# 00132380: Probability Theory and Statistics (B)
# Fall 2018

**Lectures:** Tuesdays and even Fridays 1:00–2:50 pm, 102 Science Classroom Building

**Instructor:** Wei Lin (weilin@math.pku.edu.cn)
*Office hours*: Thursdays 9:30–11:30 am, 1547 Science Building 1

**Teaching Assistants:**
邵凌轩 (lxshao@pku.edu.cn), 王惠远 (huiyuan.wang@pku.edu.cn)
*Office hours*: Fridays 3:00–5:00 pm, 503 Science Building 5

**Course Description:**
This is an undergraduate upper-level course for students majoring in science, engineering, and other fields where applied probability and statistics play an essential role. Topics covered include basic concepts of probability, random variables and vectors, expectation and variance, laws of large numbers and central limit theorems, descriptive statistics, point and interval estimation, hypothesis testing, simple linear regression, analysis of variance, and additional topics when time permits.

**Required Text:**
何书元 (2013). 概率论与数理统计 (第 2 版). 高等教育出版社.

**References:**
1. Grimmett, G. R. and Stirzaker, D. R. (2001). *Probability and Random Processes* (3rd ed.). Oxford University Press.
2. Casella, G. and Berger, R. L. (2002). *Statistical Inference* (2nd ed.). Duxbury.
3. Seber, G. A. F. and Lee, A. J. (2003). *Linear Regression Analysis* (2nd ed.). Wiley.

**Homework:**
There will be homework assignments due every other Tuesday in class. If you missed the class, contact the TAs to turn in your homework by the end of the day. No late homework will be accepted.

**Exams:**
There will be two one-hour midterm exams on Tuesday, October 30, 2018 (covering Chapters 1–5) and Friday, December 7, 2018 (covering Chapters 6–10) in class and a final exam on Tuesday, January 8, 2019, 2:00–4:00 pm (inclusive, emphasizing Chapters 11–13), all closed book.

**Grading:**
The course grade breaks down as follows: homework 15%, midterm exams 20% each, and final exam 45%.

**Website:**
Lecture topics and homework assignments will be posted on the course website at http://www.math.pku.edu.cn/teachers/linw/32380f18.html.