

Viewing: **STAT 100 : Statistics**

Formerly known as

History

1. Nov 10, 2015 by Mick McEnroe (mmcenroe)
2. Apr 29, 2021 by Kathy Martensen (kmartens)

(or if cross-listed - deactivated courses associated with this course) MATH 161

Last approved: 04/29/21 3:38 am

Last edit: 04/22/21 10:09 am

Catalog Pages
referencing this course

[ACE - Agr & Consumer Economics](#)

[ADV - Advertising](#)

[ANSC - Animal Sciences](#)

[Advertising, BS](#)

[Animal Sciences BS-MANSC](#)

[Animal Sciences: Companion & Equine Science, BS](#)

[Animal Sciences: Science, Pre-Veterinary & Medical, BS](#)

[Athletic Training, BS](#)

[BIOE - Bioengineering](#)

[CPSC - Crop Sciences](#)

[DO NOT APPROVE: Learning & Education Studies: Educational Technology, BS](#)

[ECON - Economics](#)

[EPSY - Educational Psychology](#)

General Information

Effective Term:

College: Liberal Arts & Sciences

Department/Unit: Statistics (1583)

Name (ORG
Code):

Course Subject: Statistics (STAT)

Course Number: 100

Course Title:

Abbreviated Title: Statistics

Course

Description:

First course in probability and statistics at a precalculus level; emphasizes basic concepts, including descriptive statistics, elementary probability, estimation, and hypothesis testing in both nonparametric and normal models.

Justification

Justification for change:

Please Note: a syllabus is required for General Education review:

Course Information

Course Credit

Course credit:

Undergraduate: 3

Graduate:

Professional:

Registrar Use

Only:

Banner Credit: 3

Billable Hours: 3

Grading Type

Grading type: Letter Grade

Alternate Grading Type (optional):

Available for DFR: No

Repeatability

May this course be repeated? No

Credit Restrictions

Credit

Restrictions:

Credit is not given for both STAT 100 and any one of the following: ECON 202, PSYC 235, or SOC 485.

Advisory Statements

Prerequisites:

MATH 112.

Concurrent

Enrollment

Statement:

Restricted

Audience

Statement:

Cross-listing

Cross Listed

Courses:

Class Schedule Information

Class Schedule

Information:

Students who have completed a year of Calculus should enroll in STAT 200 instead of STAT 100.

Fees

Is a fee requested No
for this course?

Course Description in the Catalog Entry

This is how the above information will be represented in the Catalog:

First course in probability and statistics at a precalculus level; emphasizes basic concepts, including descriptive statistics, elementary probability, estimation, and hypothesis testing in both nonparametric and normal models. Course Information: Credit is not given for both STAT 100 and any one of the following: ECON 202, PSYC 235, or SOC 485. Prerequisite: MATH 112.

Additional Course Notes

Enter any other

course
information
details to be
included in the
catalog:

Course Detail

Frequency of
course:

Every Fall
Every Spring

Duration of the Full
course

Anticipated
Enrollment:

Expected distribution of student registration:	Freshman: N/A	Sophomore: N/A	Junior: N/A	Senior: N/A
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General Education

General Education Quantitative Reasoning I
Category

General Information

Is the course required for a No
major concentration?

Is the course part of a No
sequence?

What is the frequency with which the course will be offered?:
(For Example: every semester, once a year)

Every semester, sometimes including summer.

Briefly describe how the course fulfills the General Education objectives:

STAT 100 provides students an introductory exploration of various statistical topics (see syllabus for details). While taking this course, students learn how to use statistics to make decisions under uncertainty, evaluate the experimental design and statistical conclusions presented in studies and articles, and perform basic data analysis and statistical calculations with data. STAT 100 also utilizes specific datasets and examples to show the impact of diversity – including gender, racial, and geographical diversity –

within data analysis to address both bias and hidden connections. Further, this course has no prerequisites nor assumptions of prior experience. It is intended to be a broad introduction to statistics that is taken by a diverse group of students across campus. It is very accessible to students who are not STEM majors and those who have struggled with math courses previously. The course staff provide daily office hours for one-on-one help and multiple resources such as pre-lecture videos for each chapter, randomized homework for unlimited practice, extra credit opportunities, and an abundance of exam review material to diversify instruction so that all students can succeed. The intended audience for STAT 100 is freshman and sophomore students.

Describe the instructional format and provide special justification, if necessary:

During most semesters, STAT 100 is offered both in-person and online. The in-person course meets for either three 50-minute lectures or two 80-minute lectures each week. The online course watches videos of the in-person lectures at any time that is convenient for the student. There are no discussion sections, but three hours of open office hours are available each day Monday through Friday staffed by the instructor and undergraduate course assistants which students can attend for individual help. There are three midterm exams given during Week 4, Week 8, and Week 12 of the semester, as well as a cumulative final exam given during finals week. There are two short (~30-45 minute) homework assignments due each week.

Describe the means by which the Communication Skills goal will be achieved:

As an introduction to statistics, STAT 100 students analyze real-world data and examples during each class and through each assessment. The instructor will use examples to illustrate how to communicate statistics and ideas with other statisticians as well as the general public, including people who have limited statistics knowledge. Students also learn how to interpret, understand, and evaluate sources that contain statistics concepts such as news articles and research papers.

As part of the course assessments (homework and exams), students must provide more than a numeric answer. They must explain the impact and implication of their findings. Students are encouraged to work together on homework each week. Many of the students participate in the homework discussion board where they can ask questions and answer each their peers' questions. Due to the large enrollment of the course, many students visit office hours and work with both the course staff and their peers. During this time, students improve their ability to communicate statistical results and concepts in a small group setting.

Describe how evaluation and adherence to General Education guidelines will be monitored:

Please indicate the timeline for such evaluations

The Department of Statistics Curriculum Committee annually reviews the course syllabus and enrollment data. The Department also reviews the student course evaluations each semester and periodically reviews the course products. The course capacity typically accommodates 1500 students each semester, with a large number of seats exclusively available for freshmen. Instruction is supported by 10-12

undergraduate course assistants and 10-15 graders/proctors to help administer the course each semester.

Indicate those who will teach the course and describe procedures for training & supervising teaching assistants:

Karle Flanagan, Senior Instructor in the Department of Statistics, is the course coordinator for STAT 100 and the primary instructor for teaching this course most semesters. Occasionally, PhD students in the Department's doctoral program who possess exemplary communication skills and an interest in an academic career are given the opportunity to teach this course. In those cases, the course coordinator for STAT 100 prepares, trains, and supervises those appointed Teaching Assistants.

Quantitative Reasoning I

Which type of course is this?

Probability or Statistics

How does the course emphasize the relationships between the assumptions of the probabilistic and statistical models discussed and the conclusions drawn?

STAT 100 discusses modeling in detail in the lectures and the assessments. The goal is for students to gain an understanding of how probability works, random variables, and when it is important to build a probability model to help understand something that you are interested in. A prominent theme throughout the course will be correlation vs. causation.

In STAT 100, experimental design is a key topic that is discussed throughout the course. Students will look at observational studies vs. randomized experiments. Specifically, students will be looking at how to identify and deal with confounding variables in observational studies using real datasets and examples. They will also investigate how to evaluate causal claims.

What strategy is employed to assure that students will understand when particular models are appropriate or inappropriate?

Stat 100 covers linear regression and explains in detail when this is appropriate, what assumptions are necessary, and what happens when the assumptions are violated.

Additional Course Information

Does this course No

replace an
existing course?

Does this course No
impact other
courses?

Does the addition No
of this course
impact the
departmental
curriculum?

Has this course No
been offered as a
special topics or
other type of
experimental
course?

Will this course be
offered on-line?
 Online and Face-to-Face

Faculty members
who will teach
this course:
 Karle Flanagan, Kelly Findley

Course ID: 1007062

Comments to
Reviewers:

Course Edits
Proposed by:

Key: 8971