# **Mathematics of Financial Options**

### **Financial Mathematics 3613b**

# Winter 2018 - Course Outline

# **Instructor Information**

Instructor: <u>Hristo Sendov</u>

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Office Hours: Tuesdays 2:30pm-3:30pm

Lecture Hours: Tuesday 9:30-10:30am and Thursday 9:30-11:30am in KB-K203

### **Course Information**

# **Course Description**

#### **Textbook**

Matt Davison, Quantitative Finance: A Simulation--Based Introduction Using Excel, CRC Press, (2014)

# **Course Objectives**

This course is about modern financial mathematics -- the study of making financial decisions under uncertainty. Such decisions are shaped by three main drivers – the balance between future and present, quantified by the interest rate; the role of uncertainty, often quantified in terms of the volatility, and investors attitudes toward risk. Several products are available to trade and manage risk: stocks and bonds at a basic level; forwards, futures, and options at a more advanced level. We will develop theories for pricing and hedging both individual securities and portfolios of them. By the end of the course we will understand two Nobel-prize winning economic theories – [n ae qu afle(n1 (fn(al)-1 16.(l0pr)6.(276.6 173.28(Tm (nATwEMsser)-6ss1 P)-4m) 4.</mc/MC)1 (a)

# **Midterms or Tests**

Midterm test 1 (Thursday, February 15, 7-9PM, in TC205)

Midterm test 2 (Thursday, March 15, 7-9PM, in TC205)

Final Exam

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Student Health and Wellness: As part of a successful student experience at Western, we encourage students to make their health and wellness a priority. Western provides several on campus health-related services to help you achieve optimum health and engage in healthy living while pursuing your degree. For example, to support physical activity, all students, as part of their registration, receive membership in Western's Campus Recreation Centre. Numerous cultural events are offered throughout the year. Please check out the Faculty of Music web page <a href="http://www.music.uwo.ca/">http://www.music.uwo.ca/</a>, and our own McIntosh Gallery <a href="http://www.mcintoshgallery.ca/">http://www.mcintoshgallery.ca/</a>. Information regarding health- and wellness-related services available to students may be found at <a href="http://www.health.uwo.ca/">http://www.health.uwo.ca/</a>. Students seeking help regarding mental health concerns are advised to speak to someone they feel comfortable confiding in, such as their faculty supervisor, their program director (graduate chair), or other relevant administrators in their unit. Campus mental health resources may be found at <a href="http://www.health.uwo.ca/mental\_health/resources.html">http://www.health.uwo.ca/mental\_health/resources.html</a>. To help you learn more about mental health, Western has developed an interactive mental health learning module, found here:

http://www.health.uwo.ca/mental\_health/module.html. This module is 30 minutes in length and provides participants with a basic understanding of mental health issues and of available campus and community resources. Topics include stress, anxiety, depression, suicide and eating disorders. After successful completion of the module, participants receive a certificate confirming their participation.

#### **Email Communication**

E-mail can be an efficient and effective way to communicate with your Professor, but it should be used very rarely, only to provide us with information or to ask a question that requires a very brief response. I do not wish to see emails that ask "What did I miss in class today?". For more lengthy discussions, you should raise questions after class or during office hours, or make a separate appointment if necessary.

Please remember that I will only read e-mails from your UWO student account. The subject line should contain "SS2857". E-mails from other accounts (e.g. hotmail, yahoo, etc.) will not be read. Please conduct yourselves professionally if you choose to e-mail your Professor.

#### Attendance

Classroom attendance is viewed as an important part of the learning process. Students are advised that excessive absenteeism may result in the student being disbarred from the final exam (see Western Academic Calendar).

#### **Classroom Environment**