

---

COURSE TIMES + LOCATION:

We 11:30 AM– 12:20 PM  
VMC 3517, Burnaby

Fr 10:30 AM– 12:20 PM  
BLU 9655, Burnaby

---

INSTRUCTOR:

Gary Parker  
gparker@stat.sfu.ca  
1 778 782 4818  
Office: SC K10562

---

PREREQUISITES:

ACMA 320.

Description

---

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, dividends. Covers part of the syllabus for Exam M of the Society of Actuaries and Exam 3 of the Casualty Actuarial Society. Quantitative.

COURSE DETAILS:

This course, a continuation of ACMA 320, covers the fundamentals of Actuarial Mathematics.

Course Outline:

The topics covered correspond to part of Exam MLC of the Society of Actuaries and they include:

- Reserves (Policy values) Continuous, Discrete, Recursive formulas, Fractional duration, Pro fit, Asset shares
- Multiple state models Continuous time stochastic process, Transition probabilities, Premiums, Reserves, Multiple decrement models, Joint life and last survivor benefits
- Pension mathematics Salary scale function, Pension plan service table, Defined benefit and defined contribution pension plans
- Diversifiable and non-diversifiable risk
- Participating and Universal life insurance Participating insurance, Universal life insurance, Pro fit testing

This course is accredited under the Canadian Institute of Actuaries (CIA) University Accreditation Program (UAP) for the 2016-2017 academic year. Achievement of the established exemption grade in this course may qualify a student for

