George Mason University
Math 110-001

Course Syllabus

Term   Spring 2019
Title   Probability
Course   Math 110-001-10548
Location   Peterson 2413
Time   Tue and Thu 12:00 - 1:15
Professor: Douglas Eckley
                deckley2@gmu.edu
                mobile #   571 277 7927 (use sparingly)
                office #   703 993 1682
                office hours Tue and Thu; 2pm - 6pm

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 chances to learn the material: from lecture and from book.

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
Semester Project	5

The semester project will be handed down from GMU administrative people, probably in February.

Attendance

I normally do not take attendance, but WILL do so on group assignment days. If you are not there, your group will struggle and you will suffer a minor penalty.

Calendar

Date	Topic
22-Jan-19	Introduction to Excel
24-Jan-19	Introduction to Excel
29-Jan-19	Lines, XY Graphs, Trendlines
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
05-Mar-19	Set Theory
07-Mar-19	Probability
12-Mar-19	Spring Break
14-Mar-19	Spring Break
19-Mar-19	Probability
21-Mar-19	Permutations and Combinations
26-Mar-19	Review
28-Mar-19	Progress Test 3
02-Apr-19	Mathematics of Loans (Car, Home)
04-Apr-19	Mathematics of Loans (Car, Home)
09-Apr-19	Basics of Retirement Saving
11-Apr-19	Mathematics of Retirement Saving
16-Apr-19	Review
18-Apr-19	Progress Test 4
23-Apr-19	Mathematics of Roulette; Simulation
25-Apr-19	Progress Test 5
30-Apr-19	Encryption
02-May-19	Group Assignment
07-May-19	Review or Reading Day
09-May-19	Final Exam (10:30am as per GMU schedule)