## STAT 7080: Advanced Statistical Inference (Fall 2018)

**Lectures** Tuesday/Thursday: 1:00 pm - 2:15 pm, September 5 - December 7

**Location** 319 Allen

**Instructor** Dr. Liqun Wang

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Office Hours By appointment

**References** There is no required text. The following books are recommended for reading.

Supplementary material and articles will be given in class for extra reading.

R.J. Serfling: Approximation Theorems of Mathematical Statistics, Wiley, 2001.

J.M. Wooldridge: Econometric Analysis of Cross Section and Panel Data, 2<sup>nd</sup> Ed.

The MIT Press, 2010.

**Topics** 

1. Nonlinear statistical inference

- 2. Numerical optimization
- 3. M-estimation
- 4. Conditional likelihood estimation
- 5. Generalized method of moments
- 6. Hypothesis testing
- 7. Some other advanced topics

Grading 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 30% October 4, 2018
Test #2 30% November 8, 2018
Final Exam 40% 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.

**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.