University of Toronto
ACT 471 H1F
Fall 2017
Course Outline

John Zhou and Sajjad Ahmad

Syllabus Objectives and Introduction

- Advanced Ratemaking Methodologies
  - Reference book:
    - Anderson, D., Feldblum, S., Modlin, C., et al., "A Practitioner's Guide to Generalized Linear Models", 3rd Edition, February 2007
    - Goldburd, M., Khare A., Tevet, D. Generalized Linear Models for Insurance Rating, CAS Mongraph Series Number 5
    - Predictive Modeling Applications in Actuarial Science, Volume 1, edited by Edward W. Frees, Richard A. Derrig, Glenn Meyers, Cambridge University Press, 2014
  - Will not prepare for the SOA or CAS exam
  - Will apply techniques and develop analyses on industry data

- Evaluation
  - 45%/15% - ratemaking report 1 / presentation
  - 30% - ratemaking Final Exam
  - 10% - class performance/participation

Lesson Schedule

Week	Chapters
Sep 13	PPV GLM – Recap of ACT372, Introduction to R
Sep 20	PPV GLM – Introduction to GLM
Sep 27	PPV GLM – PPV Frequency Model building
Oct 4	PPV GLM – Validating GLM Models
Oct 11	PPV GLM - PPV Severity Model building and validation
Oct 18	PPV GLM – Combining frequency and severity models
Oct 25	***** Present GLM Results and Submit GLM Report 1**
Nov 1	PPV GLM – Consumer behavior model
Nov 8	Reading Week – No Class
Nov 15	Reinsurance – Overview of different contract types
Nov 22	Reinsurance Pricing Calculations
Nov 29	Catastrophe Models and Pricing
Dec 6	Commercial Pricing
Dec 9 – 20	Final Exam. The exact date TBD.