

**FINANCE 4250**  
**CRN: 13186**  
**FINANCIAL DERIVATIVES**  
**Winter 2018**

**Class Meetings**

Lecture: 6:30 PM – 9:20 PM, R, (January 4<sup>th</sup> – April 19<sup>th</sup>)

**Room:** **Mathematics and Science Center 384**

**Instructor**

Dr. Ranadeb Chaudhuri

Office: 320 Elliott Hall

Office Hours: Wednesday and Thursday 1:30 PM - 2:30 PM and by appointment

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**Reading Material**

1. John C. Hull – Options, Futures, and Other Derivatives, 9<sup>th</sup> edition, Prentice Hall ISBN-10: 0133456315

**Course Material:**

I will post PowerPoint slides, assignments, solutions to assignments, and tests on Moodle. Please check it regularly for any announcements. Once an announcement is posted on Moodle, I will assume that all students are aware of it.

**Course Purpose and Objectives**

This course will introduce students to derivatives such as forwards, futures, swaps, and options. Students will learn the main features of the most commonly used financial derivatives and will understand how to use them to achieve various hedging and speculating objectives. Students will also be introduced to various frameworks for pricing derivatives, and study several applications of derivative-pricing techniques outside derivative markets.

**Grading Policy:** Course grade will be based on the following components:

1 Midterm exam	20 %
1 Final exam	20 %
5 Assignments	50 % (10 % each)
Class Participation	<u>10 %</u>
<b>Total</b>	<b>100 %</b>

Your final course grade will be converted to the official Oakland University's 32 point grading scale using the following cutoffs. No grades will be awarded for individual components.

Grading Scale							
Considered "A"s		Considered "B"s		Considered "C"s		Considered "D"s	
4.0	100% - 99	3.5	89 - 87	2.9	77 - 77	1.9	67 - 67
3.9	98 - 97	3.4	86 - 85	2.8	76 - 76	1.8	66 - 66
3.8	96 - 95	3.3	84 - 83	2.7	75 - 75	1.7	65 - 65
3.7	94 - 93	3.2	82 - 80	2.6	74 - 74	1.6	64 - 64
3.6	92 - 90	3.1	79 - 79	2.5	73 - 73	1.5	63 - 63
		3.0	78 - 78	2.4	72 - 72	1.4	62 - 62
				2.3	71 - 71	1.3	61 - 61
				2.2	70 - 70	1.2	60 - 59
				2.1	69 - 69	1.1	58 - 57
				2.0	68 - 68	1.0	56 - 55

### Additional information about exams and assignments:

1. Exams and assignments are problem-oriented but will also include some theoretical questions to ensure students understand the conceptual material. The exams and quizzes are non-comprehensive, although some material are pervasive to the course and may subsequently, or at least tangentially, be involved in each exam.
2. All Exams are closed book but a calculator may be used for all exams.
3. You will be allowed one page of note sheet (letter size paper, both sides for the exams. **The note sheet must not contain any solved example or problem. Any violation would result in a zero grade for that particular exam.** You may also bring a calculator manual, if you need one, to the examinations.
4. Since the exam dates are specified in advance, any unexcused absence will be graded as a failure. If there is a time conflict, please talk to the instructor and reschedule in advance.
5. **There will be five assignments in total.** You will get at least one week to work on the assignment. Preparing assignments in a group often leads to a better understanding of the material than when the assignments are submitted individually. For this reason, assignments may be submitted in groups of three or four students. If you choose to complete the assignments by hand, please do so neatly. You must show all necessary working to receive full credit. **Finally, please ensure that you staple all your pages together before you turn in the assignment.**

### Important Dates:

March 1 <sup>st</sup> :	Midterm Exam (6:30PM – 8:30PM)
February 22 <sup>nd</sup> :	Winter Recess (No Class)
March 29 <sup>th</sup> :	No Class (Tentative)
April 19 <sup>th</sup> :	Final Exam (7:00PM – 9:00PM)

**Academic Honesty:** All students are expected to practice and uphold standards of academic honesty and integrity. Any alleged academic conduct violation will be reported to the Dean of Students Office. A final grade of 0.0 may be given to any student who is found guilty of academic misconduct by the Academic Conduct Committee.

### **TENTATIVE COVERAGE**

Topic No.	Topic	Chapter
1	Introduction	1
2	Mechanics of Futures Markets	2
3	Hedging Strategies using Futures	3
4	Determination of Forward and Futures Prices	4, 5
5	Mechanics of Options Markets	10
6	Properties of Stock Options	11, 12
7	Introduction to Binomial Trees	13
8	The Black-Scholes Model and Implied Volatilities	15, 20, 26
9	Interest Rate Swaps	7
10	Securitization and the Credit Crisis of 2007	8
11	Credit Derivatives	25