POLICIES AND PROCEDURES FOR DOCTORAL QUALIFYING EXAMINATION

The Decision No:2 dated November 9, 2006 on Policies and Procedures for Doctoral Qualifying Examination of the Doctoral Qualifying Committee of the Department of Actuarial Sciences is as follows;

- “Doctoral Qualifying Examination” aims to examine whether the student has comprehensive knowledge, skills, ingenuity and the ability of synthesis about the basic topics of Actuarial Sciences and his/her doctoral study. Written part of the examination has to be carried out in different sessions which contain major fields given below and the average of these three examinations’ final grade has to be at least 70%.

- In the case that the average of the final grades is under 70%, the candidate is deemed to have failed and has to take the exam for the subjects he failed in the next examination term. His ultimate grade is calculated by taking the last examination into account.
  - The candidate whose average final grade is at least 70% is admitted for an oral exam. He/she is given an article about his field of interest in order to present in the oral exam and the examiners ask questions about the article to the candidate.
  - In the case that candidate cannot achieve at least 70% in the oral exam, he/she is can retake the oral exam in the next exam term.
  - The jury decides whether the candidate is successful at ‘Doctoral Qualifying Examination’ by assessing both the written and oral exams.

MAJOR FIELDS OF DOCTORAL QUALIFYING EXAMINATION

1. Life Insurance Mathematics

Covered Topics: Survival distributions and future life time; Life insurance; Life annuities; Net Premiums; Net premium reserves; Multiple decrement models; Multiple life insurance, Markov process and Markov chains

References:

Primary Books:

Supplementary Books:
2. Non-Life Insurance Mathematics

Covered Topics: Insurance process; Utility theory; Claim frequency distributions, properties and parameter estimations, Claim severity distributions, properties and parameter estimations, Risk premium; Premium calculation principles; Credibility Theory; Loss Reserving Methods; Poisson processes; No claim discount and Bonus- Malus systems.

References:

Primary Books:

Supplementary Books:

3. Risk Theory

Covered Topics: Individual risk models (Individual claim amount distributions, The distribution of aggregate claims); Collective risk models (The distribution of number of claims, The distribution of aggregate claims, Properties of certain compound distributions), Ruin theory.

References:

Primary Books:

Supplementary Books: