

STAT 971: Intro to Linear Stat Mod

2021 Spring

Classes.

- M/W 1:30pm–3:00pm on Zoom

Visit the course Canvas site for Zoom links.

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Office Hours: TBD

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Office Hours: TBD

Course Website. <https://canvas.upenn.edu/courses/1568631>. Please check the Canvas site for announcements, assignments, solutions, and other course materials.

Course Overview. This is an advanced graduate course on mathematical statistics, following up on the course STAT 970. This course is **NOT** about linear models. Course prerequisite is STAT 970. Topic to be covered including:

- Stochastic convergence
- Delta method
- Asymptotic normality of M-estimators
- Concentration inequalities
- U-Statistics
- Uniform laws of large numbers
- Efficiency of tests

Textbook. *Asymptotic Statistics*, A.W. van der Vaart. Cambridge University Press, 1998.

High-dimensional statistics: A non-asymptotic viewpoint, Martin J. Wainwright. Cambridge University Press, 2019.

Course Requirements and Grading Policy. There will be some problem sets, one midterm and one final. Evaluation will be based on homework (30%), midterm (30%) and final (40%).

- The midterm will be an in-class exam (tentatively) taking place on Monday, March 8. You may bring your textbook and notes to the midterm.
- The final will be a take-home exam. Exam time and logistic details will be announced later.