

Math 419A Actuarial Mathematics I

Fall 2014

MWF 11:00 – 11:50 PM Black 137

Instructor: Cen-Tsong Lin

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Office Hours: 10 – 10:50, Monday – Friday or by appointment

Prerequisite: Math411A and Math418A (concurrent with Math 418A is OK)

Course goals: The goal of this course is to develop students' knowledge of the theoretical basis of certain actuarial models and the application of those models to insurance and other financial risks. After completing this sequence (Math 419A/B/C), students will be able to apply their knowledge to price and evaluate the risk for traditional insurance and annuities products. After completing Math 419A, students will be able to calculate and demonstrate mortality rates, survival time, and benefit premiums for traditional insurance and annuity products.

Required Text:

Actuarial Mathematics for Life Contingent Risks, 2nd Edition, 2013, Dickson, D., Hardy, M., Waters, H., Cambridge University Press.

Course outlines:

- Chapter 1 Introduction to life insurance
- Chapter 2 Survival Models (continuous parametric context)
- Chapter 3 The life tables and selection (discrete tabular context)
- Chapter 4 Insurance benefits (contingent payment models)
- Chapter 5 Annuities (contingent annuity models)
- Chapter 6 Premium calculation (if time allows)

Grading Policy

Three tests: 10/10/2014, 10/31/2014, and 10/21/2014 (all Friday)	60%
Homework assignments:	15%
Final exam: 8:00 – 10:00, Wednesday, 12/10/2014	25%
Total	100%

Note: The due day of homework assignment usually is one week after it is assigned. This syllabus, homework assignments and class handouts are also available on Canvas system