

ZIBS International Summer School

Fintech-MAX



浙江大学 国际联合商学院
INTERNATIONAL BUSINESS SCHOOL
ZHEJIANG UNIVERSITY

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Overview

The financial world is changing—it is changing very fast. The combination of Finance and Technology—commonly known as Fintech—is revolutionizing the way financial services are provided. ZIBS, joining hands with Cambridge Judge Business school, will hold the “FinTech-MAX” summer school aiming to provide students the cutting edge courses about FinTech, including FinTech theoretical foundations, regulations, and popular applications of machine learning in finance.

Bitcoin – the famous crypto currency – has already shocked the financial industry. E-commerce payment, and remittance services are being revolutionized by AI and new technologies. Tech giants such as Google, Apple, and Amazon are trying to compete against other giants like Alipay or WeChat Pay. Facebook, for instance, is going to offer a digital currency called LIBRA. Deep-learning algorithms could aid in developing new drugs, interpreting medical images, cleaning up electronic patient charts, and more. All these are becoming possible due to new technology (AI, DLT).

How will this transformation revolutionize the financial services market? What are the disruptive technologies? How are they disrupting the existing business models? How the incumbents are going to accommodate disruptive technologies? How do new innovations such as Distributed Ledger Technology is going to be used by various players, including governments?

FinTech-MAX



Study location

ZIBS, International Campus, Zhejiang University



Type

Summer Course, Full-time



Nominal duration

10-day intensive from 20 July to 29 July



Tuition fee

USD 1800 or RMB 12,000



Language requirements

Chinese, English

The objective of this module is to learn the latest developments in FinTech industry by address the following questions:

- What is quantitative FinTech and how the key technologies drive FinTech development and shape the competitive landscape of finance over the next decade.
- How has the financial services industry evolved and what was the role of technology and regulation? What are major current changes in technology and regulation and how is the financial service industry responding?
- What is the current dominant business model and how are Fintech entrants changing this business model?
- The road ahead: what changes can we expect in the financial service landscape?
- What is digital health and what is the relationship between AI and digital health?

Who should attend this course?

This course is suitable for:

- Current 3rd year bachelor or (prospective) master students in a program interested in finance and business
- Start-ups in financial services
- Entrepreneurs who are already managing, or planning to open, a business
- Current and potential investors in financial markets

Course Duration and Dates

This is a 10-day intensive course from 20 July to 29 July, 2022.



Prerequisites

No educational background in finance or economics is required; An interest in the developing field of FinTech.



Recommend literature

No textbook is required to buy. Relevant information will be provided during the sessions.



Teaching methods

Lecture, Presentation, Discussion, Debate



Assessment methods

Class Participation; Assignments, Group work and presentation



Keywords

Fintech, Regulations, Machine Learning, AI, cryptocurrency, Investment, Insurance, Digital Healthcare, etc

Curriculum

01

Theoretical Foundations of Finance (offered by ZIBS)

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1.1. Foundations in Finance: Financial Modelling and Business Valuation

Throughout this module you will explore elements of probability theory and review matrix algebra and statistics. In this module you will engage in a systematic exploration of accounting and corporate valuation tools.

1.2. Foundations in Finance: Application of Python and Matlab for Finance

This module develops your confidence with the basics of programming in Python and Matlab and enables you to develop good practice and knowledge to tackle complex problems.

1.3. Selected Topics in Quantitative FinTech

In a broad overview, we'll explore the intersection between quantitative method and Fintech, such as robo-advising, AI and personal banking. More specifically,

1. Learn fundamental models in quantitative finance
2. Explore the connection between FinTech and techniques in stats and computer science
3. Evaluate current trends in big data and FinTech, as well as examples in financial big data

1.4. Blockchain and Cryptocurrency

Now is the time to understand how bitcoin and blockchain work and how they're used, including a comparison of the different uses of crypto finance.

1. Identify how bitcoin and blockchain work in practice
2. Justify the use of blockchain components given their apparent security risk
3. Compare the different uses of blockchain in finance
4. Articulate a strategy for using blockchain in finance

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02

FinTech Regulations and Innovations (offered by CAM & MIT)



Cambridge will offer the courses about FinTech regulations and innovations, such as Review of Innovation in FinTech, Insurance Regulatory Sandboxes and Alternative Capital Raising, and Cryptoassets and DLT International Regulatory Cooperation Regulatory Sandboxes. The series of courses will cover many topics in FinTech innovations: APIS, Cloud computing, DLT/Blockchain, IOT, RPA, AI, Machine Learning, NLP, Quantum-Safe cryptography, QR codes, etc.

Machine Learning and AI (offered by ZIBS & ZJUI)



3.1. Introduction to machine learning

Explore the underlying elements of machine learning and its fundamental components

1. Become familiar with the fundamental components of and approaches to machine learning problems and ways to classify problems along the major dividing lines of the ML landscape
2. Understand how to differentiate ML from statistics
3. Examine real-world applications of machine learning across a variety of industries

3.2. Algorithms in machine learning

Acquire an in-depth understanding of basic understandings of algorithms in machine learning

1. Nearest neighbour methods, Decision tree, Naïve Bayes
2. Bayesian optimization, Logistic regression, Support vector machines
3. Unsupervised learning, Principle Component Analysis, Deep learning and Neural networks.

3.3. Machine learning and FinTech

Machine Learning works by extracting meaningful insights from raw sets of data and provides accurate results. This information is then used to solve complex and data-rich problems that are critical to the banking & finance sector. Further, machine learning algorithms are equipped to learn from data, processes, and techniques used to find different insights.

1. Machine Learning Use Cases in Finance: Financial Monitoring, Making Investment Predictions, Process Automation, Secure Transactions, Risk Management, Algorithmic Trading, etc.
2. Future Prospects of Machine Learning in Finance: Recommendations or Sales of Different Financial Products. Enhanced Security, Customer Sentiment Analysis, Better Customer Service, etc.
3. Machine Learning in FinTech: What's the Next?

3.4 AI for Healthcare: Fundamental Techniques and Application Trends

In this module, you will learn the fundamental techniques in artificial intelligence for various healthcare related problems, understand their advantages and limitations in real-world clinical scenarios, and know about recent innovation and applications in the industry.

Faculty

Academic Director



BEN Shenlin

Dean and Professor of Zhejiang University International Business School (ZIBS)
Dean of Academy of Internet Finance, Zhejiang University (AIF)

Research Interests: FinTech, Entrepreneurial Finance, International Finance, Global Business



Michael Sung

Founder and Chairman of CarbonBlue Innovations
Founding Co-Director of the Fudan Fanhai Fintech Research Center at the Fan hai International School of Finance at Fudan University

Research Interests: Digital Finance, Fintech Policy & Regulation, AI and Blockchain Innovation, Digital Asset Investment Banking, Asset-backed Securitisation, Tokenomics Systems, Digital Economy Business Model Innovation, and Cryptoeconomics



David Wen

Professor and Researcher of Zhejiang University International Business School (ZIBS)
Director, International Research Center for Fintech Security

Research Interests: Financial Technology, Digital Currency, Blockchain, Cyber Security

Lectures



Jack YAN

Associate Professor of Zhejiang University International Business School (ZIBS)

Research Interests: Internalization of Chinese banks, Management of multinational banks



WANG Hongwei

Associate Professor, ZJUI
Assistant Dean, ZJUI

Research Interests: Collaborative Design and Simulation, Knowledge Management and Knowledge-Based Engineering, Description and Composition of Manufacturing Resources, Condition Monitoring and Fault Diagnosis of Complex Systems, Modern Design Methods and Tools



YANG Hao

Assistant Professor and Researcher of ZJU-UIUC Institute of Zhejiang University

Research Interests: Wireless Communications & Networking, Age of Information, Distributed Machine Learning



SHAO Hui

Assistant Professor and Researcher of Zhejiang University International Business School (ZIBS)

Research Interests: Research Interests: FinTech, Quantitative Finance, Applied Probability



LIU Zuozhu

Assistant Professor and Researcher of ZJU-UIUC Institute of Zhejiang University

Research Interests: Machine Learning, AI for Healthcare, Big Data Analytics in Wireless Networks, Representation Learning



LU JiaJun

Assistant Professor and Researcher of Zhejiang University International Business School (ZIBS)

Research Interests: Urban and regional economics, Housing economics, Applied spatial econometrics



CHEN Di

Assistant Professor and Researcher of ZJU-UoE Institute of Zhejiang University

Research Interests: Embryonic stem cells, Stem cell maintenance, Stem cell differentiation, Post-transcriptional regulation, RNA modifications



ZHOU Wenyu

Assistant Professor and Researcher of Zhejiang University International Business School (ZIBS)

Research Interests: Theoretical Econometrics, Digital Economics, Empirical Asset Pricing



Contact

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