

Seattle University
Albers School of Business and Economics

Course	Valuation of Derivatives FINC-5105-01
Professor	Dr. Cathy Xuying Cao, CFA
Term/ Format	2020 Winter Asynchronous Online Class on Canvas
Office Hours	Tuesday 4:30 pm-5:30 pm (Except for Exam Weeks)

Professor's Contact Information

Email Address caoc@seattleu.edu

Q&A Sessions **Tuesday 4:30 pm-5:30 pm**

Zoom Meeting

Other Information *This class will be held asynchronously online.* If you have technology needs, please feel free to contact library@seattleu.edu.

I strongly urge you to use email to contact me. I will check my email daily on weekdays and occasionally on weekends.

Also, please feel free to post your questions on Canvas Discussions. I will create a Discussion Board for each topic. Your questions posted on Discussions will be beneficial to other students.

General Course Information

Pre-requisites, Co-requisites, & other restrictions

You must have successfully completed FINC5100. You are expected to know simple algebra and some basic concepts of calculus. The text chosen has provided in depth coverage of the mathematical approach to the problems studied in chapter appendices. Those who are more comfortable with the technical approach can feel free to expand their knowledge through this avenue.

Course Description

This course examines derivatives, which are securities whose values derive from (or are contingent on) the price of some underlying asset. The specific types of derivative securities that we examine include forward and futures contracts, and options. We will learn how to value these securities and how to use them for risk management purposes. A central theme in our discussions on valuation is that there should be no opportunities for riskless arbitrage in a well-functioning market. We will learn the mechanics of futures and options trading and will implement trading strategies to mitigate various types of risk.

The course will be a blend of online lecture, class participation via discussion boards, quizzes, and exams.

Learning Outcomes

On successful completion of this course, you will be able to reach all three learning outcomes of Seattle University Master of Science in Finance (MSF).

- Quantify the relation between risk and return and apply it in value-maximizing financial activities of individuals and corporations (in global, ethical context).
- Choose and be proficient in applying financial tools and analytical methods to improve financial decision-making.

- Effectively communicate and justify, in both written and oral form, results and recommendations of financial analysis to audiences having varying degrees of financial sophistication.

Required Texts & Materials

Teaching materials are drawn from several books, newspapers, and periodicals. There are assigned readings for each week.

Textbook: *John C. Hull, Fundamentals of Futures and Options Markets*, (Pearson Prentice Hall, **Nine Edition**).

Note: The **CD** coming with the Textbook is **NOT** required.

Suggested Texts, Readings, & Materials

Calculator: You will need a calculator with the following functions: y^x , $1/x$, e^x , and \ln . A good business calculator (or a cheap scientific calculator) will have these functions.

Suggested Readings/ News Media: *Wall Street Journal and CNBC*

Assignments & Academic Calendar

This agenda is subject to change. The exact schedule of lectures and content of exams will depend on the flow of the course.

The course contents and timelines are subject to change at the discretion of the Professor.

Tentative Class Schedule

Date	In-class Activity	Textbook Chapters
Week 1	Course Introduction Forwards and Futures Markets	Chapter 1 (1.1-1.4, 1.7, 1.8-Hedging Using Forward Contracts, 1.9-Speculation Using Futures, 1.10, 1.11) Chapter 2
Week 2	Pricing Forwards and Futures	Chapter 4 (4.3 – 4.4) Chapter 5
Week 3	Pricing Forwards and Futures (Continued)	Chapter 5
Week 4	Futures Hedging Strategies	Chapter 3 (3.1-3.3, 3.4- Calculating the minimum Variance Hedge Ratio, Optimal Number of Contracts), 3.5
Week 5	Exam Review & Midterm Exam	Everything covered sofar
Week 6	Option Specifications and Properties	Chapter 1 (1.5, 1.6) Chapter 9 (9.1-9.4) Chapter 10
Week 7	Basic Option Strategies	Chapter 11 (11.2-11.4)
Week 8	Pricing Relationships—Binomial Model	Chapter 12 (12.1-12.8) Chapter 18 (18.6)
Week 9	Pricing Relationships—Black-Scholes- Merton Model Hedging with Options	Chapter 13 Chapter 17 (17.4-17.9)
Week 10	Swaps	Chapter 4 (4.6) Chapter 7 (7.1-7.5 Valuation of InterestRate Swaps)
Final Exam Week	Exam Review Final Exam	Everything aftermidterm

Course Policies

Grading

Grading will be based on a combination of the following:

Class Participation	3%
Practice Quizzes	20%
Two Exams	77%
Midterm Exam	37%
Non-cumulative Final Exam	37%
Exam with highest grade	3%
Total	100%

Grades will be assigned based on the overall section performance, adjusted for overall section performance. It is expected that the median grade in this course will be a B.

Your course grade depends on the distribution of the weighted average scores. Normally, a weighted average score of 95 or above is an A, 90 and above is A-, between 80-89 is (B+, B, B-), 65-79 is (C+, C, C-). The actual demarcation line for each letter grade depends on the actual distribution of all weighted average scores. If the distribution warrants, plus or minus grades may not be given.

Practice Quizzes

Practice quizzes will be given for each online lecture. The practice quiz is **graded**. Please be aware of the due date. **There is no make-up for any missing quiz.**

To prepare you for the online practice quizzes, I will **partially disclose** the practice quiz questions (a WORD document posted) with each lecture. The disclosed questions are mainly **problem-solving questions**.

Once you are ready, you can log onto the quiz page to take the quizzes.

There is no time limits for the practice quiz. You have three attempts.

The format of practice quiz includes 1) True and False Questions; 2) Multiple Choices Questions; and 3) Fill-in-the-blank Questions.

Most fill-in-blank questions are based largely on the disclosed problem-solving questions. For Fill-in-blank questions, the online quiz grading is sensitive to the formats of your inputs, such as the number of decimals, the upper-case or lower case of letters, the subscripts or superscripts, and so on. To avoid false grading, **please strictly follow the format requirements for fill-in-blank questions.**

There is no make-up for missing or late practice quizzes.

Midterm and Final Exam

Both exams are online exams. Each exam has limited time to complete.

The format of each exam includes 1) True and False Questions; 2) Multiple Choices Questions; and 3) Fill-in-the-blank Questions.

The level of difficulty of the computational problems in exams is similar to those of the end-of-chapter problems, lecture examples, worksheet questions, and practice quiz questions. **Please do all your own work.** You will learn more, and the alternative is not worth the risk.

Makeup exams will not be given except in a dire emergency with a proof and only if I am notified prior to the scheduled exam time.

Grades are not negotiable and will only be changed in case of a math or grading error on the instructor's part or Canvas online grading system.

Suggested After- chapter Problems

I will assign after-chapter problems from the textbook. You do not need to submit the suggested after-chapter problems.

Online Class Participation and Discussion Etiquette

*****Important!**

Each student is expected to actively participate throughout the week in order to promote a meaningful and engaging learning experience. I will initialize a discussion for each topic (on average, every week). **The discussion question may be included in the exams.**

In order to earn full credit for an online threaded discussion, you need to make at least two (2) posts per discussion thread. You could 1) initialize a post to ask questions; 2) respond to my discussion questions; or 3) respond to an existing post.

When posting on the Discussion Board, please follow the policy:

- Make posts that are on topic and within the scope of the course material.
- Take your posts seriously, and review and edit your posts before sending.
- Be as brief as possible while still making a thorough comment, including your claim, evidence, and concise analysis.
- Always reference or quote the source that you cite.
- Be sure to read all messages in a thread before replying or asking a question. Please do not repeat a similar question asked before.
- Please do not repeat someone else's post comment without adding something of your own to it.
- Avoid short, generic replies such as, "I agree." You should include why you agree or add to the previous point (such as claim, evidence, and concise analysis).
- Always be respectful of others' opinions even when they differ from your own.
- When you disagree with someone, you should express your differing opinion in a respectful and non-critical way.
- Please do not make personal or offensive remarks.
- Be open-minded.

Canvas: Delivery of Course Materials

This class will be held asynchronously online. Always check the Canvas page for class announcements and course information. This site will include online lectures, assignments (with due dates), class discussions, and exams.

If a file or link is not operational, let me know via email ASAP so I can correct the link. If you have any other problems using Canvas, contact the Seattle University technology help desk.

If you have technology needs, please feel free to contact library@seattleu.edu .

Academic Resources & Academic Integrity

- Library and Learning Commons ([Seattle University Learning Commons](#)) (This includes: Learning Assistance Programs, Research [Library] Services, Writing Center, Math Lab)

- Academic Integrity Tutorial (found on Canvas and SU Online)

- Seattle University is committed to the principle that academic honesty and integrity are important values in the educational process. Academic dishonesty in any form is a serious offense against the academic community. Acts of academic dishonesty will be addressed according to the Seattle University Academic Honesty Policy.

I expect from you a high level of responsibility and academic honesty. This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Notice for students concerning Disabilities

If you have, or think you may have, a disability (including an ‘invisible disability’ such as a learning disability, a chronic health problem, or a mental health condition) that interferes with your performance as a student in this class, you are encouraged to arrange support services and/or accommodations through Disabilities Services staff located in **Loyola 100,**

(206) 296-5740. Disability-based adjustments to course expectations can be arranged only through this process.

Notice Regarding Religious Accommodations

It is the policy of Seattle University to reasonably accommodate students who, due to the observance of religious holidays, expect to be absent or endure a significant hardship during certain days of their academic course or program. Please see, *Policy on Religious Accommodations for Students* ([Seattle University Policy on Religious Accommodations](#).)”

Office of Institutional Equity

Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in educational programs or activities that receive Federal financial assistance. This prohibition includes sexual misconduct, which encompasses sexual harassment and sexual violence. Seattle U remains committed to providing a safe and equitable learning, living, and working environment. Seattle U offers emergency, medical, and other support resources, as well as assistance with safety and support measures, to community members who have experienced or been impacted by sexual misconduct.

Seattle U requires all faculty and staff to notify the University's Title IX Coordinator if they become aware of any incident of sexual misconduct experienced by a student.

For more information, please visit [Seattle University Institutional Equity](#). If you have any questions or concerns, you may also directly contact the Title IX Coordinator in the Office of Institutional Equity

(**email:** oi@seattleu.edu; **phone:** 206.296.2824) University Resources and Policies.

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These descriptions and timelines are subject to change at the discretion of the Professor.