

# MATH 108, Elementary Statistics

**Summer 2011  
Marcus Jaiclin**

## **Course Objectives:**

This course will cover all of the following:

- Descriptive Statistics:
  - Quantitative vs Qualitative data
  - Graphical Displays of Data
    - Bar Graphs/Histograms
    - Stemplots, Boxplots
    - Time series plots, frequency polygons
  - Interpreting Graphs
    - Estimating Center and Spread
    - Locating Modes, Skew, Gaps and Outliers
    - Determining Symmetry
  - Computing Measures of:
    - Center
    - Spread
    - Skewness
    - Outliers
  - Determining circumstances under which one measure should be used over another
  - Standard Normal Distribution, Percentile Ranks and applications
- Inferential Statistics
  - Correlation
  - Linear Regression
  - Hypothesis Testing
    - with a Proportion (Qualitative Data Variable)
    - with a Mean (Quantitative Data Variable)
  - Confidence Intervals
    - with a Proportion (Qualitative Data Variable)
    - with a Mean (Quantitative Data Variable)
- We will learn to use readily available technology (calculators, Excel) to perform most statistical calculations.
- We will emphasize interpretation of statistics over experimental design.

## **Textbook:**

We will use Introductory Statistics by Daniel T. Larose, published by WH Freeman.

### **Requirements:**

This course satisfies a requirement for several majors; check with your departmental advisor if you are not sure whether or not this course is appropriate for your major. This course also satisfies a Mathematics/Applied Analytical Reasoning Core Requirement.

This is a 16-week course which we are completing in 6 weeks. You should expect to spend a bare minimum of 6-8 hours a week online working on this course. If you are not prepared to invest this kind of time, this is probably not the course for you.

### **Grading and Assessment:**

I do not curve grades at all. You will need an average in the 90's to get in the A range, in the 80's for a B, 70's for a C, and you will need a 65 to pass this course. I will set a reasonable standard, and I will hold you to it.

I will take academic honesty very seriously. Any breach of the WSC academic honesty policy will be reported promptly to the Dean of Undergraduate Studies or of DGCE to be permanently included in your student file, and will result in a substantial effect on your grade in this course.

You will be assessed in a variety of ways; since this course is online, you will be expected to write more than in a typical statistics course. You will also be expected to discuss the material orally in web conferences or in person.

### **Course Philosophy:**

I will work to find examples that use real data that I find to be relevant to my life and that I expect you may find relevant to yours. I have a particular interest in baseball and in politics, so many of my examples come from these two contexts, though not exclusively.

You can expect me to be clear about what I expect you to be working on at any time. You can expect me to provide a well-organized course that uses current information. You can expect me to be clear about what is included in your grade and what standard I am using to assign a grade to it. You can expect me to ask you to cover an amount of material that is appropriate for this course.

## Questions or Comments:

If you would like to discuss your potential participation in this course, please do not hesitate to contact me: [mjaiclin@wsc.ma.edu](mailto:mjaiclin@wsc.ma.edu) or x8777 on campus. If the course is listed as full on the WSC registration system, please do not ask me to overload you, as this will not be possible.