ST810: Valid Probabilistic Inference  
Fall 2017

INSTRUCTOR DATA.
Name: Dr. Ryan Martin  
Office: SAS 5238  
Phone: 919-515-1920  
Email: rgmarti3@ncsu.edu (the best way to contact me)

COURSE DATA.
Lectures: T 3:00–5:45pm in SAS 5270  
Office hrs: TBA—see website  
Website: www.stat.ncsu.edu/people/rmartin/courses/st810/

COURSE PLAN. The first part will focus on the goals of statistical inference and how and to what extent the existing frameworks can fall short. Motivated by these shortcomings, the second part will focus on the new *inferential model* (IM) approach, starting with the intuition, basic construction, and key properties. The third part 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. Pass/Fail grades will be based on “class participation” and a final project. More details about the project will be given in time but, roughly, the idea is that students will, with guidance from the instructor, identify an interesting problem, do some work along the lines discussed in the course, and summarize their work in a written report. The goal is that these projects—whether applied, computational, methodological, or theoretical—will eventually lead to publications or PhD theses.

MISCELLANY.
- Attendance is expected at all lectures.
- Reasonable accommodations will be made for students with verifiable disabilities. In order to take advantage of available accommodations, students must register with Disability Services for Students. Any student who feels they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss your specific needs.
- Students are responsible for reading, understanding, and adhering to the university’s policies, regulations, and rules.

1http://www.ncsu.edu/provost/offices/affirm_action/dss/  
2https://policies.ncsu.edu/regulation/reg-02-20-01  
3https://policies.ncsu.edu