

**ACTU 457 (MAST 724)**

Risk Theory  
*Winter 2005*

- Instructor:** Q. Tang  
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Office Hours: Tuesdays & Thursdays 13:30-16:30 or by appointment
- Schedule:** Tuesdays & Thursdays, 10:15-11:30 in CC-321, Loyola Campus
- Outline:** Risk theory forms the core part of Property-Casualty Insurance mathematics. The course gives an introduction to classical models and applies them to some common problems of interest in risk theory. The emphasis is on the probabilistic aspects (stochastic processes) although some estimation (inference) questions will also be discussed.
- Text:** "Loss Models", S.A. Klugman et al., 2<sup>nd</sup> edition, John Wiley & Sons, 2004. Chapters 2-8.  
  
"Actuarial Mathematics", N.L. Bowers et al., 2<sup>nd</sup> edition, Society of Actuaries, Schaumburg, Illinois, 1997. Chapters 1-2, 13-14.
- Other Texts:** "Non-Life Insurance Mathematics", E. Straub, Springer-Verlag, New-York, 1988 (U/G - Theoretical).  
  
"Practical Risk Theory for Actuaries", C.D. Daykin et al., Chapman & Hall, 1994 (U/G - Practical).  
  
"Stochastic Processes for Insurance and Finance", T. Rolski et al., Wiley, 1999 (Graduate- Theoretical).
- Assignments:** There will be four assignments given in class, roughly every two weeks. These will count 20% towards your final mark.
- Exams:** A midterm will be held in class on February 17 and will count for 30% of your final mark. A three-hour final will be held during the examination period in May and will count for the remaining 50%.  
**There is no option for a 100%-final.**