

**Math 151 Course Syllabus  
Sandhills Community College  
Department of Mathematics**

Course:	MAT 151 Statistics I
Credit Hours:	3
Lecture Hours:	3 per week
Lab Hours:	0 per week
Prerequisite:	Satisfactory scores on the placement test, or Math 080 with a grade of C or better
Corequisite:	None
Course Description:	This course provides a project-based approach to the study of basic probability, descriptive and inferential statistics and decision making. Emphasis is placed on measures of central tendency and dispersion, correlation, regression, discrete and continuous probability distributions, quality control, population parameter estimation, and hypothesis testing. Upon completion, students should be able to describe important characteristics of a set of data and draw inferences about a population from sample data. <b>This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/ mathematics(quantitative option)</b>
Text: (Subject to change)	<b>Elementary Statistical Concepts</b> , 2nd Edition by Walpole, Prentice Hall, 1983, ISBN 0-02-424020-6
Goals and Objectives:	The student should be able to model and solve application problems while learning to: <ol style="list-style-type: none"> <li>1. Find the mean, median, mode, variance and standard deviation for a collection of data.</li> <li>2. Apply Chebyshev's Theorem, find a z-score, create a distribution, and apply the Empirical Rule.</li> <li>3. Deal with and compute probabilities of events.</li> <li>4. Find a probability distribution for a discrete random variable.</li> <li>5. Work with the binomial distribution, the normal distribution, and the normal approximation to the binomial distribution.</li> <li>6. Apply the Central Limit Theorem, and the t-distribution.</li> <li>7. Find interval estimates and sample sizes.</li> <li>8. Test a hypothesis involving a mean or a proportion.</li> </ol>
General Education:	Students who are successful in this course will improve in the following general education areas: reading, oral communication, mathematical skills, problem solving, critical thinking, and cooperating with others.
Course Requirements:	Calculator: You are required to have a Texas Instruments TI-83 or 83 + calculator for use in this course.

**Grading Scale:**

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93 - 100 = A

84 - 92 = B

74 - 83 = C

65 - 73 = D

Below 65 = F