SYLLABUS

ABIZ 3540 FINANCIAL RISK MANAGEMENT
Department of Agribusiness and Agricultural Economics
University of Manitoba

WINTER TERM 2019
Instructor: Charles Grant
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Office hrs: By Appointment
Lectures: 11.30am – 12.50pm Tuesday/Thursday

COURSE DESCRIPTION
The course is a study of concepts and tools used to measure and mitigate financial risk of firms. The course introduces the study of mathematics for finance and financial engineering particularly as they relate to the management of financial risk.

TEXTBOOK

LECTURE CONTENT
The lectures move through the chapters of the textbook as listed below. In addition, computer applications will be discussed and will be posted on UM Learn at appropriate times throughout the term. We will also be doing some coding using Python to automate our price searching and portfolio assembly.

EXERCISES
Exercises from the textbook will be completed in class regularly throughout the term. One ongoing exercise will be assigned to be submitted at the end of the term.

GRADING
Grades will be based on a submitted exercise, mid-term and final examination.
Submitted Exercise 10%
Mid-term examination 30%
Final examination 60%
Total 100%
ACADEMIC INTEGRITY
Plagiarism or any other form of cheating in examinations, term tests or academic work is subject to serious academic penalty. Cheating in examinations or tests may take the form of copying from another student or bringing unauthorized materials into the exam room. Exam cheating can also include exam impersonation. A student found guilty of contributing to cheating in examinations or term assignments is also subject to serious academic penalty. Students should acquaint themselves with the University’s policy on plagiarism, cheating, exam impersonation and duplicate submission see http://www.umanitoba.ca/student/resource/student_advocacy/cheating_plagiarism_fraud.html

STUDENT AFFAIRS
Students are encouraged to familiarize themselves with the resources available to them by visiting the Student Affairs website at http://umanitoba.ca/student/index.html. The site contains helpful general information as well as links to webpages for the Aboriginal Student Centre, the International Centre for Students, the Academic Learning Centre, Student Advocacy & Accessibility, the Student Counselling & Career Centre, and University Health Service.

COURSE CONTENT
Investments: Certain (Bonds) and Uncertain (Stocks); Derivative Investments: Forwards, Futures, Options and their Valuations; Pricing Options: Replication and Black-Scholes Model, Derivagem Model; Managing Risk with Options; Types of Options: European, American, Asian; Using Derivatives to Change the Shape of the Distribution of Investment Outcomes; Six Standard Assumptions of the Investment Model; Arbitrage: Definition and Calculation; Three-Step Binomial Tree; Diversification and Risk: Two-investment Portfolio Model, Seven-investment Portfolio Model, n-investment Portfolio Model; Diversifiable and Non-diversifiable Risk; Shape of the Distribution of Investment Outcomes: Skewness, Kurtosis, Semi-kurtosis; Time Value of Money Calculations; Capital Budgeting: Risk-adjusted Discount Rate; Market Volatility, Moving Averages for Market Timing; Analysis of Market Timing: Time Series and Cross-section; Cash, Stock Investments, and Derivative Transactions: Risk Management Exercise; Coding with Python to automate price searches and portfolio assembly