

## COURSE OUTLINE FOR ISOM 4520, SPRING 2016

### Statistics for Financial Risk Management

**Instructor:** Yingying Li

**Office:** LSK 4070

**Email:** [yyli@ust.hk](mailto:yyli@ust.hk)

**Lectures:**

Mondays 1:30pm - 4:20pm LSK1007

**Instructor's Office Hours:** By appointment (email).

**TAs:**

LEE, Elvis ([imelvis@ust.hk](mailto:imelvis@ust.hk)), Office: LSK 4065, Office Hours 4-5pm Thursdays.

DING, Yi ([ydingai@ust.hk](mailto:ydingai@ust.hk)), Office: LSK 5017

**Tutorial sessions:** Mondays 4:30-5:30 , LSK G021

**Reference book:**

*"Elements of Financial Risk Management"*, (Academic Press), by Peter F. Christoffersen.

**Course Webpage:** <http://canvas.ust.hk/>

**Course Objectives:**

On completion of the course, students will be able to

- (1) Analyze and assess financial risks based on appropriate analytical and quantitative techniques.
- (2) Critically compare and evaluate different risk models and risk measures.
- (3) Discuss and interpret clearly and effectively the technical details and results of statistics for risk management to both technical and managerial audiences.
- (4) Work effectively and efficiently in teams.

**Course Outline:**

- Introduction and Preparation
- Volatility Modeling
- Correlation Modeling
- Non-Normality and Tail Behavior
- Simulation Based Methods
- Option Pricing and Hedging
- Risk Model Evaluation

**Evaluation:**

- 20% Assignments
- 10% Class Participation
- 30% Midterm Examination (March 7, 2-4pm)
- 40% Final Examination

**About Assignments:** You may discuss the problems with other students, but you must write them up independently. Duplication of homework solutions prepared in whole or in part by someone else is not permitted.

**Warnings:**

- No make-up midterm exams will be given. Absence from the midterm exam will not be excused except for medical reasons supported by proper documentation submitted no later than 24 hours after the exam is taken (in these cases, your final exam will be re-weighted accordingly, i.e., it will be worth 70% of your course grade).
- No make-up final exams will be given except for cases approved by ARRO.

(Excerpted from [https://www.ab.ust.hk/arr/reg/em/em\\_std\\_reg/reg\\_makeup.html](https://www.ab.ust.hk/arr/reg/em/em_std_reg/reg_makeup.html))  
“Students who fail to attend a final examination as scheduled will be given zero mark for that examination. If the absence is due to extenuating circumstances beyond the student’s control, such as medical emergencies, he/she may apply to the Admissions, Registration and Records Office (ARRO) within one week from the missed examination for a make-up examination to be held. For absence due to medical reasons, the student is required to submit certification issued by a registered medical practitioner. Appropriate documentation will be required for absences due to other reasons. The ARRO will decide, in consultation with the Office of the Provost and the Department/Course Instructor concerned, whether the student’s application should be approved. The student will be notified of the result of the application within one week from the date the application is lodged with ARRO. The make-up examination will be held within five weeks after the regular examination period. The format of the make-up examination will be decided by the course instructor concerned.”

**Academic Integrity:** Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabricating of information, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of other students, or tempering with the academic work of other students. All exam answers must be your own, and you must not provide any assistance to other students during exams. Current university policy on academic dishonesty is “if a student is discovered cheating, however minor the offence, the course grade will appear on his/her record with an X, to show that the grade resulted from cheating. This X grade stays with his/her record until graduation. If the student cheats again and “earns” another X grade, he/she will be dismissed from the University.”

**General:** I strongly encourage you to discuss with me any problem that you may have with this course as soon as it arises.