



Fixed Income Analysis

BUSI 4511 A
FALL 2024

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Office Hours: Monday 2:30 pm – 3:30 pm

Email response policy: I will try my best to respond to emails received during business hours (9am-5pm) during the same business day. Emails received after hours will be responded to during the next business day.

TA: TBA
Office Hours: TBA
Email: TBA

Modality: In-Person
Class Times: Monday 11:35 am – 2:25 pm

Pre-requisites:

BUSI 3502 and BUSI 3512 (with a grade of C- or higher in each), and STAT 2602 or STAT 2607 (with a grade of C- or higher in each).

Course Calendar Description (from the [2024/2025 University Calendar](#))

Valuation of fixed income securities and interest rate derivatives including bonds, mortgage- and asset-based securities. Analytic tools used in bond portfolio and interest rate risk management including yield curve construction, duration and convexity, and term structure models.

Course Description:

The goal of the course is to develop a conceptual framework for fixed income valuation and risk management. The course will introduce you to valuation of fixed income securities and interest rate derivatives including bonds, mortgage- and asset-backed securities. You will learn analytic tools used in bond portfolio and interest rate risk management including yield curve construction, duration and convexity, and term structure models.

Drop Course Policy

The deadline for academic withdrawal follows the dates prescribed by Carleton University: <https://calendar.carleton.ca/academicyear/>

Learning Outcomes:

1. Students will be able to understand fixed income securities and their valuations.
2. Students will be able to apply analytic tools such as yield curve construction, duration and convexity to manage interest rate risk of bond portfolios effectively.
3. Students will learn how to value and utilize interest rate derivatives for investment and risk management purposes.
4. Students will be able to understand the importance of credit risk management and valuation of credit derivatives.

Reading(s)/Textbook(s)/Required Materials

CFA Institute, “Fixed Income Analysis” 5th edition, Wiley, 2022, ISBN 978-1119850540.

CFA Institute, “Fixed Income Analysis Workbook”, 5th edition, Wiley, 2022, ISBN 978-1119852995.

John Hull, “Options, Futures, and Other Derivatives”, 11th edition, Pearson, 2022, ISBN 978-0136939979

Methods of Evaluation / Grading Scheme / Course Completion Requirements

<i>Course Evaluation</i>	<i>Grade weight</i>
Quizzes (3 @ 5% each)	15%
Group presentation	20%
Midterm Exam	25%
Final Exam	40%
Total:	100%

Quizzes: Quizzes are designed to focus on material that was just covered. They will be 20 to 30 minutes in length and will consist of a number of multiple-choice questions. There are NO make-up quizzes, if a student misses a quiz, then the mark allocation of that quiz will be allocated to the remaining quizzes.

Group presentations: Each group will have to present on a topic selected from a list of topics distributed in class. The presentation should be no longer than 20 minutes. More information about the group presentations will be given in class.

Midterm and Final Exam

Midterm

There will be an in-class midterm test. Once marked, the midterm will be returned to students. Be sure that you are available for the midterm exam. **Allowance will not be made for**

conflicting travel plans. If a student is unable to sit the midterm exam due to a verifiable illness (or, in rare cases, some other circumstances beyond your control), the mark allocation for the midterm exam will be allocated to the final exam.

Final Exam

The date and location of the final exam will be announced through the University's normal procedures for such matters. Be sure that you are available for the final exam. **Allowance will not be made for conflicting travel plans.** The final exam is for evaluation purposes, not instruction. It will not be returned to students.

NOTE: the final exam will be comprehensive, covering material from the entire course. If you are awarded less than 40% on the final exam, you will receive an "F", regardless of your total mark in the course.

Every effort will be made to mark fairly and accurately. Nonetheless in some cases, students may call into question the grades awarded to assignments or tests. In such cases, please write a brief note describing the difficulty with the awarded grade and provide the note, together with the graded work, to the instructor no later than seven calendar days following the return of the graded work. Please be sure to include your name and student number to enable the instructor to identify it properly. Note that the resulting remarking may lead to a lower grade.

Deferred Examinations:

If you wish to defer a Formal Final Exam, you – the student – must reach out to the registrar's office with the proper documentation prior to the deadline (please refer to <https://carleton.ca/registrar/deferral/> for dates). Once the request has been put through, your instructor will be notified for their approval. Your final exam will be formally scheduled. If you miss the deadline for applying for a deferral, please reach out to your instructor personally to discuss.

If you wish to defer a Midterm or an Assignment, please reach out directly to your instructor to discuss.

For more information or to apply for a deferral visit: <https://carleton.ca/registrar/deferral/>

Expectations:

Students are responsible for reading each chapter listed in the course outline and knowing the material in those chapters whether specific mention of certain topics is made in class and regardless of whether topics are addressed in class. Because of time constraints, it is not possible to cover all the chapter material in class. Class time will be spent on the most important topics and on the topics from which students receive the most benefit from explanation in class.

Finance cannot be learned without solving problems. To ensure that you understand the material, sample problems will be given. These problems will NOT be graded. However, it is strongly recommended that you try solving the assigned problems as they will help you in preparation for quizzes and exams. Group work on the sample problems is encouraged.

Course Schedule

Week #	Week of	Topic	Chapters in CFA (Hull)
		Introduction to Debt Securities You are responsible for reading this material on your own. You will be tested on it on Quiz 1.	1-2
1	Sept. 9	Interest Rates and Bond Yields	3 (4)
2	Sept. 16	Valuation of Debt Securities	8
3	Sept. 23	Quiz 1 – Term Structure of Interest Rates	7
4	Sept. 30	Duration and Convexity	5
5	Oct. 7	Midterm Exam	
6	Oct. 14	Statutory holiday. University closed.	
7	Oct. 21	Fall break (no class)	
8	Oct. 28	Valuation of Bonds with Embedded Options	9
9	Nov. 4	Quiz 2 - Mortgage-Backed Securities.	4
10	Nov. 11	Interest Rate Derivatives	(6)
11	Nov. 18	Quiz 3 – Credit Risk Analysis	6, 10 (24)
12	Nov. 25	Credit Derivatives	11 (25)
13	Dec. 2	Group presentations	
14	Dec. 6	Group presentations	

Contribution to Learning Goals of the Program ([BCom](#), [BIB](#)):

Program Learning Goal	Competencies Not Covered	Competencies Introduced (only)	Competencies Taught But Not Assessed	Competencies Taught and Assessed
CHECK (X) ONE PER ROW				
BC1 Knowledge <i>Graduates will be skilled in applying foundational business knowledge to appropriate business contexts.</i>				X
BC2 Collaboration <i>Graduates will be collaborative and effective contributors in team environments that respect the experience, expertise and interest of all members.</i>				X
BC3 Critical Thinking <i>Graduates will be discerning critical thinkers, able to discuss different viewpoints, challenge biases and assumptions, and draw conclusions based on analysis and evaluation.</i>				X
BC4 Communication <i>Graduates will be effective and persuasive in their communications.</i>			X	
BI5 Global Awareness (BIB ONLY) <i>Graduates will be globally-minded.</i>			X	

ADDITIONAL INFORMATION

Course Sharing Websites

Materials created for this course (including presentations and posted notes, labs, case studies, assignments, and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Required calculator in BUSI course examinations.

If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

Group work

The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, followership, and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

Grading

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

Grades entered by Registrar:

WDN = Withdrawn from the course

DEF = Deferred

Academic Regulations

University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:

<http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/>

Requests for Academic Accommodation

Carleton is committed to providing academic accessibility for all individuals. You may need special arrangements to meet your academic obligations during the term. The accommodation request processes, including information about the *Academic Consideration Policy for Students in Medical and Other Extenuating Circumstances*, are outlined on the Academic Accommodations website (students.carleton.ca/course-outline).

You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy Accommodation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation

Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website: carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities

If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. carleton.ca/pmc

Survivors of Sexual Violence

As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and its survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: carleton.ca/sexual-violence-support

Accommodation for Student Activities

Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

For more information on academic accommodation, please contact the departmental administrator or visit: students.carleton.ca/course-outline

Academic Integrity

Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another’s ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated.

Process: If an alleged violation occurs, all relevant documentation will be forwarded to the Dean. If the allegation proves true, the penalties may include; a grade of Failure on the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. **For a first offence, at a minimum, the penalty assigned will normally be a zero on the submitted work and at least a minimum full grade reduction of the final course grade. For a second offence, at a minimum, the penalty assigned will normally lead to a suspension from studies.**

Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: <https://carleton.ca/registrar/academic-integrity/>.

Sprott Student Services

The Sprott Undergraduate Student Services Office offers program advising and overall student success support. Our team is available to discuss your academic goals and your program progression plans. We can also work with you to develop strategies for success, including study skills for Business. If you experience any difficulty this term or if you would like to access support, please contact our team at bcom@sprott.carleton.ca or at bib@sprott.carleton.ca.

Centre for Student Academic Support

The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at: carleton.ca/csas.

Important Information:

- Students must always retain a copy of all work that is submitted.
- All final grades are subject to the Dean’s approval.
- For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting <https://carleton.ca/its/get-started/new-students-2/>

