

STAT-S211 — STATISTICS FOR JOURNALISTS — SPRING 2022

MWF 11:30 - 12:20 Wylie Hall ([WY](#)) 005

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Course Description:

Essential statistical concepts and tools for journalists in the age of data, including probability, graphics, descriptive statistics, prediction, study design, comparison, testing, and estimation. The course has a heavier emphasis on writing and reading media reports than other introductory statistics courses.

Course Objectives:

In this course, we will cover essential statistical concepts and tools for journalists and media professionals in the age of data, including

- Organizing data: graphs, distributions, relationships, prediction
- Producing data: surveys, experiments, ethics
- Chance: probability, simulation, expected values
- Inference: confidence intervals, tests of significance, and their abuse

Successful students will be able to

- Think critically about statistics and data and make data-driven decisions.
- Acknowledge the existence of uncertainty and how that affects decision-making.
- Understand the importance of data to science and prediction.
- Understand intuition behind common statistical techniques like regression, confidence intervals, and significance testing.
- Recognize common statistical errors in journalism and avoid them in their own work.
- Correctly communicate statistical results to a general audience.
- Use technology (Excel) to understand and solve statistical problems.

Prerequisites: College algebra (MATH-M 14 or equivalent). Finite math (MATH-M 118) may provide an advantage but is not required. The course is restricted to journalism majors only.

Course Materials: This is a restricted list of various interesting and useful books that will be touched during the course. You need to consult them occasionally.

Required Textbooks/Materials:

- David S. Moore and William I. Notz, *Statistics: Concepts and Controversies*, 10th edition, W.H. Freeman and Company, 2020.
- Microsoft Excel. Some of your assignments will require Excel to analyze and graph data. We will discuss any required functions and commands during lectures using Excel. You can download Excel from [IUWare](#) through the Office 365 service, or you can use IU's cloud service [IUanyWare](#).

Free Textbooks/Materials:

- David Diez, Mine Cetinkaya-Rundel, Leah Dorazio, and Christopher Barr, *Advanced High School Statistics*, Second Edition, OpenIntro, 2019.

Optional Textbooks/Materials:

- Carl T. Bergstrom and Jevin D. West, *Calling Bullshit: The Art of Skepticism in a Data-driven World*, Random House Trade Paperbacks, 2021.

Grading:

In-Class Activities	15%	Midterm Exam 1	15 %
Homeworks/Quizzes	15%	Midterm Exam 2	15 %
Writing Assignments	20%	Final Exam	20 %

Cut-offs are the traditional ones:

A+ (≥ 97.00), A (93-96.99), A- (90.00-92.99), B+ (87.00-89.99), B (83.00-86.99), B- (80.00-82.99), C+ (77.00-79.99), C (73.00-76.99), C- (70.00-72.99), D+ (67.00-69.99), D (63.00-66.99), D- (60.00-62.99), F (≤ 59.99)

Class Responsibilities:

- Attendance/Participation
 - Attendance is required.
 - If you are unable to attend and have a valid excuse, please contact the instructor. Ideally, you should contact the instructor before the absence.
- Homeworks/Quizzes
 - There will be (approximately) weekly homeworks/quizzes posted on Canvas throughout the semester.
 - Each homework/quiz will be roughly 10 questions, untimed, with two attempts. You are permitted to collaborate with your peers and/or seek outside help on these assignments; however, it should be **you** completing the assignment and **you** should be able to explain any answer you provide.
 - Answers will be released immediately following the due date. As such, no late quizzes or make-ups will be permitted.
 - Your lowest homework/quiz score will be dropped.

- In-Class Activities
 - There will be activities throughout the semester that occur in class and will be turned in by the end of class.
 - There are no make-ups if you miss an in-class activity.
 - Your lowest in-class activity score will be dropped.
- Writing Assignments
 - There will be 2 writing assignments.
 - These writing assignments are expected to be roughly 2-3 pages.
 - The document should be nicely typed and submitted through Canvas as a pdf.
 - There will be a 10% penalty per day for late writing assignments.
- Exams
 - There are two midterm exams (50 minutes) and one final exam (2 hours).
 - Exams are closed book; however you are permitted to create your own single-sided note sheet that you will turn into the instructor along with your completed exam.

Academic Integrity

As a student at IU, you are expected to adhere to the standards and policies detailed in the Code of Student Rights, Responsibilities, and Conduct. When you submit an assignment with your name on it, you are signifying that the work contained therein is yours, unless otherwise cited or referenced. All suspected violations of the Code will be reported to the Dean of Students and handled according to University policies. Sanctions for academic misconduct may include a failing grade on the assignment and a failing grade in the course, among other possibilities. If you are unsure about the expectations for completing an assignment be sure to seek clarification beforehand.

Bias-Based Incident Reporting

As your instructor, one of my responsibilities is to create a positive learning environment for all students. Bias incidents (events or comments that target an individual or group based on age, color, religion, disability, race, ethnicity, national origin, sex, gender, gender identity, sexual orientation, marital status or veteran status) are not appropriate in our classroom or on campus. What should you do if you witness or experience a bias incident? See it? Hear it? Report it by submitting a report online (biasincident.indiana.edu) or calling the Dean of Students Office (812-855-8187).

Disability Services for Students (DSS)

Every attempt will be made to accommodate qualified students with disabilities (e.g. mental health, learning, chronic health, physical, hearing, vision neurological, etc.). You must have established your eligibility for support services through the appropriate office that services students with disabilities. Note that services are confidential, may take time to put into place and are not retroactive. Captions and alternate media for print materials may take three or more weeks to get produced. Please contact Disability Services for Students at <http://disabilityservices.indiana.edu> or 812-855-7578 as soon as possible if accommodations are needed. The office is located on the third floor, west tower, of the Wells Library, Room W302. Walk-ins are welcome 8 AM to 5 PM, Monday through Friday. You can also locate a variety of campus resources for students and visitors that need assistance at:

<http://www.iu.edu/~ada/index.shtml>.

Religious Observances

Should you plan to observe a religious holiday that will prevent you from attending a class meeting or submitting an assignment by its due date, please notify me by the second week of classes. Students seeking accommodations for religious observances can find the necessary form here: <https://vpfaa.indiana.edu/faculty-resources/teaching-resources/religious-observances-information.html>.

Sexual Misconduct and Title IX

As your instructor, one of my responsibilities is to create a positive learning environment for all students. Title IX and IU's Sexual Misconduct Policy prohibit sexual misconduct in any form, including sexual harassment, sexual assault, stalking, and dating and domestic violence. If you have experienced sexual misconduct, or know someone who has, the university can help. If you are seeking help and would like to speak to someone confidentially, you can make an appointment with: The Sexual Assault Crisis Services (SACS) at (812) 855-8900 (counseling services) Confidential Victim Advocates (CVA) at (812) 856-2469 (advocacy and advice services) IU Health Center at (812) 855-4011 (health and medical services) It is also important that you know that Title IX and University policy require me to share any information brought to my attention about potential sexual misconduct, with the campus Deputy Title IX Coordinator or IU's Title IX Coordinator. In that event, those individuals will work to ensure that appropriate measures are taken, and resources are made available. Protecting student privacy is of utmost concern, and information will only be shared with those that need to know to ensure the University can respond and assist. I encourage you to visit stopsexualviolence.iu.edu to learn more.

Masks and Physical Distancing Requirements

In recognition of what all IU community members owe to each other, all students, staff, and faculty signed an acknowledgement of their responsibility to follow public health measures as a condition of returning to the campus this fall. Included in that commitment were requirements for appropriately wearing (covering mouth and nose) adequate masks in all IU buildings and maintaining physical distancing in all IU buildings. Both are classroom requirements. Both requirements are necessary for us to protect each other from transmission of COVID-19.

- Therefore, if a student is present in class without an adequate mask (that covers both mouth and nose) worn appropriately, the instructor will ask the student to put a mask on immediately or leave the class.
 - If a student comes to class a second time without a mask the instructor will report the student to the Office of Student Conduct of the Division of Student Affairs.
 - If a student refuses to put a mask on or to wear a mask appropriately after being instructed to do so, the instructor may end the class immediately, and report the student to the Office of Student Conduct. The student will be summarily suspended from the university pursuant to IU's Summary Suspension Policy
- If Student Conduct receives three cumulative reports from any combination of instructors or staff members that a student is not complying with the requirements of masking and physical distancing, the student will be summarily suspended from the university for the semester.

Summary Suspension Policy: A student may be summarily suspended from the university and summarily excluded from university property and programs by the Provost or designee of a university campus. The Provost or designee may act summarily without following the hearing procedures established by this section if the officer is satisfied that the student's continued presence on the campus constitutes a serious threat of harm to the student or to any other person on the campus or to the property of the university or property of other persons on the university campus.

The Provost has determined that refusal to comply with the public health requirements specified in the Student Responsibility form, including the requirement of wearing a mask in all IU buildings, constitutes "a serious threat of harm to other persons" within the meaning of the summary suspension policy. In addition,

the Provost has determined that a person who does not comply with these requirements, as evidenced by three credible violations of the policy reported to the campus from any source, constitutes “a serious threat of harm to other persons” within the meaning of the summary suspension policy.

- Student Rights

Any student who believes another person in a class is threatening the safety of the class by not wearing a mask or observing physical distancing requirements may leave the class without consequence.

- Attendance

The student responsibility form requires that you take your temperature every morning and that you refrain from attending class if you have a temperature of 100.4 or other symptoms of illness. In order to ensure that you can do this, attendance will not be a factor in the final grade. Attendance may still be taken to comply with accreditation requirements.

- Assigned Seating

In order to ensure we can contact you in the event you are exposed to COVID-19, you must remain in your assigned seat for the entire semester.