MATH 555-001 – ACTUARIAL MODELING I
Fall 2014
(http://math.gmu.edu/~robeirne/math555)

PREREQUISITE: Math 554 (Financial Mathematics) and Probability & Statistics

INSTRUCTOR: Richard O'Beirne, Department of Mathematical Sciences
Telephone: 703-993-1467
Email: ROBEIRNE@GMU.EDU
Office: Exploratory Hall, Room 4452

MEETINGS: Wednesdays from 7:20 p.m. to 10:00 p.m. from August 27, 2014 through December 3, 2014 in RB108 (except no class on November 26 - Thanksgiving)

OFFICE HOURS: 5:00 p.m. – 5:55 p.m. on Mondays and Wednesdays, and by appointment as necessary.

TEXTBOOK: "Actuarial Mathematics for Life Contingent Risks" by Dickson, Hardy and Waters (2nd edition)

MATERIAL: The course will cover most of the material contained in the following chapters:
Chapter 1 – Introduction to Life Insurance
Chapter 2 – Survival Models
Chapter 3 – Life Tables and Selection
Chapter 4 – Insurance Benefits
Chapter 5 – Annuities
Chapter 6 – Premium Calculation
Chapter 7 – Policy Values

GRADING: There will be 6 take-home assignments. The highest five will count for 25% of the grade. There will be three one-hour tests. The highest two will count for 45% of the grade. The final examination on December 10 will count for the remaining 30%. I will also give occasional quizzes. The quizzes will not count toward the grade.

This course is heavily oriented toward the Society of Actuaries (SOA) MLC exam. That exam also covers material taught in Math 556. During the course I will review many exam-type questions which will be helpful to those planning to sit for the MLC exam.

The key to success in any mathematics course is in understanding the examples in the book and working the exercises at the end of every chapter. I will identify specific exercises that should be worked as we proceed through the course. You should consolidate all of the worked exercises in a notebook to be used to study for tests and the final examination. The Honor Code is in effect in this course. You may not give or receive help during tests. I will discuss test procedures in more detail in class. You will need access to Microsoft Excel for use throughout the course. I will cover the use of Excel in class for those who are not yet familiar with it.