

ELEMENTARY STATISTICS AND INFERENCE
STAT:1020 / PSQF:1020 • Lecture AAA, 8:30 MWF • 40 SH
Fall 2019
(Subject to change)

Instructor	Prof. Harris, 314 LC, 335-5570, deborah-harris@uiowa.edu
Office Hours	9:30 a.m. to 10:30, M, W, & F; or by appointment
Department	Psychological and Quantitative Foundations, 361 LC, 335-5579
DEO	Dr. Foley Nipcon, 361 LC, 335-5495
TAs	There are two TAs (Philip Foti philip-foti@uiowa.edu and Caroline Morrison caroline-morrison@uiowa.edu) for the four discussion sections. Their office is 350 SH. Their office hours will be forthcoming.
Textbook	<p>De Veaux, R. D., Velleman, P. F. & Bock, D. E. (2018). <i>Intro Stats (fifth edition)</i>. Boston, MA: Pearson.</p> <ul style="list-style-type: none">• When students enrolled in the course, they were automatically registered for Pearson's MyLab & Mastering website, which includes access to the eText and a variety of other online resources (enrollment in MyLab & Mastering is mandatory for the completion of online homework assignments).• Access Code: HSCDVB-JEDDA-SAURY-LAMBS-AFOOT-TAXES• Students have the opportunity to opt out of the course material during the beginning of the course (https://teach.uiowa.edu/icon-direct-opt-out), but their ability to participate fully in the course without these materials may be limited. No charge to the student's U-Bill will be made if the course is dropped during the Opt Out period. Students will lose access to any additional content the instructor might add to the eTextbook, such as links to other content; additional supplemental resources; and highlights, annotations, and any study tips the instructor may add to guide your engagement and learning in the course. <i>Please consider that if you choose to opt out, you may not be able to earn course points or assignment grades associated with this content.</i>• Students risk falling behind in the course if they have not acquired alternate versions of the same materials prior to the first day of the class. Faculty are not responsible for providing students with alternative materials or waiving course/class requirements.• Students are free to purchase a loose-leaf copy of the textbook (available at the UI bookstore).
Course Description	<p>This course provides an overview of the logic and techniques involved in quantitatively analyzing and interpreting empirical data. Methods for displaying data graphically and for describing characteristics of data will be covered in the first part of the course dealing with descriptive statistics. The second part of the course includes topics in elementary probability theory and sampling, forming a basis for techniques of statistical inference. The problem of inference, attempting to make generalizations that go beyond the data at hand, is the focus of the third part of the course.</p> <p>This is a <i>General Education</i> course in <i>Quantitative or Formal Reasoning</i>. Courses approved in this area have as their primary purpose the development of the analytical powers of the student as they might be exercised in presentation and evaluation of mathematical or other formal symbolic systems. Students will learn and practice methods of statistical reasoning. Students will also learn to evaluate arguments made in the symbolic system embodied in the course and will become familiar with its major concepts and ways of formulating questions.</p>

- Course Requirements**
- readings (see schedule for textbook chapters)
 - exercises from textbook (for self study, and for review in discussion sections with the TAs); see **Recommended Textbook Exercises**
 - students are expected to attend all lectures and discussion sections
 - 3 exams (open note—must be hard copy. No electronic access via computers, tablets, phones, etc., evenings and Exam Week). See **Course Schedule** for dates, times, and location.
 - 11 homework assignments. See **Homework Assignment Schedule** for deadlines.

Discussion Sections These are scheduled with the course TAs for the purpose of answering questions from lectures, demonstrating computer applications, and reviewing recommended textbook exercises. Discussion sections will meet first on August 27 & 29, 2019.

Homework Assignment Schedule	HW Assignment 1	September 8, 11:59 pm	Chapters 1, 2.1 – 2.3
	HW Assignment 2	September 15, 11:59 pm	Chapters 2.4, 2.5, 3
	HW Assignment 3	September 22, 11:59 pm	Chapter 4, 5.1, 5.2
	HW Assignment 4	September 29, 11:59 pm	Chapters 5.3 – 5.5, 6
	HW Assignment 5	October 13, 11:59 pm	Chapter 8.1 – 8.3, 8.5
	HW Assignment 6	October 20, 11:59 pm	Chapters 10, 11
	HW Assignment 7	November 3, 11:59 pm	Chapter 12
	HW Assignment 8	November 17, 11:59 pm	Chapter 14
	HW Assignment 9	November 24, 11:59 pm	Chapter 15, 16.3
	HW Assignment 10	December 8, 11:59 pm	Chapter 17
	HW Assignment 11	December 15, 11:59 pm	Chapter 18

Course Grades

- final grades are based on the best 10 out of 11 homework assignments (2.5% each), and three exams (25% each)
- plus/minus grading will be used
- absence from an exam must be okayed with Professor Harris on or before the exam date
- any student who is absent from an exam must submit a completed *Absence from Class Form* to Professor Harris before being allowed to take a make-up (see <https://clas.uiowa.edu/sites/default/files/ABSENCE%20EXPLANATION%20FORM2019.pdf>)
- any unexcused absence from an exam will result in a score of zero with no opportunity for a make-up

Attendance & Assignments

- discussion section attendance may be considered in making borderline decisions for final grades
- all homework assignments are due at 11:59 p.m. on Sunday; late submissions are accepted up until 11:59 p.m. on Monday (that is, one day later) with a 50% penalty on those questions answered after the Sunday deadline; there are no exceptions or extensions to these deadlines for any reason
- this is a 3-semester-hour course; therefore, students are expected to spend (on average) 6 additional hours of outside work per week (not including discussion sections or exams), for a total of 10 hours per week if lecture and discussion section times are included

Recommended Textbook Exercises

Students are expected to know how to answer all of these exercises, even though they aren't scored/graded. Some of these questions are included in (or similar to) the homework assignments, and some are used as examples in lectures and/or discussion sections.

Chapter 1: 1, 7, 9, 21, 23, 25, 31, 33, 35, 37, 39

Chapter 2: 1, 3, 5, 9, 13, 15, 17, 21, 23, 35, 37, 39, 41, 43, 45, 47, 53, 55, 59, 61, 63, 65, 67, 71, 73, 79, 81

Chapter 3: 1, 3, 5, 9, 11, 15, 19, 23, 27, 29, 31, 33, 35, 37, 41, 43, 49, 51

Chapter 4: 1, 3, 5, 7, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33

Chapter 5: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57

Review (pages 154 – 162): 3, 5, 7, 15, 17, 19, 23, 25, 31, 33, 35 (a, c, d), 37

Chapter 6: 3, 5, 7, 11, 13, 15, 19, 25, 27, 29, 31, 33, 35, 37, 39, 45, 47

Chapter 7: 1, 3, 5, 7, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 67, 69, 75

Chapter 8: 1, 3, 5, 7, 9, 21, 23, 25, 27, 29, 37, 39, 41, 45, 47, 49, 51, 57, 61

Review (pages 307 – 318): 1, 3, 7, 9, 11, 15, 17, 21, 29, 31, 33, 43,

Chapter 10: 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45

Chapter 11: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 23, 27, 31, 47, 57

Review (pages 367 – 372): 1, 3, 5, 7, 9, 11, 13, 15, 17, 21, 23, 25, 27, 35, 39

Chapter 12: 3, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 23, 27, 31, 33, 35, 37, 39, 41, 43, 51, 53, 57, 59, 61, 63, 65, 67, 69, 71, 73, 77, 81 (only a & b), Phones, Ammenities, Cards, Cards Again

Review (pages 533 – 535): 1, 3, 6, 15, 17 (only a and c), 20, 21, Technology Use on Campus

Chapter 13: 1, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53

Chapter 14: 5, 9, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37

Chapter 15: 1, 3, 5 (only b and c), 7, 9, 15, 17, 19, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43

Chapter 17: 1, 3, 9, 11, 13, 15, 23, 25, 27, 29, 31, 33, 37, 39, 49, 51, 53, 57, 59, 61, 63, 75, 77, 83

Chapter 18: 1, 9, 13, 23 (only a and b), 27 (only a and b), 29, 31, 33, 35, 39

Chapter 19: 1, 3, 5, 13, 17, 19, 23, 25, 27, 39, 41, 47, 49

Elementary Statistics and Inference (Lecture Section AAA, Fall 2019)
 STAT:1020 / PSQF:1020 Course Schedule (Subject to change depending on class pace, etc.)
 Professor Harris

<u>DAY</u>	<u>DATE</u>	<u>TEXTBOOK ASSIGNMENT / CHAPTER (SECTION)</u>
UNIT 1 - EXPLORING DATA & RELATIONSHIPS BETWEEN VARIABLES		
1	Aug. 26 M	1.1 – 1.4
2	28 W	2.1 – 2.2
3	30 F	2.3 – 2.4
*	Sep. 2 M	Labor Day—No Class
4	4 W	2.3 – 2.4
5	6 F	2.5
6	9 M	3.1 – 3.4
7	11 W	4.1 – 4.2
8	13 F	4.1 – 4.2
9	16 M	5.1 – 5.2
10	18 W	5.3
11	20 F	5.4 – 5.5
12	23 M	6.1 – 6.2
13	25 W	6.2 – 6.3, 8.3, 8.5
14	27 F	7.1 – 7.3
15	30 M	7.3 – 7.4
16	Oct. 2 W	7.5 – 7.7, 8.1, 8.2
	3 TH	EXAM 1 (Chapters 1–7) PBB W10, 6:30–8:30 pm
UNIT 2 - GATHERING DATA, PROBABILITY, & CONFIDENCE INTERVALS		
17	4 F	10.1 – 10.3
18	7 M	10.4 – 10.7
19	9 W	11.1 – 11.3
20	11 F	11.4 – 11.6
21	14 M	12.1 – 12.3 (373 – 380 & 384 – 388)
22	16 W	12.3 (381 – 384)
23	18 F	12.4 – 12.5 (388 – 393)
24	21 M	12.5
25	23 W	12.6
26	25 F	12 Review
27	28 M	13.1 – 13.2
28	30 W	13.3 – 13.4
29	Nov. 1 F	13.5 – 13.6
30	4 M	14.1 – 14.2
31	6 W	14.3 & 14.5
	7 TH	EXAM 2 (10 – 13) PBB W10, 6:30–8:30 pm
UNIT 3 - INFERENCE & ASSOCIATION BETWEEN VARIABLES		
32	8 F	15.1 – 15.3
33	11 M	15.1 – 15.3
34	13 W	15.4 – 15.5, 16.3
35	15 F	15.4 – 15.5, 16.3
36	18 M	17.1 – 17.3
37	20 W	17.4 – 17.5
38	22 F	17.4 – 17.5
*		THANKSGIVING BREAK (Nov. 25 – 29)
39	Dec. 2 M	18.1 – 18.2
40	4 W	18.1 – 18.2
41	6 F	18.3
42	9 M	19.1
43	11 W	19.4
44	13 F	Review
Exam Week	Dec. 16 - 20	EXAM 3 (Chapters 14, 15, 17 – 19) Date/Time/Location TBA

College of Liberal Arts and Sciences Information and Policies for Undergraduates

Absences and Attendance

Students are responsible for attending class and for contributing to the learning environment of a course. Students are also responsible for knowing the absence policies for their courses, which will vary by instructor. All absence policies, however, must uphold the UI policy related to student illness, mandatory religious obligations, unavoidable circumstances, or University authorized activities (<https://clas.uiowa.edu/students/handbook/attendance-absences>). Students may use this absence form to communicate with instructors:

<https://clas.uiowa.edu/sites/default/files/ABSENCE%20EXPLANATION%20FORM2019.pdf>

Academic Integrity

All undergraduates enrolled in courses offered by CLAS have, in essence, agreed to the College's Code of Academic Honesty. Misconduct is reported to the College, resulting in suspension or other sanctions, with sanctions communicated with the student through the UI email address (<https://clas.uiowa.edu/students/handbook/academic-fraud-honor-code>).

Accommodations for Disabilities

UI is committed to an educational experience that is accessible to all students. A student may request academic accommodations for a disability (such as mental health, attention, learning, vision, and physical or health-related condition) by registering with Student Disability Services (SDS). The student is then responsible for discussing specific accommodations with the instructor. More information is at <https://sds.studentlife.uiowa.edu/>.

Administrative Home of the Course

The College of Liberal Arts and Sciences (CLAS) is the administrative home of this course and governs its add/drop deadlines, the second-grade-only option, and related policies. Other colleges may have different policies. CLAS policies may be found here: <https://clas.uiowa.edu/students/handbook>.

Communication and the Required Use of UI Email

Students are responsible for official correspondences sent to the UI email address (uiowa.edu) and must use this address for all communication within UI (Operations Manual, III.15.2).

Complaints

Students with a complaint about a course should first visit with the instructor or course supervisor and then with the Chair of the department or program offering the course; students may next bring the issue to CLAS in 120 Schaeffer Hall. For more information, see <https://clas.uiowa.edu/students/handbook/student-rights-responsibilities>.

Final Examination Policies

The final exam schedule is announced around the fifth week of classes; students are responsible for knowing the date, time, and place of a final exam. Students should not make travel plans until knowing this information. No exams of any kind are allowed the week before finals. Visit <https://registrar.uiowa.edu/final-examination-scheduling-policies>.

Nondiscrimination in the Classroom

UI is committed to making the classroom a respectful and inclusive space for all people irrespective of their gender, sexual, racial, religious or other identities. Toward this goal, students are invited to optionally share their preferred names and pronouns with their instructors and classmates. The University of Iowa prohibits discrimination and harassment against individuals on the basis of race, class, gender, sexual orientation, national origin, and other identity categories set forth in the University's Human Rights policy. For more information, contact the Office of Equal Opportunity and Diversity (diversity.uiowa.edu).

Sexual Harassment

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community must uphold the UI mission and contribute to a safe environment that enhances learning. Incidents of sexual harassment must be reported immediately. For assistance, please see <https://osmrc.uiowa.edu/>.