

SYLLABUS - MATH 1070, Section 5, Fall 2020
Introduction to Statistical Inference

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Class Hours: This is an interactive video conference class meaning there will be a synchronous delivery using technology
MWF 9:40 – 10:30 AM, Canvas (I will post a zoom meeting on canvas for each lecture)

Office Hours: Office hours are by appointment only. But please feel free to message me anytime with questions you might have.
The best way to get ahold of me is to message me through Canvas as it will go straight to my phone

Text: The Basic Practice of Statistics, by David S. Moore et al., 6th ed or later

Prerequisite: Completion, with a grade of C or better, of Math 1010 or Accuplacer CLM score of 50 or better.

Expected Learning Outcomes: Upon successful completion of this course, a student should be able to:

- Summarize the data using charts, graphs, histograms, and to calculate basic descriptive statistics like the mean, standard deviation, median and quartiles.
- Work with the normal distribution and use table to find probabilities.
- Understand the difference between correlation and causation.
- Perform regression analysis and compute correlation.
- Understand the Central Limit Theorem and the normality assumption.
- Understand the basics of tests of significance and confidence intervals including z-tests, t-tests, proportion tests, Chi-square tests, ANOVA and non-parametric tests.
- Perform simple statistical analysis of large data sets using spreadsheets (throughout the whole course).

Grading: The grades will be calculated as follows:

Homework	10 %	A: 93 - 100	C-: 70 - 72
Quizzes	15 %	A-: 90 - 92	D+: 67 - 69
Exam 1	20 %	B+: 87 - 89	D: 63 - 66
Exam 2	20 %	B: 83 - 86	D-: 60 - 62
Project	15 %	B-: 80 - 82	E: 0 - 59
Final Exam	20 %	C+: 77 - 79	
		C : 73 - 76	

Homework: Homework will be due by midnight Friday. Scans of the questions from the appropriate edition of the book will be posted to canvas. Homework will be graded on completion, meaning full points will be given for making an honest attempt at a problem. If

a problem is missing or it is obvious you didn't make an honest attempt no points will be given. Homework needs to be turned in as 1 file, this can be pdf, word, or if it fits on one page a scan or picture. I will not grade your homework if you submit more than 1 file. Late homework **will not** be accepted, but two of the lowest assignment scores will be dropped at the end of the semester.

Quizzes: Weekly quizzes will be given on Mondays. Makeup quizzes **will not** be given, but two of the lowest quiz scores will be dropped at the end of the semester.

Exams: Two in-class midterm exams and a final exam will be given (see schedule for dates). Rescheduling must be done one week in advance, no exceptions.

Projects: Near the midpoint of the semester, students will complete a project using Microsoft Excel. Since portions of this course will use excel it is recommended that you get an early start on this if you are unfamiliar with Excel. You can download a free version of Excel through the university office of software licensing www.software.utah.edu

Calculators: Calculators that do not connect to the internet may be used during quizzes and exams. Cell phones **may not** be used for this purpose (or any other purpose) during quizzes and exams.

COVID-19 Considerations: Students must self-report if they test positive for COVID-19 via coronavirus.utah.edu.

Syllabus subject to change: This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas.

Incompletes: According to university policy, to be considered for an incomplete, a student must have 20% or less of the course work remaining and be passing the course with a C or better. You must request an incomplete grade and I will consider giving that grade only under exceptional circumstances.

NETIQUETTE - EXPECTATIONS FOR ONLINE LEARNING ENVIRONMENT: While this course is being conducted in a digital setting it needs to be treated as if we were still in a classroom. If you do decide to come to the online lectures please be respectful and make sure not to cause any distractions to other students. But also do not be afraid to ask questions if something does not make sense to you. This is the best way for you to learn and also help me make sure that you are not falling behind. All of the concepts discussed in this course build on one another so not understanding one topic will have implications later in the semester.

Inclusivity Statement: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both

in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, and veteran status, and other unique identities. gender, sexuality, disability, age, socioeconomic status, ethnicity, race, culture, and other unique identities. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

Addressing Sexual Misconduct: Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted on the basis of your sex, including sexual orientation or gender identity/expression, you are encouraged to report it to the University's Title IX Coordinator; Director, Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or to the Office of the Dean of Students, 270 Union Building, 801-581-7066. For support and confidential consultation, contact the Center for Student Wellness, 426 SSB, 801-581-7776. To report to police, contact the Department of Public Safety, 801-585-2677(COPS).

Campus Safety: The University of Utah values the safety of all campus community members. To report suspicious activity or to request a courtesy escort, call campus police at 801-585-COPS (801-585-2677). You will receive important emergency alerts and safety messages regarding campus safety via text message. For more information regarding safety and to view available training resources, including helpful videos, visit safeu.utah.edu

Office of the Dean of Students: The Office of the Dean of Students is dedicated to being a resource to students through support, advocacy, involvement, and accountability. It serves as a support for students facing challenges to their success as students, and assists with the interpretation of University policy and regulations. Please consider reaching out to the Office of Dean of Students for any questions, issues and concerns. 200 South Central Campus Dr., Suite 270. Monday-Friday 8 am-5 pm.

Discrimination and Harassment: If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or Office of the Dean of Students, 270 Union Building, 801-581-7066. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS). Please see Student Bill of Rights, section E <http://regulations.utah.edu/academics/6-400.php>. I will listen and believe you if someone is threatening you.

ADA Statement: The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services (CDS), 162 Olpin Union Building, 581- 5020 (V/TDD). CDS will work with you and me to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to CDS.

Student Responsibilities: All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. You have specific rights in the classroom as detailed in Article III of the Code. The Code also specifies proscribed conduct (Article XI) that involves cheating on tests, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee: <http://regulations.utah.edu/academics/6-400.php>

Due Dates: These are also posted on Canvas with grades as you complete them.

Monday, August 24	Quiz 0
Monday, August 31	Quiz 1
Friday, September 4	HW 1 due: Ch. 1:22,27,30,31;Ch. 2: 19,22,25,28,30,44,52
Monday, September 7	Labor Day holiday
Wednesday, September 9	Quiz 2
Friday, September 11	HW 2 due: Ch. 3: 16,28,29,30,32,35,36
Monday, September 14	Quiz 3
Friday, September 18	HW 3 due: Ch. 3: 45,47;Ch. 4: 16,17,18,19,20,21,26,34
Monday, September 21	Quiz 4
Friday, September 25	HW 4 due: Ch. 5: 19,20,21,32,33,37
Monday, September 28	Quiz 5
Friday, October 2	HW 5 due: Ch. 8: 17, 18, 20, 21, 24, 38; Ch. 9: 20, 21, 22, 25, 29, 36
Friday, October 9	EXAM 1 9:40 – 10:30 PM
Monday, October 12	Quiz 6
Friday, October 16	HW 6 due: Ch. 10: 21, 24, 26, 38, 41, 43; Ch. 11: 14-20 (even), 26, 28, 36
Monday, October 19	Quiz 7
Friday, October 23	HW 7 due: Ch. 14: 11, 12, 15, 16, 17, 18, 24, 26
Sunday, October 25	Projects Due
Monday, October 26	Quiz 8
Friday, October 30	HW 8 due: Ch. 15: 20, 21, 22, 23, 24, 30, 32, 41
Monday, November 2	Quiz 9
Friday, November 6	HW 9 due: Ch. 18: 16, 19, 29, 30, 33
Friday, November 13	EXAM 2 9:40 – 10:30 PM
Monday, November 16	Quiz 10
Friday, November 20	HW 10 due: Ch. 19: 16, 17, 25, 26, 32, 33; Ch. 20: 32, 34, 38
Monday, November 23	Quiz 11
Wednesday, November 25	HW 11 due: Ch. 23: 30, 32(b), 38, 42
November 26-29	Thanksgiving break
Monday, November 30	HW 12 due: Ch. 25: 15, 16, 28, 30, 37, 39
Wednesday, December 2	Last day of class
Friday, December 11	FINAL EXAM 8:00 – 10:00 AM

Course Content Calendar: Notes are provided under the Canvas 'files' tab in the 'notes' folder. Please bring them to class to get the most out of the lectures.

August 24,26 and 28	Chapters 1 and 2
August 31, September 2 and 4	Chapter 3
September 7, 9 and 11	Labor Day Holiday, Chapter 3 continued and Chapter 4
September 14,16 and 18	Chapter 5
September 21,23 and 25	Chapters 8 and 9
September 28, 30 and October 2	Chapter 10 and 11
October 5,7 and 9	Review and Exam 1
October 12,14 and 16	Chapter 14
October 19,21 and 23	Chapter 15
October 26,28 and 30	Chapter 18
November 2, 4 and 6	Chapters 19 and 20
November 9, 11 and 13	Review and Exam 2
November 16, 18 and 20	Chapter 23
November 23 and 25	Chapter 25, Thanksgiving Holiday
November 30 and December 2	Review and last day of class
Friday, December 11	FINAL EXAM 8:00 – 10:00 AM