

MAST 335
Investment Mathematics
Winter 2024

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Class Schedule: Mondays & Wednesdays, 13:15-14:30.

Office Hours: Mondays, 15:00-16:00 and Wednesdays, 12:00-13:00.

Goal: This course intends to introduce the student to the notion of interest (compound and simple) and the basic principles of financial mathematics. Topics covered include: accumulation and discount function using compound and simple interest, rate and discount, nominal interest rates, calculation of the present value of constant and varying annuities, amortization schedules, calculation of the outstanding balance of a debt at any point in time, assessing the amount of principle and interest and a payment, determination of the yield rate of an investment, sinking fund and calculation of the price and market value of a bond. Essentially, the first four chapters of the textbook will be covered.

Reference: *Mathematics of Investment and Credit*, 8th Edition, by S.A. Broverman.

The textbook will be available at:

<https://www.bkstr.com/concordiastore/home>

Note: Students should order textbooks as early as possible, especially for printed versions in case books are backordered or there are any shipping delays.

Other Reference: *The Theory of Interest*, 2nd Edition, by S.G. Kellison, 1991.
Mathematics of Investment and Credit, 6th Edition, by S.A. Broverman.

Calculators: The only calculators allowed in exams for this course are either the Math and Stat approved calculators with the sticker or the battery- or solar powered Texas Instrument calculators, models BA-II Plus*, BA-II Plus, TI-30X, TI-30Xa (the official CAS calculator) or TI-30X II*.

Assignments: There will be 4 to 5 assignments. Assignments are compulsory. Students are expected to submit their assignments as a single PDF file on Moodle site. **Late assignments will not be accepted.** Assignments contribute 10% to your final grade. Working regularly on the assignments is essential for success in this course.

Midterm Test: There will be one **midterm test**, based on the material of weeks 1-6, which will contribute up to 30% to your final grade (see the **Grading Scheme** below). **Midterm test will be held in class.** This exam, as well as the final, will be closed-book exams.

NOTE: It is the Department's policy that tests missed for any reason, **including illness**, cannot be made up. If you miss the midterm test **because of illness** (*medical note required*) the final exam will count for 90% of your final grade, and the assignments will count for the remaining 10%.

Final Exam: At the end of course, there will be final examination during the period assigned by Concordia's Exam Office.

PLEASE NOTE: Students are responsible for finding out the date and time of the final exam once the schedule is posted by the Examination Office. Any conflicts or problems with the scheduling of the final exam must be reported directly to the Examination Office, **not** to your instructor. It is the Department's policy and the Examination Office's policy **that students are to be available until the end of the final exam period. Conflicts due to travel plans will not be accommodated.**

Final Grade: Will be based on the higher of
Option (A): the weighted average of assignments (10%), the Midterm (30%) and of the Final Exam (60%), **or**
Option (B): the weighted average of assignments (10%) and of the Final Exam (90%).

If the grading scheme for this course includes graded assignments, a reasonable and representative subset of each assignment may be graded. Students will not be told in advance which subset of the assigned problems will be marked and should therefore attempt all assigned problems.

Note: There will be no make-up tests.

NOTE: **THERE WILL BE NO SUPPLEMENTAL FOR THIS COURSE AND NO 100% OPTION FOR THE FINAL EXAM**

Academic Integrity and the Academic Code of Conduct

This course is governed by Concordia University's policies on Academic Integrity and the Academic Code of Conduct as set forth in the Undergraduate Calendar and the Graduate Calendar. Students are expected to familiarize themselves with these policies and conduct themselves accordingly. "Concordia University has several resources available to students to better understand and uphold academic integrity. Concordia's website on academic integrity can be found at the following address, which also includes links to each Faculty and the School of Graduate Studies: <https://www.concordia.ca/conduct/academic-integrity.html>" [Undergraduate Calendar, Sec 17.10.2]

Behaviour

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications.

Concordia students are subject to the [Code of Rights and Responsibilities](#) which applies both when students are physically and virtually engaged in any University activity, including classes, seminars, meetings, etc. Students engaged in University activities must respect this Code when engaging with any members of the Concordia community, including faculty, staff, and students, whether such interactions are verbal or in writing, face to face or online/virtual. Failing to comply with the Code may result in charges and sanctions, as outlined in the Code.

Intellectual Property

Content belonging to instructors shared in online courses, including, but not limited to, online lectures, course notes, and video recordings of classes remain the intellectual property of the faculty member. It may not be distributed, published or broadcast, in whole or in part, without the express permission of the faculty member. Students are also forbidden to use their own means of recording any elements of an online class or lecture without express permission of the instructor. Any unauthorized sharing of course content may constitute a breach of the [Academic Code of Conduct](#) and/or the [Code of Rights and Responsibilities](#). As specified in the [Policy on Intellectual Property](#), the University does not claim any ownership of or interest in any student IP. All university members retain copyright over their work.

Extraordinary circumstances

In the event of extraordinary circumstances and pursuant to the [Academic Regulations](#) the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the change.