

ECO421/ECO2508H Course Syllabus

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| Course Number: | ECO421/2508H1F, section L5101 • Applied Financial Risk Management • May–Jun, 2021 |
| Department: | Economics |
| Title: | Topics in Financial Risk Management |
| Instructor: | (Alan) Xian Yang |
| Contact Information: | xian.yang@utoronto.ca Tel: 647-480-ThreeTheeeSixNine |
| Course Notes Website: QUERCUS | https://q.utoronto.ca/ (UTOR login password required) |
| Lecture Times & Location: | <ul style="list-style-type: none">– Time: May and June on Monday, Wednesday, and Friday night from 19:00-21:00– Location: Zoom Online class (check QUERCUS course portal for online link and password)– <i>Note:</i> The first class is on May 3rd and the last class is on June 11. |
| Office Hours/Tutorial & Location: | – No special office hours scheduled; problems and questions should be solved online with the help of course instructor or TA. |

***Note:** This class is online synchronous course. Lectures will be delivered as per course schedule. Students will synch online with course instructor or TA three time a week on Monday, Wednesday, and Friday from 19:00 to 21:00. During the course, the course instructor or TA will help to go over the course notes, answer student questions and discuss assignments. There will also be random quiz questions issued online. In special circumstances recordings of lectures will also be made available for students to view asynchronously. Since participation during lectures is an important element of the course, it is recommended that students have a computer with a microphone and camera in order to participate in online activities.*

Zoom is the major application tool to broadcast live online course. Students do not have to install Zoom application, Zoom URL and password will be available on QUERCUS course portal to connect online.

However, it is strongly recommend all students visit Zoom website: <https://zoom.us> to create a free Zoom account and test your web camera, mic and speaker before the class starts. Ensure these devices working are essential for participation in the class.

Course Description:

This course provides a comprehensive introduction to the real-world application of Financial Risk Management modeling theory with an emphasis on the industry best-practice methodologies. The course covers major issues in, such as: Liquidity Risk, Value at Risk, Counter Party Credit Risk, Economic Capital, Regulatory Capital, Credit Value Adjustment, Scenario Generation, Stress Testing, Back Testing and Portfolio Credit Risk Management. The course also covers the motivation of Enterprise-wide Risk Management. As the course focuses on Financial Engineering approaches, Excel Visual Basic Application based assignments will help to illustrate the concepts. There may be not enough time to cover all the interesting topics, the focus varies from term to term.

Course Objectives:

The course is intended to introduce to students the main idea about how to implement financial risk management by means of financial engineering. After completing this course, students will be able to:

- Differentiate and describe major risks and associated risk factors in the financial market;
- Spec financial risk models and use VBA functions to quantify financial risks based on real world financial engineering practices;
- Explain and debate on various issues in the financial risk management.

Prerequisite:

MA, MFE and PH.D Economics Department are qualified to take this course. Some 400-level economics undergraduate students with good standing are also qualified. If you are a graduate student outside the economics department who would like to take one of these courses, please see link:

<http://www.economics.utoronto.ca/index.php/index/graduate/nonEconCourseAdd>

About Marks:

Assignments & Projects: 60%

In Class Quiz: 40%

About Assignments and Projects:

- All the assignments will be posted on the QUERCUS Course Portal. It can be finished at home but should be finished independently and submit online before the deadline.
- Projects are just large assignment that needs to finish in team.
- Style of Assignments and Projects: there will be VBA exercises, or using Visual Basic and financial engineering approaches learned in the class to quantify risks.

About Quiz:

- Random in class tests, asking questions related to course notes and related concepts.

About Reference Books:

- Reference books are not required. Relevant papers and course notes that cover each topic will be released online or on course portal before class starts.
- In terms of Visual Basic programming, good reference books are (available in UT Book Store):
 - “Excel VBA Programming For Dummies”, 2nd Edition, by John Walkenbach
 - [Excel 2013 Power Programming with VBA](#), by [John Walkenbach](#), [John Wiley & Sons](#) © 2013 (1104 pages)[Citation](#), ISBN:9781118490396
 - “Mastering VBA for Microsoft Office 2013” by [Richard Mansfield](#) [Sybex](#) © 2013 (960 pages) Citation ISBN:9781118695128
 - “Advanced Modelling in Finance using Excel and VBA”, by Mary Jackson and Mike Staunton

Articles and Other Materials:

- Academic journal articles are available in electronic form on *J-Store* at the U of T Library.
- Where materials are available over the Internet, I will provide the web links.

[COVID-19 resources for the U of T community](#)