

Department of Finance
Boston University

The Economics of FinTech

MF 740, Spring 2020
R 12:30pm-3:15pm, HAR 224

Prof. Steven Kou

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Textbooks: None

Approximate Schedule

Week	Topics
1. Jan 23	Overview
2. Jan 30	Blockchain (1)
3. Feb 6	Blockchain (2)
4. Feb 13	Stable coins
5. Feb 20	Contract design for ICO
6. Feb 27	Midterm
7. Mar 5	Robo-Advising (1)
8. Mar 19	Robo-Advising (2)
9. Mar 26	Prediction Markets
10. Apr 2	Crowd Wisdom
11. Apr 9	Privacy Preservation
12. Apr 16	Guest Lecture
13. Apr 23	Project Preparation
14. Apr 30	Project Presentations
15. May 1	Project Presentations
16. May 6	Final Exam 3pm to 5pm

Course Requirements and Grades

The final grade will be generated from following components:

In-Class Homework (12.5%), Regular Homework (12.5%), Midterm Exam (25%), Final Exam (35%), Group Project (15%)

To avoid positive bias in re-grading, except clerk's error, if requested, we will re-grade an exam paper in whole, which may result in either higher or lower scores.

1. Regular Homework

Homework assignments are *not* optional; they are integral to an understanding of the material. In order to encourage you in this, some of the problems on the examinations may be taken from the homeworks.

Note that homework assignments must be completed *individually*, and no collaboration with any other people is allowed.

The course assistant will be available during their office hours to discuss questions you may have about the homework.

2. In-Class Homework and Class Attendance

Because of the short duration of the course, students are expected to attend every class meeting. To be able to learn new things fast is a very valuable skill in job markets. However students are not very well trained in this skill within the traditional academic curriculum. To do this training, from time to time students will also be asked to solve homework problems in class (open book, open notes). The problem will be directly related to the lecture given on that date.

3. Examinations

There will be two exams, the midterm and final exams, as shown on the class schedule.

The exams will be in class, closed book. Your (fully charged) regular calculator is the only outside material to be used during the examination. **The exams cannot be taken at**

any time other than the regularly scheduled time.

4. Project

There will be one project that required students to complete in a team (consisting of about 4 people).

The overall project score for each student is computed by multiplying the score for the whole project team (given by the instructor) by the individual performance score (given by the team members). The individual performance score is computed as the trimmed mean without the highest and lowest numbers.

The project can be either a business proposal or an academic report related to Fin-Tech. Each team will write a report and give a presentation, which consists of a 40-minute talk and a 10-minute Q&A.

For a business proposal, the project will be evaluated by the whole class (80%) and myself (20%). The criteria are (1) Is the project team committed to implement the proposal? (2) Has the team developed a protocol that may be implementable in the near future? (3) Is there a market for the proposal? (4) Is there a possibility to get funding for the proposal?

For an academic report, a team will do a survey paper focusing on one or two academic papers. The project will be evaluated by myself (100%). The criteria are (1) Can the team replicate the results in the paper(s)? (2) Does the team have any new insights, such as finding a different empirical conclusion; a new proof for the theoretical results; a new application; a new example or counterexample; a new connection between the existing results?

5. Calculator

Every student must have a calculator with charged batteries and a square root key available during labs and exams. "Slide rule" calculators with log, exp, and trig functions are strongly recommended for statistical data analysis. Such machines can be purchased for

less than \$50.00. **No programming calculator is allowed during the exams.**

THE INSTRUCTOR AND TA ARE NOT RESPONSIBLE FOR CALCULATORS IN ANY EXAMS.

6. Final Notes

- Handouts contain important information. Make certain that you read them, understand them, and file them for future reference.
- **No late homework will be accepted.** However, considering some unforeseeable difficulties, the lowest score of the in-class homework assignments will be dropped.
- **No makeup examination will be given,** unless we get a written permission from the relevant officer (e.g. the department head, the dean's office, etc.).
- In keeping with University policy, any student with a disability who needs or thinks they need academic accommodations must contact the Office of Disability Services to arrange a confidential appointment with a Disability Services staff member. Accommodation letters must be delivered to me in a timely fashion. Please note that accommodations will not be delivered absent an official letter of accommodation.
- Sexual Misconduct/Title IX Policy. The Questrom School of Business is committed to fostering a safe learning environment for all members of the its community and preventing sexual misconduct. All forms of sexual misconduct, including rape, acquaintance rape, sexual assault, domestic and dating violence, stalking, and sexual harassment are violations of Boston University's policies, whether they happen on campus or off campus.

Title IX of the Education Amendments of 1972 is a federal civil rights law that prohibits sex-based discrimination in federally funded education programs and activities. This law makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources at the web site <http://www.bu.edu/safety/sexual-misconduct/>