MATHEMATICS   1040 – Section 1
Introduction to Statistics and Probability (3 credits)
9:40 am– 10:45 am MWF   CSC 208

Textbook: Elementary Statistics: Picturing the World, by Ron Larson and Betsy Farber (Third custom edition for University of Utah, taken from the sixth edition)
ISBN-10: 1-269-89815-9
ISBN-13: 978-1-269-89815-7

A. The least expensive option for the book is to buy it through the Inclusive Access Program. An email will go out to all math 1040 students (sent by the bookstore to your .edu email address) prior to the first day of class with information on what Inclusive Access is and instructions on how to access the digital course materials. You can access the book through the Canvas link "Bookshelf". If you (the student) decide you don't want the instant access to the course materials you will have the option to OPT OUT and will be refunded accordingly. Students still need to pay for the course materials cost along with their tuition, but once you OPT OUT during the first two weeks of class you will receive a full refund of the course material cost. You will then be responsible for obtaining you own course material/textbook for that course. Through the Inclusive Access Program, students will receive a digital copy of the book. The students' cost for math 1040 access is $41.80.

B. If a student wishes to order a hard copy of the book, he/she can talk to Shane Girton (U of U Bookstore) and a copy of the book can be special ordered. The new copy of the custom version for the U of U is $110.

C. A student can choose to rent the book (180-day rental) or buy eTextbook at the following website:
https://www.vitalsource.com/products/elementary-statistics-ron-larson-v9780321900845
The current cost for math 1040 book is $44.99 through this website.
D. The book can be rented/purchased through a variety of vendors, such as eBay, Amazon or similar websites. The cost is usually more than the Inclusive Access cost and it changes daily.

NOTE: Before you purchase the textbook please make sure that Math 1040 is a good fit for you and you are not planning to withdraw from the class. Some vendors will not allow you to return the book for a refund if you decide to withdraw. Please read all policies associated with the return/refund before you purchase and pay for the book.

You are <u>required</u> to print and bring to every lecture the handout available on Canvas (under "Files"). Please print this handout as soon as possible.

Instructor: Aleksandra Jovanovic-Hacon; office JWB 204
e-mail address : ahacon@math.utah.edu

Quiz/exam solutions, grades, any solutions for the exam reviews and other hanouts will be posted on Canvas. Any important announcements will be send through Canvas and to you Umail. Please check it frequently.

Office hours: Monday: 8:40 am – 9:30 am
Wednesday: 8:40 am – 9:30 am
Friday: 11:45 am – 12:45 pm
or by appointment

Prerequisites: "C" or better in Math 1010 (Intermediate Algebra) or Math 1030 (Introduction To Quantitative Reasoning) OR Accuplacer CLM score of 50 or better (taken prior ro January 14th, 2019) OR Next Generation Accuplacer AAF score of 240 or better (taken after January 30th, 2019) OR ACT Math score of 22 or better OR SAT Math score of 550 or better. Note: You can place into math courses with the ACT/SAT or Accuplacer Exam scores if you took the exam within the last 2 years.

This means that you should be able to manipulate variable expressios, work with simple linear equations and graphs, work with fractions and exponents.
(Note: Math 1040 does not satisfy a Math 1070 prerequisite.)

Course objectives: Math 1040 will fulfill the Quantitative Reasoning – Statistics/Logic (QB) general education requirement for graduation. This course addresses the following Essential Learning Outcomes: inquiry and analysis, critical thinking, oral communication, quantitative literacy and problem solving.
Math 1040 is the introductory statistics and probability course. We will learn how data is collected, organized, analyzed and interpreted, how to determine the probability that an event will occur, how to create and use probability distribution, how to recognize normal (bell-shaped) distributions and how to use their properties in real-life applications.
Statistics and probability are applicable to a wide variety of academic disciplines, from the natural and social sciences to the humanities, government and business.
The course is based on chapters 1 – 5, and sections 9.1 and 9.2. You are expected to read each section that we cover. We will also try to bring and analyze recent newspaper/magazine articles that describe the results of a statistical study.

For every hour of lecture, the university suggests that you invest 2-3 hours of additional work (every week). This means that for this 3 credit hour class, you need to put in 6-9 hours of additional work on a weekly basis.

At the end of the course a student should be able to:
- recognize different ways of collecting data and decide what method would be the best for a given situation
- distinguish between various sampling techniques and decide what sampling technique

would work the best in a given situation
- use different tables and graphs to organize and analyze data
- calculate the mean, median, mode, range, quartiles, interquartile range, outlier(s), find percentile that corresponds to a value and interpret the results in variety of ways
- find the z-score (the standard score) and compare the z-scores from different data sets
- find the mean, variance and standard deviation; interpret standard deviation using Empirical Rule (68-95-99.7 rule) for the bell-shaped distribution; interpret standard deviation in connection with a distribution that is not bell-shaped or it is unknown using Chebychev's Theorem; find the standard deviation for grouped data (using classes and midpoints)
- determine the probability of an event using the Fundamental Counting Principle, conditional probability, the multiplication rule, and the addition rule
- create and use probability distributions; find the mean and standard deviation
- recognize a binomial experiment and calculate the binomial distribution using the Binomial Probability Formula
- recognize normal (bell-shaped) distribution and standard normal distribution; calculate the areas/probabilities using the standard normal distribution table
- use the standard normal distribution table to find probabilities or values in connection with real-life applications
- explain the meaning of different values of the correlation coefficient and relate the concept to the strength/weakness of linear relationship between two variables when examining different scatter plots
- find the equation of the regression line (line of best fit) and predict values using the equation of the regression line

<u>Homework</u>: Homework problems are assigned for each section. Homework will not be collected, but I strongly recommend that you do these problems. I will be answering homework questions at the beginning of each class (whenever possible).

<u>Quizzes</u>: Approximately every 2 weeks there will be a quiz. The quiz problems will be very similar to the textbook examples/problems and examples that we have done in class; or the assigned suggested homework problems. <u>No make-up quizzes will be given</u>, but the **lowest 2 quiz grades will be dropped** at the end of the semester for all students.
I can only provide a make-up quiz for University excused absences (band, debate, student government, intercollegiate athletics, etc.) or military duty with an official documentation addressing the reason for absence.

<u>Exams</u>: You will have 3 exams (50 minutes each). You MUST bring a valid ID to the exam. The lowest exam score (one score) will be dropped at the end of the semester. <u>The Final Exam score cannot be dropped.</u>
Absence from an exam will be excused only if you can provide verifiable and convincing evidence that you have a significant illness or serious personal or family crisis that will prevent you from attending. Except under extremely unusual circumstances, you must inform me at least 5 days in advance of the missed test, and you must take the make-up exam prior to the actual exam date. University excused absences (band, debate, student government, intercollegiate athletics, etc.), military duty or religious obligations are excused with an official documentation

addressing the reason for absence. You are expected to promptly make arrangements with me to make up the test. <u>Vacation or work schedule are not considered to be excused absences.</u>

The first exam is scheduled for February 12th (Wednesday), the second exam is scheduled for March 18th (Wednesday), and the third exam is scheduled for April 6th (Monday). <u>Please plan ahead of time.</u>

I might request a larger classroom for the exams, but I can ony do that a few weeks before the exam. I will make an announcement in class (well in advance) and on Canvas regarding the location of your exams.

<u>NOTE</u>: Students with planned absences when quizzes or exams are given must take alternate quizzes or assignments BEFORE they go. Usually these will be taken at the Exam Services at the Marriott Library. This center is typically open from 9am-5pm Monday-Friday, from 9am-8pm on Thursday and from 9:30am-1:30pm on Saturday, but the hours will vary week to week. It is students' responsibility to check the center's hours Students must register for a time-slot to take their quiz or exam.
Location: Marriott Library, Room 1704
Phone: 801-581-6112 (option 3)
Website: https://testingcenter.utah.edu/

If it is convenient for both the student and instructor, other times and locations can also be used for make-up quizzes and exams.

Final Exam (comprehensive/departmental): **April 24th (Friday)**
8:00 am – 10:00 am

This date and time is assigned by the Univeristy of Utah scheduling office. You can view the Spring 2020 final exam schedule at:
http://registrar.utah.edu/academic-calendars/final-exams-spring.php

The final exam will be in our classroom. If there is a location change, the scheduling office will let me know in advance and I will make an announcement in class and on Canvas during the last few weeks of the semester.

Students are not allowed to take early/late final exam. Please do not schedule your trip before this date, or do not ask me to give you extra time to study.

Grading Policy: Your grade will be based on:
Quizzes (5 best)   25%
Exams (2 exams)   40% (20% each)
Final exam   35%

Course Grades (Evaluation methods and criteria):
Your final letter grade will be determined by your overall percentage as follows:

A	93% - 100%	C+	77% – 79.9%	D-	55% - 59.9%
A-	90% - 92.9%	C	73% – 76.9%	E	below 55%
B+	87% - 89.9%	C-	70% – 72.9%		
B	83% - 86.9%	D+	65% – 69.9%		
B-	80% - 82.9%	D	60% – 64.9%		

Calculators: You will need a calculator for this course. A scientific calculator will be sufficient. You are required to bring the calculator to every lecture/exam since I do not provide the calculator for students. You are not allowed to use your cell phone as a calculator.

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, 162 Olpin Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Safety Statement: 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.

Crisis Services Center: This center offers services Mo-Fr 8 am – 5 pm. f you would like to talk to one of the staff members, please call 801-581-6826 ot walk into the Center at 426 Student Services Building (SSB). For more ugent situations and after hours, please go to the Univeristy Neuropsychiatric Institute (UNI), 501 Chipeta Way, ot to the Emergency Department at the University Hospital.

UNI Crisis Line: 801-587-3000 offers crisis response 24/7, including: crisis support over the phone, a mobile outreach option (MCOT) that will respond to persons in their home, and the Receiving Center where individuals from Salt Lake County can access a safe and supportive environment to help individuals work through their crisis situation. Individuals may spend up to 23 hours at the Receiving Center, at no cost.

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, 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 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 the police, contact the Department of Public Safety, 801-585-2677(COPS).

Student Names and Personal Pronouns statement: Class rosters are provided to the instructor with the student's legal name as well as "Preferred first name" (if previously entered by you in the Student Profile section of your CIS account). While CIS refers to this as merely a preference, I will honor you by referring to you with the name and pronoun that feels best for you in class, on papers, exams, group projects, etc. Please advise me of any name or pronoun changes (and update CIS) so I can help create a learning environment in which you, your name, and your pronoun will be respected. If you need assistance getting your preferred name on your UID card, please visit the LGBT Resource Center Room 409 in the Olpin Union Building, or email bpeacock@sa.utah.edu to schedule a time to drop by. The LGBT Resource Center hours are M-F 8am-5pm, and 8am-6pm on Tuesdays.

Wellness Statement: Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness at www.wellness.utah.edu or 801-581-7776.

Important Dates:

- last day to add without a permission code – Friday, January 10th
- last day to add, drop (delete), elect CR/NC, or audit classes – Friday, January 17th
- last day to withdraw from classes – Friday, March 6th

All important dates can be seen at: http://registrar.utah.edu/academic-calendars/spring2020.php

Tutoring: The Rushing Math Center offers free drop-in tutoring, a computer lab, and study areas for undergraduates. The Rushing Student Center is adjacent to the LCB and JWB. The hours for the Fall/Spring semester are: 8 am – 8 pm Monday-Thursday and 8 am – 6 pm on Friday. The tutoring center will open the first week of classes. Tutors are there to help you understand the material, not to do the homework for you. Please be aware that there are many tutors with a variety of teaching styles and it may take you a few tries to find the tutor that works best with you.

Classroom Etiquette: Please turn off your cells phones while you are in class. During lectures, if your cell phone rings or you are texting, you will be asked to leave. During the exam/quiz if your cell phone rings/vibrates points will be deducted (5 points from on the quiz and 10 points on the exam). I do not tolerate talking during lectures. If you have an emergency, you are more than welcome to step out to make a call or talk to someone.