

**Department of Economics
Dalhousie University
ECON 3800
Financial Economics
CRN: 10992
Fall 2021/2022**

Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

Instructor: Prof. Kuan Xu

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Homepage: <https://faculty.economics.dal.ca/kxu/>

Timetable:

Lecture Hours: Format: In-person, Monday and Wednesday: 14:35–15:55, Studley SIR JAMES DUNN BUILDING 101

Office Hours: Format: Online, 10:00-11:30, Tuesday and Thursday, via Big-bluebutton at <https://econ-bigbluebutton.mathstat.dal.ca/b/kua-3ga-df7> (or by appointment)

TA: TBA

TA E-mail: TBA

TA Tutorial Hours: TBA

TA Office Hours: TBA

Course Description:

This course is an introduction to financial decision-making under uncertainty, portfolio theory, asset pricing, financial markets, and instruments. The course covers both theoretical and practical aspects of investment, surveys the tools and methods used by financial professionals, and emphasizes “hands-on” learning with Canadian and international case studies.

Course Prerequisites:

ECON 2200.03 (or ECON 2210.03 or ECON 2220.03), ECON 2201.03 with minimum grades of C

Learning Objectives:

1. Students should understand the fundamental concepts, principles, and theories in financial economics in today's increasingly interrelated and complex financial markets.
2. Students should understand the theories on consumer's investment behaviours, capital market structure, portfolio theory, asset pricing, bonds analysis, and equity analysis.
3. Students should be informed of common practices and emerging new ideas in financial industry and community.
4. Students should be able to combine the latest financial theories with the best practices in finance/financial economics in making financial decisions.
5. Students should become competent in conducting financial analysis through their group projects.
6. Students should appreciate that the financial side of economic activities is a mirror image of the real side of these activities and that fundamental analysis on economic activities is indispensable to finance/financial economics.

Course Materials:

1. David G. Luenberger, Investment Science, 2nd Edition, Oxford University Press, 2014. ISBN 978-0-19-974008-6. (L)
This is the primary textbook for this course available via Willo. The exercises in the book will be assigned to students, who should have a copy of, or have convenient access to, this book.
2. Kuan Xu, Lecture Notes on Financial Economics, 2021 (Lec)
This ebook contains 7 chapters and review questions.
3. Frank K. Reilly and Keith C. Brown, Investment Analysis and Portfolio Management, 10th Edition, Thomson/South-Western, 2012, ISBN-13: 978-0538482387 ISBN-10: 0538482389. (RB)

Chapters 10, 11, 12, 13, and 14 of this book are to be used for group projects.

Other Readings:

Advanced readings (research papers) will be posted for our lectures at Brightspace.

Course Assessment

Academic Calendar regulation 16.1 “In order to complete a course satisfactorily, a student must fulfill all the requirements as set down in the course outline.”

The student performance is evaluated by

- Two In-class Tests 20% (October 6 & November 17) ¹
- Preliminary Group Project 5% (Due October 13, 2021)²
- Final Group Research Project 15% (Due date: December 7)³
- Class Participation 10% (Every Class)⁴
- Final Exam 50% (TBA)⁵
- **Note:** In order to pass this course, a student must pass the final exam. If one has failed the final exam, he or she will fail the course.

¹These are closed book tests.

²The group project requirements and evaluation criteria will be posted at Brightspace.

³The group project requirements and evaluation criteria will be posted at Brightspace.

⁴In each class, students will be randomly selected. The participation will be recorded over time.

⁵Please check https://www.dal.ca/academics/exam_schedule.html for time and location information.

The grading scheme in this course is given in Table 1.

Table 1: Dalhousie University Grade Conversion Table

A+	: greater than or equal to 90	Excellent
A	: greater than or equal to 85 and less than 90	
A-	: greater than or equal to 80 and less than 85	
B+	: greater than or equal to 77 and less than 80	Good
B	: greater than or equal to 73 and less than 77	
B-	: greater than or equal to 70 and less than 73	
C+	: greater than or equal to 65 and less than 70	Satisfactory
C	: greater than or equal to 60 and less than 65	
C-	: greater than or equal to 55 and less than 60	
D	: greater than or equal to 50 and less than 55	Marginal Pass
F	: less than 50	Inadequate

Course Policy

In this course, following rules apply.

1. Please read relevant chapters of Lecture Notes (Lec #)⁶ & the text books (L Ch# & RB Ch #)⁷ prior to each class.
2. Please study the chapter-end review questions in Lecture Notes and do assigned exercises after each class. Doing these review and exercise questions is essential for preparing for the in-class tests and the final exam.
3. Each test will be 40 minute long from 2:35PM to 3:15PM and then class will resume at 3:20PM during the class time.
4. If a student misses any test for a justifiable reason, the missed 10% will be automatically added to the final exam. No make-up test will be given. To get more information on Student Absence Declaration, please visit

https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/academic-policies/Information%20for%20students/Information%20for%20faculty.html
5. The answers to the chapter-end review questions of Lecture Notes can be found in that chapter of Lecture Notes. The exercises and answer keys will be posted at Brightspace but your work for these exercises will not be graded.
6. All students in this course will do a group project on equity research. The instructor will post related reading materials, sample projects, and evaluation criteria at Brightspace to ensure that students can read these materials throughout the term.
7. Each group should have 2-3 students. When a group is formed, please elect a group coordinator who should send the names of group members to kuan.xu@dal.ca no later than September 20.
8. The group members shall contribute about equally to their group project. In a group of two students, each student should contribute about 50% each. In a group of three students, each student should contribute

⁶This refers to the chapter number of Lecture Notes.

⁷This refers to the chapter number of L (Luenberger) or RB (Reilly and Brown).

about 33.33% each. If student F does not contribute sufficiently to the group project, his or her work can be evaluated by the other student in a group of two, or by other two students in a group of three and the contribution share evaluation(s) must be submitted to the instructor. The instructor then uses the evaluation(s) of the contribution share to determine the share of contribution of student F. For example, if the other student in the group of two believes that student F only contributes a share of 10% to the group project and the group project has received 90%, student F will receive only $\frac{10}{100/2} = 20\%$ of that 90%, or only 18% for the project while the other student will receive 90%. For example, if, on average, other two group members in the group of three believe that student F only contributes a share of 10% to the group project and the group project has received 90%, student F will receive only $\frac{10}{100/3} = 30\%$ of that 90%, or only 27% for the project while other two students will receive 90% each.

9. For the group project, students should be aware of the services available at the Writing Centre and must finish Academic Integrity Module at

https://www.dal.ca/campus_life/academic-support/writing-and-study-skills/academic-integrity-module/academicintegritymodule0.html

10. Please note that final group project (both hard copies and electronic files) will not be returned. Students should keep their own files.
11. To discourage late submission of the preliminary and final group projects, this course imposes a penalty scheme on late submissions—a 25% deduction from the total marks for one day delay in submission.
12. The final exam will be a two-hour closed-book exam held on campus. It is cumulative covering the materials for the entire course.

Course Content⁸

Lecture 1: Saving, Wealth, and Investment (Weeks 2–3)

Readings: Textbook Ch. 1 and 11 and Lecture Notes Ch. 1.

Advanced Readings: Friedman and Savage (1948), Arrow (1964), Kahneman and Tversky (1979), Tversky and Kahneman (1992), Gordon and St-Amour (2000), Bleichrodt, Pinto and Wakker (2001), Hot and Laury (2002), List (2003, 2004), Xu and Fisher (2006), Levitt and List (2007), DellaVigna (2009), Attanasio and Weber (2010), Barberis (2013), Cronqvist and Siegel (2014), Barberis (2018), and Lugilde, Bande and Riveiro (2019), Cochrane (2021)

1. Utility functions
2. Intertemporal savings behavior
3. Finite future states
4. Expected utility and risk aversion
5. The determinants of intertemporal behavior
6. Three consumption/saving theories
7. Investments

Lecture 2: Financial Markets and Trading of Securities (Week 4)

Readings: Textbook Ch. 18.1-18.2 and Lecture Notes Ch. 2

Advanced Readings: Kelly (1956), Rotando and Thorp (1992), Varian (1993), Lo, Mamayski, and Wang (2000), Lerman and Larson (2007), Hautsch (2012, Chapter 2), MacLean, Thorp and Ziemba (2010), Starr (2011), Akepanidta-worn et al. (2018), and Wang, Xu, and Zhang (2019)

1. Brokerage firms, brokers, trading and commissions
2. Types of orders
3. Margin transactions
4. Short sales

⁸Advanced readings are optional. The schedule is subject to changes.

5. Call markets and continuous markets
6. Organization of the stock exchanges
7. Transaction costs
8. Kelly's criterion

Lecture 3: Portfolio Theory (Weeks 5–7)

Readings: Textbook Ch. 6 and 9 and Lecture Notes Ch. 3.

Advanced Readings: Tobin (1958), Markowitz (1952, 1991), Roy (1952), Luenberger (1993), Ibbotson and Kaplan (2000), Hill et al. (2006), Hill (2006), Sotomayor and Cadenillas (2009), Xiong et al. (2010), and Ang et al. (2014)

1. Evaluation of risky securities
2. Portfolio returns
3. Efficient frontier
4. Preferences
5. Optimal portfolios
6. The market model

Lecture 4: Asset Pricing Models (Weeks 7–9)

Readings: Textbook Ch. 7-8 and Lecture Notes Ch. 4.

Advanced Readings: Sharpe (1964), Lintner (1965), Mossin (1966), Black (1972), Black, Jensen, and Scholes (1972), French (2003), Ross (1976a), Gilles and LeRoy (1991), Roll and Ross (1995), Fama and French (1992, 1993, 1996, 1998, 2004, 2016), Liu, Zhao and Xu (2011), Perold (2004), Frazzini, Kabiller, and Pedersen (2013), Huang, Lou, and Polk (2014), Frazzini and Pedersen (2014), Berk and van Binsbergen (2016), Pysarenko (2017), Zhang (2017), Hou, Xue, and Zhang (2018), Hou, Mo, Xue, and Zhang (2019), Cochrane (2021)

1. The Capital Market Line
2. Components of risk

3. The Security Market Line
4. Beta and the market model revisited
5. Factor models
6. Arbitrage Pricing Theory

Lecture 5: Bond Analysis (Weeks 9–11)

Readings: Textbook Ch. 2-4 and Lecture Notes Ch. 5.

Advanced Readings: Weil (1973), Bierwag (1977), Faulhaber and Baumol (1988), Bierwag et al. (1992), Altman (1968), Altman and Saunders (1998), and Livingston and Zhou (2005)

1. Money market instruments
2. Government bonds
3. Corporate bonds
4. Debt instruments trading
5. Valuation of riskless securities
6. Risk premium and term premium
7. The term structure of interest rates
8. Bond attributes and determinations of yield spreads
9. Bond market efficiency
10. Bond-pricing theorems
11. Convexity
12. Duration
13. Immunization
14. Active management

Lecture 6: Equity Analysis (Weeks 11–13)

Readings: Textbook Ch 5.6, Lecture Notes Ch. 6-7, and Reilly and Brown (2006, Ch. 10, 11, 12, 13, and 14), Cochrane (2021)

1. The corporate form
2. Cash dividends
3. Preemptive rights
4. Common stock betas
5. Growth versus value
6. Capitalization-of-income method of valuation
7. The zero-growth model
8. The constant-growth model
9. The multiple-growth model
10. Valuation based on a finite holding period
11. Model based on price-earning ratios
12. Sources of earning growth
13. Stock valuation based on earnings
14. Determinants of dividends
15. The information content of dividends
16. Accounting earnings versus economic earnings
17. Price-earning ratios
18. Analysis of financial statements
19. Analysis of economic conditions

Table 2: Schedule in One Page

Week No.	Dates	Topic	Readings	Textbooks (L, RB)	Assignments, Tests, and Exam
1	2021-09-07—2021-09-10	Outline & Project	Outline & Project	RB Ch. 10-14	Form group by 2021-09-20
2	2021-09-13—2021-09-17	Consumption, Saving and Investment	Lec 1	L Ch. 1 and 11	As 1 dist, 2021-09-15
3	2021-09-20—2021-09-24	Consumption, Saving and Investment	Lec 1	L Ch. 1 and 11	As 1 due, As 2 dist, 2021-09-22
4	2021-09-27—2021-10-01	Financial Markets	Lec 2	L Ch. 18.1-18.2	As 2 due, As 3 dist, 2021-09-29
5	2021-10-04—2021-10-08	Portfolio Theory	Lec 3	L Ch. 6 and 9	Test 1, 2021-10-06
6	2021-10-11—2021-10-15	Portfolio Theory	Lec 3	L Ch. 6 and 9	Project Proposal due, 2021-10-13
7	2021-10-18—2021-10-22	Portfolio Theory & Asset Pricing Models	Lec 3 & Lec 4	L Ch. 6 and 9 & L Ch. 7-8	As 3 due, As 4 dist, 2021-10-20
8	2021-10-25—2021-10-29	Asset Pricing Models	Lec 4	L Ch. 7-8	
9	2021-11-01—2021-11-05	Asset Pricing Models & Bond Analysis	Lec 4 & Lec 5	L Ch. 7-8 & L Ch. 2-4	As 4 due, As 5 dist, 2021-11-03
0	2021-11-08—2021-11-12	Study Break	Study Break	Study Break	Study Break
10	2021-11-15—2021-11-19	Bond Analysis	Lec 5	L Ch. 2-4	Test 2, 2021-11-17
11	2021-11-22—2021-11-26	Bond Analysis & Equity Analysis	Lec 5 & Lec 6	L Ch. 2-4 & L Ch. 5,6	As 5 due, As 6 dist, 2021-11-24
12	2021-11-29—2021-12-03	Equity Analysis	Lec 6 & Lec 7	L Ch. 5.6 & RB Ch. 10-14	
13	2021-12-06—2021-12-07	Equity Analysis	Lec 6 & Lec 7	L Ch. 5.6 & RB Ch. 10-14	As 6 due, Project due, 2021-12-07
	2021-12-09—2021-12-19	Final Exam Period	two-hours, closed-book		time & location TBA



Faculty of Science Course Syllabus (Section B) (revised June-2021)
Fall/Winter 2021-22

University Policies and Statements

This course is governed by the academic rules and regulations set forth in the University Calendar and by Senate

Academic Integrity

At Dalhousie University, we are guided in all of our work by the values of academic integrity: honesty, trust, fairness, responsibility and respect (The Center for Academic Integrity, Duke University, 1999). As a student, you are required to demonstrate these values in all of the work you do. The University provides policies and procedures that every member of the university community is required to follow to ensure academic integrity.

Information: https://www.dal.ca/dept/university_secretariat/academic-integrity.html

Accessibility

The Advising and Access Services Centre is Dalhousie's centre of expertise for student accessibility and accommodation. The advising team works with students who request accommodation as a result of a disability, religious obligation, or any barrier related to any other characteristic protected under Human Rights legislation (Canada and Nova Scotia).

Information: https://www.dal.ca/campus_life/academic-support/accessibility.html

Student Code of Conduct

Everyone at Dalhousie is expected to treat others with dignity and respect. The Code of Student Conduct allows Dalhousie to take disciplinary action if students don't follow this community expectation. When appropriate, violations of the code can be resolved in a reasonable and informal manner—perhaps through a restorative justice process. If an informal resolution can't be reached, or would be inappropriate, procedures exist for formal dispute resolution.

Code: https://www.dal.ca/dept/university_secretariat/policies/student-life/code-of-student-conduct.html

Diversity and Inclusion – Culture of Respect

Every person at Dalhousie has a right to be respected and safe. We believe inclusiveness is fundamental to education. We stand for equality. Dalhousie is strengthened in our diversity. We are a respectful and inclusive community. We are committed to being a place where everyone feels welcome and supported, which is why our Strategic Direction prioritizes fostering a culture of diversity and inclusiveness

Statement: <http://www.dal.ca/cultureofrespect.html>

Recognition of Mi'kmaq Territory

Dalhousie University would like to acknowledge that the University is on Traditional Mi'kmaq Territory. The Elders in Residence program provides students with access to First Nations elders for guidance, counsel and support. Visit or e-mail the Indigenous Student Centre (1321 Edward St) (elders@dal.ca).

Information: https://www.dal.ca/campus_life/communities/indigenous.html

Important Dates in the Academic Year (including add/drop dates)

https://www.dal.ca/academics/important_dates.html

University Grading Practices

https://www.dal.ca/dept/university_secretariat/policies/academic/grading-practices-policy.html



DALHOUSIE
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Faculty of Science Course Syllabus (Section C) (revised June-2021)

Fall/Winter 2021-22

Student Resources and Support

Advising

General Advising https://www.dal.ca/campus_life/academic-support/advising.html

Science Program Advisors: <https://www.dal.ca/faculty/science/current-students/academic-advising.html>

Indigenous Student Centre: https://www.dal.ca/campus_life/communities/indigenous.html

Black Students Advising Centre: https://www.dal.ca/campus_life/communities/black-student-advising.html

International Centre: https://www.dal.ca/campus_life/international-centre/current-students.html

Academic supports

Library: <https://libraries.dal.ca/>

Writing Centre: https://www.dal.ca/campus_life/academic-support/writing-and-study-skills.html

Studying for Success: https://www.dal.ca/campus_life/academic-support/study-skills-and-tutoring.html

Copyright Office: <https://libraries.dal.ca/services/copyright-office.html>

Fair Dealing Guidelines <https://libraries.dal.ca/services/copyright-office/fair-dealing.html>

Other supports and services

Student Health & Wellness Centre: https://www.dal.ca/campus_life/health-and-wellness/services-support/student-health-and-wellness.html

Student Advocacy: <https://dsu.ca/dsas>

Ombudsperson: https://www.dal.ca/campus_life/safety-respect/student-rights-and-responsibilities/where-to-get-help/ombudsperson.html

Safety

Biosafety: <https://www.dal.ca/dept/safety/programs-services/biosafety.html>

Chemical Safety: <https://www.dal.ca/dept/safety/programs-services/chemical-safety.html>

Radiation Safety: <https://www.dal.ca/dept/safety/programs-services/radiation-safety.html>

Scent-Free Program: <https://www.dal.ca/dept/safety/programs-services/occupational-safety/scent-free.html>

Dalhousie COVID-19 information and updates: <https://www.dal.ca/covid-19-information-and-updates.html>

DEPARTMENT OF ECONOMICS STATEMENT ON ACADEMIC INTEGRITY

At Dalhousie University, we respect the values of academic integrity: honesty, trust, fairness, responsibility, and respect. As a student, adherence to the values of academic integrity and related policies is a requirement of being part of the academic community at Dalhousie University.

What does academic integrity mean?

Academic integrity means being honest in the fulfillment of your academic responsibilities, thus establishing mutual trust. Fairness is essential to the interactions of the academic community and is achieved through respect for the opinions and ideas of others. "Violations of intellectual honesty are offensive to the entire academic community, not just to the individual faculty member and students in whose class an offence occurs."

(<http://academiccalendar.dal.ca/Catalog/ViewCatalog.aspx?pageid=viewcatalog&catalogid=1&chapterid=89&topicgroupid=381&loaduserredits=False>)

How can you achieve academic integrity?

- Make sure you understand Dalhousie's policies on academic integrity.
- While discussion with your fellow students is valuable, do not submit an assignment or essay that is essentially identical to an assignment or essay submitted by another individual or group.
- In assignments or essays, use an approved method of citation for any material taken directly from an existing source or any material that is a paraphrase of an existing source.
- Do not download the work of another from the Internet and submit it as your own.
- Do not submit work that has been completed through collaboration or previously submitted for another assignment without permission from your instructor.
- Do not have someone else write a test for you, or write a test for someone else.
- During a test, do not talk with other students and do not try to copy the work of another student.

What will happen if an allegation of an academic offence is made against you?

Instructors are required to report any suspected offence. The full process is outlined in the Discipline flow chart (found at <http://academicintegrity.dal.ca>) and includes the following:

- Each Faculty has an Academic Integrity Officer (AIO) who receives allegations from instructors.
- The AIO decides whether to proceed with the allegation and you will be notified of the process.
- If the case proceeds, you will receive a PENDING grade until the matter is resolved.
- If you are found guilty of an academic offence, a penalty will be assigned ranging from a warning to suspension or expulsion from the University and can include a notation on your transcript, failure of the assignment, or failure of the course. All penalties are academic in nature.

Where can you turn for help?

- If you are ever unsure about ANYTHING, contact your instructor.
- See <http://academicintegrity.dal.ca> for links to policies, definitions, online tutorials, and tips on citing and paraphrasing.
- See <http://writingcentre.dal.ca> for assistance with proofreading, writing styles, and citations.
- See <http://libraries.dal.ca/research.html> for a set of research tools including Subject Guides, Assignment Calculator, and RefWorks.
- See <http://studentservices.dal.ca> for assistance with appeals and discipline procedures.
- See <http://senate.dal.ca> for a list of Academic Integrity Officers, a discipline flow chart, and the Senate Discipline Committee.

The [Policy on Student Submission of Assignments & Use of Originality Checking Software](#) states that "any instructor may require student assignments to be submitted in both written and electronic (computer-readable) form, e.g., a text file or as an email attachment, as defined by the instructor. Use of third-party originality checking software does not preclude instructor use of alternate means to identify lapses in originality and attribution. The results of such assessment may be used as evidence in any disciplinary action taken by the Senate."