MATH-80: SUPPORT FOR STATISTICS

Effective Term
Fall 2025

CC Approval
02/07/2025

AS Approval
02/13/2025

BOT Approval
02/20/2025

COCI Approval
04/30/2025

SECTION A - Course Data Elements

CB04 Credit Status
Credit - Degree Applicable

Discipline

Minimum Qualifications	And/Or
Mathematics (Master's Degree)	

Subject Code
MATH - Mathematics
Course Number
80

Department
Mathematics (MATH)

Division
Mathematics (MATH)

Full Course Title
Support for Statistics

Short Title
Support for Statistics

CB03 TOP Code
1701.00 - Mathematics, General

CB08 Basic Skills Status
NBS - Not Basic Skills

CB09 SAM Code
E - Non-Occupational

Rationale
Common course numbering course update.

SECTION B - Course Description

Catalog Course Description
This course is optional for those students who place directly into STAT-C1000, Statistics. It is designed to provide additional time for students to focus on applications of the fundamental concepts in Statistics. Topics include descriptive statistics; probability and sampling distributions; statistical inference; correlation and linear regression; analysis of variance, chi-square and t-tests;

applications of technology for statistical analysis including the interpretation and relevance of statistical findings; and applications using data from a broad range of disciplines.

SECTION C - Conditions on Enrollment

Open Entry/Open Exit
No

Repeatability
Not Repeatable

Grading Options
Pass/No Pass Only

Allow Audit
Yes

Requisites

Prerequisite(s)
Completion of Intermediate Algebra level content or equivalent or appropriate placement.

Corequisite(s)
Concurrent enrollment in STAT-C1000 or equivalent.

Requisite Justification

Requisite Description
Course Not in a Sequence

Subject
STAT
Course #
C1000

Level of Scrutiny
Closely Related Lecture/Lab Courses

SECTION D - Course Standards

Is this course variable unit?
No

Units
1.00000

Activity Hours
36.00

Outside of Class Hours
18

Total Contact Hours
36

Total Student Hours
54

Distance Education Approval

Is this course offered through Distance Education?
Yes

Online Delivery Methods

DE Modalities	Permanent or Emergency Only?
Entirely Online	Permanent
Hybrid	Permanent
Online with Proctored Exams	Permanent

SECTION E - Course Content

Student Learning Outcomes

	Upon satisfactory completion of the course, students will be able to:
1.	Generate and analyze graphs from data.
2.	Identify the best measures of center and spread for a distribution in context.
3.	Calculate and interpret Normal probabilities.

Course Objectives

	Upon satisfactory completion of the course, students will be able to:
1.	Interpret data displayed in tables and graphs.
2.	Calculate and identify best measures of central tendency and variation for data.
3.	Interpret measures of central tendency and variation for data.
4.	Identify methods of obtaining data, advantages and disadvantages of each.
5.	Define and identify bias.
6.	Calculate the mean and standard deviation of a discrete distribution.
7.	Calculate probabilities using various distributions.
8.	Construct and interpret confidence intervals.
9.	Interpret the output of a technology-based statistical analysis, beyond the use of a graphing calculator.
10.	Formulate hypotheses including selecting the appropriate method for testing and interpreting the results.
11.	Use various statistical methods of inference for estimation and interpret the associated statistics.

Course Content

1. Summarizing data graphically and numerically;
2. Descriptive statistics:#measurement, measures of central tendency, and variation;
3. Sampling and sampling distributions;
4. Discrete distributions – Binomial;
5. Continuous distributions – Normal;
6. Find and interpret confidence intervals;
7. Perform and interpret results of Hypothesis Testing;
8. Methods of regression;
9. Use various statistical methods of inference for estimation and interpret the associated statistic involving real world applications.
10. Technology based statistical analysis, beyond the use of a graphing calculator.

Methods of Instruction

Methods of Instruction

Types	Examples of learning activities
Activity	Use of statistical applets to explore a variety of topics.
Discussion	Discussion of class topics.
Group Work	Collaboration on practice problems.
Workshop	Attend Math Success Center workshops.

Instructor-Initiated Online Contact Types

Announcements/Bulletin Boards
Discussion Boards
E-mail Communication
Video or Teleconferencing

Student-Initiated Online Contact Types

Discussions
Group Work

Course design is accessible

Yes

Methods of Evaluation

Methods of Evaluation

Types	Examples of classroom assessments
Class Participation	Participate in class discussions related to course content.
Lab Activities	Obtain real world data and draw conclusions using statistical analysis.
Homework	Homework worksheets involving applications of statistical investigations.
Other	The Mathematics Department maintains a commitment to diverse teaching methods in courses emphasizing vital quantitative skills and qualitative reasoning ability. To that end, it is expected that sufficient formative assessments will be given to students that in frequency, length and rigor adequately assess both quantitative skills and qualitative reasoning.

Assignments

Reading Assignments

Example 1) Read the section on Normal distributions and be ready to apply the concepts to an in-class activity.
Example 2) Read the section on sampling distributions and be ready to apply the concepts to an in-class activity.

Writing Assignments

Example 1) Describe a distribution in context including description of center and spread.
Example 2) Use side-by-side boxplots to compare two distributions in context.

Other Assignments

Other assignments as needed.

SECTION F - Textbooks and Instructional Materials

Material Type

Other required materials/supplies

Description

Use of textbook and materials from concurrently enrolled Math 232 or equivalent.

Course Codes (Admin Only)

CB00 State ID

CCC000644869

CB10 Cooperative Work Experience Status

N - Is Not Part of a Cooperative Work Experience Education Program

CB11 Course Classification Status

Y - Credit Course

CB13 Special Class Status
N - The Course is Not an Approved Special Class

CB23 Funding Agency Category
Y - Not Applicable (Funding Not Used)

CB24 Program Course Status
Program Applicable

Allow Pass/No Pass
Yes

Only Pass/No Pass
No