George Mason University
Math 106-009
Course Syllabus

Term   Spring 2019
Title   Math
Course   Math 106-009
Location   Peterson 2413
Time   Mon and Wed 9:00 - 10:15
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 discover and apply Excel spreadsheets.

Book

The book is <u>Mathematical Ideas</u>, by Miller, Hereen and Hornsby, 12th or later edition, Pearson 20nn. 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.

Topics

Intro to Excel
Graphing and Trendlines
Reasoning, Problem Solving, Logic
Decimals, Percentages, Scientific Notation, Formatting
Set Theory
Probability
Statistics
Math of Finance
Matrices and Encryption

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)	65
Final exam	25
Semester Project	5
Group Assignments	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 not get credit.

Calendar

Date	Topic
23-Jan-19	Introduction to Excel
28-Jan-19	Graphing and Trendlines
30-Jan-19	**Group Assignment**
04-Feb-19	Review
06-Feb-19	Progress Test 1
11-Feb-19	Reasoning and Logic

13-Feb-19	Problem Solving
18-Feb-19	Decimals and Percentages
20-Feb-19	Scientific Notation and Formatting
25-Feb-19	Review
27-Feb-19	Progress Test 2
04-Mar-19	Set Theory
06-Mar-19	Set Theory
11-Mar-19	Spring Break
13-Mar-19	Spring Break
18-Mar-19	Probability
20-Mar-19	Probability
25-Mar-19	Review
27-Mar-19	Progress Test 3
01-Apr-19	Statistics
03-Apr-19	Growing Money
08-Apr-19	Basics of Retirement Saving
10-Apr-19	Mathematics of Loans (Car, Home)
15-Apr-19	Review
17-Apr-19	Progress Test 4
22-Apr-19	Mathematics of Roulette; Simulation
24-Apr-19	Prof traveling, but an assignment will be given
29-Apr-19	**Group Assignment**
01-May-19	Review
06-May-19	Progress Test 5
13-May-19	Final Exam 7:30am (as scheduled on http://registrar.gmu.edu/calendars/)