

INSTRUCTOR: Logan Axon

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OFFICE: 221 Herak

OFFICE HOURS: MWF 11-12, Tu 9-10 in the Math Lab and 10-11 in Herak 221

WEB SITE: <http://web02.gonzaga.edu/faculty/axon/>

TEXTBOOK: *Probability and Statistics for Engineering and the Sciences* 8<sup>th</sup> ed. by Devore

DESCRIPTION: The goal of the course is to develop a basic understanding of probability and statistics. Correct reasoning about probabilities often leads to counterintuitive solutions and so students must learn to work in a precise way without relying on guesses. Upon completion of the course students will be able to calculate probabilities and statistics as well as interpret statements involving probabilities or statistics. Topics to be covered include the fundamentals of probability, discrete and continuous random variables, joint distributions, confidence intervals, hypothesis testing, and regression.

GRADING: The final grade for the class will be based on scores on exams, homework, in-class work (worksheets and quizzes), and a final project. There will be 3 exams during the semester (each worth 13% of the final grade) and one cumulative final exam (worth 25%). Homework, in-class work, and the final project comprise the remaining 36% of the final grade, with each worth 12%. No extra credit will be available. Final grades will be assigned according to the following scale (with + or – at the top or bottom of appropriate ranges):

Score (%)	Grade
90-100	A
80-90	B
70-80	C
60-70	D
0-60	F

FINAL PROJECT: The world is full of claims that can be analyzed mathematically: “you’re more likely to win money playing blackjack than craps”, “if the primary election were held today, Trump would win”, “vaccines cause autism”, etc. Your final project will be the analysis of such a claim: you get to choose the claim, so start watching for something interesting. The end product will be a short paper explaining the claim, where it comes from, and what data support or refute the claim. This last part will require some mathematical/statistical analysis.

PHILOSOPHY OF THE COURSE: Your task in this class is to learn the basics of probability and statistics. Some of this learning will happen in class, but a lot of it will have to happen outside of class and a lot of it will take serious work (it was hard work for me when I learned it). My job in this class is to help you to learn, so the more you tell me about the problems you’re having and the things you don’t understand, the easier everything will be for both of us. If enough of you tell me about what you understand and what you don’t understand, then I should be able to make the assignments and quizzes shorter.

ATTENDANCE AND OTHER CLASS BUSINESS: Students are expected to attend all classes. Absences should be excused in advance or by a written, signed note from an authority. Excessive absences may result in the student receiving a grade of V. Students with disabilities should work with the appropriate office to make sure that all necessary accommodations are made. Some accommodations may require 48 hours notice. Any changes to these policies will be announced in class.

The College of Arts and Sciences has suggested that the following be included in all course syllabi. It is important and you should read it at least once.

HARASSMENT, DISCRIMINATION, AND SEXUAL MISCONDUCT: Consistent with its mission, Gonzaga seeks to assure all community members learn and work in a welcoming and inclusive environment. Title VII, Title IX and Gonzaga’s policy prohibit harassment, discrimination and sexual misconduct. Gonzaga encourages anyone experiencing harassment, discrimination or sexual misconduct to talk to someone from the Campus and Local Resources list found in the Student Handbook about what happened so they can get the support they need and Gonzaga can respond appropriately. There are both confidential and non-confidential resources and reporting options available to you. Gonzaga is legally obligated to respond to reports of sexual misconduct, and therefore we

cannot guarantee the confidentiality of a report, unless made to a confidential resource. Responses may vary from support services to formal investigations. As a faculty member, I am required to report incidents of sexual misconduct and thus cannot guarantee confidentiality. I must provide our Title IX coordinator with relevant details such as the names of those involved in the incident. For more information about policies and resources or reporting options, please visit the following websites: <http://www.gonzaga.edu/eo> and <http://www.gonzaga.edu/titleix>.

**NOTICE TO STUDENTS WITH DISABILITIES AND/OR MEDICAL CONDITIONS:** The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability/medical condition requiring an accommodation, please call 509-313-4134 or visit the Disability Resources, Education, and Access Management (DREAM) office (room 209 Foley Library).

**ATTENDANCE:** I follow the university's standard policy on absences: the maximum allowable absence is two class hours (100 minutes) for each class credit. For a three-credit class meeting three times a week, the maximum number of absences allowed is six. For a three-credit class meeting twice a week, the maximum number of absences allowed is four. The grade for excessive absences is "V", which has the same effect as "F" (Fail) and is counted in the GPA. See also "Class Attendance Policy" on page 68 of the University's online catalogue.

**ACADEMIC HONESTY:** Academic honesty is expected of all Gonzaga University students. Academic dishonesty includes, but is not limited to, cheating, plagiarism, and theft. Any student found guilty of academic dishonesty is subject to disciplinary action, which may include, but is not limited to, a failing grade for the test or assignment in question, a failing grade for the course, or a recommendation for dismissal from the University. See also "Academic Honesty" on page 67 of the University's online catalogue.

**COURSE EVALUATION:** At Gonzaga, we take teaching seriously, and we ask our students to evaluate their courses and instructors so that we can provide the best possible learning experience. In that spirit, we ask students to give us feedback on their classroom experience near the end of the semester. I will ask you to take a few minutes then to carry out course/instructor evaluation in class. Please know that I appreciate your participation in this process. This is a vital part of our efforts at Gonzaga to improve continually our teaching, our academic programs, and our entire educational effort.