

BA 4839 – Financial Modeling with Spreadsheets

Tuesday 14:25-15:05 and 15:25-16:00 @ TradeMaster Investment Lounge

Thursday 14:25-15:05 and 15:25-16:00 @ TradeMaster Investment Lounge

Instructor:	Dr. Hande Ayaydın Hacıömeroğlu
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Office Hours:	Monday and Wednesday 10:35-12:10 via zoom. The link will be sent to students later during the semester.
Course Web Page:	https://odtuclass.metu.edu.tr/ Students are a natural member of ODTU Class. All the course material including power point slides and solutions to end of chapter problems, your grades, assignments and announcements will be posted there. In order to not to miss anything, please check your METU email accounts regularly.

Course Description:

Provide students with the knowledge to apply the theories they have learned using spreadsheets. The students who know the essentials of corporate finance theories should also be able to solve the financial models numerically in order to enhance their knowledge in the field. The lecture includes models in the area of pricing financial securities, capital budgeting, portfolio theory and capital structure. These models will be explained and then the models will be implemented numerically by using spreadsheets. This lecture will help the undergraduate students to enhance their theoretical and practical knowledge related to financial modelling.

For this course, as a prerequisite, students should have taken BA 2802 – Principles of Finance with a semester grade of at least DD, or an equivalent finance course with a passing grade.

Course Student Learning Objectives: (CSLO)

Upon successful completion of this course, students should be able to:

Course Specific Skills:

1. Calculate the future and present value for annuities, net present value and internal rate of return by using functions and formulas in a spreadsheet
2. Make capital budgeting decisions. Learn how to challenge issues like sunk costs, taxes, different depreciation methods, different life spans of projects, mid-year discounting, multiple IRRs, and inflation
3. Understand how to choose discount rates for different investment opportunities
4. Calculate Free Cash Flows for valuation purposes
5. Know how to use DCF model for valuation
6. Calculate risk and return for financial instruments
7. Form investment portfolios, calculate and draw efficient frontier
8. Learn to find optimum risky portfolio by employing Capital Asset Pricing Model (CAPM) and Security Market Line (SML)
9. Measure the performance of the portfolio
10. Calculate cost of capital by using CAPM
11. Model the Term Structure of Interest Rates and price the bond by using real life data
12. Price stocks by using real life data
13. Understand the capital structure of the firms and value them accordingly

Discipline Specific Skills:

Develop an understanding of:

14. how spreadsheet programs can be used to solve financial problems in general
15. how spreadsheet programs can be used when different financial instruments and firms are priced

Personal and Key Skills:

16. Develop problem solving skills
17. Develop spreadsheet program using skills

Learning and Teaching Methods:

This course is going to make use of formal lectures in computer laboratory, in-class discussions, and problem solving.

Required Reading:

Simon Benninga, Principles of Finance with Excel, 2nd Edition, Oxford University Press.

Assessment and Grading:

Form of Assessment	% Contribution	Size of the assessment	CSLOs covered by this assessment	Feedback Method
Written Examinations (Total of 4) (First three exams are 15 points each and the last exam is 20 points)	65	75-minute essay-type examination with 20 minute break	1, 2, 3, 4, 5, 14, 15, 16, 17	Written and oral (during office hours)
Homeworks (Total of 4)	26	Self-study hours	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17	Written and oral (during office hours)
Case	9	Self-study hours	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17	Written and oral (during office hours)

No "extra" work above the aforementioned will be accepted or credited.

Makeup Examinations: If you miss an exam you should prove that you have a valid reason with a valid document, i.e. doctor report. In this circumstances please make sure you notify me before the exam or as soon as possible after the exam. **All students who missed an exam with a valid reason during the semester will be asked to take a comprehensive exam that will be given during the period of final exams regardless of which exam they missed during the semester.**

Important Note About Re-sit (Bütünleme) Exams: Please note that re-sit exams are no longer given at METU.

Incompletes: A grade of incomplete will not be granted except for the most extreme circumstances and only after stringent verification and approval by the Department. A grade of incomplete will be granted only as a result of circumstances beyond the student's control. A grade of "I" is not given in lieu of an "FF".

Course Policies:

Course Requirements: The students will be assigned readings from the textbook and are expected to come to class prepared and ready to take part in class discussions.

Attendance is mandatory in this class. Past experience repeatedly demonstrated that students who regularly attend class and read the chapter assignments perform significantly better than students who have an intermittent attendance and/or who do not keep current in reading the chapters.

Exams: There will be five exams which will be held on computer using a spreadsheet program.

Homeworks: There will be five graded homework assignments during the semester. These homework assignments can be done by **groups of two**. You can select your own group members but have to notify the lecturer before **31st of October 17:00 p.m.** The homeworks are due for the start of the lecture they

are assigned. They should have been sent to the lecturer before class begins. **Late homeworks will not be accepted.**

Case: During the term you need to prepare a case report. You will be assigned to groups of 3 to 4 students. Each group will prepare a written (**word processed**) analysis of the. At the end of the term each of you will be required to provide an evaluation of the contribution of each of the group members to the group's output. The case report will be due on **January 31, 2022, at 12:00 p.m. Late case reports, regardless of how late it is, will not be accepted.** Details on both the form of the report and the peer evaluation will be provided later in the term.

Reading Assignments: The following pages give the schedule for the reading assignments. The lectures will stress the most important and/or most difficult material.

Presentation Slides: A copy of the presentation slides is available at the course web page. These slides can be used as chapter summaries and utilized while taking down notes during class.

STUDENT DISABILITIES: Any student, who, because of a disabling condition, may require special arrangements in order to meet course requirements, should contact the instructor as soon as possible. Students should present the appropriate documentation from the university's Disability Support Office (Engelsiz ODTÜ Birimi, ODTÜ Kütüphanesi, Solmaz İzdemir Salonu, Tel: 210.7196; engelsiz@metu.edu.tr) verifying their disability, and outlining the special arrangements required. Please note that no accommodations will be provided to the disabled students prior to the completion of this approved University process.

ACADEMIC DISHONESTY: The Department of Business Administration has no tolerance for acts of academic dishonesty. Such acts damage the reputation of METU, the department and the BS/MBA degree and demean the honest efforts of the majority of the students. The minimum penalty for an act of academic dishonesty will be a zero for that assignment or exam.

CHEATING: All university, faculty/institute, and department principles on academic honesty will be strictly enforced. The usual consequence for academic dishonesty is failure of the course and referral of the case to the Dean of the Faculty or the Graduate School of Social Sciences for additional disciplinary action. Examinations are individual and are to be completed without outside assistance of any sort. Persons observed cheating during examinations will receive a failing grade in the course. Homework assignments are individual, unless otherwise specified by the instructor, and are to be completed without outside assistance of any sort, as well. Persons observed cheating in their homework assignments will receive a score of zero for the portion of the semester grade that is allocated to such assignments.

PLAGIARISM: The instructor assumes that students will do their own work. By placing their names on assignments (individual or team), students are affirming that the contents are their original work. Any previous work available from files or past students, as well as materials available on the internet may be used only as a suggestive model. Violation of this provision will be considered as unethical behavior, subject to disciplinary action. If you have any doubt about the use of a specific material, see the instructor ahead of time. Any material used from outside sources should be referenced appropriately. Persons observed to plagiarize while preparing assignments will be referred to the Dean of the Faculty or the Graduate School of Social Sciences for additional disciplinary action and also they will receive a score of zero for the portion of the semester grade that is allocated to such assignments.

METU HONOR CODE

Every member of METU community adopts the following honor code as one of the core principles of academic life and strives to develop an academic environment where continuous adherence to this code is promoted.

"The members of the METU community are reliable, responsible and honorable people who embrace only the success and recognition they deserve, and act with integrity in their use, evaluation and presentation of facts, data and documents."

CIVILITY IN THE CLASSROOM: Students are expected to assist in maintaining a classroom environment which is conducive to learning. In order to assure that all students have an opportunity to gain from time spent in class, unless otherwise approved by the instructor, students are prohibited from using laptop computers and cellular phones, making offensive remarks, reading newspapers, sleeping, or engaging in any other form of distraction. Inappropriate behavior in classroom shall result, minimally, in a request to leave class.

Past observations showed that the METU classroom experience is improved when the following are true:

Students arrive on time. Timely arrival ensures that classes are able to start and finish at the scheduled times. Timely arrival shows respect for both fellow students and faculty and it helps to create a better learning environment by reducing avoidable distractions.

Students are fully prepared for each class. Much of the learning in this course takes place during classroom discussions. When students are not prepared, they cannot contribute to the learning process. This affects not only the individual but also the classmates who count on them.

Students respect the views and opinions of their colleagues. Disagreement and debate are encouraged; however, intolerance for the views of others is unacceptable.

Laptops, phones and wireless devices are turned off.

STUDENT EXCUSES: Unless you inform me in advance, I will not excuse you from any of the grade requirements. At the same time, this does not mean that I will allow you to miss a test or an assignment with any excuse that you present to me. Please note that the excuse is acceptable for only the most extreme circumstances and only after stringent verification and approval by the Department.

KNOW YOUR RIGHTS AND RESPONSIBILITIES! <http://oidb.metu.edu.tr/en/academic-rules-and-regulations>

NOTE THE IMPORTANT DATES ON THE ACADEMIC CALENDAR! <http://oidb.metu.edu.tr/en/academic-calendar>

The instructor assumes that students who attend the next class have understood and accepted to agree with all the requirements and rules of this course.

Notes:

- Usage of cell phones is strictly prohibited during class. Please be courteous to your classmates and me and make sure that your phones are on silent mode before the class begins.
- Please arrive on time and do not enter the classroom if I already have closed the classroom doors. If you have to leave early, please inform me in advance. If, due to uncontrollable circumstances, you end up being late for class, please wait outside until the first in-class break during which I will open the classroom door and let you in.
- You are encouraged to drop by my office during office hours for questions, concerns, or, suggestions. Outside the office hours, please make an appointment with me in advance, before or after the class, via phone or e-mail. For quick questions that you may have, note that e-mailing is a very effective means of communicating with me.

Good luck to all of you and let's have a very enjoyable semester together!!

Don't be Trashy. Recycle.

Do not throw items away in the trash that should go into the recycling bin.
Show a little class.

REDUCE, REUSE, RECYCLE!

The following table gives the tentative schedule for the semester. The lectures will stress the most important and/or most difficult material. The students are required to read the chapters before they are covered in class.

Tentative Course Schedule				
Month	Day	Topic	Reading/ Assignment	CSLO
October	19	Introduction Assigned Reading Introduction to Finance Time Value of Money	Chapter 1 Chapter 2	1, 16, 17
	21	Time Value of Money (cont.'d)	Chapter 2	1, 16, 17
	23	Introduction to Capital Budgeting Extra Session on Saturday at 10:35-12:10	Chapter 4	2, 14, 16, 17
	26	Issues in Capital Budgeting	Chapter 5	2, 14, 16, 17
	28	No Lecture Due to National Holiday		
November	2	Issues in Capital Budgeting (cont.'d)	Chapter 5	2, 14, 16, 17
	4	Choosing a Discount Rate	Chapter 6	3, 16, 17
November	9	Homework 1 is Due (Chapters Included: 2, 4, and 5)		
	9	Choosing a Discount Rate (con'td)	Chapter 6	3, 16, 17
November	11	Written Exam 1 (Chapters Included: 2, 4, and 5) During first 40 minutes!!!		
	11	Using Financial Planning Models for Valuation	Chapter 7	4, 14, 15, 16, 17
	16	Using Financial Planning Models for Valuation (cont.'d)	Chapter 7	4, 14, 15, 16, 17
	18	What is Risk?	Chapter 8	6, 14, 15, 16, 17
	23	What is Risk? (cont.'d)	Chapter 8	6, 14, 15, 16, 17
	25	Portfolio Returns and the Efficient Frontier	Chapter 10	6, 7, 14, 15, 16, 17
November	30	Homework 2 is Due (Chapters Include: 6, 7, and 8)		
	30	Portfolio Returns and the Efficient Frontier (cont.'d)	Chapter 10	6, 7, 14, 15, 16, 17
December	2	Written Exam 2 (Chapters Included: 6, 7 and 8) During first 40 minutes!!!		
	2	The Capital Asset Pricing Model and the Security Market Line	Chapter 11	6, 7, 8, 14, 15, 16, 17
	7	The Capital Asset Pricing Model and the Security Market Line (cont.'d)	Chapter 11	6, 7, 8, 14, 15, 16, 17
	9	The Capital Asset Pricing Model and the Security Market Line (cont.'d)	Chapter 11	6, 7, 8, 14, 15, 16, 17
	14	Using the Security Market Line to Measure Investment Performance	Chapter 12	9, 14, 15, 16, 17
	16	Using the Security Market Line to Measure Investment Performance (cont'd)	Chapter 12	9, 14, 15, 16, 17

December	21	Homework 3 is Due (Chapters Included: 10, 11, and 12)		
	21	The Security Market Line and the Cost of Capital	Chapter 13	10, 14, 15, 16, 17
December	23	Written Exam 3 (Chapters Included: 10, 11 and 12) During first 40 minutes!!!		
	23	The Security Market Line and the Cost of Capital (cont.'d)	Chapter 13	10, 14, 15, 16, 17
	28	Bond Valuation	Chapter 15	11, 14, 15, 16, 17
	30	Bond Valuation (cont.'d)	Chapter 15	11, 14, 15, 16, 17
January	4	Valuing Stocks	Chapter 16	12, 14, 15, 16, 17
	6	Valuing Stocks (cont.'d)	Chapter 16	12, 14, 15, 16, 17
	11	Capital Structure and the Value of the Firm	Chapter 17	10, 13, 14, 15, 16, 17
	13	Capital Structure and the Value of the Firm (cont.'d)	Chapter 17	10, 13, 14, 15, 16, 17
January	18	Homework 4 is Due (Chapters Included: 13, 15, 16 and 17)		
	18	Questions and Answers		
January	20	Written Exam 4 (Chapters Included: 13, 15, 16 and 17) During whole class hours, two separate sessions		
January	31	Case Report is due by 12:00 p.m.		