



# **Rotman** Commerce UNIVERSITY OF TORONTO

## **Course Outline**

### **RSM 432 H1S**

Risk Management for Financial Managers

Winter 2015

|                     |                                     |
|---------------------|-------------------------------------|
| Course Meets: L0101 | Thursday/ 10:00am - 12:00pm / WO 30 |
| L0201               | Thursday/ 12:00pm - 2:00pm / WO 30  |
| L0301               | Thursday/ 3:00pm - 5:00pm / WO 30   |
| L5101               | Tuesday/ 6:00pm - 8:00pm / WO 35    |

Note: You are expected to attend the section that you are registered in

Tutorial (not mandatory): Friday 4:00 - 5:30pm /Rotman Financial Trading Lab

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Teaching Assistant: TBA

### **Course Scope and Mission**

This course studies the way companies, particularly financial institutions, manage risk. It covers crash risk, credit risk, market risk, operational risk, and model risk. The nature of bank regulation and the Basel II capital requirements are examined. Other topics include methods for monitoring volatilities and correlations, the calculation of economic capital, and RAROC.

## Course Prerequisites

RSM333H1. A good aptitude for mathematics (calculus and linear algebra) and in particular statistics is necessary. THIS IS A QUANTITATIVE COURSE. A working knowledge of Excel is required.

## Required Readings

Hull, John C. Risk Management and Financial Institutions, 3<sup>rd</sup> Edition, Pearson, 2012  
Wall Street Journal On-line Subscription (See student subscription) – *Used in class discussions*

## Highly Recommended References

Christoffersen, P. *Elements of Financial Risk Management*, 2nd Edition, Academic Press, 2011

## Evaluation and Grades

Grades are a measure of the performance of a student in individual courses. Each student shall be judged on the basis of how well he or she has command of the course materials.

| <u>Work</u>                           | <u>Weight</u> | <u>Due Date</u>   |
|---------------------------------------|---------------|-------------------|
| Attendance/Participation/Team Charter | 5%            | On going          |
| Group presentation                    | 10%           | Week 7            |
| 1st Group Assignment                  | 10%           | Week 6            |
| 2 <sup>nd</sup> Group Assignment      | 20%           | Week 12           |
| Peer evaluation                       | 10%           | Week 12           |
| Final Exam                            | 45%           | Final Exam Period |

## COURSE FORMAT AND EXPECTATIONS

### Attendance & Participation

Attendance is *mandatory* and you are expected to attend the course section that you are registered in. You are also expected to participate in the class discussions. I will do random attendance checks. You are *required* to bring a tent card and display your name on it during each lecture. I practice cold calling. I would like the class to be as interactive as possible. Attendance/participation accounts for 5% of your final evaluation. You will be evaluated based on your professionalism as a student in my class. Do you attend the class regularly? Do you use e-mail or Facebook for non-course related reasons during my lecture? Do you participate constructively? Do you treat your instructor and your peers with respect?

### Excel Spreadsheet

Excel spreadsheet will be used heavily throughout the course. This is where the theory meets applications. Video recorded Excel modules will be posted on Blackboard. You are expected to study all the Excel exercises that are covered in class and posted on the course website. Some of the Excel exercises will be demonstrated during the tutorial.

### Tutorial (Not mandatory)

Each tutorial will cover hand-on applications of the materials that we learned in class. Although attendance at the tutorials is not mandatory, it is encouraged.

## News article

During the first ten minutes of each class, we will look at recent articles on The Wall Street Journal. The articles that are selected will touch on the issues of risk management in the financial industry. You are expected to participate in this class discussion. Final exam materials may cover the news article that we discussed in class.

## Group assignments

- You will be assigned into groups **of up to eight students all within your respective section**. Your group will be finalized in the fourth week. You will be working with the assigned team members for the assignments as well as for the presentation.
- There will be two group assignments during the semester. The first assignment is worth 10% of your total mark. The second assignment is worth 20% of your total mark. The weight associated with each assignment is reflective of its expected time for completion as well as its difficulty. Each group must hand in a single well-presented report. The report will be marked based on the *results as well as its presentation*.
- All assignments must be submitted **by 9pm** on their respective due date. Only online submission through email will be accepted. Any assignments submitted past but within 24 hours after 9pm on the respective due date will be penalized by at least 20% at the discretion of the instructor. Late assignments passed 24 hours are not accepted and a grade of zero will be assigned.

## Group presentation

- Your group members for the presentation will be *identical* to your assignments' group members.
- Your group will provide a short presentation to the class and will also hand in a write-up report on your findings. The topic and details of the deliverables will be discussed in class.

## Peer Evaluation

The peers in your group for the presentation as well as for the assignments will evaluate your performance. This will be worth 10% of your total mark. Peer evaluations will be conducted confidentially at the end of the course. Only the course instructors will see your evaluations. The peer evaluation guideline will be posted on Blackboard.

## Final Exams

- The exam will be comprehensive and will cover material from lectures, news articles, tutorial, assigned readings, and practice problems.
- I will provide you with the formula sheet, i.e., equations and symbols. This sheet will be made available to you the class prior to the examination.
- You are required to bring a standard non-programmable calculator to the examination. If you are unsure whether your calculator will be permitted to the examination room, please check with the course instructor prior to the exam.

- You are allowed to bring **one** A4-sized aid sheet to the exam. You can use both sides of the sheet. Your formula sheet must be submitted along with your final exam at the end of the examination.

### **Quantitative skill**

Modern risk management is characterized by a quantitative approach. A good quantitative aptitude is an important asset to excel in this course. Note that a good quantitative skill does not necessarily mean a good knowledge of mathematic.

### **Teaching approach**

This is a practical course and it is important that you can apply what you learn to real financial data. The course relies heavily on the Excel spreadsheet for the exposition of the materials. You should become familiarized with MS Excel as soon as the term starts.

## **POLICY AND PROCEDURE**

### ***Class Etiquette***

I welcome questions during lectures. Feel free to stop me during the lecture. I ask that you follow some simple courtesy rules during class: arrive on time, do not leave during class, do not talk while I am talking, do not talk while your peer is asking a question, and make sure cell phones are turned off. I will allow laptop usage during the class as long as it is for course-related purposes. Again, I ask that you do not use social network sites, i.e. Facebook, Twitter, Google Talk, and Messenger during class. Any usage of computer during class for non-course-related purposes will result in a significant reduction in class participation grade.

### ***Drop Date***

- The last day to drop the course without academic penalty is **March 8th**

### ***Grade Appeals***

- Grading errors should be corrected. Appeals must be made within one week after the graded work is returned (not the date you first look at it). Course work will be returned in class. Appeals submitted after this time will not be considered.
- Appeals must be in writing. The appeal should include a description of the question(s) that need to be re-examined, as well as an explanation of why the original grade was incorrect. Appeals that do not meet these criteria will not be considered.
- Once you submit an appeal, note that in general, the entire document will be checked for grading errors and correcting these could either raise or lower the overall score.
- If the problem is simply an adding error, please notify me directly at the end of the class.

### **Accessibility Needs**

The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible:

[disability.services@utoronto.ca](mailto:disability.services@utoronto.ca) or <http://www.accessibility.utoronto.ca/>.

## **Academic Integrity**

Academic Integrity is a fundamental value essential to the pursuit of learning and scholarships at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the UofT degree that you earn will continue to be valued and respected as a true signifier of a student's individual work and academic achievement. As a result, the University treats cases of academic misconduct very seriously.

## **The University of Toronto's Code of Behaviour on Academic Matters**

<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm> outlines the behaviours that constitute academic misconduct, the process for addressing academic offences, and the penalties that may be imposed. You are expected to be familiar with the contents of this document. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment (this includes collaborating with others on assignments that are supposed to be completed individually).

On test and exams:

- Using or possessing any unauthorized aid, including a cell phone.
- Looking at someone else's answers
- Misrepresenting your identity.
- Submitting an altered test for re-grading.

Misrepresentation:

- Falsifying institutional documents or grades.
- Falsifying or altering any documentation required by the University, including (but not limited to), medical notes.

All suspected cases of academic dishonesty will be investigated by the following procedures outlined in the *Code of Behaviour on Academic Matters*. If you have any question about what is or is not permitted in the course, please do not hesitate to contact the course instructor. If you have any questions about appropriate research and citation methods, you are expected to seek out additional information from the instructor or other UofT resources such as College Writing Centres or the Academic Success Centre.

## **Email**

At times, the course instructor may decide to communicate important course information by email. As such, all UofT students are required to have a valid UTmail+ email address. You are responsible for ensuring that your UTmail + email address is set up AND properly entered on the ROSI system. For more information please visit <http://help.ic.utoronto.ca/category/3/utmail.html>

*Forwarding* your utoronto.ca email to a Hotmail, Gmail, Yahoo or other type of email account is *not advisable*. In some cases, messages from utoronto.ca addresses sent to Hotmail, Gmail or

Yahoo accounts are filtered as junk mail, which means that important messages from your course instructor may end up in your spam or junk mail folder.

### **Blackboard and the Course Page**

The online course page for this course is accessed through Blackboard. To access the course page, go to the UofT Portal login at <https://portal.utoronto.ca/> and log in using your UTORid and password. Once you have logged in, look for the My Courses module where you'll find the link to all your course websites. If you don't see the course listed here but you are properly registered for the course in ROSI, wait 48 hours. If the course does not appear, go to the Information Commons Help Desk in Robarts Library, 1st floor, for help, or explore the Portal Information and Help at [www.portalinfo.utoronto.ca/students](http://www.portalinfo.utoronto.ca/students) and review the Frequently Asked Questions.

### **Recording Lectures**

Lectures and course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Canadian Copyright Act. Students wishing to record a lecture or other course material in any way are required to ask the instructor's explicit permission, and may not do so unless permission is granted (note: students who have been previously granted permission to record lectures as an accommodation for a disability are, of course, excepted). This includes tape recording, filming, photographing PowerPoint slides, Blackboard materials, etc.

If permission is granted by the instructor (or via Accessibility Services), it is intended for the individual student's own study purposes and does not include permission to "publish" them in anyway. It is absolutely forbidden for a student to publish an instructor's notes to a website or sell them in any other form without formal permission.

### **TENTATIVE SCHEDULE**

- Slides & notes to be available on Blackboard
- Tutorials will be held weekly (incl. navigating through Excel Models and course materials)
- In the event of extraordinary circumstances beyond the University's control, the content and/or evaluation scheme in this course is subject to change.

| Session  | Topic  | Readings     |
|--|--|--------------|
| Week 1: Jan 6 <sup>th</sup> / 8 <sup>th</sup>                          | Banks, Insurance Companies, Pension Funds, Mutual Funds and Hedge Funds                  | Chapters 2-4 |
| Week 2: Jan 13 <sup>th</sup> /15 <sup>th</sup>                         | Value at Risk  | Chapters 9   |
| January 18th – Deadline to enroll in S section code courses            |  |              |
| Week 3: Jan 20 <sup>th</sup> /22 <sup>nd</sup>                         | Volatility   | Chapter 10   |
| Week 4: Jan 27 <sup>th</sup> /29 <sup>th</sup>                         | Volatility<br><i>Group formation finalized</i>   | Chapter 10   |
| Week 5: Feb 3 <sup>rd</sup> /5 <sup>th</sup>                           | Correlation and Copulas<br><i>Team charter deadline</i>                                  | Chapter 11   |
| Week 6: Feb 10 <sup>th</sup> /12 <sup>th</sup>                         | Regulation, Basel II and Solvency II<br><i>Group Assignment 1 deadline</i>               | Chapter 12   |
| February 13th – Final Examination Timetable Posted                     |  |              |
| February 17 <sup>th</sup> – 20 <sup>th</sup> Reading week – No classes |  |              |
| Week 7: Feb 24 <sup>th</sup> /26 <sup>th</sup>                         | <i>Group Presentations</i>   | Chapter 14   |
| Week 8: March 3 <sup>rd</sup> /5 <sup>th</sup>                         | Market Risk VaR (Historical Simulation)  | Chapter 14   |
| March 8th – Last Day to Withdraw from S Courses                        |  |              |
| Week 9: March 10 <sup>th</sup> /12 <sup>th</sup>                       | Market Risk VaR (Model Building)   | Chapter 15   |
| Week 10: March 17 <sup>th</sup> /19 <sup>th</sup>                      | Credit Risk (Default Probabilities)  | Chapter 16   |
| Week 11: March 24 <sup>th</sup> /26 <sup>th</sup>                      | Credit default swaps and other credit derivatives  | Chapter 16   |
| Week 12: March 31 <sup>st</sup> /April 2 <sup>nd</sup>                 | Basel III, Dodd-Frank<br>Review for the final exam<br><i>Group Assignment 2 deadline</i> | Chapter 13   |
| FINAL EXAM – TBA (April 8 <sup>th</sup> – 30 <sup>th</sup> )           |  |              |