
FIN 4550-1001 (MBA 5520-5001)
FINANCIAL MODELING
Spring 2017

Instructor: Mingsheng Li
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Office Hours: 3:00-4:00pm Tuesday/Thursday or by appointment
Office No.: Rm. 210 BA
Class Time: 4:00-5:15pm Tuesday/Thursday
Class Locations: Tuesdays: BAA 1008
Thursdays: BAA 1005 (computer lab)

E-mail: mli@bgsu.edu

- Text: Principles of Finance with Excel, 2nd Edition, 2011 Oxford (or 1st Edition 2006)-*required*
- TOP HAT SOFTWARE-*required*
Students can buy digital license at BGSU bookstore or at www.tophat.com) and register via [Student Manager](#).

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<https://app.tophat.com/e/229095>

Top Hat support: direct all questions to: support@tophat.com.

Top Hat step-by-step walkthrough videos: [Student Academy](#)

- **Recommended Text:** Financial Analysis with MS Excel, 6th Edition, 2012, South-West-Cengage Learning, by Mayes & Shank.
- Assigned Mini-cases & homework, readings materials (PDF files), PowerPoint notes, and other handouts

Prerequisite: grade of C or better in FIN 3000.

I. Course Description

FIN 4550 (Financial Modeling) is an advanced course in Finance. It focuses primarily on the development of spreadsheet applications and the use of the case method to apply decision-making procedures to real world problems in finance areas.

II. Course Goals

FIN 4550 is a course devoted to (1) enhance students' knowledge primarily in the areas of corporate finance and investments; (2) improve students' analytical skills and problem solving ability through spreadsheet developments; (3) enable students to explore and better understand current issues in finance, and (4) maximize students' learning opportunity by applying Excel skill to solve finance problems. The course employs different methods (such as spreadsheet development, case study, project, etc.) in achieving these goals. Additionally, lectures are presented throughout the course discussing the main theories and issues in finance areas and introducing Excel functions that are commonly used in finance.

The objectives of the course include the following:

1. Apply finance theories and use spreadsheet as a main tool to analyze realistic financial problems in the areas of:
 - (1) financial statements and performance;
 - (2) working capital management and free cash flow forecast;

- (3) capital budgeting and funds allocation associated with fixed assets;
 - (4) alternative source of capital and related cost of raising capital;
 - (5) investment analysis, including time value of money, security valuation, and duration.
 - (6) Risk analysis and basic derivatives.
2. Using case method as a main pedagogy, maximum involvement and participation on the part of the students is stressed. The course will attempt to develop each student's ability to make decisions in realistic situations after (i) analyzing problems facing the firm and individuals and (ii) evaluating all available but viable alternatives.
 3. Another objective is to expose the student to outside reading materials that are relevant to the course topics discussed. These may come from various sources such as the **Journal of Applied Corporate Finance, Journal of Portfolio Management, Financial Analysts Journal, Journal of Empirical Finance, Financial Review, SSRN.com**, and/or from practitioners' publications such as **Business Week** and the **Wall Street Journal**.

III. Student Learning Outcomes

After successfully completing this course, students should be able to:

1. Demonstrate a clear understanding of both conceptual background and analytical techniques necessary to make sound corporate financial management and investment decisions;
2. Develop communication skills through class discussions, presentations, group assignments, and outside readings;
3. Keep the desire to continue to learn throughout their remaining years for personal benefit and professional growth;
4. Retain and effectively use the knowledge and skills related to problem solving in various areas of finance.
5. More effectively utilize spreadsheets to make and present calculations and analysis.

IV. Instructional Strategies

Although this is designed primarily as a course involving students' presentations and class discussions of cases and assignments, the format would provide opportunities for 1) discussion of outside readings from various sources noted above; 2) lecturing of main theories in the related finance areas and ongoing empirical issues; (3) guest lecturers (if available), etc. Individual assignments, group cases, projects, in-class participation in case and assignment discussions, short case quizzes, case reports, exams, etc., will be part of students' learning process in the course.

V. Course Content

The following outline relates the student learning objectives to specific topics:

1. Financial Statement/Financial Condition Analysis
2. Time Value of Money and Security Valuations.
3. Source and Cost of Capital/Capital Structure Decisions
4. Capital Budgeting and Investment Decisions
5. Security Risk Analysis and Portfolio Management
6. Dividend Policy and Empirical issues
6. Use and Valuation of Options

VI. Grading Policy

Given the nature of the course, students will be actively involved throughout the course. Case analyses, both written and oral, will be required. Students will be actively involved in using spreadsheet applications to financial problems. A student's performance and final letter grade in the course are evaluated in several areas: 1) written case report and case presentations; 2) assigned homework and quizzes, 3) participation in class discussions, 4) exams and research projects. The course grade will be determined based on the following distribution:

FOR FIN4550 STUDENTS

Two mid-terms (2 x 50) (one lowest will be dropped)	50
Group min-cases (5 out of 6)	50
Individual assignments	15
<i>Tophat</i> (Class participation & in class exercise, etc)	15
Final Exam	50
Talent Project & Presentation (required)	50
Total	<u>230</u>

FOR MBA 5520 STUDENTS:

Two mid-terms (2 x 60) (one lowest will be dropped)	60
Group-cases & presentation (6 -1) x 10	50
Individual assignments	15
<i>Tophat</i> (Class participation & in class exercise, etc.)	15
Final exam	60
Research or talent Project	50
Total	<u>250</u>

Letter grade will be determined as: A—90% or above, B—80%~89%, C—70%~79%, D—60% ~ 69%, F-- below 59%

Note that for some cases, you need to get additional data from Internet or from the CRSP and/or Research Insight.

VII. Assessing the learning outcomes

During the semester, the instructor will be continually monitoring the students' performance to assess and evaluate their progress towards their learning outcome of the subject matter. The instructor's assessment will primarily consist of evaluating the student's individual assignments, performance as a part of a group, class participations (in case discussions and/or in the quality and frequency of questions asked), mini-cases, and on talent project. More specifically, each student will be monitored in the following way:

1. On presentations: identifying issues, quality and thoroughness of analysis of issues, the relevance and completeness of solutions recommended (based upon the analysis), clarity of presentation and other standard requirements of a good presentation;
2. On case & project report: writing quality, correctness of calculations, accuracy of program and solutions, clarity of explanations, and many of the requirements noted above will also be considered for written report.
3. On the assigned homework & quizzes: correctness of solutions and program, clarity of explanation of answers;

Note:

Homework will be assigned on a regular basis; however, not of all the assignments will be

collected. Assigned homework problems will be discussed at the conclusion of the coverage of each chapter. Answers to assigned problems will be made available to students after class discussions. **Doing homework before class discussions is REQUIRED** for each student and very helpful for students to understand course materials and will have significant effect on your grades.

VIII. Class Policy and Procedures

At a minimum, all policies stated in the current BGSU Academic Honesty Policy and Code of Student Conduct should be followed. Additional class policies include:

A. Make-up Policy:

There is **NO** make-up exam in GENERAL. In case of illness, emergency or university obligations, you must present written documents from doctors or from relevant department advisors/supervisors of BGSU to prove absence. When absence is unavoidable and with excusable reasons, student must report to the instructor either before the exam or the next class after the exam to arrange a possible make-up exam. The grade for any missed exams without excusable reasons or without reporting to the instructor within the required period is zero. Final exam is comprehensive and covers most of the materials discussed in classes. *There is NO make-up for assigned presentations for whatever reasons.* The scheduled exam dates may be changes and announced in class.

B. Attendance Policy:

Attendance is **required**. When absence is unavoidable, student must show written evidence. Late arrival and early leave distract classes and must be kept to a minimum level. *If emergency situation (e.g., sick or family emergency, etc.), you need to bring your document to your instructor's office during the earliest available time after you come back to campus so that the participation part in Tophat can be adjusted accordingly for the class you missed. Otherwise, it is not impossible to make any adjustment at the end of the semester.*

C. Codes of Conduct and Academic Honesty Policy:

All students are subject to Academic Honesty Policy. Academic dishonesty in terms of cheating, reporting or sharing other people's work to be your own (plagiarism), or any other violations will be reported and penalties will be assigned. For details, refer to:

- BGSU Student Handbook (<http://bgsu.edu/downloads/sa/file15768.pdf>)
- The Academic Charter, B.II.H (<http://www.bgsu.edu/offices/facsenate/page471.html>)
- Student Discipline Programs (<http://bgsu.edu/offices/sa/studentdiscipline/index.html>)

Any cheatings will be identified and punished according BGSU rules.

F. Discipline/Course Specific Policies:

- All assignments must be completed independently by each student/group. You are **NOT** allowed to copy answers from any other people or from other sources, nor are you allowed to share your work with any other people.
- Students are **NOT** allowed to take photos or scan exam or quiz questions. Nor are students allowed to use materials (e.g., homework, mini-case, projects, exam questions) from previous students.
- Getting some codes of individual functions (e.g., IF statement, Vlookup, etc) from other courses are ok, but it is absolutely **NOT** allowed to use other people's codes to complete a main part of your project.
- Students are **NOT** allowed to distribute or post any materials or answers from this course to anyone or internet.
- Violation of any of the above will result in zero grade for the assignment, and will be disciplined based on the BGSU Academic Honesty Policy.

- **The instructor has the right to ask a student to retake any assignment if the student's grade/performance on any assignment is quite inconsistent with his/her overall performance.**
- ***Cell Phones, Pagers, and Personal Digital Assistants:*** The use of cell phones, pagers, and personal digital assistants (PDAs) is **allowed ONLY for Tophat**. Otherwise, cell phones, pagers and PDAs must be turned off during class.

G. Other University Policies:

Disability Policy: In accordance with the University policy, if the student has a documented disability and requires accommodations to obtain equal access in this course, he or she should contact the instructor at the beginning of the semester and make this need known. Students with disabilities must verify their eligibility through the Office of Disability Services for Students, 413 South Hall, 419-372-8495.
(<http://www.bgsu.edu/offices/sa/disability/>)

Religious Holidays: It is the policy of the University to make every reasonable effort allowing students to observe their religious holidays without academic penalty. In such cases, it is the obligation of the student to provide the instructor with reasonable notice of the dates of religious holidays on which he or she will be absent. Absence from classes or examinations for religious reasons does not relieve the student of responsibility for completing required work missed. Following the necessary notification, the student should consult with the instructor to determine what appropriate alternative opportunity will be provided, allowing the student to fully complete his or her academic responsibilities. (As stated in *The Academic Charter*, B-II.G-4.b at: <http://www.bgsu.edu/downloads/bgsu/file919.pdf>).

Student veteran-friendly campus: BGSU educators recognize student veterans' rights when entering and exiting the university system. If you are a student veteran, please communicate with your instructor so reasonable accommodations can be made for absence when drilling or being called to active duty (See <http://www.bgsu.edu/veteran/> for more information).

University Closure: In most cases, the University will not close for winter conditions unless the Wood County Sheriff's Department declares a Level 3 emergency.¹ Information about University wide closures is communicated by the Office of Marketing and Communications, which will notify the University Fact Line, local FM & AM radio stations and the four Toledo television stations (see [Weather Policy](#) for lists). For changes in individual class meetings, please refer to the class Blackboard site for postings by the instructor.

Tape Recording Policy: Students are not authorized to make recordings during class without permission from the instructor.

¹*A Handbook of Commonly Shared Employment Policies for BGSU Faculty, Administrative and Classified Staff*, "Severe Weather Closing Policy and Procedures," <http://www.bgsu.edu/downloads/execvp/file8135.pdf>

Tentative Schedule and Related Topics

Week	Date	Chapter and Topic	Notes
1	01/10	Introduction and Excel basics: class orientation: chapters 24-29	
	01/12	Basic Financial knowledge Review: (Financial Statements & Free Cash Flow, 1 st _ch3)	
2	01/17	Chapter 2: Time Value of Money	
	01/19	Chapter 3: What does it cost?	Ch2. problem
3	01/24	Chapter 3 continued	Mini-case1:Student
	01/26	Chapter 4: Capital Budgeting	Loan (Ch3)
4	01/31	Chapter 4 continued	
	02/02	Chapter 5: more problems in capital budgeting	Mini-case2: Capital
5	02/07	Chapter 5 Continued	Budgeting (ch4)
	02/09	Exam 1	
6	02/14	Chapter 6: WACC, Gordon Model	
	02/16	Chapter 7: Financial Planning Model	Mini-case3: Intel
7	02/21	Chapter 7 continued	(Financial Model)
	02/23	Chapter 8: Risk, Liquidity Analysis	
8	02/28	Chapter 9 &10: Portfolio Analysis & Investment Decision	Mini-case4 (portfolio)
	03/02	Portfolio Analysis & Investment Decision continued	
9	03/06 ~10	Spring Break: Enjoy the sun shine	
10	03/14	Chapters 11 - 13: CML, SML, CAPM,	
	03/16	Chapters 11 - 13 continued (Investment performance)	
11	03/21	Exam 2	
	03/23	Chapter 15: Bond Valuation	Mini-case 5: Bond
12	03/28	Chapter 15 continued	
	03/30	Chapter 16: Stock Valuation	
13	04/04	Chapter 19 Dividend Policy	
	04/06	Chapter 19 continued	
14	04/11	Chapter 20 - 21: Introduction of Options	
	04/13	Chapter 20 & 21: continued	
15	04/18	Chapter 20 &21 continued/Chapter 22	Mini-case6: Option
	04/20	Chapter 22: Black-Scholes Formula	
16	04/25	Student Presentations	
	04/27	Student Presentations/Final Review	
17	05/02 Tuesday	Final Exam 3:30-5:30pm	

Notes:

1. The instructor reserves the right to change this schedule (especially exam dates and case assignments) if necessary.
2. Students need special arrangements for classes and tests due health conditions please contact **Office of Disability Services** (372.8495 or <http://www.bgsu.edu/offices/sa/disability>).

Research & Talent Project

Purpose and Description

Students have different talents and unique interests due to their personality, education background or career goals. Thus, it would be more beneficial for students to choose whatever a topic and format that you are interested as your project, which of course must be related to the main topics of the course. Instead of imposing a specific topic on you based on your instructors' judgment, students have a chance to choose a topic and format to utilize your potential, explore your interests, and demonstrate your talent.

Specifically:

--No specific topic or format is imposed on you; your creativity is the only limit. However, whatever you choose, you **are Required to apply extensively** various useful Excel functions such as basic *Macro*, Web query, *Vlookup*, *Hlookup*, *Match*, *Index*, *VB Application*, *Form Controls* and *ActiveX Controls* (from *Insert* under *Developer*) and different macros to the topic and project at your choice and to create dynamic charts & tables in your project whenever possible.

-- The project could be a research paper, creating a new case (with spreadsheet template, explanations, and answer keys), developing a computer program or software, writing an Excel & Financial manual or, anything related to the main topics of this course. I will post several sample projects that were completed by previous students.

--Grading will be based on contents of the project, depth and coverage, relevance to the course topics, usefulness to other fellow students, creativeness and innovation, writing quality, presentation (both writing and in-class presentation) clarity and consistence. *The bottom line is that if you just spend a few weeks in a rush before the deadline and without a good-plan and gradual buildup, you won't learn much as you could otherwise and your grade won't be good either.*

--Individual or team (not more than 3 people).

Main Data Sources:

If students decide to do a research project or create a new case, the following data sources are available:

CRSP—daily and monthly trading statistics, **S&P Research Insight**—company financial data
Bloomberg Terminals (Finance Research & Trading Room, BAA 2004)

Yahoo Finance—current and historical information of firms and macro information

Key Date Points

- **Jan 26th-Thursday** (the 3rd week): one-page outline about a chosen topic and tentative issues to be addressed (**2 points penalty for late submission, suggested by previous students**)
- **Mar 16th-Thursday** (the 10th week): two pages' mid-term progress report, which includes (but not limited to) the followings: (1) narrowed down issues to be addressed in the project; (2) related literature (academic papers and articles) collected and reviewed; (3) data collected and possible test methods to be used. (**3 points penalty for late submission, suggested by previous students**)
- **Apr 25th**: turn-in the *final version* of the completed project. (**5 points penalty for late submission**)

Note that it is each student's responsibility to mark these key dates on your calendar and submit your report on time. Missing a report on the required date will result in a penalty and the related points will be taken away from total project grade. If any individual could not meet the deadline due to

unexpected circumstance, the affected individual needs to inform your instructor prior to the deadline.

➤ **May 2nd, Tuesday 3:30-5:30 Final Exam**