QUANTITATIVE METHODS IN FINANCE

FIN6306 Summer2017

Office Hours: Tues6:00PM – 10:00PM Tues5:00pm-6:00pm Or by appointment	**Dr. Liping Ma** **Office:** JSOM14.208 **Email**: Liping.Ma@utdallas.edu **Phone:** (972) 883-5068

Other Information *I strongly urge you to use email (the above address) to contact me outside of class.* I check my email messages daily Monday through Friday, you can be sure I will receive your message this way.

General Course Information

Students are responsible for all information in this syllabus.	
Pre-requisite & other restrictions	Pre-requisite: FIN 6301 (OPRE6303 or equivalent). If you have not completed all of the prerequisites or obtained an official waiver you may not register for this class.
Course Description	The objective of this course is to develop students' ability to use quantitative methods in financial decision making.
Learning Outcomes	This course will primarily focus on building a strong understanding of statistical methods and computing skills and apply those skills in corporate finance and investments. 1. Students will apply statistical methods to summarize and to make inferences from financial data. 2. Students will develop quantitative models to assist financial decision making. 3. Students will develop a set of tools based on spreadsheet technology to effectively organize, present and analyze financial data. 4. Students will construct spreadsheet representations of financial models to obtain quantitative solutions to financial problems.
Required and Recommended Text	***Quantitative Investment Analysis (QIA)***, by R. Defusco, D. McLeavey, J. Pinto, and D. Runkle; CFA Institute (John Wiley & Sons). The third edition.
Course Delivery Methods	This course combines interactive lectures and computer lab sessions. The class will work on some Excel examples and R programming.
Computers/ Software	We will be using ***laptop computers*** during classes to work on spreadsheet examples and models. We will also learn some basic programming techniques in R.
Cell Phones	You may ***not*** use your cell phones or other electronic communication devices in class.

Course Policies

Grading (credit) Criteria	Students earn a grade in the class by demonstrating *mastery of the class material*. Grades will be based on an end-of-semester ranking of students according to the total accumulated score. Both the total score and students' respective rankings will be used in assigning final grade. The precise cutoff scores used to assign grades will be an end-of-semester decision based on my perception of the difficulty of the exams and class works and other factors that I consider appropriate. Grading will be based on the following weightings of assigned material. Projects & in-class quizzes 30% Exam 1 35% Exam 2 35%
Additional Course Policies	There will be no make-up exams. You are responsible for taking all exams on the designated dates. **Note:** You must have my permission to skip an exam. If you have to miss an exam (with my permission and appropriate documents), the weight of course grade on that exam will be shifted to the final exam.

Exams	There will be two tests in this class. These exams will test your knowledge of material covered in the reading, lectures, class works, and a suggested homework. All tests are ***closed book***; You can bring one page of formula sheet to the exam. Any use of cell phones, laptops, or other wireless devices and any other methods of communication during exams are expressly prohibited. In addition, quizzes will count toward your final grade.
Quizzes	Three quizzes will be given through the semester. The quiz date will be announced one week before the test day. All quizzes are ***closed book***; Any use of cell phones, laptops, or other wireless devices and any other methods of communication during exams are expressly prohibited. There are no make-up quizzes. The lowest quiz grade will be dropped to calculate the final grade.
Group Projects	Students are randomly formed into groups. Each team will have 3-4 students. Every member should actively participate and contribute to the projects.
Homework Assignments	*Suggested* homework will be assigned.
Class Attendance& Class Work	Students registered for the class are required to attend all sessions**.** In the classroom, you cannot browse any other websites except for webpage related course materials. You will be asked to leave the classroom once discovered.
eLearning	Always check *eLearning* before class. This site will include PowerPoint files of the course lecture notes, homework assignments, any external web links, and relevant updates about the class including any changes to the schedule of assignments or quizzes.

Student Conduct and Discipline	The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year. The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391). A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.
Academic Integrity	The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited to, statements, acts or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings. Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

These descriptions and timelines are subject to change at the discretion of the professor.

Assignments & Tentative Academic Calendar

Session	Topic	Readings & Assignments
Week 1	Class Introduction; Time Value of Money Presentation of Data and Descriptive Statistics	QIA: Chapter 1-3
Week 2	Probability Distributions: Applications to Asset Returns	QIA: Chapter 4-5
Week 3	Probability Distributions: Applications to Asset Returns	QIA: Chapter 4-5
Week 4	Statistical Inference: Confidence Intervals and Hypothesis Testing	QIA: Chapter 6-7
Week 5	Mid-term Exam 2	
Week 6	July 4th Holiday	
Week 7	Regression Analysis and Linear (Matrix) Algebra	QIA: Chapter 8-9
Week 8	Regression Analysis and Linear (Matrix) Algebra	QIA: Chapter 8-9
Week 9	Time Series Analysis	QIA: Chapter 10
Week 10	Time Series Analysis	QIA: Chapter 10
Week 11	Mid-term Exam 2	

This course schedule is not absolute. While every effort will be made to follow the schedule as listed, changes may be made as needed. It is the student's responsibility to track changes that are announced.