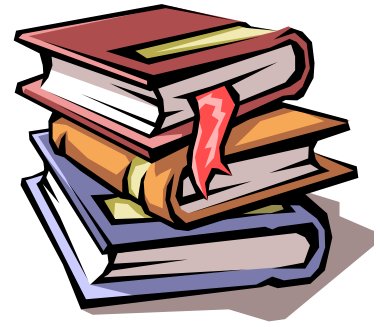


Course Outline: ACSC 318 001 Winter 2011

Tuesdays and Thursdays, 8:30-9:45 am AH348
Exam Tuesday April 19th 2010 9-12am



Instructor Peter Douglas, CW 307.24
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Email: douglas@math.uregina.ca (w), lmurphy@accesscomm.ca (h)

Office Hours Mondays 9:30-11:00am
Tuesdays and Thursday 1:30-3:00 pm
Other times by appointment (note that I am off campus on Wednesdays and many Fridays)

Text *Loss Models: From Data to Decisions*, (3rd Edition) 2008, by Klugman, Panjer, and Willmot; Chapters 2-6, 8-11
Other materials provided by the instructor.

Other Materials A class website will be maintained on URCourses
This will hold copies of handouts, assignments, solution sets and other items of interest.

Overview

This course will cover learning outcomes A to E identified under Exam C on the Spring 2011 SOA Syllabus. These include the following topics:

- 1) Severity random variables including the impact of deductibles, limits and coinsurance;
- 2) Frequency distributions including Poisson, Negative Binomial, Geometric and Binomial distributions;
- 3) Compound (Aggregate) models;
- 4) Calculation of expected values, variance, probabilities and percentiles for severity, frequency and compound models;
- 5) The uses of the lognormal distribution, in particular with reference to the Black-Scholes formula.
- 6) Calculate the impact of Coverage Modifications and inflation for all types of models;
- 7) Calculate the risk measures VaR, CTE and explain their use and limitations; and
- 8) Calculate survival and ruin probabilities using discrete and continuous models.

Course Requirements

- 1) An awareness of the U of R General Calendar.
- 2) Completion of class assignments (approximately 8-10). These should be legible, on 8.5*11" paper and stapled together. Please ensure that you clearly identify your assignments with your name and student number.
 - a. Assignments are due at the start of class on the assigned date. No credit will be granted for late papers.
 - b. For some assignments students may find it convenient to use a computer package such as Microsoft Excel or the similar.
 - c. At least one assignment will take the form of a 30-minute in-class quiz using Society of Actuaries questions.
 - d. At least one assignment will involve a group presentation to the class.
- 3) One midterm exam to be written in class time. This is tentatively scheduled for late early to mid-March.
- 4) A term project to be completed for April 8th 2011. This project will require a written report. Details on the term project will be provided following the midterm break.
- 5) One 3-hour final exam scheduled for 9-12 am on Tuesday April 19, 2011 (location to be announced).
- 6) Alternate arrangements for midterm and final exam may be made at the discretion of the instructor for students who provide prior notice and adequate documentation. However, the instructor reserves the right to deny such arrangements for students who have not completed the course assignments to date.
- 7) For the midterm and final exams, students are required to bring photo ID and are advised to bring an approved Society of Actuaries calculator. Details on approved SOA calculators may be found in the reserve file or on the SOA website.
- 8) Note that the SOA set of tables and formula sheets for Course C will be provided for the exams. These can be found online at the SOA website and at the class website.

Grading

Final grades will be based in on the average mark calculated as follows:

- i) Assignments 10%
- ii) Midterm 20%
- iii) Term project 20%
- iv) Final Exam 50%

The instructor reserves the right to fail a student who does not pass the final exam.