The Cameron School of Business at University of St. Thomas

1. Course Information

Course Title: Futures, Swaps and Options
Course number: 5341
Course Section: Regular
Credit: Hours: 3
Semester: Fall 2016
Prerequisites: FINA 5318, FINA 5319
Room #: Robertson 213
Days & hours: MoWe 5:30 - 6:45 pm

2. Instructor Information

Name: Dr. Yiying Cheng  Office location: Welder 206
Office phone: (713)525-2108
Office hours: Mon and Wed 3:00 -5:30 pm, Fri 2:00-4:00pm or by appointment
E-mail: chengy@stthom.edu
Fax number:  (713) 525–2110

3. Course Catalog Description

The purpose of this course is to introduce the student to financial derivatives, including options, swaps, futures and forward contracts and explain how they are used to transfer financial risk from risk-averse hedgers to speculators who are willing to accept this risk. Topics include hedging and trading strategies, portfolio insurance, and the valuation of financial derivatives, including the binomial model and the Black-Sholes model. Prerequisite: FINA 5319.

4. Program Goals and Objectives:

The Master of Science in Finance program has six goals.

When students complete the MSF degree at the University of St. Thomas:

1. Core of Finance Knowledge
   MSF graduates will be knowledgeable in the critical areas in the field of Finance.
   Graduates will:
   
   o demonstrate competency in the key fields of Corporate Finance, Investments, Banking and Financial Institutions, Risk Management, and
International Finance when they apply the knowledge in the required courses to solve Finance problems.

2. Analytical and Critical Thinking Skills
MSF graduates will be analytical and critical thinkers. Graduates will:
   o demonstrate skills in analyzing financial reports
   o identify and evaluate complex financial problems by integrating the skills learned in the core Finance area.

3. Value System
MSF graduates will anchor financial aspects of business activities in ethics and human values. Graduates will be able to:
   o identify and apply principles of ethical leadership and accountability as applicable to the financial aspects of business decisions
   o assess workplace behaviors and financial aspects of business decisions in terms of human values, ethical norms, and societal impact.

4. Global Awareness
MSF graduates will be aware of global influences on financial decision-making. Graduates will be able to:
   o demonstrate a knowledge of global financial and foreign exchange markets.
   o identify the impact of global financial changes on multinational enterprises.

5. Communication Skills
MSF graduates will be effective communicators. Graduates will be able to:
   o prepare written reports on financial issues.
   o deliver effective presentations on financial issues.

5. Course Learning Objectives (and relationship to program goals and objectives)

Upon finishing the course I expect that you can:
- Know how futures are used for hedging risks (Goal 1)
- Show how futures prices are determined (Goal 2)
- Have basic understanding of interest rate and interest rate futures (Goal 4)
- Show the price bounds on options (Goal 2)
- Understand when to use what strategies to trade options (Goal 2)
- Talk about swaps and CDS and how their prices are determined (Goal 5)
- Price options using binomial tree and Black-Scholes model (Goal 1)
- Discuss about 2007 credit crisis (Goal 3)
- Present your analysis in a presentation or a written paper (Goal 5)
6. Texts, Readings, Materials

Required text citation: Options, Futures and Other Derivatives, 9th ed. By John C. Hull

Supplementary readings:
Wall Street Journal
Other material posted on Blackboard

7. Instructional methods:

- Lecture, Q&A
- Group discussion/Problem solving
- Peer review/critic
- You are also encouraged to use Bb discussion so that peer students and I can add to the discussion any time.

8. Technology

1) BlackBoard: Announcements will be posted on BlackBoard as well as be conveyed in class. Any material that has an electronic version will be posted on BlackBoard for your convenience. Please understand that Notes will NOT be posted. You are required to take your own notes in class and check with peer students or me if you miss any point.

2) Deriva-Gem: We will discuss topics using Deriva-Gem (the software that comes with the textbook) with Microsoft Excel. Some optional group project may use Deriva-Gem as well.
### 9. Course Tentative Schedule:

#### Course Calendar/Schedule

<table>
<thead>
<tr>
<th>Assignments of topics, exams</th>
<th>Dates</th>
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<tbody>
<tr>
<td>Chap 1,2 - Introduction, Mechanics of Futures Markets</td>
<td>8/22, 8/24</td>
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<tr>
<td>Chap 3 –Hedging Strategies Using Futures</td>
<td>8/29, 8/31</td>
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<td>Chap 4 – Continuous Compounding interest rate and FRA</td>
<td>9/7, 9/12</td>
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<tr>
<td>Chap 5 -- Determination of Forward and Futures Prices</td>
<td>9/14, 9/19</td>
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<tr>
<td>Review 1</td>
<td>9/21</td>
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<tr>
<td>Midterm exam 1</td>
<td>9/26</td>
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<tr>
<td>Chap 10 -- Mechanics of Options Markets</td>
<td>9/28, 10/3</td>
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<td>Chap 11 -- Properties of stock options</td>
<td>10/5, 10/12, 10/17</td>
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<tr>
<td>Chap 12 -- Trading Strategies Involving Options</td>
<td>10/19(conf), 10/24, 10/26</td>
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<tr>
<td>Chap 13 – Intro to Binomial Trees</td>
<td>10/31, 11/2, 11/7</td>
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<tr>
<td>Review 2</td>
<td>11/9</td>
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<tr>
<td>Midterm exam 2</td>
<td>11/14</td>
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<tr>
<td>Chap 15 -- Application of Black-Scholes model</td>
<td>11/16</td>
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<tr>
<td>Chap 14, 19 – Black-Scholes assumptions and The Greek Letters</td>
<td>11/21</td>
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<tr>
<td>Chap 7 – Swaps and CDS</td>
<td>11/28, 11/30</td>
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<tr>
<td>Chap 8 2007 Financial Crisis</td>
<td>Online, substitute for conf date</td>
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<tr>
<td>Final Review</td>
<td>12/5</td>
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<tr>
<td>Final Exam</td>
<td>Wed 12/7: 4:30 –7:00 pm</td>
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The above schedule is tentative is subject to change in the event of circumstances beyond the instructor's control. "

### 10. Course Policies

1) **Pre-class readings**
   Although the textbook is good reference for review and studying, many students reflect that it is hard to understand without first learning the material in class. To promote in-class understanding and discussion, I highly suggest that you preview the relevant textbook material **with a goal to get whatever that made sense to**
Namely, please do not get stuck reading the book for hours, since it leads to procrastination.

1) **Open feedback**
To better my teaching, I require that you please give me feedback by email or private talk. Please try to avoid open discussion of feedback in the middle of class, as it takes up precious class time.

I may also survey you informally during the semester to see the progress on my teaching goals.

2) **Attendance/lateness**
Attendance is an essential part of class participation, full and prompt attendance is expected for all students. Some class activities are designed specifically for the number of students in class, so please inform me way ahead of time if you expect to miss part of a class. Attendance will be taken in various forms and will count towards part of your semester grade (please see the Student Grading Processes). However, if you miss more than three classes, your semester grade, at my discretion, will be down one letter grade (A- to B-). If you miss six classes, the grade is automatically F.

3) **Class Participation**
Participation is a part of course work designed for this class. You are required to show concentration and full participation in all class activities, including notes taking (yes, you read it right!), discussion, constructive questions and comments, trying to solve problem in class, and presentations.

Note that private discussion or chatting or giggling with your peers are discouraged and will be viewed as destructive for the learning environment. Please respect the class by not doing so.

4) **Make-up Exams**
Make up exams will not be given unless you convince me with hard evidence that the circumstance is inevitable. In this case, I may arrange an alternative test (which is not the same as the original test to be fair) and grade accordingly.

5) **In-class quizzes**
To better your learning and provide feedback besides exams, there will be several quizzes throughout the semester. The quizzes will be graded by your peer students and discussed immediately after. You will have a chance to correct your own quizzes with a red pen. *All properly corrected quizzes* will count as full score. However, students came in later than 5 minute past the beginning of class will not get the quiz.
6) **Assignments**

Assignments will be handed out in class AND posted on Blackboard for later reference. **All assignments will be submitted through Blackboard.** Problems will be discussed in class if time permits, therefore prompt class attendance will help expedite the homework solving.

7) **Cell phones, electronic media**

- During lectures – Please be nice to me and other students by refraining from using ANY electronic media during the class, including cell phones, tablets and so on, except for studying purpose.
- During exams – Cell phones and electronic devises will be kept in your own bag, which will be put at the podium of the classroom.

8) **Plagiarism and Academic Integrity Certificate** is required before submitting any assignment. You must complete the online tutorial, "Plagiarism and Academic Integrity at UST," at [http://www.stthom.edu/libtraining/ustplagiarism/ustplagiarism.htm](http://www.stthom.edu/libtraining/ustplagiarism/ustplagiarism.htm) Read the tutorial carefully and answer all quiz questions. When you have received a passing quiz score (70%), you will be allowed to fill your name in to a certificate of completion. Fill in your complete name, print the certificate, and submit it by the end of semester. Keep this certificate in case instructors from other courses require it. If you do not pass the quiz questions, you will need to retake the tutorial until you do.

9) **Accommodation**

Any student with a documented disability requiring accommodations in this course is encouraged to contact me after class or during office hours. Additionally, students will need to contact the office of Counseling Services for Students with Special Needs (Disability Services) at 713-525-3162 or 6953.

10) **Workshops**

Students are highly recommended to take advantage of the workshops provided and paid for by Cameron School of Business. Workshops are intended to better prepare students for their future career success and are free to all CSB students. The Schedule is published on BlackBoard.

Confirmed workshop attendance will earn 5% extra credit in final exam. This applies to one workshop maximum.

11. **Student Grading Processes:**

There are two exams, frequent in-class homework assignments and one term paper.

Course grading break down:

- HW Assignments 15%
Min (Midterm1, midterm 2, Final Exam) 10%
Max (Midterm1, midterm 2, Final Exam) 30%
Class attendance and participation 15%
Workshop 5% final exam grade

Final grade:  
93-100   A
90-92   A-
87-89   B+
84-86   B
80-83   B-
70-79   C
below 70  F

12. Available Support Services:

- **The Instructor:** Please stop by my office during office hour or email me.
- **Course-Specific Library Resources:** [http://campusguides.stthom.edu/](http://campusguides.stthom.edu/)
- **General Library Resources:** [http://www.stthom.edu/library_research/index.aqf](http://www.stthom.edu/library_research/index.aqf)
- **Learning and Writing Center (LWC):** [www.stthom.edu/tutoring](http://www.stthom.edu/tutoring) ***
- **IT Helpdesk:** Phone: (713) 525-6900 Email: ithelpdesk@stthom.edu

*** Please note that students are encouraged to consult with tutors at the Learning and Writing Center when completing assignments for this course. Based on the instructor's assessment of the student's work, the student may be required to work with the tutors at the Center to improve the student's skills

The Cameron School of Business at University of St. Thomas

**MISSION STATEMENT**

The Cameron School of Business will serve students of diverse backgrounds, providing them the necessary professional skills for a changing global economy, and instilling in them a deep appreciation for ethical behavior as the hallmark of a successful and fulfilling business career. The Cameron School will provide its students a timely and comprehensive business curriculum, with opportunities for specialized study in major business fields. The faculty will provide quality teaching, as this is the core of our mission. As an extension of our teaching mission, the faculty will engage in scholarly activity and service to the University, the profession, and the community.
**Academic Honesty** Ethical conduct is essential to a community of scholars and students searching for truth. Anything less than total commitment to honesty and honorable conduct undermines the efforts of the entire community. Academic integrity lies at the very heart of any institution of higher learning. In the Cameron School of Business, students and faculty are expected to commit to a code that exemplifies each individual's honor and integrity. Any conduct that violates this standard and betrays the respect of others is a matter of grave concern and, accordingly, is deemed unacceptable.

**Accommodations** The University of St. Thomas abides by the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973, which stipulates that no student shall be denied the benefits of an education "solely by reason of a handicap." If you have a documented disability that may impact your performance in this class and for which you may require accommodations, you must be registered with and provide documentation of your disability to Counseling and Disability Services which is located on the second floor of Crooker Center. Contact Debby Jones or Rose Signorello at 713-525-6953 or 713-525-3162.