

# Syllabus for Statistical Methods (Stat 251)

Section 02 (Johnson), Spring 2023

**Instructor:** Dr. Timothy R. Johnson, Professor of Statistics, Department of Mathematics and Statistical Science. Email: [trjohns@uidaho.edu](mailto:trjohns@uidaho.edu). Office phone: 208-885-2928. Department phone: 208-885-6742. My office is Brink 417 and my office hours are 10:30 to 11:20 on Monday, Wednesday, and Friday, but I am available to meet other times. You are welcome to make an appointment or drop-in without an appointment. I can also meet over Zoom.

**Learning Outcomes:** The learning outcomes for this course are a familiarity with the concepts of statistical description, statistical inference (including estimation, confidence intervals, statistical tests, and prediction), and the relationship between design and inference. Students should become familiar with specific methods for inferences concerning means and proportions for one- and two-sample designs, and some methods for bivariate data including contingency tables, correlation, and regression. Students should also gain an understanding of some of the underlying theoretical foundations of statistical inference including probability theory, random variables, and sampling distributions.

**Prerequisites:** One of the following: Math 143 (with grade of 'C' or better), Math 160, Math 170, or sufficient score on SAT, ACT, or math placement test (see [www.uidaho.edu/registrar/registration/placement](http://www.uidaho.edu/registrar/registration/placement)).

**Textbook:** There is no textbook. Lectures and lecture notes will be your source of material. For those who would like to consult a textbook there are some free books available online such as OpenIntro Statistics. But all material for which you are responsible will be covered in lecture.

**Course Website:** Most course materials including lecture notes, homework assignments, study guides, this syllabus, and other materials can be found on the course website [trobinj.github.io/stat251](https://trobinj.github.io/stat251). Note that this is separate from Canvas, which will only be used for examination scores. Canvas does have a link to the course website.

**Attendance:** Class attendance is required. Excluding holidays and examination days there are 39 days of lecture. You are permitted to miss up to four days of lecture with no penalty, so your attendance will be computed as the proportion of days attending out of a total of 35 days. You may miss additional days without penalty only for documented university events or extreme circumstances. If you cannot attend your courses due to a health-related issue or family emergency, you should file a VandalCare Report or contact the Dean of Students so that the university can document your absence and contact your instructors. You may not be awarded attendance if you are not engaged in class (e.g., sleeping, using your phone/computer), arrive to class late, or leave class early. You will have assigned seats after the first week of class so that attendance can be reliably recorded. You must sit in your assigned seat starting the second week of class to be awarded attendance, although you may ask to have your assigned seat changed during the semester.

**Homework:** Homework assignments be made available periodically on the course website (see the lectures section). Homework assignments will *not* be collected/graded. Some computational

problems in the examinations are based on homework problems (although the numbers may be changed) so it is highly recommended that you have worked through the homework problems before each examination in advance.

**Examinations:** There are six examinations (not including the final examination). The dates of these examinations are 1/27, 2/13, 3/3, 3/27, 4/12, and 4/28. These dates may be postponed if unforeseen circumstances delay progression through the material in lecture. You will have the full class period (50 minutes) for each examination. The question formats are multiple choice and short answer. A page of formulas will be provided with each examination, but the formulas will not be labeled. You are permitted to use one page of notes during the examinations (8.5 by 11 inches maximum, writing on both sides is fine). Calculators are permitted (and sometimes necessary), but must not be capable of wireless communication. Notes and calculators used during the examination may not be shared. Study guides for examinations will be made available on the course website in the lectures section typically two lecture days before the examination. Make-ups for missed examinations will only be permitted for documented university sanctioned events or in extreme circumstances. Notice of a missed examination due to a foreseeable absence must be given *at least one week before* the scheduled day of the examination. Notice of a missed examination due to unforeseeable absence must be made *before the end of the day* for which the examination was scheduled. If I contact you to schedule a make-up a examination you must respond *promptly* (i.e., the same day) or you may not be able to make up the examination.

**Final Examination:** The final examination is on Tuesday, May 9th, from 10:15 AM to 12:15 PM. The final examination may not be taken at another time unless, as according to university policy, you have more than two final examinations on that day, or a conflict with a documented university sanctioned event. The amount of time permitted to complete the final examination is two hours (120 minutes). The final examination is like that of the other examinations except that it is comprehensive and longer. A study guide for the final examination will be made available. Policies regarding the first six examinations also apply to the final examination, except that you are permitted to use up to five pages of notes for the final examination (8.5 by 11 inches maximum, writing on both sides is fine).

**Grading:** The first six examinations altogether are worth 70% of your course grade. Your lowest score of these six examinations will be dropped when grades are determined. The remaining five examinations are thus each worth 15% of your course grade. The final examination is worth 20% of your course grade. The final examination may not be dropped. Attendance is worth 10% of your grade. Letter grades for the course will be assigned according to the following rubric: A (87.5%-100%), B (75%-87.5%), C (62.5%-75%), D (50%-62.5%), F (less than 50%). Course grades are based solely on the examination scores and the grading rubric described above. Changes to the grading system (e.g., the grade rubric or the weights) will not result in any students getting a lower letter grade than that obtained using the system described above.

**Tutoring:** The Statistics Assistance Center (SAC) is a free drop-in tutoring service located in the library. See [www.uidaho.edu/sci/stat/about/sac](http://www.uidaho.edu/sci/stat/about/sac) for more information. Tutoring is also available through Academic Support Programs. See [www.uidaho.edu/current-students/academic-support/asp/tcs/tutoring](http://www.uidaho.edu/current-students/academic-support/asp/tcs/tutoring) for more information.

**Academic Honesty:** You are responsible for being aware of the policies of the University of Idaho on academic honesty. See Section A-1 of Article II of the Student Code of Conduct. This includes but is not limited to cheating, facilitation of cheating, and furnishing false information or false representation. Breaches of academic honesty will not be tolerated, and will result in a F for the

course and referral to the Dean of Students for further disciplinary action.

**Disability Access:** The University of Idaho is committed to ensuring an accessible learning environment where course or instructional content are usable by all students and faculty. If you believe that you require disability-related academic adjustments for this class (including pregnancy-related disabilities), please contact the Center for Disability Access and Resources (CDAR) to discuss eligibility. A current accommodation letter from CDAR is required before any modifications, above and beyond what is otherwise available for all other students in this class, will be provided. Please be advised that disability-related academic adjustments are not retroactive. CDAR is located at the Bruce Pitman Building, Suite 127. Phone is 208-885-6307 and e-mail is [cdar@uidaho.edu](mailto:cdar@uidaho.edu). For a listing of services and current business hours visit [www.uidaho.edu/cdar](http://www.uidaho.edu/cdar)

**Title IX:** University of Idaho is committed to creating a safe learning environment for all students. Consistent with this, UI policy and Title IX prohibit sexual misconduct, which includes sex or gender based harassment, sexual assault, intimate partner violence, stalking, and retaliation. If you have experienced any form of sexual misconduct, know that help and support are available. Please be aware that all University of Idaho employees are mandatory reporters and are required to report any information they receive about sexual misconduct to the university's Title IX Coordinator within 24 hours (Idaho State Board Policy, Section I, I.T.). Visit [www.uidaho.edu/ocri/title-nine/resources](http://www.uidaho.edu/ocri/title-nine/resources) to learn more about which resources on campus and within our community are confidential. If you would like to report an incident, you may do so anonymously by visiting [www.uidaho.edu/vandalcare](http://www.uidaho.edu/vandalcare) or you can directly contact the Office of Civil Rights and Investigations at 208-885-4285 or [ocri@uidaho.edu](mailto:ocri@uidaho.edu).