Financial Math & Modeling I – FINC 620
Fall Quarter, 2018

Class Times/Room: Mondays: 6 –9 / Lecture (SC 405) ; Lab. (SC 302)
Instructor: Steven Todd
Office: Schreiber 626
Office Hours: Mondays 3 – 4 and Thursdays 3 – 4.
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Description: This course focuses on how to effectively use Microsoft Excel and its built-in programming language, Visual Basic for Applications (VBA), to build financial models. The course will examine equity, fixed-income, option and portfolio optimization problems. The course is a combination of both lecture and lab. *Prerequisites: FINC 450 & ISOM 491.*

Required Text: Financial Analysis and Modeling Using Excel and VBA, 2nd edition, by Chandan Sengupta, Wiley Finance. The course schedule lists the reading assignments for each class session. I recommend you complete the readings before class.

Additional Text: VBA and Macros: Microsoft Excel 2010, by Bill Jelen and Tracy Syrstad, Que Publishing. This is a good supplementary text.

Homework: I will ask you to complete five equally-weighted homework assignments, which I will post on Sakai at least one week before they are due. Completed assignments must be submitted before class begins via Sakai; due dates appear on the course schedule below. You may complete the homework independently, or you can work with one or two classmates. [Groups larger than 3 are not allowed.] If you work in a team, please submit only one team assignment and be sure to include all group member names on the assignment. Each assignment will be graded on a ten point scale. You may find the assignments quite challenging. I recommend you budget a minimum of 10 hours for each homework.

Midterm Exam: The midterm exam will test coding skills (reading and writing code) and your knowledge of financial math and models. You may bring one double-sided 8 ½" by 11" sheet of notes to the midterm exam.

Final Exam: The final exam is a computer-based exam. You will write a set of functions and subroutines to solve a specific financial problem. You may use the Sengupta text as a reference.

Grades: Course grades will be determined by weighting class activities as follows.

Homework: 50%
Midterm Exam: 20%
Final Exam: 30%

Final course grades are assigned based on the following grid.

A	93 or above		
A-	90.0 – 92.9		
B+	87.0 – 89.9	C+	77.0 – 79.9
B	82.0 – 86.9	C	73.0 - 76.9
B-	80.0 – 81.9	C-	68.0 – 72.9

Learning Outcomes: By the end of this course, you should be able to:

1. Build financial models using Excel and VBA;
2. Value fixed-income, equity and option securities; optimize a portfolio.

Course Outline

Date	Topic	Text Chapters	Homework
Aug. 27	Introduction to VBA, Financial Analysis Modeling, Sub Procedures	21, 22	
Sep. 10	Loops, Conditional Code, Function Procedures, Calling a Function	22, 23	1
Sep. 17	Time Value of Money Fixed-Income Securities	14, 26	
Sep. 24	Fixed-Income Securities Price/Yield		2
Oct. 1	Analyzing Market History Simulating Stock Prices	16, 28 18, 29	3
Oct. 8	**Midterm Exam**		
Oct. 15	Options and Option Portfolios	19, 30	
Oct. 22	Binomial Option Pricing	20, 31	4
Oct. 29	Additional Excel Features & Review Portfolio Optimization	Parts of 5 – 9	5
Nov. 5	**Final Exam**		

* This schedule is subject to change.

Quinlan School of Business Policies

Attendance
Class attendance and participation are fundamental components of learning, so punctual attendance at all classes, for the full class meeting period, is expected of Quinlan students. Faculty may set participation policies unique to their courses and use class participation as a component of the final grade. The student is responsible for any assignments or requirements missed during an absence.

Make-Up Examinations
Loyola University academic policy provides that tests or examinations may be given during the semester or summer sessions as often as deemed advisable by the instructor. Because Quinlan faculty believe examinations represent a critical component of student learning, required examinations should be taken during the regularly scheduled class period. **Make-up examinations are discouraged**. Exceptions may be granted only by the faculty member or department chair, and only for unavoidable circumstances (illness verified by a signed physician's note, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, or religious observance). A make-up final examination may be scheduled only with the permission of the appropriate Quinlan Assistant or Associate Dean.

If a make-up examination must be given, it is the responsibility of the faculty member to prepare, schedule, and proctor the exam. The only regular exception is for a student athlete, who may use the testing services of the Athletics Department to complete a make-up examination. For a student with a documented special testing need, please consult University policy concerning use of the testing center in Sullivan Center at Lake Shore Campus.

Academic Integrity
All members of the Quinlan School shall refrain from academic dishonesty and misconduct in all forms, including plagiarism, cheating, misrepresentation, fabrication, and falsehoood. Plagiarism or cheating on the part of the student in individual or group academic work or in examination behavior will result minimally in the instructor assigning the grade of "F" for the assignment or examination. In addition, all instances of academic dishonesty must be reported to the chairperson of the department involved.

For further information about expectations for academic integrity and sanctions for violations, consult the complete Quinlan School of Business Honor Code and Statement of Academic Integrity on the Quinlan website:

http://luc.edu/media/lucedu/quinlan-graduate/pdfs/Honor-Code-Quinlan-July2012.pdf