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**Spring 2006  
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*

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**Instructor: [Dr. C. Tsai](#) (SC K10548)**

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**Prerequisites:**

STAT 285

**Textbook:**

*Loss Models: From Data to Decisions*, 2nd Edition, 2004, S.A.Klugman, H.H. Panjer and G.E. Willmot; publisher: Wiley

**References:**

*Foundations of Casualty Actuarial Science* (4th Edition), 2004, H.C.Mahler and C.G. Dean

*Introduction to Credibility Theory* (3rd Edition), 1999, T.N.Herzog

*ACTEX Manual* for SOA Exam C (or CAS Exam 4), 2005, see website:www.actexamdriver.com

**Calendar Description:**

Statistical distributions useful in general insurance. Inferences from general insurance data. Experience rating. Credibility theory: full credibility, partial credibility, Bayesian credibility. Estimation of loss distributions. Modelling loss distributions: ungrouped data, truncated and shifted data, clustering. Applications: inflation. This course covers part of the syllabus for Exam M and C of the Society of Actuaries.

**Outline:**

This course studies the subject of Credibility Theory. The topics covered correspond to Credibility Theory portion of Exam C of the Society of Actuaries (or Exam 4 of Casualty Actuarial Society).

They include the following:

**Credibility Theory:**

- ~ Limited fluctuation credibility
- ~ Bayesian credibility: non-parametric and semi-parametric
- ~ Bühlmann and Bühlmann-Straub models
- ~ Conjugate priors

**Grading:**

Assignments - 10%

Midterm - 40%

Final - 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. 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 is required of all members of the University. Please consult the General Guidelines of the calendar for more details.*

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