



## *The Hebrew University of Jerusalem*

### *Syllabus*

### *Introduction to Fin Tech - 55722*

*Last update 23-10-2019*

*HU Credits: 1*

*Degree/Cycle: 2nd degree (Master)*

*Responsible Department: Business Administration*

*Academic year: 0*

*Semester: 2nd Semester*

*Teaching Languages: English*

*Campus: Mt. Scopus*

*Course/Module Coordinator: Prof David Gershon*

*Coordinator Email: [david.gershon@mail.huji.ac.il](mailto:david.gershon@mail.huji.ac.il)*

*Coordinator Office Hours: By appointment*

*Teaching Staff:*

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Prof david gershon

Course/Module description:

The course introduction to Fintech provides an overview of FinTech in Israel and around the world. The course is given only in the first semester. The course will start with some overview of the development of technology in the financial sector, the technological revolution in banking in the past decade and the introduction of machine learning and big data to financial services. Then all the major areas of FinTech will be reviewed including: electronic and algo trading, risk management and investments, consumer and business payments and money transactions, blockchain and cryptocurrencies, P2P lending, crowd funding, consumer credit, RegTech, InsurTech. In the last part of the course we overview the state of the fintech industry in Israel and in the major FinTech centers around the world.

Course/Module aims:

Students from business, computer sciences, engineering and law disciplines will acquire tools to examine and evaluate the fintech industry, startup companies in the FinTech sector.

Learning outcomes - On successful completion of this module, students should be able to:

1. Define all areas of FinTech
2. Understand the challenges and opportunities in each area
3. Be able to pinpoint area of finTech where modernization is still required
4. Understand the linkage between certain technologies and regulations

Attendance requirements(%):

100%

Teaching arrangement and method of instruction:

Course/Module Content:

- A. Overview of the development of technology in the financial sector
- B. The technological revolution in banking in the past decade
- C. Introduction to machine learning and big data for financial services.
- D. Electronic and algo trading
- E. Risk management and investments
- F. Consumer and business payments and money transactions
- G. Blockchain and cryptocurrencies

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H. P2P lending, crowd funding and consumer credit.

I. RegTech.

J. InsurTech.

K. Overview of the state of the fintech industry in Israel and in the major FinTech centers around the world.

Required Reading:

IMF - Fintech and Financial Services: Initial Considerations

• Read: Citi GPS, 2016, Digital Disruption: How FinTech Is Forcing Banking to a Tipping Point, available at

<https://ir.citi.com/SEBhgbdvxes95HWZMmFbjGiU%2FydQ9kbvEbHlruHR%2FIe%2F2Wza4cRvOQUNX8GBWVsV>

• Read: Christensen, Clayton M., Raynor, Michael E. and McDonald, Rory. (2015). What is Disruptive Innovation? Harvard Business Review. December 2015.

• Read: Frame, W. Scott, and White, Lawrence J. (2014). Technological Change, Financial Innovation, and Diffusion in Banking. Chapter prepared for The Oxford Handbook of Banking, 2nd edition. Available at [www.ssrn-id2380060.pdf](http://www.ssrn-id2380060.pdf)

• Read: Dhar, V., Data Science and Prediction, Communications of the ACM, volume 56, number 12, December 2013

• Read: Dhar V., When to Trust Robots With Decisions and When Not To, Harvard Business Review, May 2016.

• Read: Provost and Fawcett, Data Science for Business, Chapter 8, Visualizing Model Performance

Utilizing artificial neural networks and genetic algorithms to build an algo-trading model for intra-day foreign exchange speculation. CainEvansa Konstantinos Pappasa Fatos Xhafab <https://doi.org/10.1016/j.mcm.2013.02.002>

Lecture 3: Yuval Tal: Sales and Marketing Techniques from the Founder of Payoneer <https://fintech.huji.ac.il/book/lecture-3%C2%A0yuval-tal-sales-and-marketing-techniques-founder-payoneer>

• Read: Ethereum, a Virtual Currency, Enables Transactions That Rival Bitcoin's. New York Times, March 27, 2016. <https://www.nytimes.com/2016/03/28/business/dealbook/ethereum-a-virtual-currency-enables-transactions-that-rival-bitcoins.html>

• Read: Christopher Burniske, Bitcoin and Ethereum: How smart contracts work. ARK Research blog, May 29, 2016. Available at <https://ark-invest.com/research/smart-contracts-work>

• Read: Satoshi Nakamoto, 2008, "Bitcoin: A Peer-to-Peer Electronic Cash System," unpublished, available at <https://bitcoin.org/bitcoin.pdf>

Crowdfunding: Tapping the right crowd. Paul Belleflammeab Thomas Lambertcd Armin Schwiendacherd <https://doi.org/10.1016/j.jbusvent.2013.07.003>

The dynamics of crowdfunding: An exploratory study. Ethan Mollick <https://doi.org/10.1016/j.jbusvent.2013.06.005>

Financial Stability Issues from FinTech (Industry Report - Financial Stability Board (FSB))

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OECD (2017), *Technology and innovation in the insurance sector*

Additional Reading Material:

Course/Module evaluation:

End of year written/oral examination 0 %

Presentation 60 %

Participation in Tutorials 20 %

Project work 20 %

Assignments 0 %

Reports 0 %

Research project 0 %

Quizzes 0 %

Other 0 %

Additional information: