



MyC104 - Probability and Statistics
August 11-22, 2014

Instructor: Abhinanda Sarkar

The course will run from August 11 to August 22. We will have no classes on August 15, 16, and 17 on account of Independence Day and the weekend.

We will be using an online textbook: <http://www.openintro.org/stat/>

- On the “Textbook” link, the pdf file of the book is available. Please download and store on your computer. We will refer to it regularly in class and readings will be assigned.
- On the “Labs” link, you will find instructions on how to download R. Please follow those instructions and install R on your computer before the first day of class. We will do extensive hands-on work on R throughout the course.

The grades for the class will be based on:

1. Daily written quizzes. This is a technical course, keeping up with the material is essential.
2. Daily data analysis. Each day, we will do exercises on R to learn the tool and to practice the theory. Participating in these exercises is mandatory.
3. A final exam. The date and format of this will be announced later.

This course is a prerequisite course for other courses to follow.

- The elective course on Risk Management will apply probability models to finance.
- The core course on Data Analytics will leverage R for business intelligence.
- The Research Methodology course will provide details on sampling and data collection.
- All projects are expected to make rigorous and meaningful use of data.
- Courses on marketing and supply chains may assume a basic understanding of statistics.

So it is important that the material presented in this course is not forgotten after the class ends.

Course Outline:

August 11: Data and R

August 12: Probability

August 13: Distributions

August 14: Statistical inference

August 18: Numerical data

August 19: Categorical data

August 20: Linear regression

August 21: Multiple regression

August 22: Final exam

All days:

Morning sessions – Methods

Afternoon sessions – Case studies