COURSE INFORMATION FORM

Publish in college catalog? Yes ☑ No ☐

Course Title: Introduction to Statistics

Department/Course Number: MATH& 146 Effective Quarter: Winter 2018

Credits: 5 Variable: No ☑ Yes ☐ _____ - _____

Administrative Unit Code: GM
Department: Mathematics

Multiple Versions: No ☑ Yes ☐ _____ , _____ , _____ Maximum Class Size: 36

Long Course Description (for college catalog):
(Q, NS) Introductory course. Analysis of statistical studies, descriptive methods, probability, sampling distributions, hypothesis testing, confidence intervals, correlation. For students in any major.

Short Course Description (for class schedule): ***NOTE: Maximum of 240 characters***
Introductory course. Descriptive methods, probability, sampling distributions, hypothesis testing, confidence intervals, correlation. For students in any major.

Prerequisites:
Completion of MATH 086 or HSC 086 or TS 086 or MATH 092 or
MATH 096 or MATH 098 or MATH 099 (or equivalent) with a grade of C (2.0) or higher; OR placement into MATH& 146 or higher, OR permission of a math instructor.

Co-requisites: none

Pass/Fail Option Available? Yes ☐ No ☑

Course Challenge Exam Available? Yes ☑ No ☐

Can course be repeated for credit? Yes ☐ No ☑

Number of repeats beyond initial enrollment: One ☐ Two ☐

Course Intent (*check all that apply)*:
☑ DTA Distribution/Skill

Area: Quantitative Skills/Natural Science

☑ DTA Elective *(check one only)*
- ☑ University Transfer List (A)
- ☐ Restricted Transfer (B/Gray area)

☐ Not allowable as an elective for DTA

☑ Fills requirement for: Multiple degrees *(certificate/degree)*

☐ Other _____

Workload Information:

	Contact Hours		Percent of Load
Lecture	50	÷ 150 =	.333
Laboratory		÷ 200 =	
Science Lab		÷ 180 =	
Field Supervision		÷ 300 =	

Comments

Total: .333

Student Learning Objectives - Upon successful completion of this course, students will be able to:

1. Apply the most commonly used descriptive statistics, including measures of center and spread and visual displays of data, to various distributions.
2. Solve basic and conditional probability problems using 2x2 contingency tables.
3. Solve basic problems related to binomial, normal and sampling distributions.
4. Select and use the proper distribution in tests of hypotheses involving means and proportions, including both 1 and 2-sample inference.
5. Calculate point and interval estimates for the population means and proportions, as well as two-sample comparisons of these parameters.
6. Analyze and evaluate statistical studies.
7. Analyze real-world data with descriptive and inferential statistics
8. Calculate the coefficient of correlation for paired data as well as the least-square line and predict appropriately based on that line.

Core Learning Outcomes	Introduced (I) or Assessed (A)	If assessed, how is outcome measured?
CLO #1: Engage and take responsibility as active learners	I ☑ A ☐	
CLO #2: Think critically	I ☐ A ☑	Critical thinking in the mathematical context is assessed via the program-specific outcome described below.

CLO #6: Demonstrate computer and technology proficiency	I ☑ A ☐	

Program Specific Outcomes	Introduced (I) or Assessed (A)	If assessed, how is outcome measured?
Interpret and manipulate Mathematical language	I ☐ A ☑	Assessed by evaluating student work using a common rubric on common test items that require students to read a word problem, identify and execute an appropriate solution strategy, using symbolic language. Each item also requires students to interpret the results in context.
Make connections between Mathematical concepts and real world problems	I ☐ A ☑	Assessed by evaluating student work that uses statistical analysis techniques to evaluate real world data sets.

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