

INTRODUCTION TO BIOSTATISTICS - STA 102

Fall 2018

Course Goals and Objectives:

This course introduces students to the discipline of statistics as a science of understanding and analyzing data. Throughout the semester, students will learn how to effectively make use of data in the face of uncertainty: how to collect data, how to analyze data, and how to use data to make inferences and conclusions about real world phenomena. The course goals are as follows:

1. Recognize the importance of data collection, identify limitations in data collection methods, and determine how they affect the scope of inference.
2. Use statistical software to summarize data numerically and visually, and to perform data analysis.
3. Have a conceptual understanding of the unified nature of statistical inference.
4. Apply estimation and testing methods to analyze single variables or the relationship between two variables in order to understand natural phenomena and make data-based decisions.
5. Model numerical response variables using a single or multiple explanatory variables.
6. Interpret results correctly, effectively, and in context without relying on statistical jargon.
7. Critique data-based claims and evaluate data-based decisions.
8. Complete a research project demonstrating mastery of statistical data analysis from exploratory analysis to inference to modeling.

Course Information:

	Days	Times	Location
Lecture	TTH	3:05 PM - 4:20 PM	Sociology - Psychology 126
Lab 01	M	3:05 PM - 4:20 PM	Social Sciences 119
Lab 02	M	4:40 PM - 5:55 PM	Sociology - Psychology 129
Office Hours (Curry)	T	4:30 PM - 6:30 PM	Old Chemistry 122 A
Office Hours (Patrick)	M	12:00 Noon - 2:00 PM	Old Chemistry 203 B
Office Hours (TBD)			

Contact Information:

	Office	Email	Phone
Curry W. Hilton	Old Chemistry 122 A	curry.hilton@duke.edu	984.999.5481
Patrick LeBlanc (TA)	Old Chemistry 203 B	patrick.leblanc@duke.edu	
TBD (TA)	Old Chemistry 203 B		

Course Resources:

- OpenIntro Biostatistics: Introductory Statistics for the Life and Biomedical Sciences (Provided via Sakai)

Grading:

Your final grade will be comprised of the following.

	Contribution %
Labs	15 %
Exam 1	20 %
Exam 2	20 %
Final Exam	25 %
Project	20 %

The exact ranges of letter grades and +/- assignments will be determined after the final exam. However, if you make 90% or higher you are guaranteed at least a A-, 80% or higher you are guaranteed at least B-, etc.

Students with Disabilities:

Students with disabilities who believe they may need accommodations in this class are encouraged to contact the Student Disability Access Office (<http://www.access.duke.edu/students/requesting/index.php>) at (919) 668-1267 as soon as possible to better ensure that such accommodations can be made.

Academic Integrity:

Duke University is a community dedicated to scholarship, leadership, and service and to the principles of honesty, fairness, respect, and accountability. Citizens of this community commit to reflect upon and uphold these principles in all academic and non-academic endeavors, and to protect and promote a culture of integrity. Cheating on exams and quizzes, plagiarism on homework assignments and project, lying about an illness or absence and other forms of academic dishonesty are a breach of trust with classmates and faculty, violate the Duke Community Standard (<https://studentaffairs.duke.edu/conduct/about-us/dukecommunity-standard>), and will not be tolerated. Such incidences will result in a 0 grade for all parties involved as well as being reported to the Office of Student Conduct (<http://www.studentaffairs.duke.edu/conduct>). Additionally, there may be penalties to your final class grade. Please review the Duke's Academic Dishonesty policies (<https://studentaffairs.duke.edu/conduct/z-policies/academic-dishonesty>).

Excused Absences:

Students who miss graded work due to a scheduled varsity trip, religious holiday or shortterm illness should fill out an online NOVAP (<https://trinity.duke.edu/undergraduate/academicpolicies/athletic-varsity-participation>), religious observance notification (<https://trinity.duke.edu/undergraduate/academic-policies/religious-holidays>), or short-term illness notification (<http://trinity.duke.edu/academic-requirements?p=policy-short-termillness-notification>) form respectively. If you cannot complete an assignment on the due date due to a short-term illness, you have until noon the following day to complete it at no penalty. Then the regular late work policy will kick in. If you are faced with a personal or family emergency or a long-range or chronic health condition that interferes with your ability to attend or complete classes, you should contact your academic dean's office. See more information on policies surrounding these conditions here (<https://trinity.duke.edu/undergraduate/academic-policies/personal-emergencies>). Your academic dean can also provide more information.

Course Policies:

- Late work policy for labs reports:
 - Next day: lose 30% of total possible points

– Later than next day: lose all points

- Late work policy for the project: 10% off for each day late.
- There will be no make-ups for labs, project, or exams. If the midterm exam must be missed, absence must be officially excused **in advance**, in which case the missing exam score will be imputed using the final exam score. This policy only applies to the midterm. All other missed assessments will receive a grade of 0. The final exam must be taken at the stated time. You must take the final exam and turn in the project in order to pass this course.
- Regrade requests must be made **within one week** of when the assignment is returned, and must be submitted in writing. These will be honored if points were tallied incorrectly, or if you feel your answer is correct but it was marked wrong. No regrade will be made to alter the number of points deducted for a mistake. There will be no grade changes after the final exam.
- Use of disallowed materials (textbook, class notes, web references, any form of communication with classmates or other persons, etc.) during exams will not be tolerated. This will result in a 0 on the exam for all students involved, possible failure of the course, and will be reported to the Office of Student Conduct (<http://www.studentaffairs.duke.edu/conduct>). If you have any questions about whether something is or is not allowed, ask me beforehand.