🌴 NYU STERN

Syllabus: Corporate Finance FINC-UB.0007 Summer 2015: Session I

| Schedule: | Monday and Wednesday, 12:20pm-03:30pm |
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| Location: | Tisch LC-21 |
| Course website: | NYU Classes |
| Instructor: | Siddharth Vij |
| E-mail: Office: | <u>svij@stern.nyu.edu</u> KMC 9-197E |
| Office hours: | Mondays 4-6pm in KMC 9-191 (Gruber Room) or by appointment |

Course description:

This is an introductory course in corporate finance. The course has three main objectives:

- 1. Develop an understanding of the tools that are used to value investment projects and companies (valuation).
- 2. Understand the basic issues involved in how firms should raise funds for their real investments (financing).
- 3. Evaluate how investment and financing decisions are related.

Emphasis will be placed on appreciating the limitations and challenges that are faced when applying the theoretical framework of corporate finance to real world problems.

Prerequisites:

The prerequisite for this class is a passing grade in Foundations of Finance. Therefore, it is expected that students will be comfortable with the following topics: time value of money, discounted cash flow analysis, risk-return trade-off, diversification, valuation of bonds and stocks, Capital Asset Pricing Model (CAPM).

Course Material:

Lecture Notes (required):

We will use lecture notes (LN). The booklet with the lecture notes will be distributed in the first class. The lecture notes contain gaps in material which we will fill out together in class.

Textbook (recommended, but not required):

The lecture notes are self-contained. Thus, no textbook is required. For those of you who wish to use a textbook in addition to the class notes, I recommend that you use

Brealey, R. A., Myers, S. C., and F. Allen, 2013, *Principles of Corporate Finance*, 11th edition, McGraw-Hill. (BMA)

You can also use earlier editions of the textbook. The lecture notes are mostly based on this book. The relevant chapters are indicated in the course schedule. This textbook can be used as background reading for those of you who wish to read ahead of the lecture or dig deeper into the material. *However, in terms of the questions that will be asked in the exams, all the relevant material is contained in the lecture notes.*

As an alternative, you can also use a new online textbook:

Welch, Ivo, *Corporate Finance*, 3rd Edition, 2014. (W)

The textbook is available free on the author's website at <u>http://book.ivo-welch.info/ed3/</u>.

Course Outline:

The class is divided in 8 topics. We need about 1-2 class sessions for each topic.

| Торіс | Lecture Notes | BMA Chapter (11th Edition) | W Chapter (3rd Edition) |
|--|------------------|-------------------------------|----------------------------|
| 1) Valuation | | | |
| Net Present Value | 1 | 2.1-2.3 | 2,3 |
| Rules for Making Investment Decisions | 2 | 5.1-5.4 | 4.1-4.2,4.4 |
| Real Options | 3 | 10.4, 22.1-22.3 | 12.6 |
| Cash Flow Analysis | 4 | 6.1-6.3 | 13 |
| Cost of Capital | 5 | 8.2-8.3, 9.1-9.3 | 9 |
| 2) Financing | | | |
| Capital Structure | 6 | 17.1-17.4, 18.1-18.3 | 16,17,18.1-18.2 |
| 3) Valuation & Financing | | | |
| Capital Structure and Investment Decisions | 7 | 19.1-19.4 | 19 |
| Payout Policy | 8 | 16.1-16.3 | 17.3,18.9 |

Calculator:

Please bring a calculator. There are no restrictions regarding the type of calculator you may use. Any calculator in which you can compute powers like x^y will do the job.

Problem Sets:

We will have a total of four problem sets. The problem sets are intended to help you understand the lectures and prepare yourself for the type of questions asked in the exam.

Dates of posting and submission will be announced in class and are also listed at the end of this syllabus. All problem sets will be due in class. Solutions will be posted right after the submission deadline. You are welcome to work in groups or alone on the problem sets. However, you need to write up your individual solution. Late or missed submissions will negatively affect your grade.

Participation:

This class will cover a number of concepts that build on each other and will also be helpful for you in more advanced classes. As such, it is important that you attend classes regularly. I encourage you to promptly clarify any doubts you have about the material, either in class or during office hours. Please do not wait till just before the exam!

Your behavior in class should respect your classmates' desire to learn. Classes will start and end on time. Please try not to arrive late or leave early. Disturbing the class by chatting with your neighbors or using audible electronic devices will not be appreciated. Repeated transgressions will hurt your participation grade.

Exams:

There will be no make-up exams, so please mark the following dates in your calendar:

| Midterm: | June 15, 2015, 12:20pm-01:45pm (in class) |
|----------|---|
| Final: | July 01, 2015, 12:20pm-03:30pm (in class) |

Both exams are closed book. You can bring a one-page cheat-sheet and your calculator. No other materials and electronic devices.

All exams are graded according to a grading schedule, which awards points for completing specific steps of a question and deducts points for mistakes. The grading schedule is used to ensure that all students are treated fairly. In case you feel that your exam is not graded fairly, you need to submit a written explanation of why you think your grade should be adjusted. You need to submit your appeal within one week of the exam. If there is an obvious mistake (e.g. not adding up points correctly), let me know and I will be happy to correct the mistake.

Grading:

| Problem Sets: | 15% |
|----------------|-----|
| Participation: | 10% |
| Midterm: | 30% |
| Final: | 45% |

NYU faculty has adopted a standard of rigor for teaching where:

- 25-35% of students can expect to receive A's for excellent work
- 50-70% of students can expect to receive B's for good or very good work
- 5-15% of students can expect to receive C's or less for adequate or below work

Note that while we use these ranges as a guide, the actual distribution for this course and your own grade will depend upon how well each of you actually performs in this course.

Please see <u>http://www.stern.nyu.edu/experience-stern/about/departments-centers-initiatives/academic-departments/finance/academic-programs/undergraduate/grading-standards</u> for more information.

Following departmental guidelines, incompletes will not be given.

Academic Integrity:

Integrity is critical to the learning process and to all that we do here at NYU Stern. All students are expected to abide by the NYU Stern Student Code of Conduct. A student's responsibilities include, but are not limited to:

- A duty to acknowledge the work and efforts of others when submitting work as one's own. Ideas, data, direct quotations, paraphrasing, creative expression, or any other incorporation of the work of others must be clearly referenced.
- A duty to exercise the utmost integrity when preparing for and completing examinations, including an obligation to report any observed violations.

Please see <u>www.stern.nyu.edu/uc/codeofconduct</u> for more information.

Let me emphasize that it is unfair to your fellow students to violate the Honor Code. If you do violate the Honor Code, you will be reported to the Dean's Office. Violations in the honor code may result in a failing grade for the class.

Students with Disability:

Students whose class performance may be affected due to a disability should notify me early in the semester so that arrangements can be made, in consultation with the Henry and Lucy Moses Center for Students with Disabilities, to accommodate your needs. If you do not notify me within the first two weeks of the semester, I may not be able to accommodate your request. This rule does not apply if the disability is diagnosed during the semester. Please see http://www.nyu.edu/csd for more information.

Detailed Schedule:

| Class | Date | Time | Plan | LN Chapter | Comments |
|----------|------------------|-------------------------------------|---|---------------|------------|
| 1 27-May | 12.20-1.50 | Course Introduction; Present Values | 1.1 | | |
| | 27-May | 2.05-3.30 | Perpetuities | 1.2-1.3 | PS1 posted |
| 2 | 1-Jun | 12.20-1.50 | Annuities | 1.4-1.5 | |
| ∠ 1-Jun | 1-Juli | 2.05-3.30 | Internal Rate of Return (IRR) | 2.1-2.3 | |
| 3 | 3-Jun | 12.20-1.50 | Problems with IRR; Payback rule | 2.4-2.7 | PS1 due |
| 5 3-JU | 3-Juli | 2.05-3.30 | Real Options: The Value of Information | 3.1-3.2 | PS2 posted |
| 4 | 4 8-Jun | 12.20-1.50 | Real Options (contd.) | 3.3-3.4 | |
| 4 | o-juli | 2.05-3.30 | Introduction to Cash Flow analysis | 4.1-4.2 | |
| 5 | 5 10 I | 12.20-1.50 | Basic Rules for Cash Flow analysis | 4.3 | PS2 due |
| 5 10-Jun | 10-Juli | 2.05-3.30 | Examples of CF analysis; Mid-Term review | 4.3 | |
| 6 | 15-Jun | 12.20-1.50 | Mid-Term Exam | 1-3 | |
| 0 | 13-Juli | 2.05-3.30 | Cost of Capital: Implications of CAPM | 5.1-5.2 | PS3 posted |
| 7 | 17-Jun | 12.20-1.50 | Project/Firm Cost of Capital | 5.3-5.5 | |
| / | 1/-Juli | 2.05-3.30 | Capital Structure: Modigliani-Miller Propositions | 6.1 | |
| 8 | 22-Jun | 12.20-1.50 | Trade-Off Theory | 6.2 | PS3 due |
| 8 22-J | 22 - Juli | 2.05-3.30 | Adjusted Present Value (APV) | 7.1-7.2 | PS4 posted |
| 9 | 24-Jun | 12.20-1.50 | Weighted Average Cost of Capital (WACC) | 7.3 | |
| 9 | 24-Juli | 2.05-3.30 | APV vs. WACC | 7.4-7.5 | |
| 10 | 29-Jun | 12.20-1.50 | Payout Policy | 8 | PS4 due |
| 10 | | 2.05-3.30 | Final Exam Review | 4-7 | |
| 11 | 1-Jul | 12.20-3.30 | Final Exam | | |