

FinTech

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Overview

Technology is playing an increasingly dominant role in the financial service industry, empowering existing players and threatening to obliterate business models of entire sectors within the industry. The course exposes students to this fast-growing and exciting intersection between technology and finance while emphasizing the role data and analytics play.

The course is focused on three main FinTech areas in which technology is driving changes in the way financial services are provided: (i) Lending/Banking services, (ii) Clearing (iii) Trading. It provides specific coverage and examples of developments from (1) peer-to-peer lending, (2) blockchain and distributed ledgers, (3) networks and their use in trading, and (4) algo trading and its use of non-standard inputs. In each of these areas, we start by analyzing the marketplace, the incumbents, and the business case and strategies of the incoming technology-based players with emphasis on the role data and analytics play. Guest speakers augment the discussion by offering their perspective on future trends in each of these areas.

The course mixes standard lecture, a large number of examples and cases, student presentations, and group projects. Student are expected to work in teams and demonstrate a high level of independent learning and initiative. The course' goal is to provide students with in-depth understanding of how to integrate these disruptive technologies into new business ideas and become intrapreneurs and entrepreneurs.

Grades

Grades will be determined based on:

(I) In-class group presentations — 30%

Given the scope and nature of the course, students will prepare short presentations on pre-assigned questions, in groups. All groups will submit their answer slides to the questions and some, randomly chosen groups, will present their slides to the class.

(II) Individual assignments (two) — 30%

The two individual assignments require integration of business and analytics. The first assignment covers the lending module and the second assignment covers the robo-advising module. Both assignments ask you to provide insight that builds on your industry knowledge and analytical analysis. The first asks you to evaluate how loans generated on P2P platforms can be viewed as a new asset class from the perspective of investors. The second assignment asks how the current robo-advising model can be extended to accommodate human capital risk.

(III) Final group project — 40%

The final group project is an opportunity to apply the knowledge and tools covered in the course to an original business idea developed by your group. Some groups will present their ideas on the last class and all groups will hand in a proposal for business idea in the format outlined below.

Structure of the final group project

The final group project can be structured as a slide deck or as a word document. If you choose to go with a slide deck, make sure to include all the explanations in the presenters notes such that the document is self explanatory.

Your group project outlining your FinTech venture idea should cover the following points:

1. Venture goal

2. Problem your venture is solving
3. Solution you are building
4. Market size
5. Technology & Product
6. Competition
7. Business model (how do you plan on making money)
8. Customer acquisition
9. Role of regulation

Your final group assignment project grade is determined based on the following criteria:

- 25% innovativeness of the venture
- 25% analysis of the industry and the strategy of existing and potential competitors
- 25% defensibility of the business model
- 25% integration of data and analytics into the model

Preliminary Meetings' Outline¹

Class	Topic	Case
Introduction		
	1 Overview of the industry —what is FinTech and why now?	JP Morgan Chase
Lending		
	2 Overview of the P2P lending market in developed countries — uncollateralized (consumer and SME) and collateralized	LendingClub IPO
	3 Traditional and alternative credit models	Upstart
	4 Analysis of loan applications from a P2P platform	
	5 <i>Guest speaker</i>	
Clearing		
	6 Blockchain — distributed ledger technology	
	7 Application to clearing and payment	R3 CEV
	8 Mechanics of Bitcoin	
	9 <i>Guest speaker</i>	
Trading		
	10 Interaction in networks and trading	eToro, Estimate, Quantopia
	11 Quantitative trading using non-standard signals; application of text analysis	Ravenpack
	12 Technical analysis, overfitting, and machine learning	
	13 <i>Guest speaker</i>	
	14 Final project group presentations	

¹ In addition, an optional recitation session with examples on data manipulation and analytics examples will be held during the first two weeks of the course.