



Carleton
University

Sprett
School of Business

BUSI 5906P
Special Topics: FinTech
Fall 2022

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Office: Nicol Building, 5031
Office Hours: By appointment

Class Meeting: October 14-15: 8:35am-5:25pm, Nicol Building 3040

Learning Modality: In total, attending class for this course will require the following approximate time commitment (excluding readings and assignments): 18 hours in-person

Course Calendar Description:

At the discretion of the School, a course dealing with selected topics of interest to students in the MBA program. Topics will vary from year to year, and will be announced in advance of the registration period.

Course Description:

This course will survey emerging technologies in financial markets; and more broadly, examine the role of technological advancement and disruption in financial markets. Topics include: Blockchains and cryptocurrencies, robo-advising, peer-to-peer lending, the role of social media in financial markets, algorithmic and high-frequency trading, and Artificial Intelligence and applications.

Course Learning Objectives:

1. Develop an overall understanding of how technology affects, interacts with, and drives, modern financial markets.
2. Appreciate the interaction between humans, robots, and technology within financial markets.
3. Identify ways to think as a General Manager in the context of Fintech.
4. Develop new business entrepreneurial ideas in this emerging field.

Course Prerequisites: Permission of the school

Required Materials: There is no textbook in this course; course slides will be posted ahead of the lectures each day. There is also a list of (optional) useful reference material and research articles posted on the course website

Final Exam Date: This course has a final paper in lieu of a final exam (due on Sunday, October 23rd)

Drop Course Policy: The deadline for academic withdrawal is the last day of classes (each term).

Grading Scheme:

Pre-class assignment (individual)	20%
Contribution to class discussion	10%
Team reflections (2 x 5%)	10%
Team Presentation	20%
Final Paper (individual)	40%
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TOTAL:	100%

Each component of your grade will be assigned a percentage score. Your final course grade will be a weighted average of each of these components.

- **Pre-class assignment (individual)**

In this assignment, you will write an overview of one of the major units in this course. The overview document will explain the full breadth of the topic to a general intelligent audience. The document will be 4 pages (double-spaced) including a list of appropriate references. You can use some of the reference sources available on the course website and/or other sources for one of the following topics:

- Cryptocurrencies and Blockchains
- Social media in financial markets
- Peer-to-peer lending
- Robo-advising
- Algorithmic and high-frequency trading
- Artificial Intelligence (AI) in financial markets

This document is due on Brightspace on **Thursday, October 13th at 6:00pm**. Late submissions will not be accepted.

- **Team Reflections:**

Your team of 5 members will submit 2 reflections about two units of your choice in the course. One reflection will be based on material covered on the first day, and the other on material covered on second day. You will be given time in breakout rooms to work with your team.

Each reflection will be a 3-page double-spaced document that you **submit on the course website before midnight on the day of the lecture**. The reflection consists of a short summary of the unit (in your own words), a reflection that demonstrates your understanding of the material, and 2

practical take-aways from the lecture (that either help you make sense of the emerging role of technology in financial markets or enhance your understanding of how markets work). Your reflections will cover one of the six major units covered in class (see the above item for the list of topics).

- **Team Presentation:**

The format will be a 20-minute PowerPoint presentation that you deliver in teams of 5 (each team member must present!). Presentations will take place in class on October 15th. You can form your own teams and choose your own topic based on material we cover in this course. You will sign up your group and topic in the afternoon of the first day of class (Oct 14), and the presentations will take place in the afternoon of the second day (Oct 15). You will be given some time in class to work with your team. You will be evaluated on the content as well as the style of presentation. This is your chance to have fun while teaching your classmates something new! Sample topic ideas include, but are not limited to:

- Cryptocurrencies (pick only one topic from below):
 - Illegal transactions using Bitcoin
 - Initial Coin Offerings
 - Blockchain technology outside of finance
- Peer to peer lending
- Robo advising (pick only one topic from below)
 - What is the future of the Wealth Management Industry?
 - Who is “better” at forming investment portfolios? machines or humans; can humans and machines work together?
- High-frequency and algorithmic trading (pick only one topic from below):
 - Are faster markets better?
 - Regulation of high-frequency trading
 - Social and welfare impact of high-frequency trading
- Social media in financial markets (pick only one topic from below):
 - How do investors use social media to produce/consume financial information?
 - How do firms use social media to disclose their financial information?
- Artificial Intelligence (A.I) (pick only one topic from below):
 - Using A.I techniques to select stocks (e.g. ETFs that use A.I)
 - A.I techniques in high-frequency (algorithmic) trading
- Another topic of your choice that is approved by the course Professor

- **Final paper (individual):**

Your final term paper will be a 10-page double-spaced (maximum) document – including references. Topics for the term paper will be posted after the end of the second day of class, and will generally apply and/or extend the topics covered in class, as well as offer you the chance to think about the topics covered in an entrepreneurial way (the field of FinTech is quite entrepreneurial!). The final term papers are due on the course website on **Sunday, October 23rd at 8:00pm.**

Course schedule:

Day	Session	Topic
Day 1 Morning	October 14 th , <i>Session I</i>	<p><i>Overview of the course</i></p> <ul style="list-style-type: none"> • Disruption and innovation in financial markets • The FinTech revolution <p><i>Algorithmic and high-frequency trading</i></p> <ul style="list-style-type: none"> • High-frequency trading • Algorithmic trading • Regulation of high-frequency trading
	October 14 th <i>Session II</i>	<p><i>Social media in financial markets</i></p> <ul style="list-style-type: none"> • Wisdom of the crowd • Firms'/investors' communication of financial information on social media
Day 1 Afternoon	October 14 th <i>Session III</i>	<p><i>The Blockchain and Cryptocurrencies</i></p> <ul style="list-style-type: none"> • How does the Blockchain work? • The new payment system • Bitcoin and other cryptocurrencies • Environmental and social implications
	October 14 th <i>Session IV</i>	<p>Break-out rooms' teamwork</p> <ul style="list-style-type: none"> • Reflections • Prepare for team presentations

Day 2 Morning	October 15 th <i>Session V</i>	<i>Peer-to-peer (P2P) lending</i> <ul style="list-style-type: none"> • Crowdfunding • P2P lending
	October 15 th <i>Session VI</i>	<i>Artificial Intelligence in financial markets</i> <ul style="list-style-type: none"> • How does A.I work? • A.I applications in finance
Day 2 Afternoon	October 15 th <i>Session VII</i>	<i>Robo-advisors</i> <ul style="list-style-type: none"> • The future of wealth management
	October 15 th <i>Session VIII</i>	Team presentations, course wrap-up

Late Assignments:

Since this is a condensed course, timely completion of class assignments is essential to the understanding of the material. As such, no late submissions will be accepted. Requests for extension will be considered in cases of illness, family emergency, or other exceptional circumstances.

Preparation and Participation:

Preparation and participation in the class discussion is an integral part of this course. As professionals, you each bring in a new perspective on the material based on your previous experiences, thoughts, and other courses you have covered in the program. By contributing to the class discussion, you enhance your own and your peers' learning experience. The individual pre-course assignment will help you prepare prior to the beginning of the course. Over the course itself, meaningful contribution to the class discussion, as well as to working with your teams will be assessed.

Contribution to Program Learning Goals ([MBA](#)):

MBA Learning Goal	Not Covered	Introduced	Taught but Not Assessed	Taught and Assessed
MB1 Leadership and Collaboration <i>Graduates will be equipped for leadership and collaboration.</i>				✓
MB2 Communication <i>Graduates will be effective communicators</i>				✓
MB3 Critical Thinking and Problem Solving <i>Graduates will be skilled in critical thinking and problem solving.</i>				✓
MB4 Functional Knowledge <i>Graduates will have functional knowledge of all areas of business.</i>			✓	
MB5 Global Business <i>Graduates will have an appreciation of the global environment of business.</i>				✓
MB6 Ethical Reasoning <i>Graduates will be skilled in ethical reasoning and decision-making.</i>				✓

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).

Recommended Calculator for 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. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, followership and other group skills. Group assignments are also an effective way to learn integrative skills for putting together a complex task. Your professor may assign one or more group tasks, assignments, or 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.

(If peer evaluation will be used as an input when assigning grades to group work, specify the procedure. An example appears below.)

Peer Evaluation for Group Work

To deter social loafing and ensure fairness in grading, you will be asked to assess the contribution of your fellow group members. This information will be used when assigning the grade for the final project. The procedure is as follows: Each student should take 100 points and allocate those points to the various members of the group (including him/her/themself) to reflect the contributions made by each member. For instance, if there are four members in a group and everyone contributed equally, each individual would receive 25 points. Conversely, if an individual contributed relatively little, the remaining group members might allocate few points to that member. To ensure that these peer evaluation scores are reasonable and free from personal bias, you will be asked to provide a detailed written explanation for your point allocation.

Letter Grades:

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	F = Below 50
A = 85-89	B = 73-76	C = 63-66	D = 53-56	
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52	

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:

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

- **Pregnancy**

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: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>

- **Religious Obligations**

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: <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>

- **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. <https://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: <https://carleton.ca/sexual-violence-support/>

- **Student Activities**

Carleton University recognizes the substantial benefits, to both the individual student and the university, that result from participating in activities beyond the classroom experience. Reasonable accommodation will 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:
<https://students.carleton.ca/course-outline/>

Academic Integrity:

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—are a serious academic offence, weaken the quality of the degree, and will not be tolerated. 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. 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/>

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: <https://carleton.ca/csas/>

Other Important Information:

- Students must always retain a hard 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 email account. If you do not have or have yet to activate this account, you can do so by visiting <https://carleton.ca/its/get-started/new-students-2/>

Covid-19 Information:

It is important to remember that COVID is still present in Ottawa. The situation can change at any time and the risks of new variants and outbreaks are very real. There are [a number of actions you can take](#) to lower your risk and the risk you pose to those around you including being vaccinated, wearing a mask, staying home when you’re sick, washing your hands and maintaining proper respiratory and cough etiquette.

Feeling sick? Remaining vigilant and not attending work or school when sick or with symptoms is critically important. If you feel ill or exhibit COVID-19 symptoms do not come to class or campus. If you feel ill or exhibit symptoms while on campus or in class, please leave campus immediately. In all situations, you must follow Carleton’s [symptom reporting protocols](#).

Masks: Carleton has paused the [COVID-19 Mask Policy](#), but continues to strongly recommend masking when indoors, particularly if physical distancing cannot be maintained. It may become

necessary to quickly reinstate the mask requirement if pandemic circumstances were to change.

Vaccines: Further, while proof of vaccination is no longer required as of May 1 to attend campus or in-person activity, it may become necessary for the University to bring back proof of vaccination requirements on short notice if the situation and public health advice changes. Students are strongly encouraged to get a full course of vaccination, including booster doses as soon as they are eligible, and submit their booster dose information in [cuScreen](#) as soon as possible. Please note that Carleton cannot guarantee that it will be able to offer virtual or hybrid learning options for those who are unable to attend the campus.

All members of the Carleton community are required to follow requirements and guidelines regarding health and safety which may change from time to time. For the most recent information about Carleton's COVID-19 response and health and safety requirements please see the [University's COVID-19 website](#) and review the [Frequently Asked Questions \(FAQs\)](#). Should you have additional questions after reviewing, please contact covidinfo@carleton.ca.