

Finance 425 - Derivatives and Risk Management Syllabus - Fall 2017

Mon, Wed; 11:00am - 12:15pm; Capitol Federal Hall 3041; line #26668

Instructor: Professor Koch
 email: pkoch@ku.edu
 Office / Phone: 4185 Capitol Federal Hall / (785)-864-7503
 Office Hours: Mon. & Wed., before & after class: 10:00 - 11:00am & 12:15 - 1:00pm
 or by appointment. (I have another class at 1:00pm.)
 T.A.: Ruo Yang; Office Hours: Tues. & Thurs, 12:30 - 2:30, Cap Fed Hall 2039.
 Homepage: <http://pkoch.faculty.ku.edu>
 Prerequisites: FIN 410 or 411 or consent of instructor.
 Required Text: John Hull, *Fundamentals of Futures and Options Markets*,
 8th edition, 2014, or 9th edition, 2017.
 Course Docs: Blackboard: <http://courseware.ku.edu>
 Alternative Class Web Site: <http://finpko.faculty.ku.edu/myssi/index.php?dir=FIN425/>

Course Objectives: This course covers the tools and practice of financial risk management by firms and individuals. We will examine the use of forwards, futures, swaps, options, and related financial derivatives for hedging, arbitrage, and speculation in the global environment. The course focuses on understanding how to manage a firm's operational risk, as well as interest rate risk, exchange rate risk, and commodity price risk using these derivatives. The emphasis is on understanding the motivation, issues, and techniques behind financial engineering with these derivatives, to help manage risk and value.

In English, we want to understand:

1. what these things are and how they work.
2. how they can be used to manage risk.
3. what determines their prices (i.e., valuation).

Course Grading: Your course grade will be determined by your performance on weekly quizzes, two exams, four 1-page research projects, and class participation. Late projects will not be accepted and make-up quizzes and exams will not be given. Conflicts taking quizzes or exams must be resolved *prior to* the administration of each quiz or exam. Your lowest quiz score will be thrown out. Grading weights are provided below.

If at the end of the term you are at the margin between two grades, your contribution to class discussion throughout the term will determine whether you receive the higher or lower grade. Note that it is the quality and not simply the frequency of participation that is important.

Homework: Selected cases and problems are assigned at the end of each chapter. These problems will help you understand the concepts, and will help you prepare for exams. Solutions are available. We'll discuss selected problems in class when time permits.

Withdrawal Policy: You may withdraw with a grade of "W" any time after the first exam only if you are doing passing work ("D" or better).

Finance 425 Futures & Options: Tentative Schedule - Fall 2017

Refs: Hull; *Fundamentals of Futures & Options Markets*, 8th Edition-2014, or 9th Edition-2017;
 JOD; *Journal of Derivatives*, 2000, article #1 by Kawaller & Koch;
 JACF; *Journal of Applied Corporate Finance*, 2003, #2 by Charnes, Berkman, & Koch;
 JFM; *Journal of Futures Markets*, 2012, article #3 by Juhl, Kawaller, & Koch;
 JOD; *Journal of Derivatives*, 2013, article #4 by Kawaller & Koch;
 JFR; *Journal of Financial Research*, 2016, article #5, by Jiang, Kawaller, & Koch.

<u>Date</u>	<u>Topic</u>	<u>Readings: Chapter Problems (8th Ed.)</u>
Aug 21, 23	Introduction; Background Info.	Hull- Ch. 1: 1,2,7,10-12,17-21;
	Terminology; FAS 133; Disasters; Operational Risk; Glossary, JOD, JACF, JFM, Hull-Ch. 25.	
Aug 28, 30	Mechanics of Futures Markets	Hull- Ch. 2: 1-6, 8-16, 18-24.
Sep 6, 11	Hedging Strategies (Futures Proj #1 due)	Hull- Ch. 3: 1-11,13,15-18,20,JFR.
Sep 13	Interest Rates	Hull- Ch. 4: 1,3-5,7,12,14,17,19-21
Sep 18, 20	Valuation of Forwards and Futures	Hull- Ch. 5: 1-7,9-12,14,15,17,30.
Sep 25, 27	Interest Rate Futures	Hull- Ch. 6: 1-7,9,12,14-18,20.
Oct 2 , 4	SWAPs (Futures Proj #2 due)	Hull- Ch. 7: 1-4,6-9,11-12,15-17.
Oct 9	Midterm Exam 1	Hull- Ch. 1-7, 25; Intro; Background; Glossary (pp. 1-2).
Oct 11	NO CLASS: I'm at a conference presenting research & interviewing prof's.	
Oct 16	NO CLASS: Fall Break.	
Oct 18, 23	Mechanics of Options (Futures Proj #3 due)	Hull- Ch. 9: 1,2,4-10,13-21.
Oct 25, 30	Trading Strategies with Options	Hull- Ch. 11: 1-3,5,6,9,14,15.
Nov 1	Properties of Options (Option Proj #1 due)	Hull- Ch. 10: 1-15.
Nov 6, 8	Valuation- Binomial	Hull- Ch. 12: 1,2,4-7,9-13,15.
Nov 13	Valuation- Black/Scholes	Hull- Ch. 13: 1,2,4,6,13-15.
Nov. 15	NO CLASS: I'm at a conference presenting research & interviewing prof's.	
Nov 20	Option Sensitivities & Delta Hedging	Hull- Ch. 17: 1-3,5,10,13,14,22,24.
Nov 22	Thanksgiving Break	
Nov 27	Option Sensitivities & Delta Hedging	Hull- Ch. 17: 1-3,5,10,13,14,22,24.
Nov 29	Value at Risk	Hull- Ch. 20: 1-4,8,10,11,13,14,23.
Dec 4	Exotic Derivatives	Hull- Ch. 22-24; Glossary.
Dec 6	Real Options	Real Options Notes.
Dec 11	Final Exam (10:30am - 1:00pm)	Hull-Ch. 9-13, 17, 20, 22-24, Glossary, Real Options

<u>Important Dates</u>	<u>Subject</u>	<u>Points Poss.</u>	<u>% of Grade</u>
Throughout	Quizzes (10 quizzes @ 5 pts each)	50	25.0
Sep 11	Futures Project #1 due	5	2.5
Oct 2	Futures Project #2 due	5	2.5
Oct 9	Midterm Exam 1	60	30.0
Oct 23	Futures Project #3 due	5	2.5
Nov 1	Option Project #1 due	5	2.5
Dec 11	Final Exam (10:30am - 1:00pm)	<u>70</u>	<u>35.0</u>
	Total	200	100.0

Explanation of Research Projects

You will write four short research papers (each no more than 1 page single spaced). In the first research project (Futures Project #1) you will describe the details and specifications of one financial futures contract and one commodity futures contract that you choose. In the second research project (Futures Project #2) you will track the performance of each contract described in your choice for Futures Project #1, along with the underlying assets and a margin account. In the third research project (Futures Project #3), you will describe how an individual or firm might use the specific futures contract that you chose in Futures Projects #1 and #2 to hedge, arbitrage, and speculate. In the fourth research project (Options Project #1) you will describe the details of two pairs of call and put options. The details for these 4 projects are provided in separate documents.

Students with disabilities

Any student who has a disability that may prevent her/him from fully demonstrating his/her abilities should contact me personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate the educational opportunity.

School of Business Honor System

The School of Business Honor System promotes academic integrity by its students and faculty through adherence to the following code:

We, the faculty, instructors, and students of the School of Business pledge to fulfill our mutual responsibilities to each other and the academic community at large with honor and integrity in order to build and maintain a climate of respect and trust that will enhance our research, teaching, and learning. We will support the Honor System of the School and will not tolerate activities that undermine academic integrity.

As a student in a School of Business class, you will be protected by and expected to conduct yourself in accordance with this system. For a complete description of the system, see:

<http://business.ku.edu/honor-code>,

<http://business.ku.edu/sites/businessdev.drupal.ku.edu/files/docs/KUSchoolofBusinessHonorCode.pdf>,

This documentation is required reading for all students. In accord with this policy, the following pledge must be signed by all students at the end of all exams:

On my honor, I have neither given nor received any unauthorized aid on this exam.
Nor am I aware of anyone giving or receiving any unauthorized aid on this exam.

Signature _____ Date: _____

As two examples of how this class will operate to promote this Honor System:

1. There will be no *graphing* calculators allowed in any exams.
2. No cell phones are allowed to operate during class. Be sure to turn yours off.

Concealed Carry

Individuals who choose to carry concealed weapons are solely responsible to do so in a safe and secure manner in strict conformity with state and federal laws and KU policy.

See <https://concealedcarry.drupal.ku.edu/information-students> ,

and <http://publicaffairs.ku.edu/sites/publicaffairs.ku.edu/files/docs/KU%20University-Wide%20Weapons%20Concealed%20Carry%20Policy%20%2812-14-16%29.pdf>