Statistics NSC123

Time and Place: TuTh 8.30–9.50am, Sci217
Level: Introductory, 4 credits
Instructor: Matt Ollis, `matt@marlboro.edu`
Website: `http://cs.marlboro.edu/courses/spring2014/statistics/home`

Blurb. Statistics is the science—and art—of extracting data from the world around us and organising, summarising and analysing it in order to draw conclusions or make predictions. This course provides a grounding in the principles and methods of statistics. Topics include: probability theory; collecting, describing and presenting data; hypothesis testing; correlation and regression; and analysis of variance. Two themes running through the course are the use of statistics in the natural and social sciences and the use (and abuse) of statistics in the news media. We will use the open source statistical computing package `R` (no prior computing experience is assumed).

The text for the course is OpenIntro Stats, available at `http://www.openintro.org/stat/`. This will be supplemented with other freely available sources.

Grading. Your final grade will be weighted as follows. Quizzes: 10%; final project: 20%; homework assignments: 30%; final exam: 40%. Homework will be assigned approximately once every two weeks. There will be two in-class quizzes during the semester and an optional third quiz during reading days—your best two will be worth 5% each. The final project will consist of a write-up and a class presentation and will involve either examining the use of statistics in some aspect of public life or looking at a specific use of statistics in your principal academic field. The final will be a 24-hour open-book take-home exam.

Your grade may be adjusted up or down based on attendance, participation. promptness of assignment submission, and engagement with the material. Unless your case is exceptional, this adjustment will be by at most one letter grade.

What now? If you would like to take the course, then send me an email saying "Sign me up for Statistics!" or something similar. Make sure you can access the book and download `R` and `RStudio`, following links from the lab page associate with the book. For Thursday next week please work through Labs 0 and 1 to familiarise yourself with the software, but don't worry if you get stuck; Thursday's class will be for a general introduction to the software and troubleshooting any difficulties you've had. Show up on Tuesday when we'll have a whirlwind tour of some of the main ideas of the course.

Academic Integrity. You are expected to be aware of the college's policy on academic integrity and to abide by it. It can be found on the college website, and is linked from the course website. Please come and talk to me if anything is unclear.