

Economics 360-1
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Northwestern University
Department of Economics

Corporate Finance
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Office Hours: Mondays 9:00-11:00am or by appointment at @KGH 3195 or virtual.

Lectures: TTh 11:00am-12:20pm at Technological Institute A110

Discussion Section: F 9:00am-9:50am at Technological Institute L211

TA: Valerio Di Tommaso, (valerioditommaso2025@u.northwestern.edu)

TA Office Hours: Wednesday (starting 9/27) 2-4pm at KGH 3496

Course Description

Finance is about tradeoffs between current cash flows and future cash flows. (The amount of future cash flows is often highly uncertain.) When you use more cash today, it reduces cash availability in the future. When you use less cash today, it increases cash availability in the future. We face this tradeoff in a variety of contexts and we call a decision that involves this tradeoff a financial decision. College loans, house buying and retirement saving are examples of individual financial decisions. Debt/equity choice and project evaluation are examples of corporate financial decisions. We stress corporate financial decisions in this course. However, fundamentals of financial decision-making are the same for both corporations and individuals. Therefore, we learn many important financial lessons for not only corporations but also for individuals. Topics include discounting techniques and applications, stock and bond valuation, asset pricing models, diversification and portfolio choice, capital budgeting and basic option theory.

Prerequisites

The prerequisites for the course are ECON 281-0, ECON 310-1 and ECON 311-1. If you are not familiar with basic accounting concepts such as income statement, balance sheet and cash flow statement, please watch the 1.5 hour long online course “Accounting Foundations with Earl Kay Stice” on LinkedIn Learning, prior to October 3. You can skip Chapter 4. Managerial Accounting. This course also uses Excel extensively. If you are not familiar with Excel, I recommend you to watch the online course “Excel 2016 Essential Training” by Taylor on LinkedIn Learning. You can skip Chapters 14 and 15.

Readings

- Texts: Corporate Finance, 6th edition, by Jonathan Berk, and Peter DeMarzo. Previous editions are also fine.
- Case: Cost of Capital at Ameritrade – The link to the case will be provided.
- Other materials: Handout, problem sets and their suggested solutions and sample exams to be posted at canvas.northwestern.edu. The same website provides a link to Piazza for students who want to openly exchange ideas on topics covered in the course or other course-related issues.

Reading the textbook and distributed materials in advance is strongly recommended, as this class moves quickly.

Grading

The course grade will be based on the class survey (1%), the problem sets (25%), the personal finance project (5%), the two exams (65%) (in-class midterm and final) and the class contribution (4%). The exam grade will be determined from the *higher* of the following two weighted averages:

- (1) 25% midterm exam, and 40% final exam;
- (2) 10% midterm exam, and 55% final exam.

The problem sets will provide practice with the types of calculations and concepts that are important to a proper understanding of the course material. Some problems will provide valuable practices for the midterm and final, while other problems will require you to obtain and make use of real-world financial data or to analyze a case and thus will give you an idea of how theory connects to reality.

There will be six problem sets, and I will drop the lowest problem set score from your grade. The remaining five problem sets will each account for 5% of your grade, for a total of 25% of your final grade.

Students may form study groups; each group consists of at most four people, and submits one write-up for the problem sets.

The midterm exam is scheduled in class. *The final exam* is cumulative but with more emphasis on the contents covered after the mid-term exam.

If you would like your exam regraded, type up why you feel the current grade is incorrect. Staple your statement at the top of your exam and hand it to me within one week of the day on which the exam was returned. Then, I will regrade the whole exam. Be aware that your grade may go down after regrading. If there is an error in totaling up your score, you may write this on the cover of your exam. Say what you think the total should be.

Class contribution is graded to encourage your effort to enrich the learning environment and make the class more interesting and beneficial for everyone involved.

Class contribution can be demonstrated in three ways. First, you can contribute to class by speaking in class. Second, you can post constructive questions/suggestions/articles about the class material, problem sets and cases, on piazza. Third, you can e-mail me written feedback about the course. Disturbing behaviors count as negative contribution.

Calculator/Tablet/Laptop

Bring your calculator that can compound, or tablet or laptop to every class.

The Class Honor Code

Students are encouraged to work together when preparing for class and exam. However, exam should be wholly your own individual effort. Any remaining questions or uncertainty should be discussed with me. Violating the class honor code will result in a harsh penalty. Students are also expected to treat classmates and the instructor with respect. This includes arriving for class on time and refraining from any disruptive behavior during class.

Academic Integrity

Students in this course are required to comply with the policies found in the booklet, "Academic Integrity at Northwestern University: A Basic Guide". All papers submitted for credit in this course must be submitted electronically unless otherwise instructed by the professor. Your written work may be tested for plagiarized content. For details regarding academic integrity at Northwestern or to download the guide, visit: <https://www.northwestern.edu/provost/policies-procedures/academic-integrity/index.html>

Accessibility Statement

Northwestern University is committed to providing the most accessible learning environment as possible for students with disabilities. Should you anticipate or experience disability-related barriers in the academic setting, please contact AccessibleNU to move forward with the university's established accommodation process (e: accessiblenu@northwestern.edu; p: 847-467-5530). If you already have established accommodations with AccessibleNU, please let me know as soon as possible, preferably within the first two weeks of the term, so we can work together to implement your disability accommodations. Disability information, including academic accommodations, is confidential under the Family Educational Rights and Privacy Act.

COVID-19 Classroom Expectations Statement

Students, faculty and staff must comply with University expectations regarding appropriate classroom behavior, including those outlined below and in the [COVID-19 Expectations for Students](#). With respect to classroom procedures, this includes:

- Policies regarding masking, social distancing and other public health measures evolve as the situation changes. Students are responsible for understanding and complying with current University, state and city requirements.
- In some classes, masking and/or social distancing may be required as a result of an Americans with Disabilities Act (ADA) accommodation for the instructor or a student in the class even when not generally required on campus. In such cases, the instructor will notify the class.

If a student fails to comply with the [COVID-19 Expectations for Students](#) or other University expectations related to COVID-19, the instructor may ask the student to leave the class. The instructor is asked to report the incident to the Office of Community Standards for additional follow-up.

Exceptions to Class Modality

Class sessions for this course will occur in person. Individual students will not be granted permission to attend remotely except as the result of an Americans with Disabilities Act (ADA) accommodation as determined by AccessibleNU.

Prohibition of Recording of Class Sessions by Students

Unauthorized student recording of classroom or other academic activities (including advising sessions or office hours) is prohibited. Unauthorized recording is unethical and may also be a violation of University policy and state law. Students requesting the use of assistive technology as an accommodation should contact [AccessibleNU](#). Unauthorized use of classroom recordings – including distributing or posting them – is also prohibited. Under the University's [Copyright Policy](#), faculty own the copyright to instructional materials – including those resources created specifically for the purposes of instruction, such as syllabi, lectures and lecture notes, and presentations. Students cannot copy, reproduce, display, or distribute these materials. Students who engage in unauthorized recording, unauthorized use of a

recording, or unauthorized distribution of instructional materials will be referred to the appropriate University office for follow-up.

Support for Wellness and Mental Health

Northwestern University is committed to supporting the wellness of our students. Student Affairs has multiple resources to support student wellness and mental health. If you are feeling distressed or overwhelmed, please reach out for help. Students can access confidential resources through the Counseling and Psychological Services (CAPS), Religious and Spiritual Life (RSL) and the Center for Awareness, Response and Education (CARE). Additional information on all of the resources mentioned above can be found here:

<https://www.northwestern.edu/counseling/>

<https://www.northwestern.edu/religious-life/>

<https://www.northwestern.edu/care/>

Guideline for grading of “Class Contributions by Speaking in Class”**No Participation**

The person has said little or nothing in this class to date and so has not contributed anything. Such persons are free-riders because they have benefited from the thinking and courage of their peers but have offered little in return. If this person were not a member of the class, the quality of the discussion would be unchanged or possibly improved.

Moderate

Ideas offered and/or questions asked are seldom important, often irrelevant, and do not provide insights or a constructive direction for the class. Integrative comments and higher-order thinking are absent. This person does very little to further the thinking and potential contributions of others. Contributions in case classes reflect inadequate preparation.

Good

Ideas offered sometimes provide useful insights, but seldom offer a major new direction for discussion. Supporting arguments are moderately persuasive. Comments/questions occasionally enhance the learning of others, and indicate that this person is a passable listener. If this person were not a member of the class, the quality of our discussions would be diminished somewhat. Contributions in case classes reflect satisfactory preparation.

Excellent

Challenging questions are sometimes answered. Ideas offered are usually substantive, and provide good insights and sometimes direction for the class. Arguments are generally well supported and often persuasive, and reveal that this person is a good listener. Comments usually help others to improve their thinking. If this person were not a member of the class, the quality of our discussions would be diminished considerably. Contributions in case classes reflect thorough preparation.

Outstanding

Challenging questions are almost always answered. Ideas offered are always substantive, and provide one or more major insights as well as direction for the class. Arguments are well supported, persuasively presented, and reveal that this person is an excellent listener. Comments invariably help others to move their thinking to a higher plane. If this person were not a member of the class, the quality of our discussions would be greatly diminished. Contributions in case classes reflect exceptional preparation.

Course Schedule (subject to minor change)

Legend: PS (Problem Set) and FP (Personal Finance Project)

<u>DAYS</u>	<u>ASSIGNMENT</u>	<u>TOPICS</u>	<u>TEXT CHS</u>
Sep 19&21 (Sep 23)	Survey Due	TIME VALUE OF MONEY Cash Flows; Interest Rates, FV and PV, Annuities; Perpetuities	3.2-3.3, 4.1-4.5, 4.7- 4.9
Sep 26		INTEREST RATES Interest Rate Quote; Nominal vs Real; Term Structure of Interest Rate; Interest Rates and Loans	5.1-5.3
Sep 28	PS 1 & FP 1 Due	VALUING BONDS Coupon Bonds; Yield to Maturity; Yield Curve; Arbitrage and Law of One Price; Bond Pricing;	6.1-6.3 & 3.4, 3.5
Oct 3		FINANCIAL FORECASTING FOR VALUATION Income vs. Cash Flows	2.1-2.6
Oct 5	PS 2 Due	CAPITAL BUDGETING Incremental Cash Flows; Depreciation; Salvage Value	8
Oct 10		INVESTMENT DECISION RULES Opportunity Cost of Capital; Net Present Value; Internal Rate of Return; Payback Period; Profitability Index	5.5 & 7
Oct 12		VALUING STOCKS Firm Value; Dividends; Capital Gains; Gordon Growth Model	9.1-9.4
Oct 17	PS 3 Due	RISK AND RETURNS Variance and Covariance; Diversification; Market Risk; Retirement Planning Revisited	10 & 5.4
Oct 19		MID-TERM EXAM: 11:00AM-12:20PM IN-CLASS	
Oct 24		RISK AND RETURNS, CONT'D	
Oct 26 and Oct 31	PS 4 Due	CAPITAL ASSET PRICING MODEL (CAPM) Mean-Variance Preferences; Capital Allocation Line; Efficient Frontier; Tangency Portfolio; Sharpe Ratio; Portfolio Betas;	11
Nov 2	PS5 Due* (Nov 1)	CASE: AMERITRADE Cost of Capital Estimation; Capital Budgeting	Case
Nov 7 and Nov 9	FP2 Due	COST OF CAPITAL AND PROJECT VALUATION Weighted Betas; Project Betas; Weighted Average Cost of Capital; Asset/Debt Betas	12&14.3
Nov 14		OPTIONS Call and Put Options; Put-Call Parity; Payoff Diagrams	20.1-20.5
Nov 16	PS 6 Due	VALUATION OF OPTIONS Law of One Price; Binomial Black-Scholes Model	21.1-21.2
Nov 21		REVIEW SESSION	
Dec 5		CUMULATIVE FINAL EXAM: 12PM-2PM	