The Cameron School of Business at University of St. Thomas

1. Course Information
Course Title: Futures, Swaps, and Options
Course number: 5341
Credit hours: 3
Semester: Summer 2017

Course Section: A
Prerequisites: FINA 5318, 5319
Room #: Welder 117
Days & times: MW 5:30 - 9:50pm

2. Instructor Information
Name: Dr. Daniel Perez Liston
Office: Welder 208
Office phone: 713-942-3499
E-mail: drperez@stthom.edu
Office Hours: by appointment, MW before class.

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 5318, 5319.

4. Program Goals
The Master of Science in Finance program has five goals.

Goal 1. Core of Finance Knowledge
   Objective 1. Demonstrate competency in the field by linking core financial knowledge with financial and business environments to draw valid conclusions.
   Objective 2. Demonstrate competency in conducting financial research and analyses.

Goal 2. Analytical and Critical Thinking Skills
   Objective 1. Demonstrate skills in analyzing financial reports.
   Objective 2. Evaluate data thoroughly

Goal 3. Ethical Awareness
   Objective 1. Identify ethical standards and accountability as applicable to the financial regulations and financial aspects of business decisions
   Objective 2. Apply ethical standards and accountability to the financial regulations and financial aspects of business decisions

Goal 4. Global Awareness
   Objective 1. Demonstrate knowledge of dynamic global financial markets
   Objective 2. Develop portfolio strategies of allocating global financial assets

Goal 5. Leadership and Communication Skills
   Objective 1. Graduates will develop and deliver a compelling oral presentation grounded in relevant information and facts.
Objective 2. Graduates will write professional quality documents.
Objective 3. Graduates will foster teamwork and clarify roles and responsibilities.

5. Course Learning Objectives
- The student will recognize futures, swaps, and options. (Goals 1, 2)
- Show how futures prices are determined (Goal 2)
- Have a basic understanding of interest rates and interest rate futures (Goals 1, 2)
- Understand when and how to use option trading strategies (Goal 2)
- Price options using the Black-Scholes model (Goals 1, 2)
- Present your analysis in a presentation or a written paper (Goal 5)

6. Texts, Readings, Materials
Required text:

Required reading: As posted on Blackboard

Supplementary material: Wall Street Journal

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. Use of Technology
- **Online data retrieval and/or research:**
  - Data collection at Bloomberg terminal
- **Online communication or collaboration:**
  - Blackboard
- **Use of general productivity software (e.g., Microsoft Office) to complete assignments:**
  - Excel, Word
- **Use of Blackboard learning platform:**
  - All HW assignments are assigned and submitted through Blackboard

9. Course Tentative Schedule*

<table>
<thead>
<tr>
<th>(Online Class) Syllabus and Chapter 10: The Options Markets</th>
<th>Dates</th>
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</thead>
<tbody>
<tr>
<td>Options markets – American versus European Options - Types of contract - Purposes – Moneyness</td>
<td>5/31 (Online)</td>
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</table>
**Chapter 11: Option Payoffs and Option Strategies**  
Stock and bonds - Buy or sell a call option - Buy or sell a put option - Option combinations and trading strategies

**Chapter 13: European Option Pricing**  
The Black-Scholes Option Pricing Model - Inputs for the B-S model

**Chapter 14: Option Sensitivities and Option Hedging**  
DELTA – THETA – VEGA – RHO – GAMMA – Option sensitivities and option trading strategies

<table>
<thead>
<tr>
<th>Chapter 2: Futures Markets</th>
<th>6/14</th>
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<tr>
<th>Chapter 3: Futures Prices</th>
<th>6/19</th>
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<tbody>
<tr>
<td>Reading futures prices – Basis and spread – Models of futures prices – Role of expectation – Role of risk aversion – Characteristics of futures prices</td>
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<table>
<thead>
<tr>
<th>Chapter 4: Using Futures Markets</th>
<th>6/21</th>
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</thead>
<tbody>
<tr>
<td>Price discovery – speculation- hedging</td>
<td></td>
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</table>

<table>
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<tr>
<th>Chapter 5: Interest Rate Futures: Introduction</th>
<th>6/21</th>
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<tbody>
<tr>
<td>Types of contracts – speculating with interest rate futures - hedging with interest rate futures</td>
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<table>
<thead>
<tr>
<th>Chapter 20: The Swaps Market: Introduction</th>
<th>6/26</th>
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<tr>
<td>Swaps markets – Motivations for swaps – Plain Vanilla interest rate and currency swaps - Beyond the Plain Vanilla</td>
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</table>

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<tr>
<th>FINAL EXAM (Comprehensive)</th>
<th>6/28</th>
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*The above schedule and procedures in this course are subject to change based on the progress we make in class, opportunities for guest speakers or attendance at topical events, and in the event of circumstances beyond the instructor's control. The most up-to-date schedule is the one on Blackboard.

## 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 made sense to you. Namely, please do not get stuck reading the book for hours, since it leads to procrastination.

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 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) Assignments
Assignments will be given throughout the semester. They are designed to help you learn through practice, to deepen your understanding of class material and to help prepare for the exams. Assignments will be assigned on Blackboard, with an email notice specifying the due date. Students MUST submit assignments through Blackboard.

6) Cell phones and 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.

7) Small Tasks for Small Scores (3 Completed Activities = 3% of your grade)
The list of Grovo and other workshops can be found on Blackboard, next to the syllabus
In order to (1) bolster the student’s performance in courses in the business school and (2) better prepare students for their professions and careers after school, each student is required to complete a minimum of three (three hours total) workshops. In doing so, CSB will provide numerous workshops for all students taking CSB courses (the complete list of workshops is available on BB). As can be seen in the list, the workshops are being offered by different academic support services on campus and the workshops on computer applications are being offered through an online provider (www.grovo.com).
- Workshops are being offered during the activity period and in the evening on weekdays in the Fall semester.
- In addition, workshops are being scheduled for two Saturdays in the Fall semester.
- Workshops are also being offered online via Grovo.
- While the students have to complete a minimum number of workshops per semester, the same workshops could be used for various courses.
- Students need to attend a workshop lasting at least one hour to complete one activity. For instance, if a student decides to take a half hour session on Excel
training via Grovo, she/he then needs to take an additional half hour session on something else to complete one required activity.

11. Student Grading
The final grade for the course will be determined by the following grade point system:

- One test 30%
- Final examination 40%
- Assignments 15%
- Derivatives Projects 15%

**TOTAL 100%**

**Grade Scale:**

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<tr>
<th>Percentage Range</th>
<th>Grade</th>
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<tbody>
<tr>
<td>93-100</td>
<td>A</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
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<tr>
<td>87-89</td>
<td>B+</td>
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<tr>
<td>84-86</td>
<td>B</td>
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<tr>
<td>80-83</td>
<td>B-</td>
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<tr>
<td>70-79</td>
<td>C</td>
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<tr>
<td>below 70</td>
<td>F</td>
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12. Available Support Services

- **Tutorial Services Center (TSC)**
The Tutorial Services Center offers assistance to all current UST students in a variety of content areas, including academic subjects, general concepts, and writing skills. Tutors are available anytime the center is open. The TSC offers on-site tutoring, online tutoring, and tutorial workshops. Office hours and schedules can be found at [http://www.stthom.edu/public/index.asp?page_ID=100289](http://www.stthom.edu/public/index.asp?page_ID=100289). Please contact the center at 713-525-3878 or tutoring@stthom.edu.

- **CSB Tutorials**
The Cameron School of Business offers tutoring in business subjects. Please visit [http://libguides.stthom.edu/cameron](http://libguides.stthom.edu/cameron) (under the “CSB Tutorial Services” tab) for the most current tutorial schedule and available subjects.

- **Information Technology Services**
The UST IT Solution Center offers assistance with technical issues related to general computer issues, software, email, passwords, MyStThom, and blackboard. Manuals, contact information, and discounted software and hardware purchase information may be found at [http://www.stthom.edu/Offices_and_Services/Information_Technology/Index.aqf](http://www.stthom.edu/Offices_and_Services/Information_Technology/Index.aqf).
The Cameron School of Business at the University of St. Thomas

MISSION STATEMENT

Inspired by the Basilian Fathers’ motto of Goodness, Discipline and Knowledge, the Cameron School of Business provides a comprehensive, high quality, ethically oriented business education to a diverse student body enabling graduates to serve as leaders of faith and character in a global economy.

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. The tests/exams will be individual efforts. Student may work together on homework assignments, but must submit their own assignments. The penalty for an incident of academic dishonesty is, at the discretion of the professor, either a mark of zero for the work in question or the grade of F for the course.

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. Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All discussions will remain confidential.