George Mason University
Math 110-DL1
Course Syllabus

Term	Fall 2021
Title	Probability
Course	Math 110-DL1
Location	Blackboard Collaborate Ultra
Time	Tue and Thu 1:30 - 2:45
Professor:	Douglas Eckley
	deckley2@gmu.edu
	mobile # 571 277 7927 (use sparingly)
	office # 703 993 1682
	office hours by appointment through Zoom

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
24-Aug	Introduction to Excel
26-Aug	Growing Money
31-Aug	Linear Algebra, Graphs

02-Sep Group Assignment #1
07-Sep Progress Exam 1 (15 marks)
09-Sep Intro to Matrices
14-Sep Matrices in Excel
16-Sep Simultaneous Linear Equations
21-Sep Set Theory
23-Sep Review
28-Sep Progress Exam 2 (15 marks)
30-Sep Permutations and Combinations
05-Oct Probability
07-Oct Probability
12-Oct Fall Break
14-Oct Expectation
19-Oct Expectation
21-Oct Review
26-Oct Progress Exam 3 (15marks)
28-Oct Math of Loans
02-Nov Math of Loans
04-Nov Intro to Stock Market
09-Nov Retirement Saving
11-Nov Retirement Saving
16-Nov Progress Exam 4 (15 marks)
18-Nov Simulation
23-Nov Encryption
25-Nov NO CLASS (Thanksgiving)
30-Nov Group Assignment #2
02-Dec Progress Exam 5 (only 10 marks)
07-Dec Reading Day
10-Dec Final Exam Dec 10 noon – Dec 11 1:15pm (25 hours and 15 minutes later) (20 marks; cumulative)