STAT 4200: Statistical Inference II (Winter 2015)

Instructor Dr. Liqun Wang
Office: 332 Machray Hall, Phone: 204-474-6270
Email: liqun.wang@umanitoba.ca

Lectures Monday/Wednesday: 1:00 pm - 2:15 pm, room 316 MH

Tutorial Friday: 1:00 pm - 2:15 pm, room 316 MH

Office Hours Monday/Wednesday: 2:30 pm - 3:30 pm

Marking scheme The final grade will consist of two midterm tests and one final exam. Their weights and tentative schedules are given below. The tests will be written during the class.

Test #1	25%	February 2, 2014
Test #2	25%	March 9, 2014
Final Exam	50%	Scheduled by university.

Homework There will be no formal assignments. Supplementary problems will be given in the class but they are not to be handed in for credits.

Textbook There is no required text. The following books are recommended.

References RV Hogg, JW McKean, AT Craig: *Introduction to Mathematical Statistics*. 7th ed. Pearson, 2013.

G Casella, RL Berger: *Statistical Inference*. 2nd ed. Brooks/Cole, 2002.

EL Lehmann, JP Romano: *Testing Statistical Hypotheses*. 3rd ed. Springer, 2005.

Topics:

1. Interval estimation, confidence sets, Pivotal quantities
2. Large sample confidence intervals
3. Bayes interval estimation
4. Hypotheses testing, type I and type II errors, Neyman-Pearson lemma, Uniformly most powerful tests, likelihood ratio tests
5. Large sample tests
6. Bayes tests

Academic Dishonesty: I wish to draw your attention to the sections in *The University of Manitoba Undergraduate Calendar* dealing with academic integrity, including plagiarism, cheating and examination impersonation.

Important note from the Faculty of Science:

It is your responsibility to insure that you are entitled to be registered in this course. This means that you have:

- the appropriate prerequisites, as noted in the calendar description, or have permission from the instructor to waive these prerequisites;
- not previously taken, or are concurrently registered in, this course and another that has been identified as "not to be held with" in the course description. For example, BIOL 1000 cannot be held for credit with BIOL 1020.

The registration system may have allowed you to register in this course, but it is your responsibility to check. If you are not entitled to be in this course, you will be withdrawn, or the course may not be used in your degree program. There will be no fee adjustment. This is not appealable. Please be sure to read the course description for this and every course in which you are registered.