

Acts 6301: Life Contingencies I

Fall Semester 2016

Classroom: CB3 1.310

Time: Tuesday and Thursday 17:30-18:45

Instructor: Wenyi Lu

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Office Hours: Tuesday and Thursday 2:00-3:30 PM or by appointment

Prerequisites: STAT 5351 is required explicitly, but knowledge of calculus up to multi-variable integral and of Interest Theory (Acts 6308 compound interest part) is assumed.

The required textbook is *Actuarial Mathematics*, 2nd ed (by Bowers et al). We will cover Chapter 3, 4, 5, 6. We will first study Chapter 3 on Survival Distribution and Life Tables, which is the building blocks of LC. Following these topics this course covers Life Insurance (A) in Chapter 4, Life Annuity (a) in Chapter 5, and Benefit Premium (P) in Chapter 6.

The textbook recommended by SOA, *Actuarial Mathematics for Life Contingent Risks*, 2nd ed, 2013, Dickson, D., Hardy, M., Waters, H is optional.

There will be 3 exams, two mid-terms and the final. **You are to use the “official” CAS/SOA calculators in these exams.** Tentatively, the final grade will be assigned as follows:

F (0-39.9), D- (40-44.9)

D (45-49.9), D+ (50-54.9)

C (55-64.9), C+ (65-69.9)

B- (70-74.9), B (75-79.9), B+ (80-84.9)

A- (85-89.9), A (90-94.9), A+ (95-100)

I will assign practice questions for you to work on, but I will not collect homework assignments.

Six quizzes of 10 minutes will be given in classes and the best 5 scores will be counted to your grade, 2% each.

The numerical grade will probably be computed with the formula:

Quizzes	10%
Exam 1	25%
Exam 2	25%
Final Exam	40%

The above is just a guideline. The actual break points may vary depending on the difficulty of the exams.

Life contingencies has always been the most difficult subject in all actuarial exams. Some old books may help you. *The Mathematics of Life Insurance* by Walter O. Menge and Carl H. Fischer, which contains not much calculus, is an excellent introduction to Life Contingencies. A book written to provide insight on *Actuarial Mathematics* is *Life Contingencies: A Guide for the Actuarial Student* by Robert W. Batten.

I would like to hear from anyone who has a disability requiring some modification of seating, testing or other class requirement so that appropriate arrangements may be made.

Calculators

Only one of the following calculators is allowed in the midterm exams and the final exam: BA-35, BAI Plus, BA II Plus Professional Edition, TI-30Xa, TI-30XIIS, TI-30XIIB, TI-30XS MultiView, and TI-30XB MultiView. They are also the calculators allowed in the SOA exams.