



# ACMA 425

## Actuarial Mathematics II

Fall 2007  
Day Course

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Students requiring accommodations as a result of disability, must contact the Centre for Students with Disabilities 604-291-3112 or [csdo@sfu.ca](mailto:csdo@sfu.ca)

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Instructor: [Dr. Yi Lu](#)

**Prerequisite:**

ACMA 320

**Required Text:**

*Actuarial Mathematics* (2nd ed 1997) by Bowers, Gerber, et al.; Society of Actuaries

**References:**

*Life Insurance Mathematics* by Gerber, Springer-Verlag  
*The Mathematics of Life Insurance* by Menge and Fisher; Ulrich's  
*Life Contingenices* by C.W. Jordan; Society of Actuaries

**Calendar Description:**

Actuarial reserves: allocation of the loss to the policy years. Multiple life functions: Joint-life, last-survivor. Multiple decrement models: stochastic and deterministic approaches, associated single decrement, fractional durations. Valuation theory for pension plans. Insurance models including expenses: gross premiums and reserves, type of expenses, modified reserves. Nonforfeiture benefits and dividends: equity