



FINANCE 601, Introduction to Finance Course Outline, Fall 2019

Course Objective

This course, being an introduction to modern business finance, examines various fundamental financial concepts, in order to prepare students for the specialized courses that the Master of Finance program offers. It also introduces students to various analytical and quantitative skills as required for such courses.

Instructor and Teaching Assistants

Instructor: Clarence C.Y. Kwan, Professor of Finance; MGD-312; telephone: 905-525-9140, ext. 23979; email: kwanc@mcmaster.ca.

Teaching Assistant, Office Hours, and Locations: TBA (to be announced in class and posted on AVENUE TO LEARN when confirmed).

Important Notice: As the AVENUE site for this course has not been set up for email communications between individual students and the instructor or the teaching assistant, please use McMaster's regular email system instead. For timely communications, it is very important that McMaster email accounts (***@mcmaster.ca) be used, with "FINANCE 601" being the subject heading. Otherwise, there will be either delays in response or no response at all.

Course Description

The course covers a broad range of topics in modern finance, with analytical details and conceptual underpinnings emphasized in some topics. After some preliminary materials, the course considers time value concepts and applies them directly to practical loan problems and to valuation from investors' perspectives, including bond and stock valuation. The course also considers risk-return trade-off in portfolio investments, capital market theory, and market efficiency issues.

Turning to corporate finance, the course considers corporate investment decisions (capital budgeting) and long-term sources of funds for financing the investments. Pertaining to long-term financing decisions, the major topics include the cost of capital, capital structure, and dividend policy. Financial instruments with options, including call and put options, rights, warrants, and convertible securities, are considered as well.

The course then considers working capital management, short-term and intermediate-term financing, and leasing decisions. The final topics covered include merger and corporate structuring.

Achieving the Course Objective

As many financial concepts are analytical, students are expected to be already familiar with various mathematical topics, such as finite and infinite series, matrix algebra, differential and integral calculus, and methods of mathematical proofs. Further, students are expected to be familiar with fundamental statistical concepts such as discrete and continuous probability distributions, sampling, and estimation. To achieve the course objective also requires a considerable amount of out-of-class work by each student. In addition to keeping up with the reading materials, problem solving throughout the course is highly recommended.

Although the solutions to practice problems are available, students are expected to solve the problems independently before reading the solutions. Experience has shown that independent work significantly enhances problem-solving and related quantitative skills. This is also the most effective way to prepare for examinations.

Textbook, Courseware, and Supplementary Courseware

Textbook: Jonathan Berk, Peter DeMarzo, and David Stangeland, *Corporate Finance, Fourth Canadian Edition*, 2019, Pearson Canada; ISBN 978-0-13-305529-0 (hereafter, BDS).

Main Courseware: Clarence C.Y. Kwan, FINANCE 601, *Introduction to Finance: Lecture Notes, Supplementary Materials, Illustrative Examples, and Exercises*, Fall 2019 (hereafter, Lecture Notes).

Supplementary Courseware: Clarence C.Y. Kwan, *Preparatory Mathematics and Selected Topics in Statistics for Students in Graduate Finance Programs*, Fall 2019 (hereafter, Math/Stats Notes).

The main courseware is available for purchase from McMaster's Campus Store. The supplementary courseware is distributed to registered students (at the start of the MFIN Transition). Most of the materials in the supplementary courseware are intended for self-study to strengthen the analytical skills of students. However, some lectures are directly based on the materials there.

Calculators

Only CASIO fx-991ms, which is the McMaster standard and officially approved calculator, may be used in FINANCE 601 examinations. It is each student's own responsibility to learn the various operational features of CASIO fx-991ms. Notice that present-value tables will not be provided in examinations.

Evaluation Scheme and Grading Scale

Performance in FINANCE 601 is based on four components. They include a test on materials from the Math/Stats Notes (10%), two mid-term examinations (25% each), and a cumulative final examination (40%). Any changes to the evaluation scheme will be announced in class and posted on AVENUE. The three examinations are primarily on materials in the Lecture Notes and BDS, as well as any supplementary materials that are distributed during the Term. However, some materials from the Math/Stats Notes may also be included. The date, time, duration, location, and coverage of the test and each examination, once confirmed, will be announced in class and posted on AVENUE.

This being a graduate course, B- is the lowest passing grade. The conversion from percentage grades to letter grades is as follows: 90-100%, A+; 85-89%, A; 80-84%, A-; 75-79%, B+; 70-74%, B; 65-69%, B-; 0-64%, F. The conversion will be adjusted if there is a cluster of percentage grades around a breakpoint; that is, around 90%, 85%, 80%, 75%, 70%, or 65%. However, students who have achieved percentage grades no lower than any breakpoint will be unaffected by the adjustment.

Important Notice:

1. The mathematics test and the two mid-term examinations may be written outside regular class times. Further, there may be extra classes to attend during the Term, conditional on the feasibility for scheduling them. Once confirmed, the details will be announced in class and on AVENUE.
2. Students are expected to adhere strictly to the standards of academic ethics of the University. Please see the section on academic dishonesty on page 6.
3. No electronic devices are permissible in the test and the three examinations. The only exception is the McMaster standard calculator (CASIO fx-991ms), which is allowed during each examination.
4. Test and examination papers may have multiple versions.
5. A randomized seating plan may be implemented for the test and each examination.
6. The part of each mid-term examination paper containing multiple-choice questions will not be released to students after grading; neither will the entire final examination paper.
7. Some graded test and examination papers will be photocopied and archived for statistical and pedagogic purposes.
8. Some bonus marks can be earned by students for independently reporting to the instructor typographical errors in various course materials throughout the Term. Such bonus marks may help participating students achieve better letter grades, in situations where the computed weighted averages of percentage grades are marginally below the corresponding breakpoints for grade conversion.

The Course Outline

1. Preliminaries

BDS, Chapters 1, 2, and 3.
 Lecture Notes, Chapter 1.
 Math/Stats Notes, Chapters 1 and 2.¹

¹ Chapter 12 of the Math/Stats Notes, which introduces the topic of difference equations, though not part of the required readings here, is valuable preparatory material for graduate-level economics courses.

2. Valuation of Investments

a. The Time Value of Money

BDS, Chapter 4.²

Lecture Notes, Chapter 2; exercises in Section A.1 of Appendix A (*hereafter*, A1), #1-4; exercises in Section A.2, of Appendix A (*hereafter*, A2.1, A2.2, A2.3, and A2.4 for the subsections there), A2.1, #1-6, A2.2, #1, and A2.3, #1.

Math/Stats Notes, Chapters 3, 4, and 7, with special attention to Chapter 7, Section 7.7, Appendix: Compound Interests.

Y. Feng and C.C.Y. Kwan, "Interest Rate Conversion," *Spreadsheets in Education*, 8, no. 1, (2015), Article 3.

b. Bond Valuation and Interest Rate Determination

BDS, Chapters 5 and 6.

Lecture Notes, Chapter 3; exercises in A1, #5-11; exercises in A2.1, #7-16, A2.2, #2-3, and A2.3, #2-3.

Math/Stats Notes, Chapters 3 and 4.

Y. Feng and C.C.Y. Kwan, "Time-Value Concepts, Bond Valuation, and Corresponding Spreadsheet Functions," *Spreadsheets in Education*, 5, no. 1, (2011), Article 4.

Y. Feng and C.C.Y. Kwan, "Bond Duration: A Pedagogic Illustration," *Spreadsheets in Education*, 5, no. 3, (2012), Article 1.

c. Stock Valuation

BDS, Chapter 7.

Lecture Notes, Chapter 4; exercise in A1, #12; exercises in A2.1, #17, A2.2, #4, and A2.3, #4.

Math/Stats Notes, Chapter 3.

d. Risk, Return, and Portfolio Theory

BDS, Chapters 10 and 11.

Lecture Notes, Chapter 5; exercises in A1, #14-15, and 18(a); exercises in A2.1, #18-21, A2.4, #3, and A2.5, #3.

Math/Stats Notes, Chapters 5, 6, 8, and 14, with special attention to Chapter 8, Section 8.5, Optimization.

e. Capital Market Theory

BDS, Chapters 11 and 12.

² Any exercises from BDS will be announced in class and on AVENUE.

Lecture Notes, Chapter 6; exercises in A1, #13, 16-17, 18(b), 18(c), and 19-26; exercises in A2.1, #22-27, A2.4, #4, and A2.5, #4.
Math/Stats Notes, Chapters 7, 8, and 9.

C.C.Y. Kwan, "The Arbitrage Pricing Model: A Pedagogic Derivation and a Spreadsheet-Based Illustration," *Spreadsheets in Education*, 9, no. 1, (2016), Article 4.

f. Market Efficiency

BDS, Chapter 13.
Lecture Notes, Chapter 7.

3. Capital Budgeting

BDS, Chapters 8, 9, and 21.
Lecture Notes, Chapter 8; exercises in A1, #27-31; exercises in A2.1, #28-30, A2.4, #2, And A2.5, #2.
Math/Stats Notes, Chapter 3.

4. Long-term Sources of Funds

BDS, Chapters 23 and 24.
Lecture Notes, Chapter 9; exercises in A1, #32-37; exercises in A2.1, #31-33, A2.4, #1(a), and A2.5, #1(a).

5. Long-term Financing Decisions

a. The Cost of Capital

BDS, Chapter 12.
Lecture Notes, Chapter 10; exercise in A1, #34; exercise in A2.4, #1(b), and A2.5, #1(b).

b. Capital Structure

BDS, Chapters 17 and 18.
Lecture Notes, Chapter 11; exercises in A1, #39-45; exercise in A2.1, #35.
Math/Stats Notes, Chapter 3.

c. Dividend Policy

BDS, Chapter 20.
Lecture Notes, Chapter 12; exercises in A1, #46-49; exercises in A2.1, #36-37.
Math/Stats Notes, Chapter 3.

6. Options, Rights, Warrants, and Convertibles

a. Call and Put Options

BDS, Chapters 14 and 15.
Lecture Notes, Chapter 13; exercises in A1, #50-52.

Math/Stats Notes, Chapters 4, 7, 8, 9, 10, 11, 13, and 15, with special attention to Chapter, 13, Section 13.5, The Binomial Option Pricing Model.

Y. Feng and C.C.Y. Kwan, “Connecting Binomial and Black-Scholes Option Pricing Models: A Spreadsheet-Based Illustration,” *Spreadsheets in Education*, 5, no. 3, (2012), Article 2.

b. Rights, Warrants, and Convertibles

Lecture Notes, Chapter 14; exercises in A1, #53-56.

7. Short-term Financing

BDS, Chapters 26 and 27.

Lecture Notes, Chapter 15; exercises in A1, #57-59.

8. Leasing

BDS, Chapter 25.

Lecture Notes, Chapter 16; exercises in A1, #60-63.

Math/Stats Notes, Chapter 3.

9. Merger and Corporate Restructuring

BDS, Chapters 28 and 29.

Lecture Notes, Chapter 17; exercises in A1, #64-66.

Other Useful General Information for Student (The materials below are duplicated *verbatim* from a recent template of the School’s graduate course outlines.)

Please review the Graduate Examinations Policy (if applicable):

<http://www.mcmaster.ca/policy/Students-AcademicStudies/GradExamsPolicy.pdf>

ACADEMIC DISHONESTY

It is the student’s responsibility to understand what constitutes academic dishonesty. Please refer to the University Senate Academic Integrity Policy at the following URL:

<http://www.mcmaster.ca/policy/Students-AcademicStudies/AcademicIntegrity.pdf>

This policy describes the responsibilities, procedures, and guidelines for students and faculty should a case of academic dishonesty arise. Academic dishonesty is defined as to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. Please refer to the policy for a list of examples. The policy also provides faculty with procedures to follow in cases of academic dishonesty as well as general guidelines for penalties. For further information related to the policy, please refer to the Office of Academic Integrity at:

<http://www.mcmaster.ca/academicintegrity>

MISSED ACADEMIC WORK

Late assignments will not be accepted. No extensions are available except under extraordinary circumstances. Please discuss any extenuating situation with your instructor at the earliest possible opportunity.

POTENTIAL MODIFICATIONS TO THE COURSE

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check their McMaster email and course websites weekly during the term and to note any changes.

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http://www.copyright.mcmaster.ca/Access_Copyright_Agreement

STUDENT ACCESSIBILITY SERVICES

Student Accessibility Services (SAS) offers various support services for students with disabilities. Students are required to inform SAS of accommodation needs for course work at the outset of term. Students must forward a copy of such SAS accommodation to the instructor normally, within the first three (3) weeks of classes by setting up an appointment with the instructor. If a student with a disability chooses NOT to take advantage of an SAS accommodation and chooses to sit for a regular exam, a petition for relief may not be filed after the examination is complete. The SAS website is:

<http://sas.mcmaster.ca>