

George Mason University
Math 110-002
Course Syllabus

Term Fall 2020
Title Probability
Course Math 110-002
Location Blackboard Collaborate Ultra
Time Mon and Wed noon - 01:15
Professor: Douglas Eckley
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 mobile # 571 277 7927 (use sparingly)
 office # N/A because of Covid
 office hours N/A because of Covid

Description

This course meets the quantitative reasoning requirement, one of the Foundation requirements of the University General Education program. The goal of the Foundation requirement is to help ensure that students are equipped with the tools and techniques necessary to succeed in college and throughout their lives and careers.

The learning objectives for this requirement are:

1. Students are able to interpret quantitative information (i.e., formulas, graphs, tables, models, and schematics) and draw inferences from them.
2. Given a quantitative problem, students are able to formulate the problem quantitatively and use appropriate arithmetical, algebraic, and/or statistical methods to solve the problem.
3. Students are able to evaluate logical arguments using quantitative reasoning.
4. Students are able to communicate and present quantitative results effectively.

To help achieve these objectives, we will learn to use Excel spreadsheets.

We will cover the following topics:

Introduction to Excel
Graphs (especially xy graphs)
Matrices
Linear Equations
Combinations and Permutations

Probability
Mathematics of Loans (Car, Home)
Mathematics of Retirement Saving
Craps, Simulation
Encryption

The book is Finite Mathematics and Its Applications, Eleventh or later edition, by Goldstein, Schneider and Siegel, Pearson 2014. The lectures are done my way (not from the book). The book serves as a useful source of practice problems and as a back-up resource. The idea is that you have two perspectives on learning the material: mine and the authors'.

Procedures

In this course, you must become hands-on with Microsoft Excel.

The class will consist mostly of a series of lectures. The lecture will be online (Blackboard Collaborate Ultra), with screen sharing. In effect, my computer screen becomes the whiteboard that I would use if we were meeting in person.

Grading will be divided as follows:

Progress tests (5)	75
Final exam	20
Group Assignments (2)	10

I will grade on a curve at the end of the semester. The curve will be no more harsh than 90/80/70/60.

Attendance

I do not take attendance, and I will TRY to remember to record each lecture. DON'T MISS any of the progress exams (or the final).

Calendar

Date	Topic
24-Aug-20	Introduction to Excel
26-Aug-20	Growing Money
31-Aug-20	Linear Algebra, Graphs
02-Sep-20	Group Assignment #1
07-Sep-20	NO CLASS (Labor Day)

09-Sep-20	Progress Exam 1
14-Sep-20	Intro to Matrices
16-Sep-20	Matrices in Excel
21-Sep-20	Simultaneous Linear Equations
23-Sep-20	Set Theory
28-Sep-20	Review
30-Sep-20	Progress Exam 2
05-Oct-20	Probability
07-Oct-20	Probability
12-Oct-20	Spring Break
14-Oct-20	Spring Break
19-Oct-20	Expectation
21-Oct-20	Permutations and Combinations
26-Oct-20	Review
28-Oct-20	Progress Exam 3
02-Nov-20	Math of Loans
04-Nov-20	NO CLASS (election day)
09-Nov-20	Math of Loans
11-Nov-20	Intro to Stock Octket
16-Nov-20	Retirement Saving
18-Nov-20	Review
23-Nov-20	Progress Exam 4
25-Nov-20	NO CLASS (Thanksgiving)
30-Nov-20	Simulation
02-Dec-20	Encryption
07-Dec-20	Group Assignment #2
09-Dec-20	Progress Exam 5
14-Dec-20	Review
16-Dec-20	Final Exam