

ACMA 315-3E
CREDIBILITY THEORY & LOSS DISTRIBUTIONS

Spring 2003
EVENING COURSE

Instructor: KEN COLLINS (SSC K 10543)

Prerequisites:

ACTEX Manual for Course 4, 2000 see website: www.actexamdriver.com/SMdesc.htm#4

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 of the Society of Actuaries Course 3 and 4 examinations.

Outline:

This course studies reasonable and usable approximations to the distribution of incurred losses for insured events. It also introduces the subject of Credibility Theory. The topics covered include:

Loss Distributions:

- Statistical Inference
- Modeling Loss Distributions
- Applications: Inflation, Percentile Estimation

Credibility Theory:

- Full Credibility
- Partial Credibility
- Bayesian Credibility: parametric, non-parametric
- Buhlmann-Straub Model

Grading:

- Assignments - 10%
- Midterm I - 20%
- Midterm II - 20%
- Final - 50%

Week 10.5 0 0 10M4i 4nTm0 Tc5TwFinal - 50% 2I - 20% 10 -11 TD58 -11183 - 10.5 05Th0.5 05b10.5 05T0.0011 Tc45de4 - d- 2030