Course Syllabus for Actuarial Mathematics
壽險精算

■ Instructor

Sharon Sheauwen Yang (楊曉文),

Associate Professor, Department of Business Mathematics, Soochow University

Ph.D. in Actuarial Mathematics, Heriot-watt University, UK

Master in Statistics and Actuarial Science, University of Iowa, USA

E-mail: syang@bmath.scu.edu.tw

■ Aim

■ The course is designed to provide postgraduate students an advance study on actuarial mathematics that includes pricing and reserving for life insurance products. To extend the student's knowledge, this course will discuss several hot topics arising in the global actuarial professions such as insurance product innovation, the concept of fair valuation, and asset liability management for life insurer and pension plan. The framework of this course will integrate many related knowledge such as risk management, actuarial science, finance and insurance, which the student will benefit some new thoughts for further research and SOA exam.

■ Textbooks

1. Bowers *et al.* (1997), Actuarial Mathematics.

■ References

Reference papers will be assigned during the class.

■ Grade Determination

- Midterm exam, Journal paper reading and presentation: 50%
- Final Project and Presentation: 30%
- Class Participation and Discussion: 20%

■ Course Contents

1. Pricing for Insurance Products
2. Reserves and Capital requirement
3. Participating Insurance v.s. Investment linked Insurance
4. Longevity Risk Modeling
5. Final Project: product development