

George Mason University
Math 110-002

Course Syllabus

Term Spring 2020
Title Probability
Course Math 110-002
Location Exploratory L111
Time Mon and Wed 3:00 - 4:15
Professor: Douglas Eckley
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 office # 703 993 1682
 office hours Mon and Wed; 1:00 - 2:45

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 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

If at all possible, but it is not required, bring your pc to class. That way you can be hands-on with Excel during class, which is very conducive to gaining expertise.

The class will consist mostly of a series of lectures.

Grading will be divided as follows:

Progress tests (5)	75
Final exam	20
Group Assignments (2)	6
Pop Quizzes	4

Attendance

I do not take attendance. On group assignment days, if you are not there, your group will struggle and you will not get credit. You must be physically in the classroom to get those points.

ALSO, I can give a pop quiz for points whenever I like. That means if at any time, there aren't many people in the room, look out.

Calendar

Date	Topic
22-Jan-19	Introduction to Excel
24-Jan-19	Growing Money
29-Jan-19	Linear Algebra, Graphs
31-Jan-19	Group Assignment
05-Feb-19	Review
07-Feb-19	Progress Test 1
12-Feb-19	Intro to Matrices
14-Feb-19	Matrices in Excel
19-Feb-19	Linear Equations
21-Feb-19	Simultaneous Equations
26-Feb-19	Review
28-Feb-19	Progress Test 2
04-Mar-19	Set Theory
06-Mar-19	Probability
11-Mar-19	Spring Break
13-Mar-19	Spring Break
18-Mar-19	Probability
20-Mar-19	Permutations and Combinations
25-Mar-19	Review
27-Mar-19	Progress Test 3
01-Apr-19	Math of Loans
03-Apr-19	Math of Loans
08-Apr-19	Stock Market; Retirement Saving
10-Apr-19	Retirement Saving
15-Apr-19	Review
17-Apr-19	Progress Test 4
22-Apr-19	Casino Math
24-Apr-19	Simulation
29-Apr-19	Encryption
01-May-19	Group Assignment
06-May-19	Progress Test 5

Final Exam as per GMU schedule