FINA 5327: Financial Derivatives
Fall 2020

Instructor Information

Instructor
John D. Diltz

Office Number
Business Building Room 619

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Faculty Profile
https://mentis.uta.edu/explore/profile/john-diltz

Office Hours
By appointment.

Course Information

Section Information
FINA 5327-001 and FINA 5327-900 (merged)

Time and Place of Class Meetings
Wednesdays 7:00 – 9:50 pm online via Microsoft Teams or (Plan B) Canvas Conferences

Description of Course Content
Nature and functions of the various futures and options markets; hedging for risk reduction, speculative trading for profit; the role of futures and options in overall portfolio strategy, along with fundamental concepts such as basis, spreading, normal and inverted markets and money management. Prerequisite: FINA 5311 and FINA 5323.

Student Learning Outcomes
1. Demonstrate knowledge of derivatives, including forwards, futures, swaps, and options
2. Understand the role of derivatives in financial markets
3. Understand how to price derivative securities
4. Demonstrate how derivatives may be used for hedging and risk management

Required Textbooks and Other Course Materials

Descriptions of major assignments and examinations
Three problem sets (worked at home; see Course Schedule for assignment and due dates), a brief research paper, and a multiple choice cumulative final exam.
Technology Requirements
Computer and high-speed internet access, the Canvas Learning Management System, Microsoft Teams, the Microsoft Office Suite, R, and RStudio (R and RStudio are open source, and installation instructions will be given in class).

Grading Information

Grading
Grades will be issued based upon a weighted average of your performance on following assignments, with the corresponding weights:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Weight</th>
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<tbody>
<tr>
<td>Problem Set #1</td>
<td>20%</td>
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<tr>
<td>Problem Set #2</td>
<td>20%</td>
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<tr>
<td>Problem Set #3</td>
<td>20%</td>
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<tr>
<td>Research Paper</td>
<td>15%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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Your overall course average will be mapped to the following letter grades:

- 90.00 – 100.00: A
- 80.00 – 89.99: B
- 50.00 – 79.99: C
- < 50: D

Instructions and topic suggestions for the research paper will be posted on Canvas and discussed in class approximately two weeks into the semester. The paper will be due by 11:59 pm Wednesday, December 2, 2020.

Course Schedule (Subject to change at the instructor’s discretion)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Textbook Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 26</td>
<td>Introduction to Futures and Options</td>
<td>1</td>
</tr>
<tr>
<td>Sep. 2</td>
<td>Futures Markets</td>
<td>2</td>
</tr>
<tr>
<td>Sep. 9</td>
<td>Hedging with Futures</td>
<td>3</td>
</tr>
<tr>
<td>Sep. 16</td>
<td>Interest Rates – <strong>Problem Set 1 Assigned</strong></td>
<td>4</td>
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<tr>
<td>Sep. 23</td>
<td>Pricing Futures Contracts</td>
<td>5</td>
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<tr>
<td>Sep. 30</td>
<td>Interest Rate Futures – <strong>Problem Set 1 Due</strong></td>
<td>6</td>
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<tr>
<td>Oct. 7</td>
<td>Swaps</td>
<td>7</td>
</tr>
<tr>
<td>Oct. 14</td>
<td>Introduction to Options – <strong>Problem Set 2 Assigned</strong></td>
<td>10</td>
</tr>
<tr>
<td>Oct. 21</td>
<td>Properties of Options</td>
<td>11</td>
</tr>
<tr>
<td>Oct. 28</td>
<td>Option Trading Strategies – <strong>Problem Set 2 Due</strong></td>
<td>12</td>
</tr>
<tr>
<td>Nov. 4</td>
<td>Binomial Option Pricing</td>
<td>13</td>
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<tr>
<td>Nov. 11</td>
<td>The Black-Scholes Model – <strong>Problem Set 3 Assigned</strong></td>
<td>15</td>
</tr>
<tr>
<td>Nov. 18</td>
<td>The Option “Greeks”</td>
<td>19</td>
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<tr>
<td>Nov. 25</td>
<td>NO CLASS</td>
<td></td>
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<tr>
<td>Dec. 2</td>
<td>R Package “derivmkts” – <strong>Problem Set 3 &amp; Research Paper Due</strong></td>
<td>Handout</td>
</tr>
<tr>
<td>Dec. 16</td>
<td><strong>CUMULATIVE FINAL EXAM</strong></td>
<td>Synchronous</td>
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Institution Information

UTA students are encouraged to review the below institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the Institutional Information page (https://resources.uta.edu/provost/course-related-info/institutional-policies.php) which includes the following policies among others:

- Drop Policy
- Disability Accommodations
- Title IX Policy
- Academic Integrity
- Student Feedback Survey
- Final Exam Schedule

Additional Information

Mandatory Face Covering Policy
All students and instructional staff are required to wear facial coverings while they are on campus, inside buildings and classrooms. Students that fail to comply with the facial covering requirement will be asked to leave the class session. If students need masks, they may obtain them at the Central Library, the E.H. Hereford University Center’s front desk or in their department. Students who refuse to wear a facial covering in class will be asked to leave the session by the instructor, and, if the student refuses to leave, they may be reported to UTA’s Office of Student Conduct.

Attendance
At The University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator of student success. Each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients “begin attendance in a course.” UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report must the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Canvas. This date is reported to the Department of Education for federal financial aid recipients.

Important! Be sure that you include this section on attendance, even if you do not track attendance or factor attendance into the grade. It is important that students understand that any attendance rules applied in your course are your own and not a matter of institutional policy. Doing so will keep the University in compliance with Federal regulations as they apply to Title IV funding. If you are teaching a course in which attendance / hours must be tracked to meet other non-institutional requirements (e.g., to earn an academically-grounded professional credential), be sure to clearly indicate the agency that has established the requirement.

Emergency Phone Numbers

In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911. Non-emergency number 817-272-3381