

# Course Syllabus

MATH 241: Introduction to Probability and Mathematical Statistics

Fall 2020

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<b>Instructor</b>	Nicholas Vlamis	<b>Live Class</b>	Th 11am–12pm
<b>E-mail</b>	<a href="mailto:nicholas.vlamis@qc.cuny.edu">nicholas.vlamis@qc.cuny.edu</a>	<b>Office Hour</b>	Tu 11am–12pm
<b>Zoom Link</b>	<a href="https://bit.ly/2Q9HYff">https://bit.ly/2Q9HYff</a>	<b>Zoom Passcode</b>	5eh0z7

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## Course Description

The goal of the course is to provide an introduction to the theory of probability and statistics with a focus on applications. The majority of the course will focus on probability. Time permitting, a short introduction to the basic ideas of statistics will be given at the end of the course. We will discuss discrete and continuous random variables, expectation, variance, and the central limit theorem. In order to work with discrete random variables, we will spend time in the beginning of the semester learning combinatorics (that is, learning how to count).

## Prerequisites

In order to understand continuous random variables, you will need a working knowledge of the theory of calculus, so you should have completed the calculus sequences consisting of Math 141/142/143 or Math 151/152 (or their equivalent). It will be helpful to also have taken or be taking multi-variable calculus (Math 201); however, the course will be taught in a way that it is not required.

## Supplies

The text for this course is *Introduction to Probability (Second Revised Edition)* written by Charles M. Grinstead and J. Laurie Snell. This textbook is available online as a PDF at no cost, or if you prefer, as a physical book (you can buy it from QC bookstore or your favorite place to buy books). You can find the PDF of the book on Google Classroom.

This is a book on probability and it does not discuss any statistics. If we have time to discuss statistics, I will provide another text, which will also be freely available for download.

## Course Website

We will use Google Classroom (<https://classroom.google.com>) for class communication and hosting files. If you have not done so previously, you can find instructions on how to claim your Google Apps for Education account at <http://bit.ly/2R7j8hv>. After claiming your account, you should then be able to sign into Google Classroom under the username of the form “firstinitiallastname###@qc.cuny.edu”. You can then join our Google Classroom using the code **b7pknv**.

## Class Meetings

We will be using a hybrid structure combining both synchronous and asynchronous learning. Every week I will post two 45-minute video lectures for you to watch before Thursday’s class time. During class time on Thursday, we will have a live 1-hour class session on Zoom (obtain software at <https://zoom.us>), which will largely be devoted to working through examples. Class time on Tuesday will be treated as an office hour. Note that the recorded lectures together with the live session on Thursday combine to the standard weekly total of 2.5 hours of class time.

*Recordings:* Live Zoom sessions will be recorded. Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the “chat” feature, which allows students to type questions and comments live.

## Assessment

Your course grade will be determined from the following categories and weights:

Homework	20%
Quizzes	40%
Exams	40%

**Homework:** Homework will be assigned every Wednesday and will be due the following Wednesday. You will complete the homework with pen and paper. After completing the homework, you will upload a PDF version to gradescope. You will have to sign up for Gradescope at <https://www.gradescope.com> and join the class using the course code **9K4ZB8**. Your two lowest homework grades will be dropped.

**Quizzes:** We will have a quiz every other week (except for the week we have an exam). The quiz will be timed and will generally consist of a couple of conceptual (multiple choice, true/false, or fill-in the blank) questions and then a couple of questions that are similar to the homework. The system for distributing and completing the quizzes will be announced later. Your lowest quiz grade will be dropped.

**Exams:** We will have two equally-weighted exams (each exam is worth 20% of your overall grade). Exam 1 will be held during a class hour and Exam 2 will given during the assigned final exam time given by the registrar. Exam 2 will *not* be cumulative. The exams are scheduled as follows:

Exam 1:	Thursday, October 15
Exam 2:	Tuesday, December 15

## Expectations

**Preparation:** Despite the asynchronous nature of the course, it is imperative that you work on a consistent basis. As mentioned above, before Thursday's live meeting, you are expected to have watched the two video lectures for the week. Along with the video lectures, there will be assigned reading every week. I will operate on the assumption that you have completed the readings.

**Office Hour:** As mentioned above, we will treat Tuesday's class time as an office hour for the course. I will be more than happy to talk about any aspect of the course. This time will be student driven, so please come with questions—you can ask me anything you like.

**Extensions and make-up work:** Unless you provide a clear and valid reason, you will not be permitted to make-up missed quizzes or exams. As long as it does not become a habit, I will grant short extensions to homework assignments. If you would like to request an extension, please specify how long of an extension is required (if possible, keep it to under one week).

**Academic Honesty:** It is expected that all submitted work is solely your work. For quizzes and exams, you will not be permitted to work with anyone else or to use resources outside those stated in the assessment's instructions. I will closely monitor standard online forums and help sites for questions related to the course. I will also be comparing submitted assessments to one another. Moreover, I reserve the right to request an individual meeting with any student to discuss their solution to any problem. Anyone caught cheating will—at minimum—receive no credit for the assignment and will be reported to college officials.

**Student Concerns:** Any student with a disability or other special circumstances should make an appointment and discuss this with me. Students with disabilities needing academic accommodation should register with and provide documentation to the Office of Special Services. You can reach them by phone at 718-997-5870 (you may need to leave a voicemail) or via the internet at <https://www.qc.cuny.edu/StudentLife/services/specialserv/Pages/default.aspx?>. The Office of Special Services will provide a letter for you to give to me indicating the need for accommodation and the nature of it. This should be done during the first week of class. For more information about services available to Queens College students, contact the Office of Special Services.

**This document is a contract. Your enrollment in the course will be taken as your acknowledgement and acceptance of the contents of the syllabus.**