

## Course Syllabus

### Financial Engineering MBA 683 – 50 3 Credit Hours

#### Course Description

Students gain a thorough understanding of options, futures, and other financial instruments. Skills are developed in basic pricing analysis, use of pricing models, and trading and hedging strategies.

The primary method for teaching these points follows a two step approach. First, the student will be introduced to standard techniques for pricing, hedging, and other analysis. Next, these techniques will be applied through a variety of real world strategies. The end goal is to develop skills which the students can apply in derivative markets.

Assignments: Each student will be required to complete a series of assignments dealing with derivative pricing and strategies. These assignments will require students to use theoretical models, monitor market prices, and track strategy positions.

#### Course Objectives

At completion of the course, students will be able to:

- ⇒ Explain the operation of option/futures markets
- ⇒ Price various derivative securities
- ⇒ Develop strategies which meet specified goals (i.e. risk reduction)
- ⇒ Adjust these strategies in light of changing economic conditions

#### Instructor

Dr. Matthew W. Will

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Course Web: [www.mattwill.com](http://www.mattwill.com) Twitter: [@DrMattWill](https://twitter.com/DrMattWill)

#### Class Format & Meeting Times

Wednesday 5:45pm – 8:45 pm

Face to Face

#### Office Hours

Mon 8:00 am – 9:00 am

Tue 4:30 pm – 5:30 pm

Wed 11:00 am – 12:00 pm

By appointment

## **Required Materials**

Fundamentals of Futures and Options Markets by John C. Hull, 9<sup>th</sup> Edition, Prentice Hall, 2016.  
<http://www-2.rotman.utoronto.ca/~hull/ifom/>

Options as a Strategic Investment by Lawrence McMillan, 5<sup>th</sup> Edition, Prentice Hall Press, 2012.

Email Account - (Send Email to instructor BEFORE 2nd class)

Financial Calculator - HP12C or other (***must be approved by Dr. Will***)

Access to Personal Computer and Spreadsheet program

## **Required Stuff**

### **Academic Dishonesty and Plagiarism**

You must not adopt or reproduce ideas, words, or statements of another person without giving an appropriate acknowledgement to the source. You must give due credit to the originality of others and acknowledge an indebtedness wherever you:

- Quote another person's actual words, either oral or written;
- Paraphrase another person's words, either oral or written;
- Use another person's ideas, opinions, or theories; or
- Cite facts, statistics, or other illustrative material, unless the information is common knowledge.

*All assignments must be your original work and not the work of other students.* Neither group work nor the individual work of another student may be submitted by you. Submission of such work will be considered academic misconduct. Incidents of academic misconduct, dishonesty and/or plagiarism will be handled as per the Student Handbook.

According to the Student Handbook:

Academic Integrity and Academic Misconduct: The students, faculty, and administrators of the University of Indianapolis commit themselves to the highest level of ethical conduct in academic affairs. The University of Indianapolis, therefore, adopts regulations concerning Academic Misconduct to safeguard the academic integrity of the institution. Academic Misconduct includes, but is not limited to, the following circumstances: (A) Cheating, (B) Fabrication, (C) Plagiarism, (D) Interference, (E) Violation of Course Rules, (F) Facilitating Academic Dishonesty, and (G) Abuse of Confidentiality. For a full statement of the policy refer to the University of Indianapolis Student Handbook, Section I, Academic Information.

### **ADA & Disability Accommodation**

The professor will provide accommodation for students qualifying for disability-related needs. The student should contact the Services for Students with Disabilities office (SSD) to begin the process. (see <http://www.uindy.edu/ssd> for more information).

### **Class Attendance, Preparation & Participation**

Class attendance is an important part of the academic process, and you are expected to attend classes regularly and to manage your schedule in order to meet the demands of this course. If you are absent, you will be responsible for arranging makeup work to be completed prior to the absence or immediately upon return to class at the instructor's discretion. As per the student handbook, reasonable documentation or verification of claims regarding absences may be requested.

Class preparation is critical to success in this course. You are expected to:

- (a) read the assigned material prior to arriving to class, as well as
- (b) review the solved problem illustrations in the chapter and
- (c) prepare a list of questions that you have about the topic.
- (d) participate in class discussions

Please note that the course topics build upon prerequisite knowledge of fundamental business concepts, algebra and basic spreadsheet skills. If you feel you may be deficient in any of these areas, you are encouraged to review them and/or seek tutoring outside of class.

### **Recording & Copyright Policy**

Recording of course lectures and reproduction of class content is not permitted without his expressed permission of Dr. Will. All content created by Dr. Will is copyrighted and he reserves all rights of reproduction and distribution.

### **Course Requirements**

35% Mid Term  
35% Final  
20% Assignments  
10% Current Events

### **Grading**

A 90-100%  
B 80-89%  
C 70-79%  
F 0-69%

Pluses and minuses are assigned at the instructor's discretion.

## MBA 683 - Winter 2023

Tentative Schedule (subject to change at the instructor's discretion)

Date	Topic	Reading
18-Jan	Introduction, Derivative Basics Risk Management	Hull - 1 McMillan -Preface, 1
25-Jan	Option markets Research and Valuation	Hull – 9, 10, 12, 13 McMillan - 26, 28
1-Feb	Option Strategies	Hull - 11 McMillan - 2 thru 25, Appendix A,B
8-Feb	Option Strategies	Hull - 11 McMillan - 2 thru 25, Appendix A,B
15-Feb	Greeks	Hull - 17 McMillan - 40
22-Feb	Catch up & Review	
1-Mar	Mid Term Exam	
8-Mar	Review exam Futures & Forward Basics	Hull - 2, 4, 5
15-Mar	SPRING BREAK	
22-Mar	Forward & Futures Futures Pricing	Hull - 2, 4, 5
29-Mar	Futures Strategies	Hull – 3, 6
5-Apr	Futures Strategies	Hull – 3, 6
12-Apr	Futures Options	Hull - 16 McMillan - 34, 35
19-Apr	Swaps, Mort. Backed Securities Hybrids & Other Issues	Hull – 7, 8, 20, 22
26-Apr	Catch up & Review	
3-May	Final Exam	