

Math 419B Actuarial Mathematics II

Winter 2015

TuThF 11:00 – 11:50 PM Bouillon 210

Instructor: Cen-Tsong Lin

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

Prerequisite: Math 419A

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 7 Policy values
- Chapter 8 Multiple state models
- Chapter 9 Joint life and last survivor benefits
- Chapter 10 Pension mathematics
- Chapter 11 Yield curves and non-diversifiable risk (if time allows)

Grading Policy

Three tests: 100 points each tentatively on 1/23, 2/13, and 3/6

Homework assignments:

Final exam: 125 points 10:00 – 12:00, Monday, 3/16/2015

Total 425 points + homework assignment points

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

Important online resource: <https://www.soa.org/education/exam-req/edu-exam-m-detail.aspx>