

Math 1040—Introduction to Statistics

MWF, 12:00–12:50 pm, TEC, CRN: 44454

Instructor: Brian Stine

Email: stine@dixie.edu

Office Hours: MWF 2:00–2:50 pm

Required Text: *Elementary Statistics: Picturing the World* (4th edition) by Larson and Farber

Prerequisites: C or better in Math 1010 or 1030 or ACT of 23 or higher

Phone: 275-2215

Office: NIB Adjunct Office

Course Description

Math 1040 is an introduction to the basic concepts and methods used in statistical data analysis. Course topics include descriptive statistics, sampling methods, and inferential statistics. The course emphasizes problem solving and critical thinking. Furthermore, Math 1040 is a lecture course with homework assignments, lab assignments, and tests—including a non-comprehensive final exam. Importantly, the basic principles learned in Math 1040 can greatly benefit anyone and everyone, regardless of which future career a person chooses.

Course Objectives

All classes in mathematics at Dixie State College of Utah support the general education goals of the college. Each mathematics class will:

- Require students to perform mathematical processes including fractions, percentages, decimals, proportions/ratios, algebraic equations, and/or calculus techniques
- Provide students with application problems that use a variety of methods including arithmetical, algebraic, and geometric methods
- Challenge students to make inferences from mathematical models that include formulas, graphs, and tables
- Provide students with real-life applications that use a variety of mathematical functions

Upon successful completion of Math 1040, a student will demonstrate the ability to:

- Compute and interpret descriptive statistics, including mean, median, mode, standard deviation, and interquartile range
- Employ and interpret graphical representations of data
- Construct confidence intervals for population parameters of interest
- Determine the sample size required to satisfy a predetermined goal
- Test null hypotheses related to the mean, the proportion, or the variance of a sample
- Test null hypotheses related to the difference in mean or the difference in proportion between two samples
- Interpret the results of null hypothesis tests, including the role of the significance level α
- Interpret bivariate correlations and linear regression models
- Apply various other statistical tests, including goodness-of-fit tests, independence tests, two sample F -tests, and ANOVA

Disability Resource Center

If you are a student with a medical, psychological or a learning difference and requesting reasonable academic accommodations due to this disability, you must provide an official request of accommodation to your professor(s) from the Disability Resource Center within the first two weeks of the beginning of classes. Students are to contact the center on the main campus to follow through with, and receive assistance in the documentation process to determine the appropriate accommodations related to their disability. You may call (435) 652-7516 for an appointment and further information regarding the Americans with Disabilities Act (ADA) of 1990 per Section 504 of the Rehabilitation Act of 1973. Our office is located right next to the Testing Center on the bottom floor of the Financial Aid and Career Center building.

Behavior Policies

Your attendance and behavior are expected to reflect your dedication to excellence as a university student. You are expected to attend class, participate in discussions and group work, and to use class time for Math 1040 activities only. You must abide by all regulations set forth in the “Student Rights and Responsibilities Code” (DSC Policy 5.33). In particular, you should be aware of your obligations pertaining to academic performance (“Academic Performance Responsibilities,” DSC Policy 5.33.5).

Homework and Exams

Homework is due daily, but will be accepted up to the day of the test for that section. You are allowed to bring one “cheat sheet” (4 x 6 inch notecard, front and back) to each test. You will need to bring a bluebook for each test.

Grading

Homework	200 points
Tests (100 pts. each)	400 points
Final Exam	<u>400 points</u>
Total	1,000 points

Your grade will be determined according to the percentage of points you earn in this course. Your semester grade will be based on the following scale: **A**(95-100%), **A-**(90-94%), **B+**(85-89%), **B**(80-84%), **B-**(75-79%), **C+**(71-74%), **C**(67-70%), **C-**(63-66%), **D+**(59-62%), **D**(55-58%), **D-**(51-54%), **F**(0-50%).

Important Dates

Mon, Aug 23 Classwork starts
 Wed, Aug 25 Last day to add without a signature
 Mon, Aug 30 Drop fee begins (\$10 per class)
 Mon, Sep 6 Labor Day
 Tue, Sep 7 \$50 Late registration/payment fee
 Mon, Sep 13 Last day for refund
 Mon, Sep 13 Last day to drop without a "W" grade
 Fri, Sep 17 Last day to add classes
 Fri, Oct 1 Last day to apply for graduation
 Thurs-Fri, Oct 14-15 Semester break
 Mon, Oct 18 Last day to drop or audit classes
 Fri, Nov 12 Last day for complete withdrawal
 Tue, Nov 16 Career Day
 Wed-Fri, Nov 24-26 Thanksgiving break
 Fri, Dec 10 Last day of classes
 Fri, Dec 17, 12:30 – 2:30 pm final exam

Schedule

	Mon	Wed	Fri
8/23-27	Intro	1.1	1.2 & 1.3
8/30 - 9/3	2.1 & 2.2	2.3	2.4
9/6-10	Holiday	2.5 & review	3.1
9/13-17	3.2	3.3	3.4
9/20-24	Review	Test	4.1
9/27 - 10/1	4.1 & 4.2	5.1	5.2
10/4-8	5.3	5.4	5.5
10/11-15	Review	Test	Break
10/18-22	6.1	6.2	6.3
10/25-29	6.4	7.1	7.2
11/1-5	7.3	7.4	Review
11/8-12	Test	8.1	8.2
11/15-19	8.3	8.4	8.4
11/22-26	9.1	Holiday	Holiday
11/29 - 12/3	9.2	Review	Test
12/6-12/10	10.1 & 10.2	10.3 & 10.4	Review
12/13-12/17			Final