

INSTRUCTOR DATA.

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COURSE DATA.

Prereq: Roughly Stat 511 (or instructor consent)
Textbook: Martin and Liu, *Inferential Models*, Chapman & Hall/CRC Press, 2015.
Lectures: MWF 9:00–9:50am in Lincoln Hall, Room 101
Office hrs: MWF 10:00–11:00am, or by appointment
Website: <http://www.math.uic.edu/~rgmartin/stat591.html>

COURSE PLAN. This special topic course will delve into some recent work on the foundations of statistics. The first part of the course will focus on the goals of statistical inference and how the existing frameworks generally fall short of this goal. Motivated by the shortcomings of existing frameworks, the second part of the course will focus on the new *inferential model* (IM) approach, starting with the intuition, basic construction, and key properties. The third part of the course will focus on extensions of the basic setup, applications, and new directions to pursue.

SOFTWARE. R can be downloaded for free at <http://cran.r-project.org>.

ASSIGNMENTS AND GRADES. Grades will be based on “class participation” and a final project. More details about the project will be given as the course progresses but, roughly, the idea is that students will identify a problem of interest related to the course material, do some work, and summarize their work in a written report. These projects, which could be applied, computational, methodological, or theoretical, may lead to journal publications or PhD theses. Grades will be assigned according to the following rule:

$$A \geq 90\% > B \geq 80\% > C \geq 70\% > D \geq 60\% > F.$$

I reserve the right to make adjustments to the overall grading policy, but the letter grade cutoffs will be no stricter than those advertised above.

MISCELLANY.

- Due dates are firm, no extensions will be given.
- Don’t cheat! See the *UIC Guidelines for Student Conduct*, at <http://www.uic.edu/depts/dos/studentconduct.html>.
- Disputes about grading must be brought to my attention within *one week* after the graded assignment is returned to you.