



浙江大學

**FINS582**

**Derivative Securities and Risk  
Management**

## **FINS582**

### **Derivative Securities and Risk Management**

#### Instructor Contact Details

Lecturer-in-charge: Jiyu Zhu

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Office location: Huajiachi Campus, Zhejiang University, Hangzhou, China

Consultation Time: Book appointment by sending email to: wlwyxy\_29@zju.edu.cn

#### Teaching Times, Modes and Locations

Course Duration: 23 Dec 2024 to 10 Jan 2025

Modes: Online/Face-to-face

Location: Anywhere via online, or Huajiachi Campus, Zhejiang University via face-to-face

#### Academic Level

Undergraduate

#### Credit Points:

The course is worth 6 units of credit point.

#### Credit Hours

The number of credit hours of this course equals to the credits of a standard semester-long course.

#### Contact Hours

The course contains a total of 53 contact hours, which consists of orientation, lectures, seminars, quiz, discussion, research, case study, small tests, assignments, on-site field trip(s), in-class and after-class activities, revision, self-study, and final exam. Students will receive an official transcript which is issued by Zhejiang University when completing this course.

#### Enrolment Requirements

Eligibility requires enrollment in an overseas university as an undergraduate or postgraduate student, proficiency in English, and pre-approval from the student's home institution.

### Course Description:

This course introduces students to financial derivatives through both theoretical and practically applicable knowledge. It will be focusing on how derivatives are used in managing financial risks. Derivative securities covered in this unit will be including options, futures, forwards, and swaps. It will be looking into basic pricing principles that are largely relevant to derivatives in the financial markets for the theoretical component of the course. For practical knowledge, students will investigate the different types of derivative contracts and valuation techniques used in the industry today. Students will be well equipped with both analytical and problem-solving skills through interactive classes which prepare them for contemporary workplace issues. They will be able to obtain the knowledge and skills necessary for effectively resolving genuine problems in the industry.

### Prerequisite:

Prior knowledge in fundamental Finance is required for taking this course.

### Learning Resources

- Chance, D and Brooks, R., Introduction to Derivatives and Risk Management, 10th Edition, Cengage Learning, 2014

### Learning Objectives

By the end of this course, you should be able to:

- Identify the most common derivatives and apply the fundamental principles of derivatives pricing in different contexts.
- Develop an understanding of the economic intuition underlying option pricing.
- Outline the correct derivatives used for hedging the different types of risks.
- Understand and evaluate the shortcomings of hedging as well as the general health of the financial markets.
- Describe the adverse consequences of financial derivatives and how it can be exploited by unscrupulous individuals.

### Course Delivery:

- Online Lecture mode includes lectures, seminars, quiz, discussion, research,

case study, small tests, assignments, online field trip(s), in-class activities, revision, and final exam.

- Face-to-face Lecture mode includes lectures, seminars, quiz, discussion, research, case study, small tests, assignments, on-site field trip(s), in-class and after-class activities, revision, and final exam.

The following course will be taught in English. There will also be guest speakers and optional field trips available for students who would like to enhance their learning experience. All courses and other sessions will be run during weekdays.

Topics and Course Schedule:

WK	Topic	Activities
1	Orientation	
1	Introduction to Derivatives An overview of on derivatives Origins and development, Types of derivatives	Lecture; Tutorial
1	Derivative Markets Introductions and revolution of derivative markets, Structure of derivative markets	Lecture; Tutorial
1	Options Pricing	Lecture; Tutorial
1	The Binomial model Hedge portfolio Overpriced call Underpriced call	Lecture; Tutorial
2	Options Pricing Model	Lecture; Tutorial
2	Seminar	
2	Key terms: Stock transactions, Call option transactions Put option transactions Calls and stock	Lecture; Tutorial
2	Advanced Option Strategies: The modified butterfly & Key criteria to consider	Lecture; Tutorial
2	Seminar	
2	Principles of Pricing	Lecture; Tutorial
3	Key differences Settlement of contracts Speculation and hedging	Lecture; Tutorial
3	Options on Futures	Lecture; Tutorial
3	Exploiting pricing inefficiencies Riskless profits	Lecture; Tutorial
3	Importance of hedging Short hedge and long hedge	Lecture; Tutorial

	Hedging strategies	
3	Revision	
3	Final exam	

Assessments:

Class participation	15%
In-class Test	15%
Assignments	20%
Final exam	50%

Grade Descriptors:

HD	High Distinction	85-100
D	Distinction	75-84
Cr	Credit	65-74
P	Pass	50-64
F	Fail	0-49

**High Distinction 85-100**

- Treatment of material evidences an advanced synthesis of ideas Demonstration of initiative, complex understanding, and analysis.
- Work is well-written and stylistically sophisticated, including appropriate referencing, clarity, and some creativity where appropriate.
- All criteria addressed to a high level.

**Distinction 75-84**

- Treatment of material evidences an advanced understanding of ideas Demonstration of initiative, complex understanding and analysis Work is well-written and stylistically strong.
- All criteria addressed strongly.

**Credit 65-74**

- Treatment of material displays a good understanding of ideas.
- Work is well-written and stylistically sound, with a minimum of syntactical errors.
- All criteria addressed clearly.

**Pass 50-64**

- Treatment of material indicates a satisfactory understanding of ideas Work is adequately written, with some syntactical errors.
- Most criteria addressed adequately.

**Fail 0-49**

- Treatment of ideas indicates an inadequate understanding of ideas Written style inappropriate to task, major problems with expression.
- Most criteria not clearly or adequately addressed.

### Academic Integrity

Students are expected to uphold the university's academic honesty principles which are an integral part of the university's core values and principles. If a student fails to observe the acceptable standards of academic honesty, they could attract penalties and even disqualification from the course in more serious circumstances. Students are responsible for knowing and observing accepted principles of research, writing and any other task which they are required to complete.

Academic dishonesty or cheating includes acts of plagiarism, misrepresentation, fabrication, failure to reference materials used properly and forgery. These may include, but are not limited to: claiming the work of others as your own, deliberately applying false and inaccurate information, copying the work of others in part or whole, allowing others in the course to copy your work in part or whole, failing to appropriately acknowledge the work of other scholars/authors through acceptable referencing standards, purchasing papers or writing papers for other students and submitting the same paper twice for the same subject.

This Academic Integrity policy applies to all students of the Zhejiang University in all programs of study, including non-graduating students. It is to reinforce the University's commitment to maintain integrity and honesty in all academic activities of the University community.

### Policy

The foundation of good academic work is honesty. Maintaining academic integrity upholds the standards of the University. The responsibility for maintaining integrity in all the activities of the academic community lies with the students as well as the faculty and the University. Everyone in this community must work together to ensure that the values of truth, trust and justice are upheld.

Academic dishonesty affects the University's reputation and devalues the degrees offered. The University will impose serious penalties on students who are found to have violated this policy. The following penalties may be imposed:

- ✓ Expulsion
- ✓ Suspension
- ✓ Zero mark /fail grade
- ✓ Marking down
- ✓ Re-doing/re-submitting of assignments or reports, and
- ✓ Verbal or written warning.