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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 Contingencies* 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 concept, cash values insurance options, asset shares, divide(s)1510e va(mr9u MCID 29 BDC BTTT3 1 Tf0 Tc 0 Tw 10.02 0 0 10.02 21.5998409.56

- Nonforfeiture Benefits and Dividends:
- Cash Value, Insurance Options, Asset Shares, Dividends.

**Grading Scheme:**

Assignments – 10%  
Midterm – 40%  
Final Exam – 50%

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*Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks.*