



MATH 1350 G-Introduction to Statistics Section Name Section Credit Hours Credits
Syllabus

Course Information

Meeting times and location: section meeting_times section location

Catalog description: This course discusses the fundamentals of descriptive and inferential statistics. Students will gain introductions to topics such as descriptive statistics, probability and basic probability models used in statistics, sampling and statistical inference, and techniques for the visual presentation of numerical data. These concepts will be illustrated by examples from a variety of fields.

Prerequisites: High School Algebra II with a C or higher or take with co-requisite MATH-1351; and either ENGL-1110(ENGL-111) or ENGL1210(ENGL-118)

Terms offered: All Semesters

Section-specific Course Description:

Course Level Objectives

Course Learning Outcomes

1. Descriptive and Inferential Statistics
2. Regression and Correlation
3. Probability Theory
4. Distributions – Normal, Binomial, Student-t
5. Confidence Intervals
6. Hypothesis Testing

Specific Learning Outcomes

Upon successful completion of the course, the student will be able to...

A. Descriptive Statistics

A1. Explain and evaluate statistics used in the real world (from a news article, research project, etc.).

A2. Use statistical vocabulary appropriately.

A3. Distinguish between descriptive and inferential statistics.

A4. Distinguish between qualitative and quantitative data.

A5. Distinguish between populations and sample, and parameters and statistics.

A6. Give examples of independent and dependent variables.

A7. Present data graphically using histograms, frequency curves and other statistical graphs.

A8. Interpret graphs of data, including histograms and shapes of distributions.

A9. Calculate and interpret the mean, median, and mode to describe data.

A10. Calculate and interpret range, variance, and standard deviation to describe data.

B. Probability

B1. Interpret basic probabilities.

B2. Calculate probabilities using compound probability rules and the binomial distribution.

B3. Calculate probabilities using the standard normal distribution and relate them to areas under the curve.

B4. Determine if the binomial distribution can be approximated with the normal distribution.

B5. Describe the relationship between the sampling distribution and the population distribution.

B6. Use the Central Limit Theorem to approximate the probability distribution and calculate probabilities.

C. Inferential Statistics

- C1. Determine the confidence interval for a parameter.
- C2. Interpret the confidence level and margin of error.
- C3. Determine whether a statistical technique is appropriate under stated conditions.
- C4. Identify null and alternative hypotheses.
- C5. Perform and interpret statistical tests (e.g. z-test, t-test, one-tailed and two-tailed, one-sample, two-sample) and determine whether data is statistically significant.
- C6. State the conclusion of a hypothesis test.
- C7. Interpret a p-value as compared to a significance level.
- C8. Explain why a test can lead us to reject a null hypothesis, not accept one.
- C9. Distinguish between Type I and Type II errors.

D. Correlation and Regression

- D1. Explain the difference between correlation and causation.
- D2. Construct and interpret scatter plots.
- D3. Calculate and interpret the linear correlation coefficient.
- D4. Determine and use the equation of least-squares regression line between two variables to make predictions.
- D5. Interpret the meaning of the coefficient of determination.

E. OPTIONAL TOPICS

- E1. Inter-quartile range, box-plots, stem-and-leaf plots.
- E2. Combinations and permutations.
- E3. The Poisson distribution.
- E4. Statistical power.
- E5. The Chi-square distribution.

E6. Analysis of Variance.

General Education Student Learning Outcomes

This course meets the requirements set forth by the state of New Mexico for a general education course that is transferable to any public institution of higher education in New Mexico. Each general education course addresses three essential skills as outlined in the table below.

General Education Content Area	Essential Skills Associated with the Content Area
Communication	Communication, Critical Thinking, Information & Digital Literacy
Creative and Fine Arts	Communication, Critical Thinking, Personal & Social Responsibility
Humanities	Critical Thinking, Information & Digital Literacy, Personal & Social Responsibility
Mathematics	Communication, Critical Thinking, Quantitative Reasoning
Science	Critical Thinking, Personal & Social Responsibility, Quantitative Reasoning
Social & Behavioral Sciences	Communication, Critical Thinking, Personal & Social Responsibility

For further information on the Essential Skills, visit the [General Education Essential Skills](#) page.

Required Texts and/or Materials

BEGINNING STATISTICS PLUS INTEGRATED REVIEW SOFTWARE + EBOOK

9781642772814

Warren, Denley, Atchley

Hawkes

Third edition

The above text is an example of the type of text and software bundle students should expect to use.

This does not mean every statistics section at SJC will use this particular text. Please refer to the section specific syllabus for your instructor's text requirements. The text may differ depending on the instructor. Most instructors have a minimum requirement of the publisher's access code, but some may require the purchase of a textbook.

Some instructors may provide supplemental materials in class.

Students should expect to use a TI-84 graphing calculator for this course.

Required Technology and Software

- Canvas
- Chrome, Safari, or Firefox

Course Requirements

This master syllabus is for informational purposes only and individual course syllabi may differ. Faculty reserve the right to make changes to their individual syllabi on an as-needed basis.

In a typical intro to statistics class at SJC, students may complete a series of weekly homework assignments. Instructors may also use weekly regular quizzes to solidify class concepts and use tests every 3 to 4 weeks, online or otherwise, to assess students. Some instructors might use additional assessments, such as projects or statistical analyses. Use of technology, such as the TI-84 calculator and statistical software, such as Minitab Express or StatCrunch, is to be expected. Students should expect to have a final assessment, such as a final exam, given on the last day of class.

Other Classroom Policies and Expectations

Each instructor may have additional policies on classroom expectations. Students need to read the information provided by their instructor for their section regarding specific policies and expectations. Policies and expectations may vary from section to section.

Grading

Each instructor will have a different grade distribution. One **example** of a grade distribution:

Lessons/Homework 15%

Tests 35%

Midterm 20%

Final Exam 30%

Please read the information provided in Canvas by your instructor for your section's specific grade distribution. The above grade distribution is only an example.

Course Time Commitment

In general, for every hour you spend in class for a face to face class, you should expect to spend 2 - 3 hours outside of class on work for class. For a regular semester, the standard time commitment is 8-12 hours outside of class for a 4-credit face to face course and 12-16 hours per week for an online course for a regular 16-week semester.

Canvas Participation and Expectations

Students should be logging into Canvas regularly, at a minimum of two to three times a week.

Participation and Attendance Policy

Regular attendance is important for success in a math class. All instructors expect students to attend class or, and to notify instructors if they will be absent. Students in online classes are expected to log in to Canvas and check email/announcements at least two times per week. Late work policies will vary by instructor. Some instructors may not give full credit for late work missed due to absence.

Students are expected to actively participate in class, adhere to deadlines, be respectful when communicating with instructors and other students, and to read all course information provided by their instructor in the Simple Syllabus and Canvas.

Instructor Response Times & Regular Interaction Expectations

All instructors endeavor to respond to student requests within 24 hours Monday - Friday. Some instructors will respond on the weekends and some will not. Check with individual instructors regarding weekend response times. Instructors also try to return graded work or review material submitted online through an external learning management system within 3 - 5 days.

Key Dates to Remember

[Full Academic Calendar](#)

Course Schedule

The exact schedule with due dates will be determined by the instructor. See Course Requirements in your specific section for general information on assignment expectations.

Technical Support

Technical support is available through the San Juan College Help Desk 24/7/365. The help desk can be reached at 505-566-3266 or by creating a ticket at [San Juan College Help Desk](#).

For password reset and Canvas support, visit the [Student Technology Guide](#) website.

Accessibility/Privacy Policies for all Technology Tools Used

[Accessibility/Privacy Policies for all Technology Tools Used](#)

Student Support

At San Juan College, we are committed to supporting your academic success and overall well-being. We recognize that college life can be challenging and stressful, impacting both learning and personal health. We are here to help you succeed.

Academic Support and Resources

We provide a range of academic support services to help you stay on track on your educational journey. Free resources include tutoring, computer loans, life skills workshops, and so much more. Visit the [Academic Support and Resources](#) webpage to learn more about support and resources available through Academic Advising, the Tutoring Center, the Student Resource Center (formerly Student Achievement Center) and the Testing Center.

Student Support and Resources

If you or someone you know could benefit from counseling, accessibility services, career exploration, veteran transitional assistance, or any of our other support services, visit the [Student Support and Resources](#) webpage where you'll find detailed information about various resources available to you as an SJC student.

We encourage you to take advantage of these free resources to enhance your college experience and ensure your success.

College Policies and Resources for Current Students

The [Student Handbook](#) provides information on student support, student organizations, and student conduct policies at San Juan College.

The San Juan College catalog outlines the [Academic Policies](#) students need to know.

Healthy and Safe Practices for Being on Campus

We want a healthy and safe campus for students, faculty, staff, and guests.

Contagious diseases and your responsibility:

If you have COVID-19 symptoms, fever, flu or even the common cold, you should stay home. Do not come to campus if you are feeling sick. Contact your instructor about missing class (and review your instructor's policies on missed or late work). Being sick does not necessarily excuse you from completing your work on time.

Safety on campus and your responsibility:

If you are on campus and experience or witness an emergency, call 9-1-1 first and then the Department of Public Safety at 505-566-3333 (or just 3333 if calling from a campus phone).

When you are on campus, be aware of your surroundings. If you need an escort to your vehicle, call 505-566-4444 (DPS non-emergency line) or 505-215-3091 (officer on duty line).

The College will send information for campus emergencies through SJC SunsAlert, email and the webpage. Stay informed and stay safe.

Inclement Weather Information

Students will receive notification of class delays and cancellations due to inclement weather via the SJC SunsAlert and SJC student email. Face-to-face classes will not meet in person; however, students are advised to check with instructors about alternative meeting options, as some may choose to meet via zoom. Hybrid classes will meet as scheduled via zoom. For questions regarding your class delay or cancelation, please contact your instructor. If you have not already done so, [Sign up for SJC SunsAlert](#) to stay up to date on weather alerts.

Online Course Fee

Online Courses - San Juan College requires all online courses to include some form of assessment to demonstrate the mastery of course objectives. This could include exams, capstone projects, e-portfolios, presentations, final papers or other appropriate assessments. The use of a proctoring platform, plagiarism detection software or other method to ensure that assessments are completed by the enrolled student is required.

A course fee of \$5.00 is assessed for all online courses at San Juan College to cover the cost of the above services. Students who are required to take a proctored exam and choose to use a physical testing center outside the SJC Testing Center or SJC Disability Services will be responsible for the cost of using that center.