

FIN 3521/FIN 6521 – Derivatives¹

SYLLABUS

Spring 2022

ABOUT THE INSTRUCTOR:

Instructor: Hainan Sheng, Ph.D., CFA	Class Dates: 01/18/2022 - 5/10/2022
Virtual office hours via Zoom: Fri. 11:00 a.m.– 12:00 p.m. & by appointment	Classroom: Online UMSL Canvas
Office: 227 Anheuser-Busch Hall	E-mail: hainan.sheng@umsl.edu

COURSE DESCRIPTION & OBJECTIVE:

This is a comprehensive course in derivative financial instruments, such as forwards, futures, and options. It expands upon the basic understanding of derivatives gained in the fundamental finance courses to include pricing models and risk management techniques. The course introduces both the theory and the application of derivatives markets and their uses in portfolio allocation and risk management. Topics include option valuation models, principles of forward and futures pricing, and strategies for hedging and arbitrage.

Derivatives are financial tools used extensively by hedge funds, mutual funds, firms, institutional investors and experienced individual investors. The subject matter requires relatively greater use of quantitative methods and theoretical reasoning than many other business courses, and some students may find it challenging. However, in this course the math requirement will be kept to the minimum. The goals are to understand the characteristics of various derivatives, to take a look at the “black box” to understand the pros and cons of various models that are widely used, and to gain some experience in applying these instruments and models for valuation, risk management, and financial engineering.

LEARNING OUTCOME FOR UNDERGRADUATE STUDENTS:

After successfully completing the entire course requirements, students should be able to:

- Demonstrate a basic understanding of the uses of financial engineering and risk management approaches and techniques used by modern organizations
- Understand the meaning of the various financial derivative securities and explain their differences
- Be familiar with risk-return characteristics of the various types of derivative securities
- Develop a sound conceptual understanding of the quantitative approach to valuing derivative securities
- Have the basic skills to perform derivative security analysis and valuation

LEARNING OUTCOME FOR GRADUATE STUDENTS:

In addition to learning outcomes listed above, graduate students are further expected to be able to:

¹ Disclaimer: circumstances may occur during the semester that may require changes to this syllabus. Students are responsible for any changes announced during class or email.

- Construct models for pricing of financial derivatives
- Make informed judgements on the use of derivative instruments for hedging and/or speculative purposes
- Apply their knowledge of derivatives in solving problems involving financial risks including foreign exchange risk, interest rate risk, credit risk and portfolio risks
- Analyze the derivatives embedded in structured products
- Design arbitrage strategies based on derivatives securities

TIME REQUIREMENTS:

This is a 3-credit hour active online course. Students should expect to work approximately 3 hours per week for every course credit hour. That means that students need to plan to spend 9 hours every week on activities related to this course (such as watching videos, reading required materials, et al.) If you are worried about your preparedness, consider taking the [Online Readiness Survey](#) to help decide if an online course is right for you.

TECHNOLOGY REQUIREMENTS:

Students are expected to have reliable internet throughout the semester. Problems with your computer or other technology issues are not an excuse for delays in meeting expectations and missed deadlines for the course. If you have a problem, [get help in solving it immediately](#). At a minimum, you will need the following software/hardware to participate in this course:

- Computer with an updated operating system (e.g. Windows, Mac, Linux)
- Updated Internet browsers ([Apple Safari](#), [Internet Explorer](#), [Google Chrome](#), [Mozilla Firefox](#))
- Ability to navigate UMSL Canvas (Learning Management System)
- Minimum Processor Speed of 1 GHz or higher recommended.
- DSL or Cable Internet connection or a connection speed no less than [6 Mbps](#).
- Media player such as [VLC Media Player](#).
- [Adobe Flash player \(free\)](#)
- [Adobe Reader or alternative PDF reader \(free\)](#)
- A webcam and/or microphone is recommended.

If this is your first online course, it is recommended that you log into Canvas and complete the [Online Course Overview](#) listed in your Canvas course list. If you've already completed the orientation, you do not have to retake it but you can refer to it for helpful videos and tutorials about the technologies used in this course.

TEXTBOOKS, READINGS, AND OTHER RECOMMENDATIONS:

- Textbook: *Introduction to Derivatives and Risk Management* (10th edition), by Don M. Chance, and Roberts Brooks. ISBN-13: 978-1305104969; ISBN-10: 130510496X.
- Optional Supplemental Materials: Chartered Financial Analyst (CFA) exam curriculum regarding derivatives
- Recommended Financial Calculator: [Texas Instruments BAI Plus](#) (this is the one that instructor will be using).

ELECTRONIC MATERIALS:

UMSL Canvas will be used for posting course materials such as syllabus, lecture videos, exercises, and other information about the course as needed.

COMMUNICATION:

UMSL Canvas and/or your UMSL email address will be used for all course correspondence. If you email me, please indicate somewhere that your question/problem pertains to FIN 3521/FIN 6521 or Derivatives. I will commit to respond within 24 hours to all email messages.

COURSE REQUIREMENTS:

- Quizzes

Over the course of the semester, a number of quizzes will be administered via UMSL Canvas. These quizzes will mainly focus on materials covered in the previous modules including the required reading materials.² Detailed instruction will be provided in the first week of class.

No make-up quiz will be given under any circumstance. No consideration will be given for students who cannot complete the quizzes prior to the deadline, including technology problems. Late submissions will receive a 50% automatic deduction, and any submission that is more than 24 hours late will not be accepted.

It is expected that students understand the technology requirements for the course and minimum laptop/desktop computer requirements for accessing the Canvas, including access to an internet connection.

GRADING POLICY:

Your final course grade will be determined according to the following weights:

+ Quiz 1	15 points
+ Quiz 2	35 points
+ Quiz 3	35 points
+ Quiz 4	35 points
+ Quiz 5	35 points
+ Quiz 6	20 points
+ Quiz 7	25 points
Total	200 points

While specific points available and grade cut-offs will be determined as the semester progresses, allocated letter grades will comport to the following framework:

² Disclaimer: circumstances may occur during the semester that may require changes to the quiz deadline. Students are responsible for any changes announced via Canvas or email.

186 points	<=	A	
180 points	<=	A-	< 186 points
174 points	<=	B+	< 180 points
166 points	<=	B	< 174 points
160 points	<=	B-	< 166 points
154 points	<=	C+	< 160 points
146 points	<=	C	< 154 points
140 points	<=	C-	< 146 points
134 points	<=	D+	< 140 points
126 points	<=	D	< 134 points
120 points	<=	D-	< 126 points
		F	< 120 points

CHECKING YOUR GRADES

Take charge of your education! Be an active learner and dedicate yourself to your success. Keep an eye on your grades on *Canvas* every week. If there is a discrepancy, e-mail me and put it in writing. Be sure to read the latest announcements on grading and opportunities for improvement.

CANVAS MESSAGE SETUP

Please update your Canvas notification settings to receive the following types of communications by email. Have a green check mark next to the following Notification Preferences:

<https://umsl.instructure.com/profile/communication>

- Announcement
- Added to Conversation
- Conversation Message
- Conversation Message by Me

ATTENDANCE, PARTICIPATION, AND CLASS PROTOCOL:

Online classroom participation is expected and encouraged. Students are expected to review the materials, read the assigned chapters, and attempt the problem(s) that are given. Students should watch the entire assigned lecture videos on time and be attentive/respectful to both the instructor and their fellow students.

ACADEMIC DISHONESTY:

The level of integrity consistent with University policy is expected. The attempt of students to present as their own any work not honestly performed is regarded by the faculty as a most serious offense. Any student turning in work represented as his or her own work, that turns out to be otherwise, will be given an “F” in the course. If you have a question about an assignment, do not hesitate to contact me for clarification. You are responsible for being attentive to and observant of University policies about academic honesty as stated in the [University's Campus Policies](#) and [Code of Student Conduct](#) found in the UMSL Bulletin.

ACCESS, DISABILITY, AND COMMUNICATION:

Your academic success is important. If you have a documented disability that may have an impact upon your work in this class, please contact Disability Access Services (DAS) immediately. Students must provide documentation of their disability to the office of Disability Access Services in order to receive official University services and accommodations. The staff is available to answer questions regarding accommodations or assist you in your pursuit of accommodations. Information about your disability is confidential. Once DAS reviews your medical documentation, they will provide you with the information and steps to inform me about the accommodations to which you are entitled. Your accommodations will begin as soon as we discuss your approved accommodations.

- 144 Millennium Student Center (MSC)
- Phone: (314) 516-6554
- Email: Tara Cramer, cramert@umsl.edu
- Website: <http://www.umsl.edu/services/disability/>

TECHNICAL SUPPORT:

- Online Mentor Program
Online education requires different teaching, learning, and technology skills than those found in traditional face-to-face classes. We assist students with the online technology in Canvas and provide resources for studying and success in online classes.
 - 598 Lucas Hall
 - Phone: (314) 516-4211
 - Email: onlinementor@umsl.edu
 - Website: <http://www.umsl.edu/services/ctl/studentsupport/omp.html>
- Canvas
If you have problems logging into your online course, or an issue within the course site, please contact the Technology Support Center:
 - Phone: (314) 516-6034
 - Email: helpdesk@umsl.edu
 - Website: <http://www.umsl.edu/technology/tsc/>

If you are having difficulty with a technology tool in Canvas, consider visiting the [Canvas Student Guides](#), which has overviews of each tool and tutorials on how to use them.

If you continue to experience problems or just have questions, you can also contact the Learning Resource Lab:

- Phone: (314) 516-6704
- Email: lr@umsl.edu
- Website: <http://www.umsl.edu/technology/lrl/>

CLASS BEHAVIOR

- Meaningful and constructive dialogue is encouraged in this class and requires a degree of mutual respect, willingness to listen, and tolerance of opposing points of view. Respect for individual

differences and alternative viewpoints will be maintained at all times in this class. One's words and use of language should be tempered and within acceptable bounds of civility and decency.

NETTIQUETTE OF ONLINE COMMUNICATION:

- Maintain a positive tone;
- Use appropriate grammar and structure;
- Avoid personal attacks and flames;
- Avoid offensive language; be respect.