

STAT G011N: PROBABILITY FOR STATISTICS

Item	Value
Curriculum Committee Approval Date	03/04/2025
Top Code	170200 - Mathematics Skills
Units	0 Total Units
Hours	6-10 Total Hours (Lecture Hours 0; Lab Hours 6-10)
Total Outside of Class Hours	0
Course Credit Status	Noncredit: Support Course (U)
Material Fee	No
Basic Skills	Basic Skills (B)
Repeatable	Yes; Repeat Limit 99
Open Entry/Open Exit	Yes
Grading Policy	P/NP/SP Non-Credit (D)

Course Description

This noncredit course introduces the basic concepts of probability, the addition rule and complements, independence and the multiplication rule, conditional probability and the general multiplication rule, and counting techniques and is designed to provide complementary support for college-level statistics courses. COREQUISITE: MATH G100, MATH G103, MATH G104, MATH G115, MATH G115S, MATH G120, MATH G140, MATH G140S, MATH G170, MATH G180, MATH G185, MATH G280, MATH G285, MATH G287, STAT C1000, STAT C1000E, PSYC G140, SOC G125, or ECON G160. Open Entry/Open Exit. NOT DEGREE APPLICABLE. Not transferable.

Course Level Student Learning Outcome(s)

1. Course Outcomes
2. Apply various probability and counting rules to compute probability of simple and compound events.

Course Objectives

- 1. Apply the general addition rule to compute probabilities of disjoint and non-disjoint events.
- 2. Apply the general multiplication rule to compute the probabilities of independent and dependent events.
- 3. Apply the complement rule to compute at-least probabilities.

Lecture Content

Lab Content

Basic Concepts of Probability Addition Rule for Disjoint Events
 Multiplication Rule for Independent Events Complement Rule General
 Concepts of Probability General Addition Rule General Multiplication
 Rule At-Least Probabilities Conditional Probabilities Counting Concepts
 Multiplication Rule for Counting Permutation Combinations

Method(s) of Instruction

- Enhanced NC Lab (NC2)
- Online Enhanced NC Lab (NC6)
- Live Online Enhanced NC Lab (NCA)

Reading Assignments

Textbook and instructor handouts

Writing Assignments

Writing up solution methods to course concept problems within assignments and course assessments.

Out-of-class Assignments

Demonstration of Critical Thinking

Students will demonstrate critical thinking and problem-solving skills by solving, analyzing, and interpreting various probability and counting problems. Demonstrations will be shown by completing assignments, participating in discussions, and completing required assessments.

Required Writing, Problem Solving, Skills Demonstration

Students will demonstrate their problem-solving skills through completing assignments and course assessments by showing their step-by-step processes to solving problems from start to finish.

Eligible Disciplines

Mathematics: Master's degree in mathematics or applied mathematics OR bachelor's degree in either of the above AND master's degree in statistics, physics, or mathematics education OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Illowsky, B., Dean, S.. Introductory Statistics, 2 ed. OpenStax (OER), 2023