THE UNIVERSITY OF HONG KONG  
HKU Business School  

FINA2342CDE Insurance: Theory and Practice  
2022 Spring  

Class Time and Venue:  
Section C: Thursdays 13:30-16:20, ONLINE  
Section D: Fridays 9:30-12:20, ONLINE  
Section E: Fridays 14:30-17:20, ONLINE  
Instructor:  
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Teaching Assistant:  
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By appointment  

In the face of the new Hong Kong government policies and the University policies, all teaching and learning activities for the 2022 Spring semester are moved online (except for the final exam, pending further instructions from the University). Please note the change of class arrangement in RED.  

Course format  
The course is delivered through a mix of pre-recorded videos and occasional live sessions. Videos will be posted before the scheduled lecture time in each week. Live sessions will be scheduled at regular class time. During live sessions, I will review the concepts we have covered and students are expected to participate in class discussions.  
There is an 1-hour tutorial session starting a few weeks after the semester starts. The TA will be responsible for the tutorial sessions.  

Course description  
Insurance is the study of risk pooling. The use of insurance to reduce the adverse financial impact in case of a loss has become an important element of financial management in our society. The insurance industry has evolved with the trend of financial liberalization in the recent decades.
This course has three parts. The first part lays down the principles that we use to understand insurance. The second part introduces various insurance policies. The third part describes and analyzes the operation of insurers and the insurance industry overall. The theories and principles discussed in this course apply globally.

**Prerequisite**
ECON1001/ ECON1210 Introductory Microeconomics, Calculus NOT required

**Textbook**
The course will mainly follow the instructor’s lecture notes. The lecture notes are self-contained. These notes evolve over time and it is greatly appreciated if you can give me feedbacks. Part of the lecture notes follow the textbooks below. Additional materials will be posted on moodle.

There are two textbooks that students can use for reference. The main textbook for the course is “Principles of Risk Management and Insurance,” *George E. Rejda and Michael McNamara*, 13th Edition or 14th Edition (earlier editions also OK)

Another textbook that was used in previous years is “Risk Management and Insurance,” *Scott Harrington and Gregory Niehaus*, 2nd Edition (the book is out of print and not easily available)

**Required Tool**
A standard financial calculator SUCH AS Texas Instruments, Casio, and HP 12C.

**Grading Policy**
The course grade will be based on tutorial session participation (10%), two individual assignments (15%), one group project (15%) and a final exam (60%).

Your grade on the individual assignment part will be **the higher of the two assignment grades**.

The topic for group project will be announced in after the first week of class. The teaching assistant will help with the group formation. Students are strongly recommended to form groups with students in the same subclass. **In the last two weeks of class, each group will give a 10-to-15-minute presentation on the project with slides through zoom.** If a group has students from different subclasses, the time of presentation for this group will be decided by the instructor. After the presentation, each group should submit their presentation slides.

Tutorial homework questions will be assigned but will **not** be collected and therefore **not** graded.
Course Outline

1. Introduction (1 week)
   Live session, 1/20 and 1/21, regular class time, 3 hours.
   • Insurance and personal financial planning
   • Insurance and the economy
   • The structure of the course
   • Basic concepts and terminologies of insurance
   • Historical and modern insurers (if time permits)

Presentation topics distributed.

Part I. Principles of Insurance (3 weeks)

2. Risk, Risk Aversion, and Risk Pooling (1 week)
   Pre recorded video, the week of 1/24-1/28
   • Risk characterization using probability distribution
   • Utility function and risk aversion
   • Risk management I: Risk categorization
   • Risk pooling and the role of correlation
   • Risk management II: Risk insurability
   • Risk management III: The risk management framework

3. Assessing Cash Flows: NPV, IRR, and CAPM (1 week)
   Pre recorded video, the week of 2/7-2/11
   • The time value of money and present value
   • Assessing cash flows and the net present value (NPV) rule
   • The internal rate of return (IRR)
   • Taking risk seriously: the Capital Asset Pricing Model (CAPM)

4. Insurance Pricing and Asymmetric Information (1 week)
   Pre recorded video, the week of 2/14-2/18
   • Actuarial insurance pricing, expense loading and profit loading
   • Capital and the underwriting cycle
   • Adverse selection
   • Moral hazard
   • Behavioral biases and insurance pricing
   • Contractual provisions of insurance and the legal doctrines of insurance

1st Assignment distributed.

Second Live session 2/24 and 2/25, regular class time, about 1 hour, mainly review and Q&A.
Part II. Insurance Policies (4 weeks)

5. Life Insurance (1.5 weeks)
   Pre recorded video, the week of 2/21-2/25
   - Overview of life insurance
   - Term insurance
   - Whole life insurance
   - The pricing of life insurance
   - Contractual provisions of life insurance
   - Examples of whole life insurance plans
   - Life insurance and personal financial planning

6. Annuities and Pension, Health Insurance, and Social Security (1.5 weeks)
   Pre recorded video, the week of 2/28-3/4
   - Annuities, pension, and retirement planning
   - Private commercial health insurance and employee group insurance
   - Health insurance and personal (financial) planning
   - Unemployment insurance, social security, and public healthcare
   - Tax effects of pension and insurance

2nd Assignment distributed.
   Third live session 3/17 and 3/18, regular class time, 3 hours. Review, discussions, and Q&A. No pre recorded video for the week of 3/14-3/18.

7. Property and Casualty Insurance (1 week)
   - Tort liability system and liability insurance
   - Personal P&C insurance: Auto insurance
   - Personal P&C insurance: Homeowners’ insurance
   - P&C insurance cost and personal financial planning
   - Corporate commercial insurance
   - Corporate commercial insurance: motivation for risk management
   Pre recorded video, the week of 3/21-3/25.

Part III. Insurers (2.5 weeks)

8. The Operations of Insurers (1.5 weeks)
   - The ownership structure of insurers
   - Balance sheet management and the changing nature of insurers
   - Investment behavior of insurers
   - Risks of insurers, capital, and insolvency
   - Reinsurance: Risk management of insurers
   - Insurers in the financial system
   Pre recorded video, the week of 3/28-4/1.

9. Insurance Regulation and the Financial System (1 week)
- The regulation of insurers in the globe
- Regulation, insurers’ balance sheet management, and shadow insurance
- Insurers and systematic risks: the case of the global financial crisis and the Covid crisis

Pre recorded video, the week of 4/4-4/8. No pre recorded video for the week of 4/14 and 4/15.

**Fourth live session 4/21 and 4/22, regular class time, 1.5 hours.**

10. Student Presentations (1.5 weeks)

Live session, 4/21 and 4/22 second half, and 4/28 and 4/29, 3 hours.

**Final exam, details to be determined.**