



Spring 2006
DAY COURSE

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

Instructor: [Gary Parker](#) (SC K10562)

Prerequisites:

ACMA 310 (with a grade of C+ or higher), MATH 232 and STAT285.

Textbook:

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

References:

ACTEX Study Manual for Exam M of the SOA by Matt Hassett, Donald G. Stewart, Amy Steeby, publishers: ACTEX.

Life Contingencies by C.W. Jordan; publishers: SOA.

Life Insurance Mathematics by H.U. Gerber; publishers: Springer-Verlag.

The Mathematics of Life Insurance by Menge and Fisher; publishers: Ulrich's.

Calendar Description:

Survival distributions: age at death, life tables, fractional ages, mortality laws, select and ultimate life tables. Life insurance: actuarial present value function (apv), moments of apv, basic life insurance contracts, portfolio. Life annuities: actuarial accumulation function, moments of apv, basic life annuities. Net annual premiums: actuarial equivalence principle, loss function, accumulation type benefits. Actuarial reserves: prospective loss function, basic contracts, recursive equations, fractional durations. This course covers part of the syllabus for Exam M of the Society of Actuaries, and covers practical applications such as computational aspects of pricing and reserving, and risk measurement of insurance portfolios.

Outline:

This course covers the fundamentals of Actuarial Mathematics in life insurance. The topics covered correspond to about the first

Final – 40%

Students should be aware that they have certain rights to confidentiality concerning the return of course papers and the posting of marks. Please pay careful attention to the options discussed in class at the beginning of the semester. Students are reminded that Academic Honesty is a cornerstone of the acquisition of knowledge. Scholarly integrity