STAT 200X-F61: Elementary Probability and Statistics
Summer Session I 2020
MTWR 10:00 – 11:50
Chapman 104

Instructor: Mackenzie Parrott, 303C Chapman Building

Contact: email: mrparrott@alaska.edu, mailbox: Chapman 101

Office Hours: MTW 9:00 – 10:00, or by appointment

Text: *Mind on Statistics* by Utts and Heckard, 5th edition.

Course Description: Descriptive statistics, frequency distributions, sampling distributions, elementary probability, estimation of population parameters, hypothesis testing (one and two sample problems), correlation, simple linear regression, and one-way analysis of variance. Parametric methods.

Course Goals: There are two primary goals for this course. One is to learn the basic techniques of collecting, analyzing and drawing inferences from data. Implicit in this is the ability to choose the appropriate statistical techniques that apply to a given problem or situation. The second goal is to develop an intuitive grasp of randomness and variability. This understanding is the key to making sense of and evaluating statistical results presented in the media and in scientific papers or texts in your own major field of study.

Expected Learning Outcomes: Students will learn to compute descriptive statistics, probabilities, point estimators and their sampling distributions, confidence intervals, hypothesis tests, simple linear regression functions and one-way analysis of variance models. Students will learn how to identify appropriate statistical techniques for a given situation by considering sampling design, assumptions and scientific objectives. Students will develop an understanding of randomness and variation in real-life applications and use that understanding to evaluate scientific results.

Prerequisites: A grade of B or better in DEVM F105 or DEVM F105N or in all three of DEVM F105G and DEVM F105H and DEVM F105J; or placement; or a grade of C- or better in a higher-level math course; or permission of instructor.

Computation: You will need a calculator for homework assignments and exams. We may also use computer software including Microsoft Excel and the statistics program R. R is a very powerful and useful program for statistical computations. Plus, it's free! You can download it at `http://www.r-project.org/`.

Grading: Grades will be determined by your performance on homework, one midterm exam, and a final exam. These components will be weighted as follows.

Homework	35%
Midterm Exam	30%
Final Exam	35%

Grading scale: A: 93-100, A-: 90-92, B+: 87-89, B: 83-86, B-: 80-82, C+: 77-79, etc.

Homework: I will use Blackboard to assign readings and exercises from the text. Homework will be assigned and collected twice per week, generally on Mondays and Wednesdays. Assignments should be submitted at the start of class on the date they are due. I encourage you to discuss homework problems with other students, as well as with me. But the work you turn in must be your own. Please write neatly, properly cite any references used, and include only relevant computer output with your solutions where applicable. I do not accept late homework unless there is a documented excuse and arrangements have been made prior to the due date. However, I will drop your lowest homework score before computing your final course grade.

Final Exam: 10:00 – 11:50 Thursday June 25. The final will be comprehensive.

Disability Services: The Office of Disability Services implements the Americans with Disabilities Act (ADA), and ensures that UAF students have equal access to the campus and course materials. I will work with the Office of Disabilities Services (208 WHITAKER BLDG, 474-5655) to provide reasonable accommodation to students with disabilities.

Other Policies:

- There will be no make-up exams except under extreme circumstances, and where the absence is documented.
- The Department of Mathematical Sciences has policies on early finals and incomplete grades (see http://www.dms.uaf.edu/dms/Policies.html). See also the Student Code of Conduct in the UAF catalog.
- The use of laptops or cell phones during lecture can be distracting to those around you. Please refrain from using these devices for reasons unrelated to the course.

Tentative Schedule STAT 200 Summer 2020

Day	Date	Lecture	Assignments
M	5/18	Intro, 2.1–2.4	HW1 Assigned
T	5/19	2.5 – 2.8	
W	5/20	3.1–3.2	HW1 Due, HW2 Assigned
R	5/21	3.3 – 3.5	
M	5/25	**Memorial Day**	
T	5/26	4.1 – 4.4	HW2 Due, HW3 Assigned
W	5/27	Ch5; Ch6	HW3 Due, HW4 Assigned
R	5/28	7.1 – 7.3	
M	6/1	7.4 – 7.5	HW4 Due, HW5 Assigned
T	6/2	8.1–8.4	
W	6/3	8.5 – 8.8	HW5 Due
R	6/4	**Midterm Exam**	
M	6/8	9.1 – 9.4	HW6 Assigned
T	6/9	9.5 – 9.10	
W	6/10	10.1 – 10.4	HW6 Due, HW7 Assigned
R	6/11	11.1 – 11.5	
M	6/15	12.1 – 12.2	HW7 Due, HW8 Assigned
T	6/16	12.2 – 12.4	
W	6/17	13.1 – 13.3	HW8 Due, HW9 Assigned
R	6/18	13.4 – 13.6	
M	6/22	14.1 – 14.3	HW9 Due, HW10 Assigned
T	6/23	15.1 – 15.3	
W	6/24	Review	HW10 Due
R	6/25	**Final Exam**	