2014

MATH 156-84 General Statistics I

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Course Description

Statistics is a discipline in which the collection and analysis of data is studied. Fundamental statistical ideas and methods are particularly valuable in today’s technically advancing world, since data not only appears in a wide variety of contexts, but is also readily accessible. In this introductory course, students learn techniques to describe data and become proficient with classical tools for data analysis, such as confidence intervals, hypothesis testing, regression, and correlation.

With respect to the core curriculum at Xavier, this course provides the student ample opportunity to: (1) develop effective written and oral communication skills, and (2) develop his/her critical thinking ability.

Prerequisites

None, although students should understand the topics in MATH 120 (Elementary Functions).

Required Text


Technology

A TI–84 (preferred) or a TI–83/84 Plus graphing calculator is required. **NOTE:** Video and audio recordings of lectures and posting of MATH 156 course materials are strictly prohibited without instructor approval.

Course Structure & Grading

- Course materials and calendar can be found at the MATH 156 website: http://canvas.xavier.edu
• **Class Participation/Attendance, Homework, & Quiz**
  - An essential key to success in MATH 156 is to keep up with the pace of the course. Homework, typically consisting of readings (and occasionally videos) and exercises, will be assigned after each lecture.

• **Project**: Students will have the opportunity to complete a MATH 156 project which is intended to provide non-math majors a way to connect probability and statistics with their own personal or academic interests. Specific details will be provided soon.

• **Exams**: Two in-class exams are scheduled for the semester. Check the course website for dates/times.

**Overall course grades will be determined by the following scale:**

\[
A \equiv [93, 100] \quad A- \equiv [90, 93] \\
B+ \equiv [87, 90] \quad B \equiv [83, 87] \quad B- \equiv [80, 83] \\
C+ \equiv [77, 80] \quad C \equiv [73, 77] \quad C- \equiv [70, 73] \\
D+ \equiv [67, 70] \quad D \equiv [63, 67] \quad D- \equiv [60, 63] \\
F \equiv [0, 63]
\]

• Although not guaranteed, it is possible that some type of curve will be applied. The curve will reward diligent students (e.g., those who attend lectures regularly, seek help during office hours, etc.) and/or students who have shown marked improvement over the semester; they will be more positively affected by the curve. In addition, the instructor reserves the right to significantly reduce the final grade depending on the number of unexcused absences accumulated by the student during the semester.

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**Academic Integrity**

• In accordance with the policies described in the [Xavier University Catalog](https://example.edu/catalog), students are expected to follow the following policies.

  • **Classroom/Attendance Policy**: Students are expected to attend all scheduled lectures. You are responsible for making up any work you miss if you are not in class. Please practice good classroom etiquette: come to class on time, turn off cell phones, refrain from disruptive behavior, and be respectful of your fellow classmates.

  • **Honor Statement**: Students will be requested to sign the following MATH 156 Honor pledge on certain assignments:
Some Friendly Advice

- Invest about 30 minutes after every class to review your lecture notes. Do your assignments while the relevant ideas are still fresh in your mind, and keep pace with the course material. Highlight or make additional notes in the margin where you feel important terms or concepts were described. To help you do this, ask yourself the following:

  1. What was the most important point in the lecture?
  2. What was the muddiest point?
  3. What would you like to hear more about?

These questions comprise the “Muddiest Point in the Lecture” feedback device, which was introduced by Harvard statistician Frederick Mosteller.

- Write down any questions about anything that you aren’t quite clear on. As far as the ideas you are comfortable with: how do they relate to your question?

- Bring your questions to lecture, or to the instructor’s office hour. (If you cannot make the scheduled office hours, contact the instructor to set-up a meeting time, or check the availability of the Math Tutoring Lab, located in Conaton Learning Commons Room 419.) If you have a study group, use your questions to stimulate discussion.

- An ideal solution to a MATH 156 problem should not only include all the mathematical steps needed to arrive at the final solution, but also a few sentences which summarize the main ideas used in your answer. If you can explain a solution in words, then you probably have a good understanding of both the problem and solution.

- Try not to be overly concerned with you grades, and only try to “get by”. If you really understand ideas and concepts, then I will do my best to ensure that your performance on class assignments reflects that.

Disclaimer

Please be aware that although this syllabus provides a general guideline/description of Max Buot's MATH 156 course, it is still subject to change. Official changes concerning the items
contained in this document will be announced in class or posted on the course website.