

# Math 419C Actuarial Mathematics III

Spring 2011

MW 2:30 – 3:45 Bouillon 010

**Instructor:** Cen-Tsong Lin

**Office:** Bouillon 108B, Tel: 963-2842, e-mail: ctl@cwu.edu

**Office Hours:** 10:00 – 10:50, Monday – Thursday; 9:00 – 10:00 Friday or by appointment

**Prerequisite:** Math 419B

**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. lives.

**Required Text:** Cunningham, R., Herzog, T. and London, R.L., *Models for Quantifying Risk*, 3rd Edition, ACTEX Publications, Inc., 2009

Supplementary study notes: (available from SOA website)

- [Multi-State Transition Models with Actuarial Applications](http://www.soa.org/files/pdf/edu-2008-spring-mlc-24-2nd.pdf), SOA study notes, code MLC-24-05  
(<http://www.soa.org/files/pdf/edu-2008-spring-mlc-24-2nd.pdf>)
- [Poisson Process \(and mixture distributions\)](http://www.soa.org/files/pdf/edu-2008-spring-mlc-28-n.pdf), SOA study notes, code MLC-28-08  
(<http://www.soa.org/files/pdf/edu-2008-spring-mlc-28-n.pdf>)

## Course outlines:

- Chapter 9 Multi-Life Models (starts section 9.3)
- Chapter 10 Multiple-Decrement Models (includes Markov Chain models)
- Chapter 14 Process Models (includes Poisson process and mixture models)

## Grading Policy

3 tests: 4/13, 5/4 and 5/25 (all Wednesday)	60%
Homework assignments:	10%
Final exam: 12:00 – 2:00, Wednesday, 6/8/2011 (Comprehensive)	30%
Total	100%

Note:

- The due day of homework assignment is one week after it is assigned.
- This syllabus, homework assignments and class handouts are also available in the following website:  
[www.cwu.edu/~ctl](http://www.cwu.edu/~ctl)