



**University of International Business and Economics  
International Summer School**

**FIN403 Risk Management and Derivatives**

**Term: January 4 - January 29, 2021**

**Instructor: Ping Li**

**Home Institution: Beihang University**

**Email: liping124@buaa.edu.cn**

**Class Hours: Monday through Friday, 120 mins per teaching day (2,400 minutes in total)**

**Office Hours: TBD**

**Discussion Session: 2 hours each week**

**Total Contact Hours: 64 contact hours (45 minutes each, 48 hours in total)**

**Course Description:**

Financial derivatives play an important role in current financial markets. This course provides students with a broad understanding of financial derivatives, including futures, forwards and options contracts. Students learn the fundamentals of financial derivatives, including the market dynamics, pricing, pricing and how they can be used for trading and risk management. This course will also provide students chances to simulate trading on futures and options.

**Course Goals:**

Upon successful completion of this course students should be able to:

1. Demonstrate an understanding of concepts, applications and methodologies associated with financial derivatives in current financial markets;
2. Explain and apply arbitrage principles to derivatives pricing;
3. Formulate and analyze trading strategies involving derivatives for trading;
4. Devise static and dynamic hedging strategies using derivatives to manage financial risk;
5. Implement suitable approaches to derivative pricing and address key issues arising in risk management relevant to derivatives

**Required Textbook:**

John C. Hull, 2018 "Options, Futures, and Other Derivatives," 10th Edition, Pearson Additional readings

The following additional textbooks can be consulted for additional reading to this course:

Chance, D.M. and Brooks, R. 2010. An introduction to derivatives and risk management. 8th ed. Thomson.

Frino, A. and Jarnecic, E. 2005. Introduction to futures and options markets in Australia. Pearson Prentice Hall.

Kolb, R.W. AND Overdahl, J.A. 2007. Futures, options, and swaps. 5th ed. Blackwell Publishers.

McDonald, R.L. 2013. Derivatives Markets. 3rd ed. Pearson Addison Wesley.

**Grading Policy:**

Assessment task 1: Final Exam (Individual), Weight: 50%;

Assessment task 2: Quizzes (Individual), Weight: 25%;

Assessment task 3: Case Study (Group), Weight: 25%.

**Grading Scale:**

Assignments and examinations will be graded according to the following grade scale:

<b>A</b>	90-100	<b>C+</b>	72-74
<b>A-</b>	85-89	<b>C</b>	68-71
<b>B+</b>	82-84	<b>C-</b>	64-67
<b>B</b>	78-81	<b>D</b>	60-63
<b>B-</b>	75-77	<b>F</b>	below 60

**Class Rules:**

Students are expected to:

- ✦ Attend all classes and be responsible for all materials covered in class and otherwise assigned. Any unexcused absence may impact a student's grade.
- ✦ Complete the day's required reading and assignments before class.
- ✦ Review the previous day's notes before class; make notes about questions you have about the previous class or the day's reading.
- ✦ Participate in class discussions and complete required written work on time.
- ✦ **No electronic products are allowed to use during the lecture.**

**Academic Integrity:**

Students are responsible for knowing policy regarding academic honesty.

The University of International Business and Economics (UIBE) expects students to be honest in their academic work. Academic dishonesty is viewed as a serious violation of university rules and such misconduct is not accepted by academic community. In particular, students must refrain from plagiarism, cheating and collusion in connection with examinations, submitting substantially the same piece of work to different classes and must fully acknowledge all the sources of ideas and all assistance received in work submitted to the instructor for evaluation.

Violation of the rules of academic honesty may lead to suspension or disqualification of the student from further study at UIBE.

### Attendance Policy:

Summer school is very intense and students need to attend every class. Occasionally, due to illness or other unavoidable circumstance, the student may need to be absent. UIBE policy requires a medical certificate to be excused. Any unexcused absence may affect the student's grade. Moreover, UIBE policy is that a student who has more than 1/3 of the class in unexcused absences will fail the course.

### Course Schedule:

Day	Activity	Topic
Day 1	Lecture	Introduction to financial derivatives (1)
Day 2	Lecture	Introduction to financial derivatives (2)
Day 3	Lecture	Mechanics of futures markets
Day 4	Lecture	The determination of forward and futures prices
Day 5	Lecture	Hedging Strategies Using Futures
Day 6	Lecture	Interest Rate Futures (1)
Day 7	Lecture	Interest Rate Futures (2)
Day 8	Lecture	Swaps
Day 9	quiz	
Day 10	Lecture	Mechanics of Options Markets
Day 11	Lecture	Properties of Stock Options
Day 12	Lecture	Trading Strategies Involving Options
Day 13	Lecture	Binomial Trees method for option pricing
Day 14	Lecture	The Black-Scholes-Merton Model
Day 15	Lecture	Options on Stock Indices, Currencies and Futures
Day 16	Lecture	The Greek Letters
Day 17	Lecture	Exotic options
Day 18	Lecture	Simulate trading of futures and options



Day 19	Lecture	Derivatives Mishaps and lessons
Day 20	Exam	Final Exam