

**Department of Statistics and Actuarial Science**  
**Statistics for Business (STAT:1030)**

Spring 2025

STAT:1030:0002, 6:30-8:20 PM, T/Th, 110 MLH

▷ **General Information**

- *Instructor:* Max Sampson, 258 Schaeffer Hall, [max-sampson@uiowa.edu](mailto:max-sampson@uiowa.edu)
- *Office Hours:* M/T/W 2:30-3:30PM, and by appointment
- *DEO:* Kung-Sik Chan, 241 SH
- *Textbook:* Sharpe, De Veaux, and Velleman. Business Statistics, 4th Edition ISBN: 9780137897629
- *ICON/Web:* This course will use ICON (<https://icon.uiowa.edu>) for grades, announcements, homework assignments, etc.

- ▷ **Course Description & Objectives** This is a one semester undergraduate course in business statistics. 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. The material will be introduced 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).

The students will develop a basic understanding of statistical and probabilistic reasoning. They will be able to (i) explain statistical concepts to colleagues; (ii) measure and understand probabilistic uncertainty; (iii) describe data, both graphically and numerically; (iv) carry out predictions, with uncertainty bounds, using simple linear models; (v) understand statistical associations, and use them to improve predictions; and (vi) correctly apply and understand the results from basic statistical inference procedures.

▷ **Course Organization**

- **Lectures.** The 110-minute in-person meetings on Tuesday and Thursday will be used to introduce important concepts, give a running summary of the material, work through examples as a class, and work through examples individually or in small groups. We will cover chapters 1-17 in the textbook. Students will be expected to come prepared and to participate in the worked examples. To be better prepared for lectures, students are strongly encouraged to look over the relevant material before class. A more detailed description of what we will cover week to week can be found on ICON, which should be used to guide where we are throughout the semester.
- **Attendance.** Attendance is required. Students must attend all lectures.
- **Quizzes.** Short ICON quizzes will be due each Tuesday at 5:00 PM to reinforce lecture material. The lowest two quiz scores will be dropped. No make-up quizzes will be provided.
- **Homework.** Assignments are due on ICON each Thursday by 6:30 PM. Submissions must be neat, correctly ordered, and uploaded as a single file. Homework may include textbook problems, instructor-created questions, and Excel exercises. The lowest two homework scores will be dropped. Late or improperly formatted submissions will not receive credit. Students are encouraged to collaborate but must submit their own work.
- **Exams.** There will be two midterm exams (tentatively February 27 and April 3) and one final exam. All exams will be in person. The first two will take place during the normal lecture time. The final exam will take place during our scheduled final exam time (TBD). The format and further details will be shared in advance during lecture.

- ▷ **Course Topics** A weekly guide is available on ICON. The following topics will be covered in approximately this order:

- Data collection, summary statistics, and graphical displays
- Introduction to correlation and simple linear regression
- Counting techniques and probability

- Random variables, expectation, and variance
- Discrete distributions
- Continuous distributions
- Linear combinations of random variables
- Sampling distributions, Central Limit Theorem
- Inference (confidence intervals and hypothesis testing) for a mean  $\mu$  ( $Z$  and  $t$ )
- Inference (confidence intervals and hypothesis testing) for a proportion  $p$
- Inference for  $\mu_1 - \mu_2$
- Inference for simple linear regression
- Chi-square test for independence and chi-square goodness of fit test
- Focus your readings on the material that was covered in class. Supplementation to the textbook, when needed, will be provided.

▷ **Exams**

There will be two in class midterm exams (17.5% each) and a final exam (25%). Exam dates:

- Exam 1: Thursday, February 27 (Tentative)
- Exam 2: Thursday, April 3 (Tentative)
- Final Exam: TBA

Students are expected to be present for the exams at the *scheduled time*. It is your responsibility to make the appropriate arrangements *beforehand*. The policy for missed exams is the same as the policy outlined by the College of Liberal Arts and Sciences. Exams may be made up for

- Illness. Visits to Student Health are free for current UIowa students. A note from Student Health or documentation from MyChart would be helpful to prove an illness occurred on the day of an examination.
- Religious holy days.
- Military service obligations.
- University-sponsored activities.

▷ **Grading**

- *Exams*: 60% total
  - \* Exam 1: 17.5% total
  - \* Exam 2: 17.5% total
  - \* Final Exam: 25% total
- *ICON Quizzes*: 15% total
- *Homework*: 25% total
- Your attendance, participation, preparedness, work ethic, etc. will affect your final grade.
- This course uses the  $+/-$  grading system (i.e. grades such as A–, B+, and B will be assigned).
- **This course is not curved.** Grade cutoffs will follow the usual 90, 80, 70, 60 breakdown.
- Use of calculators, tables, and pencils is required during assessments. Sharing of materials is not allowed.
- Bonus points may be given at any time. The bonus points may be applied to any part of your grade.
- Once work is returned, students have 7 calendar days to review their scores and discuss any questions or concerns with the instructor.

▷ **Extra Help**

- A list of tutoring resources can be found at

<https://stat.uiowa.edu/undergraduate/tutoring-resources>

- Supplemental Instruction TBD

▷ ***Academic Misconduct***

- During exams, you may not talk, whisper, pass notes, view other students' work, allow a fellow student to view your own work (cover your paper), communicate with a fellow student in any way, use a cell phone, use class notes, etc.
- Directly copying solutions from online resources (e.g. Chegg, ChatGPT, etc) is considered cheating.
- Simply copying a another student's homework will be considered academic misconduct.
- All academic misconduct will receive the following sanctions:
  - \* You will receive a 0 on the exam/quiz/homework on which the academic misconduct took place.
  - \* A report will be filed with the College of Liberal Arts and Sciences and Tippie College.
  - \* Your final grade will be lowered by 2 full letter grades (e.g. from a B+ to a D+).
- Students are encouraged to contact me about fellow students possibly engaging in academic misconduct. Your identity will remain anonymous.

▷ ***General Notes***

- If you decide to communicate via email, make sure you are proper email etiquette. See here for a checklist: <https://drexel.edu/graduatecollege/professional-development/blog/2018/October/12-tips-for-writing->
- Do not miss class. Attendance is necessary for success.
- Refrain from talking, eating, using your phone, wearing earbuds, and using other electronic devices in class.
- Work a lot of practice problems. *Frequently quizzing/testing yourself is the best, most efficient way to learn the material.* Don't memorize; try to understand.

▷ ***Student Complaints***

Students with a complaint about a grade or a related matter should first discuss the situation with the instructor, and finally with the Director or Chair of the school, department, or program offering the course. Students should contact CLAS Undergraduate Programs for support when the matter is not resolved at the previous level.

▷ ***Accommodations for Students with Disabilities***

The University is committed to providing an educational experience that is accessible to all students. 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 to the student. 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.

▷ ***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 and withdrawing here. Graduate students should adhere to the academic deadlines and policies set by the Graduate College.

▷ ***The College of Liberal Arts and Sciences Policy and Procedures (Hyperlinks)***

- Basic Needs and Support for Students
- Classroom Expectations
- Exam Make-up Owing to Absence
- Free Speech and Expression
- Mental Health

- Military Service Obligations
- Non-discrimination
- Religious Holy Days
- Sexual Harassment/Misconduct and Supportive Measures
- Class Recordings