Stat 579: An Introduction to R
Fall 2011

Prerequisites: Solid grounding in linear algebra, calculus and introductory statistics.

Lecture Location: Snedecor 3121

Lecture Times: Section A: Thursdays, 12:10 – 2pm
Section B: Tuesdays, 12:10 - 2 pm

Class Website: http://maitra.public.iastate.edu/stat579/fall2011.html

Instructor: Ranjan Maitra

   E-mail: maitra@iastate.edu
   Office: 2220 Snedecor Hall
   Phone: 515-294-7757
   Office Hours: T 2:10-3 pm, R 11:00-11:50 am, or by appointment

TA: Yihui Xie

   E-mail: xie
   Office: 2215 Snedecor Hall
   Phone: 515-294-2465
   Office Hours: tba

Text and References: The class textbook is “Introduction to Scientific Programming and Simulation Using R" by Owen Jones, Robert Maillardet and Andrew Robinson (CRC Press/Chapman Hall, 2009). We will cover Part I (largely) and portions of Parts II, III and IV.

I will occasionally cover and present additional material in the class, which will be additional to the textbook. Please print out class notes, etc from the website before you come to class. (They should be on by 9:30 am).

Content: An introduction to the logic of programming, numerical algorithms, and graphics. The statistical package R will be used to demonstrate how data can be stored, manipulated, plotted, and analyzed using both built-in functions and user extensions. Concepts of modularization, looping, vectorization, conditional execution, and recursion will be emphasized.
Software: The software used will only be R (including necessary packages).

Grades: Your performance on one midterm exam and one final exam will determine your grade. I will weigh midterms and finals according to the following percentages when computing the final grade:

- **Homeworks:** 40%
- **Exams:** Midterm 25%
- **Final:** 35%

Homework Policy: I will assign a problem set each week. The homeworks will be graded by the TA. I will post homework problems and solutions on the course webpage. I recommend that you compare your answers with the solutions that I post and **ASK** me if you have questions (or have better ideas at solving the problems). I encourage you to collaborate on the homework problems, but for purposes of learning, to work out your own answers independently.

Exams: The dates for the in-class midterm and the final will be decided later and in consultation with you. The **final** exam will be around Thanksgiving, most likely in the late afternoon/ evening.

Academic Dishonesty: This class will follow the Iowa State University policy on academic dishonesty found in the ISU catalog. A score of zero will be given for the entire assignment in which the academic dishonesty occurred and further disciplinary action will be pursued in line with university policy.

Accommodations for Students with Disabilities: Iowa State University complies with the Americans with Disabilities Act and Sect 504 of the Rehabilitation Act. If you have a disability and anticipate needing accommodations in this course, please contact Professor Ranjan Maitra, the course instructor, within the first two weeks of the semester. Retroactive requests for accommodations will not be honored. Before meeting with the course instructor, you will need to obtain a SAAR form with recommendations for accommodations from the Disability Resources Office, located in Room 1076 on the main floor of the Student Services Building. Their telephone number is 515-294-6624.