Send To Printer | Close Window

Instructor Contact Info and Grading Components

New York University Tandon School of Engineering

FRE-GY 6051 Insurance Finance and Actuarial Science

Fall, 2019, Second Half

Rogers Hall, Room TBD, Brooklyn Campus

Professor: Brian R Lessing (212) 314-2931 (office), (917) 417-7317 (cell)

brl255@nyu.edu, brlessing@earthlink.net, brian.lessing@axa.us.com

Course Structure:

Anticipated class sessions for lectures, discussions of homework assignments, and final exam are as follows:

(NOTE THAT THE FOLLOWING TENTATIVE SCHEDULE WILL BE ADJUSTED IF NECESSARY TO BE CONSISTENT WITH THE FINAL FALL 2019 FRE ACADEMIC CALENDAR FOR THE SECOND HALF).

Mon 11/4 regular class

Mon 11/11 regular class

Mon 11/18 regular class

Mon 11/25 regular class

Mon 12/2 regular class

Mon 12/9 regular class

Mon 12/16 final exam

Course Requirements:

Students will be expected to master all material from the assigned chapters of the text book, the class lecture slides, and the homework. Class lectures will touch on many of the topics from the text book and slides, but will not cover everything; independent study of the text book and class lecture slides will be necessary and expected.

Course grades will be based upon the final exam and class participation including homework. Students are encouraged to complete and hand in homework assignments by the next following or second following class session (but in any case not later than the final exam class session), as well as to participate fully in class discussions. It's anticipated that the final exam will count for approximately 60% of the final course grade, and homework and class participation will together count for approximately 40%.

The final exam will be "open book" in that reference to the text book "Life Insurance Products and Finance" (see below for more details) and printed class room lecture slides (to be provided) will be permitted. Reference

to other notes or written materials will not be allowed.

It is expected that each student will have a personal laptop computer and Excel software to do homework assignments, participate in class sessions, and take the final exam. Much of the homework and the final exam may be Excel-based, as the calculations needed are often recursive and lend themselves to spreadsheets.

For the final exam, students may use only their text book, lecture slides, calculator and personal computer. No other books, notes, stored files, or electronic devices may be used. Cell phones may not be used as a calculator.

Learning Objective

Course Description: This course will provide an introduction to life insurance products and finance.

Course Prerequisites: Students will be assumed to have a basic understanding of algebra and probability. An acquaintance with the theory of interest would be helpful. Note however that Chapter 4 of the text covers the basic elements of actuarial mathematics needed in the course. Students will need to have access to and be able to use Excel software on their laptop computers in order to do the homework and take the final exam.

Course Objectives: To gain a basic understanding of individual life insurance products, product development, pricing, modeling, and finance. To understand the concepts, be able to explain and use the concepts, and be able to apply the models developed in class and the textbook to solve problems and arrive at correct numerical results.

Readings: Subject to class participation and topic mastery, we'll attempt to cover most or all of chapters 1, 4, 5, and 6 of the required text book (see below for text particulars) during the regular class sessions, devoting approximately one and a half class sessions (see above for session schedule) to each chapter. If there is any additional time, we will cover other topics in the text. Students should review chapters 2 and 3 on their own for general background during the first few weeks while we are covering chapters 1 and 4. The chapter topics are as follows:

Part I: Product Development Fundamentals

Chapter 1 .....Life Insurance Overview

Chapter 2 .....Product Development

Chapter 3 .....Pricing Assumptions

Part II: Product Pricing

Chapter 4 .....Basic Actuarial Mathematics

Chapter 5 .....Life Insurance Cash Flows

Chapter 6 .....Reserves

Chapter 7 .....Reinsurance

Chapter 8 .....Investment Income

Chapter 9 .....Taxes

Chapter 10.....Required Capital

Chapter 11.....Profit Measurement and Analysis

Chapter 12.....Quarterly Calculations

Chapter 13.....Annuity and Investment Products

Part III: Modeling and Finance

Chapter 14.....Financial Modeling

Chapter 15.....Stochastic Modeling

Chapter 16.....Financial Management

Required Materials

We will use the following textbook:

"Life Insurance Products and Finance", 2000,

by David B Atkinson, FSA, James W. Dallas, FSA, MAAA,

ISBN: 978-0-93895-967-0

Available from ACTEX Publications 1-800-282-2839,

https://www.actexmadriver.com/product.aspx

Moses Center Statement of Disability

If you are student with a disability who is requesting accommodations, please contact New York University's Moses Center for Students with Disabilities (CSD) at 212-998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Information about the Moses Center can be found at www.nyu.edu/csd. The Moses Center is located at 726 Broadway on the 3rd floor.

NYU School of Engineering Policies and Procedures on Academic Misconduct

1. Introduction: The School of Engineering encourages academic excellence in an environment that promotes honesty, integrity, and fairness, and students at the School of Engineering are expected to exhibit those qualities in their academic work. It is through the process of submitting their own work and receiving honest feedback on that work that students may progress academically. Any act of academic dishonesty is seen as an attack upon the School and will not be tolerated. Furthermore, those who breach the School's rules on academic integrity will be sanctioned under this Policy. Students are responsible for familiarizing themselves with the School's Policy on Academic Misconduct.
2. Definition: Academic dishonesty may include misrepresentation, deception, dishonesty, or any act of falsification committed by a student to influence a grade or other academic evaluation. Academic dishonesty

also includes intentionally damaging the academic work of others or assisting other students in acts of dishonesty. Common examples of academically dishonest behavior include, but are not limited to, the following:

- Cheating: intentionally using or attempting to use unauthorized notes, books, electronic media, or electronic communications in an exam; talking with fellow students or looking at another person's work during an exam; submitting work prepared in advance for an in-class examination; having someone take an exam for you or taking an exam for someone else; violating other rules governing the administration of examinations.
- Fabrication: including but not limited to, falsifying experimental data and/or citations.
- Plagiarism: intentionally or knowingly representing the words or ideas of another as one's own in any academic exercise; failure to attribute direct quotations, paraphrases, or borrowed facts or information.
- Unauthorized collaboration: working together on work that was meant to be done individually.
- Duplicating work: presenting for grading the same work for more than one project or in more than one class, unless express and prior permission has been received from the course instructor(s) or research adviser involved.
- Forgery: altering any academic document, including, but not limited to, academic records, admissions materials, or medical excuses.