Revised:
Date of Previous Revision: June 2002
Date of Current Revision:

	Descriptive Title	Semester Credits

F: Calendar Description:

A pre-calculus introduction to descriptive statistics, measures of central tendency and variation, elementary probability, probability distributions, sampling, hypothesis testing, regression, correlation and chi-square testing.

G:

Learning Settings

Primary Methods of Instructional Delivery and/or Learning Settings:

Lecture and tutorials

Number

H: Course Prerequisites:

Math 1105 or
BC Principles of Math 11 (B or better) or
BC Applications of Math 11 (A- or better) or
BC Principles of Math 12 (C or better) or BC
Applications of Math 12 (B or better)

M: Course Objectives / Learning Outcomes

At the end of the course, the successful student should be able to:

Define the terms "population" and "sample" as they apply to Statistics
Define and differentiate between the nominal, ordinal, interval and ratio levels of measurement
Explain the proper use of Statistics within real world application and provide examples of its abuse
Have an understanding of experimental design and the use of random number tables and generators
Create and interpret frequency tables, histograms, cumulative frequency tables, stem and leaf displays and scatter plots
Calculate and interpret measures of central tendency and variation
Calculate and interpret standard scores
Understand the classical and relative frequency approaches to probability and employ counting techniques
Know and apply the addition and multiplication rules for probability and the concept of conditional probability
Be able to differentiate between discrete and continuous random variables
Determine whether the conditions for a Binomial experiment apply and compute the Binomial probabilities
Compute the mean, variance and standard deviation for the Binomial distribution
Determine probabilities of standard and non-standard normal random variables
Use the Normal distribution to approximate Binomial probabilities
Understand and apply the Student t distribution
Apply the Central Limit Theorem to estimate population parameters using large and small samples
Apply the Central Limit Theorem to estimate the difference between population parameters
Perform hypothesis tests on population parameters or the difference between population parameters using large and small samples
Create confidence intervals for population parameters or their difference using large and small samples.
Create Contingency Tables and perform goodness-of-fit testing in multinomial experiments using the Chi-square test. (optional)
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8. Inferences from Two Samples

Inferences about two means: dependent samples, inferences about two means: independent and large samples, inferences about two means: independent and small samples, inferences about two proportions

9. Correlation and Regression

Correlation, regression variation

O:	Methods of Instruction	

Lectures, group work, assignments.

P:	Textbooks and Materials to be Purchased by Students	

Moore, **The Basic Practice of Statistics**, 2nd Edition, Freeman, 2003
Calculator TI83+ or TI84 (optional)

Q:	Means of Assessment	

Evaluation will be carried out in accordance with Douglas College policy. The instructor will present a written course outline with specific evaluation criteria at the beginning of the semester.

a. Weekly Quizzes	0 - 20%
b. Term Tests	20 - 70%
c. Tutorials	0 - 10%
d. Participation/Attendance	0 - 5 %
e. Assignments	0 - 10%
f. Final Exam	30 - 40%

Note: Students may be required to pass the final exam in order to be eligible to pass the course.

R:	Prior Learning Assessment and Recognition: specify whether course is open for PLAR	

None

Course Designer(s) Annie Marquise	Education Council / Curriculum Committee Representative

Dean / Director Des Wilson	Registrar Trish Angus