Dr. Alex Liebrecht
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The University of Iowa
The College of Liberal Arts and Sciences
Spring, 2024

Title of Course: STAT:1030:0AAA Statistics for Business
Course meeting time and place: 3:30P – 4:45P AUD MH
Department of Statistics and Actuarial Science: https://stat.uiowa.edu/

Course ICON site: To access the course site, log into Iowa Courses Online (ICON) using your Hawk ID and password.

Instructor: Alex Liebrecht
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Office: 221 SH
Office Hours: 2:00P – 3:20P
Phone: (319) 335 – 1038

TAs (and discussion sections)**:**

STAT:1030:0A01 7:30A - 8:20A T 41 SH 7:30A - 8:20A Th 30 SH *Sreya Sarkar*	**STAT:1030:0A02** 7:30A - 8:20A T 30 SH 7:30A - 8:20A Th 41 SH *Emilia Thedens*	**STAT:1030:0A03** 8:30A - 9:20A T 41 SH 8:30A - 9:20A Th 30 SH *Sreya Sarkar*	**STAT:1030:0A04** 8:30A - 9:20A T 30 SH 8:30A - 9:20A Th 41 SH *Emilia Thedens*
STAT:1030:0A05 9:30A - 10:20A T 41 SH 9:30A - 10:20A Th 30 SH *Nick Grener*	**STAT:1030:0A06** 9:30A - 10:20A T 30 SH 9:30A - 10:20A Th 41 SH *Shuyuaan Wang*	**STAT:1030:0A07** 10:30A - 11:20A T 41 SH 10:30A - 11:20A Th 30 SH *Nick Grener*	**STAT:1030:0A08** 10:30A - 11:20A T 30 SH 10:30A - 11:20A Th 41 SH *Shuyuan Wang*
STAT:1030:0A09 11:30A - 12:20P T 41 SH 11:30A - 12:20P Th 30 SH *Payel Ghosal*	**STAT:1030:0A10** 11:30A - 12:20P T 30 SH 11:30A - 12:20P Th 41 SH *Nikita Jaiswal*	**STAT:1030:0A11** 12:30P - 1:20P T 41 SH 12:30P - 1:20P Th 30 SH *Payel Ghosal*	**STAT:1030:0A12** 12:30P - 1:20P T 30 SH 12:30P - 1:20P Th 41 SH *Nikita Jaiswal*
STAT:1030:0A13 1:30P - 2:20P T 41 SH 1:30P - 2:20P Th 30 SH *Lyle Paukner*	**STAT:1030:0A14** 1:30P - 2:20P T 30 SH 1:30P - 2:20P Th 41 SH *Sumedha Dhar*	**STAT:1030:0A15** 2:30P - 3:20P T 41 SH 2:30P - 3:20P Th 30 SH *Lyle Paukner*	**STAT:1030:0A16** 2:30P - 3:20P T 30 SH 2:30P - 3:20P Th 41 SH *Sumedha Dhar*
STAT:1030:0A17 3:30P - 4:20P T 41 SH 3:30P - 4:20P Th 30 SH *Yang Cao*	**STAT:1030:0A18** 3:30P - 4:20P T 30 SH 3:30P - 4:20P Th 41 SH *Qian Tang*	**STAT:1030:0A19** 4:30P - 5:20P T 41 SH 4:30P - 5:20P Th 30 SH *Yang Cao*	**STAT:1030:0A20** 4:30P - 5:20P T 30 SH 4:30P - 5:20P Th 41 SH *Qian Tang*
STAT:1030:0A21 5:30P - 6:20P T 41 SH 5:30P - 6:20P Th 30 SH *Shamriddha De*	**STAT:1030:0A22** 5:30P - 6:20P T 30 SH 5:30P - 6:20P Th 41 SH *Chenyang Li*	**STAT:1030:0A23** 6:30P - 7:20P T 41 SH 6:30P - 7:20P Th 30 SH *Shamriddha De*	**STAT:1030:0A24** 6:30P - 7:20P T 30 SH 6:30P - 7:20P Th 41 SH *Chenyang Li*

DEO (Department Chari): Kung-Sik Chan
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Description of Course
This is a one semester undergraduate course in business statistics. All the course material including the textbook will be made available on ICON. Lectures will introduce the student to statistical and probabilistic reasoning and will cover introductory topics in descriptive and inferential statistics, with emphasis on business applications. Discussions will support lecture material and include a weekly computer lab component where software Excel will be used to carry out data analyses. The material is pitched at a level that should be comfortable to a first-year undergraduate student who has successfully completed high school algebra. This is an approved General Education course (Quantitative and Formal Reasoning).

Learning Objectives
The successful student will leave this course with a basic understanding of many of the fundamentally important ideas in statistics. They will be equally comfortable (i) explaining statistical concepts, paradoxes, and fallacies to colleagues; (ii) using basic probability rules to measure uncertainty, (iii) graphically and numerically describing univariate and multivariate data; and (iv) applying elementary statistical inference procedures. They will also be comfortable using the computer software Excel to carry out many of the descriptive and inferential tasks.

Optional Textbook: Business Statistics A First Course
ISBN: 9780321506092
Author: Sharpe, De Veaux, and Velleman

Academic Honesty and Misconduct
All students in CLAS courses are expected to abide by the CLAS Code of Academic Honesty. Undergraduate academic misconduct must be reported by instructors to CLAS according to these procedures. Graduate academic misconduct must be reported to the Graduate College according to Section F of the Graduate College Manual.

Student Complaints
Students with a complaint about a grade or a related matter should first discuss the situation with the instructor and/or the course supervisor (if applicable), and finally with the Director or Chair of the school, department, or program offering the course.

Undergraduate students should contact CLAS Undergraduate Programs for support when the matter is not resolved at the previous level. Graduate students should contact the CLAS Associate Dean for Graduate Education and Outreach and Engagement when additional support is needed.

Drop Deadline for this Course
You may drop an individual course before the deadline; after this deadline you will need collegiate approval. You can look up the drop deadline for this course here. When you drop a course, a "W" will appear on your transcript. The mark of "W" is a neutral mark that does not affect your GPA. Directions for adding or dropping a course and other registration changes can be found on the Registrar's website. Undergraduate students can find policies on dropping CLAS courses here. Graduate students should adhere to the academic deadlines and policies set by the Graduate College.

Grading System and the Use of +/-

Grade cutoffs will be no higher than the usual 90-80-70-60 breakdown. The course will use the +/- grading system. The A+ grade is used only in extraordinary situations.

Course Grades
Final course grades will be assessed based on your performance in the following activities:

Participation (5% of grade)**:** There will be the occasional attendance check during lecture (probably once a week) to encourage classroom attendance. This will include things like answering three brief questions throughout lecture and turning them in on a piece of paper.

Homework (10% of grade): Homework will be assigned and collected during Discussion on Thursdays at your assigned discussion time. This homework will be checked for completion purposes. Furthermore, there will be two presentations during discussion throughout the semester ---one on regression and one on hypothesis testing. These will be counted as a "double" homework assignment.

Quizzes (10% of grade): On Thursdays, Discussion will conclude with a short quiz (probably about 15 minutes on average). These quizzes will cover material from lecture and discussion for the week and will be checked for correctness. Each quiz will be worth 10 points and we will drop the two lowest quizzes. On weeks that there are exams, there will be no quiz.

--- IMPORTANT---

Exams (25% of grade each): There will be two midterms and a final. The midterms will be online over ICON on **(2/14), (3/20),** and **(5/8).** The exams will be posted at 3:30P and you will have until 6:30P to submit the exam. The exam is written with the intention of taking an hour but you will have three hours to turn in the online exam. Feel free to use your notes, homework, the internet, and especially *Excel* on the exam. Make sure that you DO NOT use any "human-being" as a resource such as your classmates, Chegg, etc.

Course Content

Unit 1: Introduction (2 weeks)
Statistics and Variation
Data
Surveys and Sampling
Displaying and Describing Categorical Data
Displaying and Describing Quantitative Data
Unit 2: Regression (2 weeks)
Correlation and Linear Regression
Unit 3: Understanding Data and Distributions (3 weeks)
Randomness and Probability
Random Variables and Probability Models
Unit 4: Inference for Proportions (3 weeks)
Sampling Distributions and Confidence Intervals for Proportions
Testing Hypotheses about Proportions
Unit 5: Inference for Means (3 weeks)
Confidence Intervals and Hypothesis Tests for Means
Comparing Two Groups
Unit 6: Inference for Counts (2 weeks)
Chi-Square Tests

Attendance and Absences

Attendance is required. Students must attend all lectures and discussion sections. Just as in the workplace, attendance is a critical predictor of success. There will be announced and unannounced engagement activities in both lecture and discussion. There will be no make-ups for missed homework, quizzes, or attendance checks. Please note that the lowest two quizzes are dropped --- this is to help with any quizzes that are missed.

[University regulations require that students be allowed to make up examinations](#) that have been missed due to illness, religious holy days, military service obligations (including service-related medical appointments), or other unavoidable circumstances or University-sponsored activities. Students with UI-authorized activities must discuss their absences with the instructor as soon as possible. Religious obligations must be communicated within the first three weeks of classes.

Communication: UI Email
Students are responsible for all official correspondences sent to their UI email address (uiowa.edu) and must use this address for any communication with instructors or staff in the UI community. For the privacy and the protection of student records, UI faculty and staff can only correspond with UI email addresses.

Where to Get Academic Support for this Course

Help Outside of Class

Statistics Tutor Lab: There is a free statistics tutorial lab (1113 Red, Library Commons, First Floor, Main Library) for students in this course. During available times, a graduate student will be present to assist you. Hours for the lab can be found at https://www.stat.uiowa.edu/resources/tutoring. A list of paid private tutors can be found on this page as well.

Supplemental Instruction (SI): This course has SI available. SI is an excellent peer facilitated interactive group study session designed to not only help you learn the material, but also how to learn. SI sessions will begin on Sunday, January 21st and all sessions will be offered in the Academic Resource Center (ARC), which is located on the ground floor of the Iowa Memorial Union (IMU). There will be no SI sessions during spring break or finals week. The scheduled SI times can be seen below:

Statistics for Business	Sundays 1:00-1:50 PM
STAT:1030	Mondays 5:30-6:20 PM
SI Leaders: Matt	Thursdays 11:00-11:50 AM

Mental Health Resources and Student Support

Students are encouraged to be mindful of their mental health and seek help as a preventive measure or if feeling overwhelmed and/or struggling to meet course expectations. Students are encouraged to talk to their instructor for assistance with specific class-related concerns. For additional support and counseling, students are encouraged to contact University Counseling Service (UCS). Information about UCS, including resources and how to schedule an appointment, can be found at counseling.uiowa.edu. Find out more about UI mental health services at mentalhealth.uiowa.edu.

Student Care and Assistance provides assistance to University of Iowa students who are experiencing a variety of crisis and emergency situations, including but not limited to medical issues, family emergencies, unexpected challenges, and sourcing basic needs such as food and shelter. More information on the resources related to basic needs can be found at basicneeds.uiowa.edu/resources/. Students are encouraged to contact Student Care & Assistance in the Office of the Dean of Students (Room 135 IMU, dos-assistance@uiowa.edu, or 319-335-1162) for support and assistance with resources.

University Policies

Accommodations for Students with Disabilities

The University is committed to providing an educational experience that is accessible to all. If a student has a diagnosed disability or other disabling condition that may impact the student's ability to complete the course requirements as stated in the syllabus, the student may seek accommodations through Student Disability Services (SDS). SDS is responsible for making Letters of Accommodation (LOA) available. **The student must provide an LOA to the instructor as early in the semester as possible, but requests not made at least two weeks prior to the scheduled activity for which an accommodation is sought may not be accommodated.** The LOA will specify what reasonable course accommodations the student is eligible for and those the instructor should provide. Additional information can be found on the SDS website.

Free Speech and Expression
Absences for Religious Holy Days
Classroom Expectations
Non-discrimination
Sexual Harassment/Misconduct and Supportive Measures
Sharing of Class Recordings (if appropriate)