both closed book. The final will be comprehensive, with an emphasis on materials covered since the midterm.

Grading:

The breakdown of the course grade is as follows: homework 20%, midterm 30%, final 50%.

Web:

Lecture topics, homework assignments, and other course information will be posted at <http://www.math.pku.edu.cn/teachers/linw/12640f17.html>. Grades will be posted at <http://course.pku.edu.cn>.