

# IE 522 – Statistical Methods in Finance

Professor	Liming Feng
Office	Transportation Building Room 216A
E-mail	<a href="mailto:fenglm@illinois.edu">fenglm@illinois.edu</a>
Office hours	Wednesday 4pm-5pm
Course site	<a href="http://compass2g.illinois.edu">http://compass2g.illinois.edu</a>
Prerequisites	Introductory probability and statistics
Teaching assistant	Runqi Hu ( <a href="mailto:runqihu2@illinois.edu">runqihu2@illinois.edu</a> ), Office hours: Friday 4pm-5pm

## Course description

This course covers probability theory and statistical tools that are fundamental for financial modeling, analyzing financial data and further study in financial engineering. The course consists of four parts mainly: probability theory, statistical inference, time series analysis and regression.

## Course materials

- Lecture notes: available on <http://compass2g.illinois.edu>
- References (e: available electronically from <http://www.library.illinois.edu>)
  - Introduction to Probability Models, 10<sup>th</sup> Edition, 2010, Sheldon Ross e
  - Probability Essentials, 2<sup>nd</sup> Edition, 2004, Jean Jacod and Philip Protter
  - All of Statistics, a Concise Course in Statistical Inference, 2004, Larry Wasserman
  - Statistical Inference, 2<sup>nd</sup> Edition, 2002, George Casella and Roger Berger
  - Statistics and Data Analysis for Financial Engineering, 2011, David Ruppert e
  - Econometrics, 2000, Fumio Hayashi
  - Use R! series and many other books on R e

## Policies

- Homework 35%, Essays 30%, Final exam 35% (Friday 12/12/2014)
- Homework and essays are due at the beginning of the class on Tuesdays. **No late homework/essays will be accepted.** If you cannot submit on the due date, submit earlier
- All homework assignments and essays must be finished individually. Cheating/plagiarism cannot be tolerated. Those who violate will fail the course. You should protect your own work to avoid penalty due to the cheating of other students. See [http://studentcode.illinois.edu/article1\\_part4\\_1-402.html](http://studentcode.illinois.edu/article1_part4_1-402.html) for UIUC student code
- Requests for correction of possible grading errors must be submitted to the professor within one week after the work is returned. **No corrections possible afterwards**
- Exams are open notes; makeup exams are possible only under emergencies (official proof required **prior to the exam**)
- Please attend class on time and check your email regularly for important announcements. Please make sure your email address in the system is correct and your account is not over quota

## Schedule

Monday	Tuesday Lecture (2:00-3:20pm)	Wednesday Feng Office Hour (4-5pm)	Thursday Lecture (2:00-3:20pm)	Friday TA Office Hour (4-5pm)
	Aug 26 L1		Aug 28 L2	
	Sept 2 L3		Sept 4 L4	
	Sept 9 L5 (HW1)		Sept 11 L6	
	Sept 16 L7 (Essay1)		Sept 18 L8	
	Sept 23 L9 (HW2)		Sept 25 L10	
	Sept 30 L11 (Essay2)		Oct 2 L12	
	Oct 7 L13 (HW3)		Oct 9 L14	
	Oct 14 L15 (Essay3)		Oct 16 L16	
	Oct 21 L17 (HW4)		Oct 23 L18	
	Oct 28 L19 (Essay4)		Oct 30 L20	
	Nov 4 L21 (HW5)		Nov 6 L22	
	Nov 11 L23 (Essay5)		Nov 13 L24	
	Nov 18 L25 (HW6)		Nov 20 L26	
Thanksgiving Break				
	Dec 2 L27 (Essay6)		Dec 4 L28	
	Dec 9 L29 (HW7)			Dec 12 Final Exam 1:30pm-4:30pm

## MSFE class schedule

Fin	500	MW	9:30-10:50am
IE	523	MW	2:00-3:20pm
IE	522	TR	2:00-3:20pm
Fin	501	TR	4:00-5:20pm