George Mason University
Math 110-DL1
Course Syllabus

Term	Fall 2022
Title	Probability
Course	Math 110-DL1
Location	Blackboard Collaborate Ultra
Time	Tue and Thu
Professor:	Douglas Eckley
	deckley2@gmu.edu
	mobile # 571 277 7927 (use sparingly)
	office # 703 993 1682
	office hours by appointment through Zoom

Goals

Goal #1 is to learn some math, especially probability.

Goal #2 is to learn something you can take away from this course: spreadsheets. If you do not want to learn to use a spreadsheet, then you are in the wrong class.

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.
The final will be cumulative.

Grading will be divided as follows:

Progress exams (5)	70
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
23-Aug	Introduction to Excel
25-Aug	Growing Money
30-Aug	Linear Algebra, Graphs
01-Sep	Group Assignment #1
06-Sep	Progress Exam 1 (15 marks)
08-Sep	Intro to Matrices
13-Sep	Matrices in Excel
15-Sep	Simultaneous Linear Equations
20-Sep	Set Theory
22-Sep	Review
27-Sep	Progress Exam 2 (15 marks)
29-Sep	Permutations and Combinations
04-Oct	Probability
06-Oct	Probability
11-Oct	Fall Break
13-Oct	Expectation
18-Oct	Expectation
20-Oct	Review
25-Oct	Progress Exam 3 (15marks)
27-Oct	Math of Loans
01-Nov	Math of Loans
03-Nov	Intro to Stock Market
08-Nov	Retirement Saving
10-Nov	Retirement Saving
15-Nov	Progress Exam 4 (15 marks)
17-Nov	Simulation
22-Nov	Encryption
24-Nov	NO CLASS (Thanksgiving)
29-Nov	Group Assignment #2
01-Dec	Progress Exam 5 (only 10 marks)
06-Dec	Reading Day
09-Dec	Final Exam