



The University of Hong Kong Postgraduate Studies at HKUCS

香港大學計算機科學系
Department of Computer Science
The University of Hong Kong

2024





THE UNIVERSITY OF HONG KONG (HKU)



Something about HKU

- **Renowned Tradition**
 - Hong Kong's first tertiary institution since 1912
- **Academic Excellence**
 - Top-tier academic and research staff from around the world
- **Cross-Cultural Exposure**
 - Mix of “international faculty and students”
 - “English-speaking” university

Rankings & ratings

RANKINGS

The University of Hong Kong is one of the top public universities in Hong Kong, Hong Kong SAR. It is ranked #=26 in QS World University Rankings 2024.

#=26

QS World University Rankings

#=77

QS WUR Ranking By Subject

#4

Asian University Rankings

#3

Asian University R...

2024 QS Rankings: 26

QS World University Rankings



Department of Computer Science (HKUCS)

HKUCS Postgraduate Programmes

- MPhil/PhD (not for today's talk)
- MSc in Computer Science 計算機科學理科碩士課程
- MSc in Electronic Commerce and Internet Computing 電子商貿及互聯網工程理科碩士課程
- MSc in Financial Technology and Data Analytics (part-time) 金融科技與數據分析理科碩士課程
- Master of Data Science
- MSc in Artificial Intelligence



HKUCS MSc(CompSc)



Our Programme Team

- Dr KP Chow – Programme Director
- Professor SM Yiu– Deputy Programme Director
- Dr Loretta Choi – Associate Director
- Dr Dirk Schnieders – Associate Director
- Dr HF Ting – Associate Director (Admission Director)



Our Programme

- Our programme trains students professional skills; emphasizes on hands-on ability
- Solid foundation for further research

=> Companies like our graduates very much
(multiple offers; about 100% employment rate)



MSc(CompSc) Degree – Complete 72 credits

- **Enrolment modes:**

- **Project Mode**

- Courses (60 Credits) + Project (12 Credits)

- i.e. **10 Courses + Project**

- or

- **Dissertation Mode**

- Courses (48 Credits) + Dissertation (24 Credits)

- i.e. **8 Courses + Dissertation**

Project: Case study, System development, Industrial projects
(offered by research institutes or industry partners)

Dissertation: Research-based projects





1 year Full-Time 2 years Part-Time

- Length of study:
 - Full time (Project Mode): 3 semesters (Sept 2024 - Aug 2025)
 - Full time (Dissertation Mode): 5 semesters (Sept 2024 - May 2026)
 - Part time: 6 semesters (Sep 2024 to Aug 2026)
- Number of semesters in 1 year:
 - Semester 1 (Sep to Dec)
 - Semester 2 (Jan to May)
 - Summer semester (Jun to Aug)

MSc(CompSc) Areas of Specialization



4 streams of study in MSc(CompSc)

- MSc(CS) in **Cyber Security**
- MSc(CS) in **Financial Computing**
- MSc(CS) in **General Stream**
- MSc(CS) in **Multimedia Computing**



3 specialized streams + 1 general stream

- Each course may be classified as belonging to more than specialized stream or not belonging to any specialized stream
- If you go for a specialized stream, say cyber security, you need to take **4 courses belonging to that stream + project/dissertation belonging to that stream**
- The remaining courses, you can freely to choose any others



Study Pattern – Full-time Project Mode

Semester	Full time
1 (Sep-Dec)	Take 5 courses
2 (Jan-May)	Take 4 or 5 courses Start project preparation
3 (Jun-Aug)	Take 0 or 1 course Work hard on your project



Introduction to different streams of the Programme



MSc(CS) in Multimedia Computing



Multimedia computing Stream

- **Metaverse, Web3, VR & AR:** There is a growing demand in the Hong Kong, mainland China, and worldwide industry for multimedia computing professionals (e.g. **virtual KOL**)
- In this stream you will gain **theoretical and practical skills** that will enable you to **develop innovative and creative multimedia computing technologies**



5

Text-To-Videos



1girl looking at viewer



Night Train in City

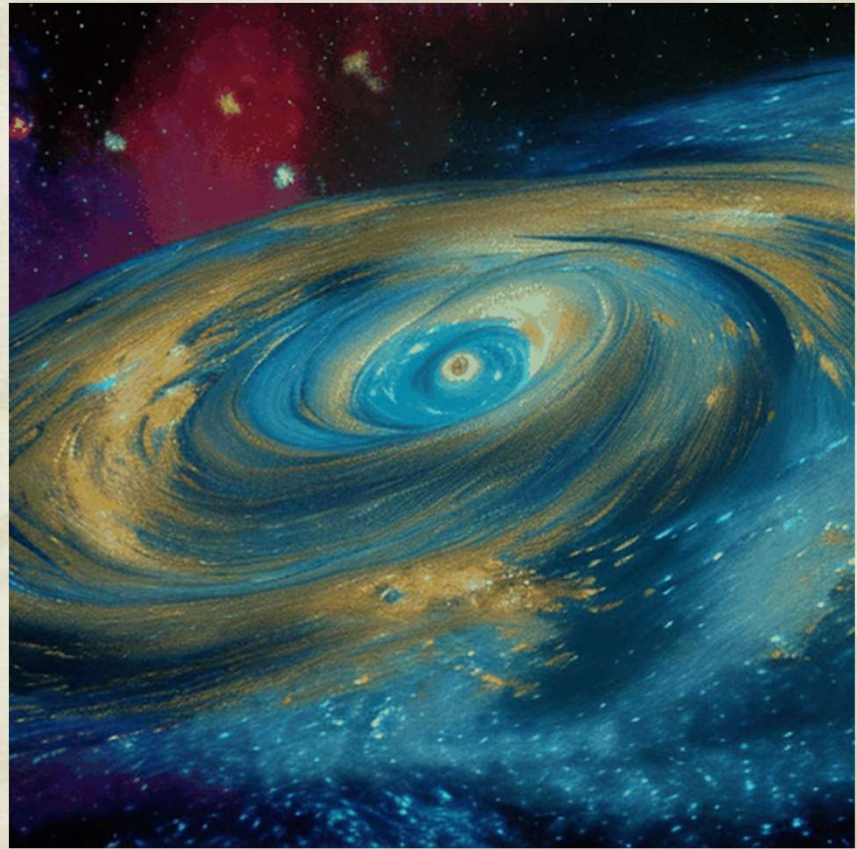


5

Text-To-Videos (Cont'd)



Sailboat under starry sky



Galaxies in van Gogh style



Focus



- Multimedia Computing Courses:
 - Multimedia technologies
 - Visualization and visual analytics
 - Image processing and computer vision
 - Smart phone apps development
 - Game design and development
 - Data-driven computer animation

Check our website for more details!



Multimedia Facilities

- MSc(CS) **Multimedia Laboratory** [MM Lab]
- State of the art **high-spec computing (GPU farm)** and **specialized multimedia equipment**
- **24h access** for Multimedia Computing Stream students



MSc(CS) in Financial Computing



Our programme focuses on **FinTech (Financial Technology)**

Our graduates are able to do the followings

- **Algo-trading** (write s/w to do automatic stock selection & trading: quantitative to high-frequency trading)
- **Pricing & Risk assessment** (evaluate the risk & set a price for a financial product)
- **IT Infrastructure design and implementation** for a financial or investment company
- **Big data analytics** for financial data
- **Blockchain** (platform & applications development)
- **Security** (fraud identification and investigation)

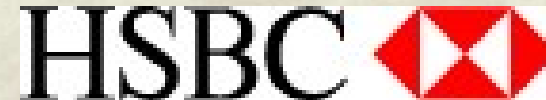
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Many job openings with very high salary \$\$\$\$\$\$\$\$ (in particular, in HK and overseas)



Who are the teachers?

- Peter Ng: Deutsche Bank, BNP Paribas
- Jingrui Zhang: ExodusPoint Capital Management
- C.D. Shum: JP Morgan Chase Bank
- J.H. Rahmel: HSBC



Professionals from industry



Sorry, I don't have any background in finance, can I join the Financial Computing Stream?

No problem, we do NOT assume that you have knowledge in finance



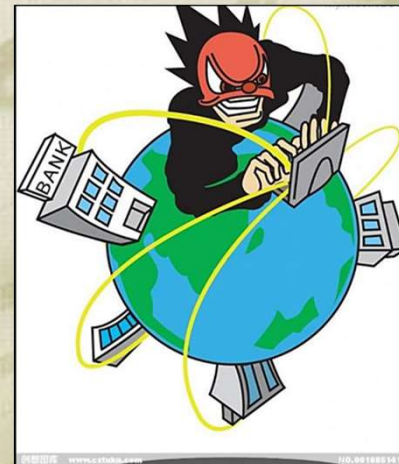
Basic and Advanced Financial Computing Courses

- Introduction to financial computing
- Securities transaction banking
- Techniques in computational finance
- Software development for quantitative finance
- Distributed ledger and **blockchain technology**
- Introduction to cyber security
- Data mining
- **Financial fraud analytics**
- Machine learning in trading and finance
- Banking in Web 3.0 - Metaverse, DeFi, NFTs and beyond

Check our website for more details!



MSc(CS) in Cyber Security





Highlights of our stream - What make us different from others

What you expect to learn from this stream?

- Cryptography
- Basics of computer/network security
- Advanced topics: wireless/cloud/big data security

Common to almost all master programmes
focused on information security.

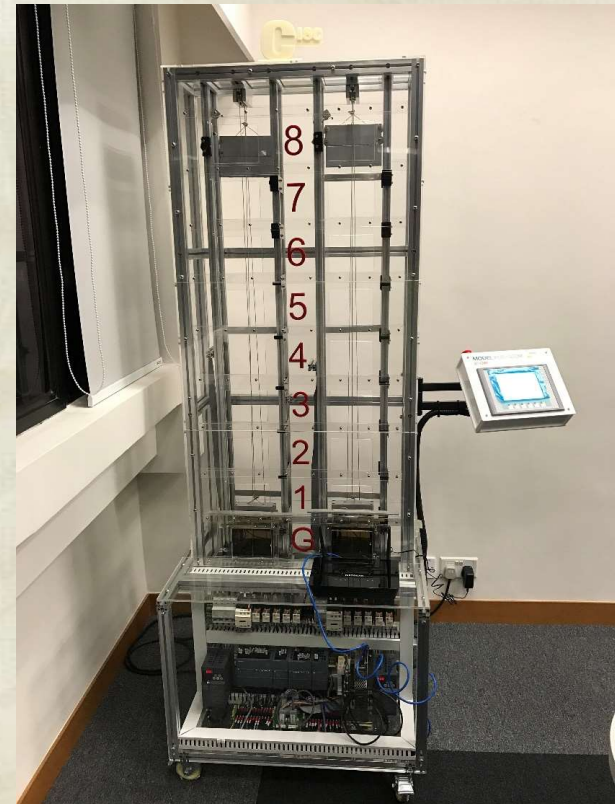


🎵 Practical hacking and defense

State-of-the-art **Cyber security lab!**

Hacking/Defence Tools:

- Password cracking tools
- Key logger
- Social network hacking tools
- Windows/games hacking tools
- Exam?



General Stream

You can take any courses in the curriculum (incl. the courses offered by the 3 specialized streams: Cyber Security + Multimedia Computing + Financial Computing)



You can take any courses in the curriculum (incl. the courses offered by the 3 specialized streams: Cyber Security + Multimedia Computing + Financial Computing)



COMP7103	Data mining
COMP7106	Big data management
COMP7305	Cluster and cloud computing
COMP7404	Computational intelligence and machine learning
COMP7506	Smart phone apps development
COMP7607	Natural language processing
DASC7606	Deep learning



Our Students



Past Events



Career fair



Career talk



Career talk

Career Fair



Meiya cup



Meiya cup

Competition



Congregation



Graduation dinner



Alumni gathering



Alumni gathering



HKU MSc Computer Science Alumni Association

Branches of MSc(CompSc) Alumni Association

Beijing

北京



Shenzhen

深圳



Shanghai

上海



Chengdu

成都



THE UNIVERSITY OF HONG KONG

MSc in Electronic Commerce and Internet Computing

電子商貿及互聯網工程理科碩士課程

Innovate your Global Business with Technology



MSc(CS)

vs

MSc(Ecom&IComp)

More technical, e.g. how to setup a cloud, how to write smart contracts....

- To train students to bridge “technology” and “business”
- To nurture entrepreneurship (e.g. goes for start-ups?)
- Mix with our part-time executive officers in major companies

Remarks:

(1) Pick a programme to fit you!!

(2) Study mode: similar (two modes, do you still remember?)



Curriculum - Discipline courses

At least 4 out of 8 Fundamental courses

Check our website for more details!

ECOM6004	Legal aspects of IT and e-commerce
ECOM6008	Supply chain and e-logistics management
ECOM6013	E-commerce technologies
ECOM7127	Digital transformation: strategy and people
ICOM6012	Internet infrastructure technologies
ICOM6034	Website engineering
ICOM6045	Fundamentals of e-commerce security
ICOM6046	Semantic data architecture



Curriculum - Discipline courses

Any combinations of your choice

ECOM 6004	Legal aspects of IT and e-commerce
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ECOM 6008	Supply chain and e-logistics management
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ECOM 6013	E-commerce technologies
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ECOM 7127	Digital transformation: strategy and people
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ICOM 6012	Internet infrastructure technologies
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ICOM 6034	Website engineering
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ICOM 6045	Fundamentals of e-commerce security
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ICOM 6046	Semantic data architecture
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ECOM 6014	E-marketing
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ECOM 6016	Electronic payment systems
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ECOM 6023	E-financial services
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ECOM 7121	Dynamic digital capabilities
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ECOM 7122	Entrepreneurship development and ventures in Asia
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ECOM 7123	Building smart cities: an information system approach
--------------	---

ECOM 7124	Mobile and IoT computing services and applications
--------------	--

ECOM 7126	Machine learning for business and e-commerce
--------------	--

ICOM 6027	E-crimes: digital crime scenes & legal sanctions
--------------	--

ICOM 6044	Data science for business
--------------	---------------------------

ICOM 7125	Digital forensics
--------------	-------------------

COMP 7311	Legal issues in artificial intelligence and data science
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COMP 7404	Computational intelligence and machine learning
--------------	---

COMP 7412	Banking in Web 3.0 – Metaverse, DeFi, NFTs and beyond
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COMP 7802	Introduction to financial computing
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COMP 7901	Legal protection of digital property
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FITE 7407	Securities transaction banking
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FITE 7409	Blockchain and cryptocurrency
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FITE 7410	Financial fraud analytics
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FITE 7411	RegTech in finance
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Cross-curriculum enrolment

- May select up to 12 credits of elective courses (i.e. normally 2 courses) from other taught-postgraduate programmes in the Faculty of Engineering, e.g. MSc(CompSc), MSc(Eng)(EEE)
- Subject to approval by the directors of the home programme and the offering programme



Capstone Requirement

- All students would have to enrol in either a Case Study Project (ECOM7001) or a Dissertation (ECOM7000)
- Normally the project starts after the student has completed at least 2 courses of the degree
- All projects should commence in the second semester of an academic year

Project Type	Full-Time Students
Case Study Project	2 – 3 semesters
Dissertation	3 – 5 semesters



Case Study Project

12 credits (equivalent to 2 courses)

- Designed for students interested in real E-Commerce experience and integration of what have been learned
- Work on an innovative E-Commerce business plan and try to execute the plan as genuine company
- Work in group of 4 (nominal, min 3 – max 5)



Case Study Project

12 credits (equivalent to 2 courses)

Some project titles:

- STEM Course Matching Platform
- BitComp – The Price Quoting Platform of Cryptocurrencies
- Return Water - Flight Compensation Claim
- Theyta.com – Data Analysis, Sharing and Collaboration Platform
- Embedded Audio System – Invisible Audio



Words from our graduates



Charlie Poon (Class of 2023)

Co-founder and CEO, THEYTA

"The MSc(ES&IComp) programme offers great flexibility in course selection. We are allowed to choose from a diverse range of courses - from e-marketing to a legal course on copyrights and data privacy, from quantum computing to many specific engineering courses.

The case project allows students to form into teams to literally build a digital business from scratch. It's a real business that you can run with your teammates rather than a cliché case study. Luckily, some of us, including myself, have co-founded our own startups from this programme."

Adam Kacki (Class of 2021)

"Without any doubts the MSc(ES&IComp) programme offers great value and it also requires some great efforts and teamwork from the students. As a part time student of MSc(ES&IComp), I was still able to cope with my full time job which makes it suitable for anybody who is actively pursuing their career and wishes to broaden their education at the same time."



Karen Chung (Class of 2021)

Vice President, Bank of America

"To pursue a business and technology blended Master's degree is always my dream. The MSc(ES&IComp) provides the opportunity for me to enhance both my technical and business knowledge without affecting to my career. The programme is well defined with the flexibility for the student to enroll in a mixture of both computing and technology programmes according to their interest. Specific study paths were also created for startup founders, finance professionals, and programming professionals."





Opportunities



THE UNIVERSITY OF HONG KONG
MEICOM
ALUMNI ASSOCIATION



Stay Connected

Expand your
Network



12.05.2023

Never Stop
Learning

Past Alumni Events



MEICOM FIREPLACE TALK SERIES 4

Enhancing Knowledge Management in Corporations through Digital Transformation and AI Integration

20 MAY (SAT)
9:00 - 9:45 PM (HKT)

on Zoom
Zoom login will be emailed to MEICOM alumni and students. For event inquiries, please email us at meicom.hku@gmail.com

MEICOM

Fireplace Talk Series

DR. TREVOR LIU
Adjunct assistant professor of HKU Business School, Knowledge Management consultant

MCs:

THOMAS
MEICOM MEMBER

DAVID
MEICOM MEMBER

LIVE EVENT





The University of Hong Kong
Master of Science
FinTech and Data Analytics
MSc(FTDA)

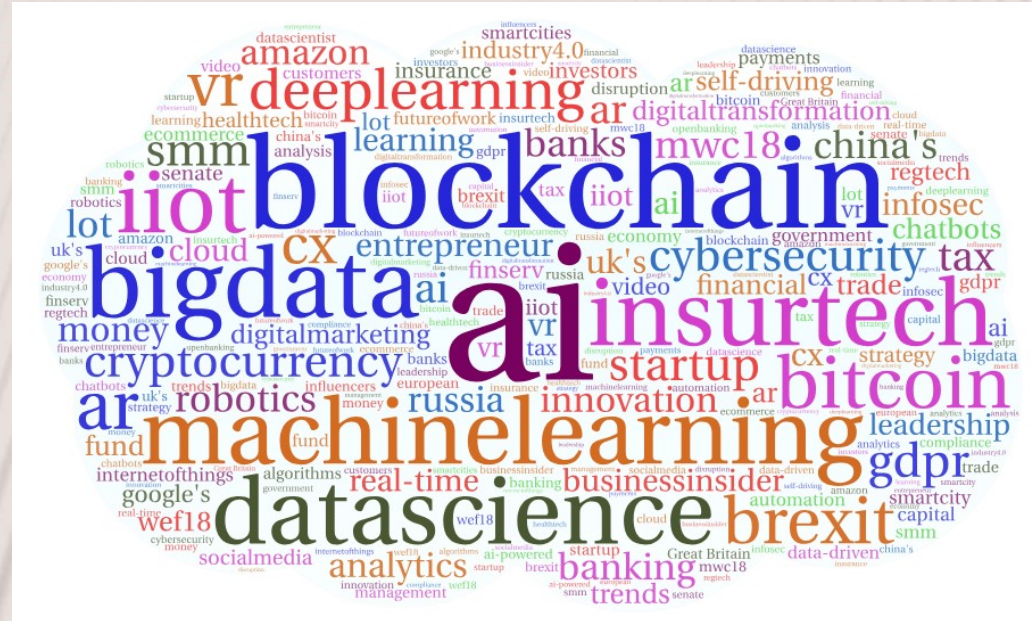
Department of Computer Science
The University of Hong Kong

2024

Q1. Are you graduating in Jun 2024 with an Engineering or Science or ... degree?

Q2. Do you want to pursue a career in FinTech?

What's FinTech?



All these jobs require working experiences



1. I don't know finance
2. I don't know blockchain
3. I don't have money
4. My mother wants me to start working
5. ...



Master of Science in Financial Technology and Data Analytics

[MSc(FTDA)]



HERE IS THE PATH

Date	What to do
Sep 2024 (Sem 1)	Start your MSc(FTDA) with HKUCS
Jan 2025 (Sem 2)	Continue your study
Jun 2025 (Summer Sem)	Continue your study Or take a summer holiday?
Sep 2026 (Year 2/Sem 1)	Start your MSc(FTDA) project
Jan 2026 (Year 2/Sem 2)	Working hard on your MSc(FTDA) project and continue your study
Jun 2026	Get your MSc(FTDA) degree Start your new FinTech job



Some information about

Master of Science in
Financial Technology
and Data Analytics
[MSc(FTDA)]



SOME HIGHLIGHTS

- ✘ Truly interdisciplinary and highly integrated programmes
- ✘ Two-year part-time curriculum
- ✘ Target intake: 60 students
- ✘ Enrolment mode:
 - + 10 Courses (at least 60 Credits)^ + Project (12 Credits)

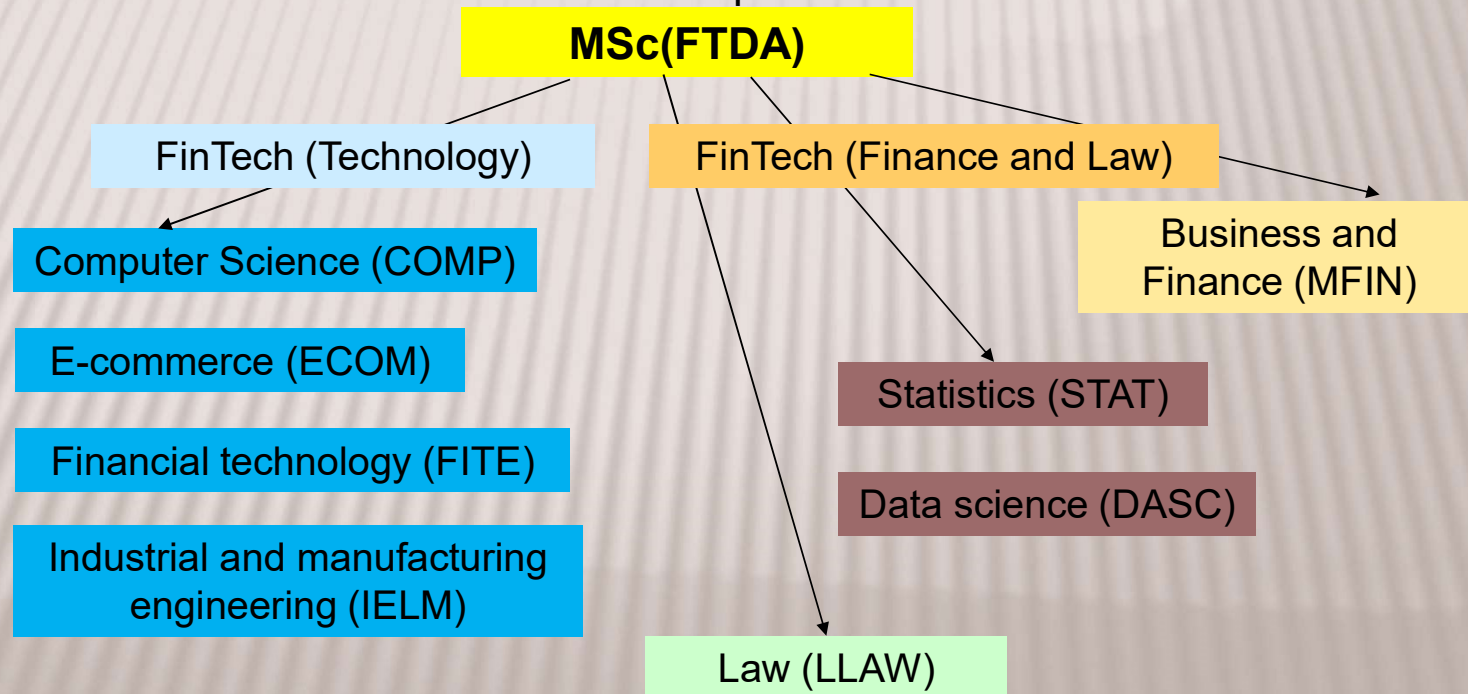
^ Most courses in the curriculum has 6 credits. However, courses offered by Faculty of Law has 9 credits.



UNIQUENESS

MSc(FTDA) has an interdisciplinary curricula by drawing on the expertise from diverse areas of engineering, law, statistics and business, with a technology focus

Courses are offered from different disciplines.





CURRICULUM

List A: Disciplinary compulsory courses (3 courses, 21 credits)

Discipline	Course
Technology	FITE7409 Blockchain and cryptocurrency (6 credits) or COMP7408 Distributed ledger and blockchain technology (6 credits)
Finance	MFIN7002 Investment analysis and portfolio management (6 credits)
Law	LLAW6093 Regulation of financial markets (9 credits)

Students holding a non-computer science major should select FITE7409 Blockchain and Cryptocurrency while candidates holding a computer science major should select COMP7408 Distributed Ledger and Blockchain Technology.



CURRICULUM

List B: Disciplinary courses (3 courses, 18 credits)

List-B-1 <i>(with at least one course from List-B-1)</i>	List-B-2 <i>(with at least one course from List-B-2)</i>
COMP7802 Introduction to Financial computing (6 credits)	FITE7407 Securities transaction banking (6 credits)
COMP7906 Introduction to cyber security (6 credits)	FITE7410 Financial Fraud Analytics (6 credits)
ECOM6016 Electronic payment systems (6 credits)	STAT6013 Financial data analysis (6 credits)



CURRICULUM

List C: Disciplinary courses (at least 2 courses)

List-C-1 (with at least 1 course from List-C-1)	List-C-2 (with at least 1 course from List-C-2)
FITE7405 Techniques in computational finance (6 credits)	COMP7412 Banking in Web3.0 – Metaverse, DeFi, NFTs and beyond (6 credits)
FITE7406 Software development for quantitative finance (6 credits)	ECOM6023 E-financial services (6 credits)
FITE7801 Topics in financial technology (6 credits)	ECOM7126 Machine Learning for Business and E-commerce (6 credits)
COMP7103 Data Mining (6 credits)	FITE7411 RegTech in finance (6 credits)
COMP7305 Cluster and cloud computing (6 credits)	IMSE7310 Financial engineering (6 credits)
COMP7404 Computational intelligence and machine learning (6 credits)	LLAW6046 Privacy and data protection (9 credits)
COMP7409 Machine learning in trading and finance (6 credits)	LLAW6126 E-Finance: law, compliance and technology challenges (9 credits)
DASC7606 Deep learning (6 credits)	LLAW6256 Law of anti-money laundering and counter-terrorist financing and compliance issues (9 credits)
STAT8020 Quantitative strategies and algorithmic trading (6 credits)	MFIN7034 ^ Machine learning and artificial intelligence in finance (6 credits) or MFIN7037 ^ Quantitative trading (6 credits)
	STAT6015 Advanced quantitative risk management (6 credits)

[^] Students can select either MFIN7034 Machine learning and artificial intelligence in finance or MFIN7037 Quantitative trading.



CURRICULUM

Capstone requirement (12 credits)

- All students would have to enrol in FITE7001 Project.
- Recommend to be a group project.
- Can be case study or software prototype implementation.
- **Not** required to be basic research.



SCHOLARSHIP



We offer scholarships to attract and reward the best students. All scholarships shall be awarded on the basis of academic merit and personal qualities.

HKU-SCF Scholarship in Financial Technology

The HKU-SCF FinTech Academy will offer five scholarship*, each at the value of HK\$60,000, exclusively for MSc(FTDA) and MSc(CompSc) [Financial Computing Stream] students. It shall be awarded to local students who are Hong Kong permanent residents.

* Supported by Standard Chartered Hong Kong 150th Anniversary Community Foundation (SCF).



HKU MSC FTDA ALUMNI ASSOCIATION



HKU MSc in FTDA Alumni Association



BLOCKCHAIN SERIES 2024

HOSTED BY **FTDAAA** (HKU MSc in FTDA Alumni Association)

CO-HOSTED BY **MEICOM**, **AND CO**, **RED BLOCKCHAIN**

SPEAKERS



ANTHONY CHAN

A web3 veteran, Anthony is a Senior Researcher in a leading crypto exchange. As he conducted 1000+ crypto projects as a Venture Capitalist, Anthony has a deep understanding in the intricacies of Web3 and DeFi. Before his journey in web3, he worked extensively in hedge funds adopting multi-strategies, with his focus on equity trading and research into various industries and companies. Anthony holds both a Bachelor of Laws (LLB) and a Bachelor of Social Sciences in the University of Hong Kong.



EDISON LEUNG

Edison is a Crypto Native Venture Capitalist and a Consultant/Scout at Bessemer Venture Partners, specialising in ZKP tech and blockchain infra. He started his journey in crypto as a token delegate for MakerDAO on behalf of a16z in his sophomore year. He previously worked at HSBC VC division with a focus on tokenizing real world asset and ERA, New York's largest early-stage accelerator and VC fund. Edison studied Economics and Data science at University of Toronto and Columbia University.

31 JAN 7:00PM - 8:00PM

RM 101, KK LEUNG BULD, HKU

FREE ADMISSION

All HKU students and graduates are welcome
Registration required

BLOCKCHAIN, DEFI AND WEB 3.0

- What's blockchain and why it's important
- First principles of crypto industry
- BTC as 'Sound Money' and ETH as 'Ultra-sound Money'
- Status quo of decentralized finance: in what ways it achieving things not achievable by traditional finance?
- Future potential: subverting the banking system?

LANGUAGE: ENGLISH

MORE INFO & REGISTRATION VISIT

FTDAAA (HKU MSc in FTDA Alumni Association)

GRILL MASTER UNITE
AN ANNUAL FTDA TRADITION

Barbecue Party

13 JANUARY 2024
6PM TO 11PM

FLAT 4, 13F, KWUN TUNG INDUSTRIAL CENTRE BLOCK 4

JOIN HERE: **FOOD, DRINKS & ALCOHOL INCLUDED**

\$400 FTDAAA MEMBER
\$450 NON-MEMBER

Admission Important Information



Admission Requirements

- MSc(CS) & MSc(Ecom&IComp): A Bachelor's degree with honours, or an equivalent qualification
- MSc(FTDA): A Bachelor's degree in Engineering or Science discipline of this University, or an equivalent qualification
- For applicants graduating from universities not using English as a teaching medium
 - English Language Proficiency Requirement
 - **TOEFL** : **550** or above (paper-based test) or **80** or above (internet-based test)
 - **IELTS**: a minimum overall band of **6** with no subtest lower than **5.5**



Admission Procedures

<http://hku.hk/tpg/>



Tuition Fees

Tuition Fees for 2024/25 intake

- MSc(CompSc) & MSc(ECom&IComp):

	Tuition Fees	Admission Deposit
Local Full-time student	HK\$210,800	HK\$105,400
Local Part-time student	HK\$210,800	HK\$52,700
Non-local Full-time student	HK\$281,000	HK\$140,500
Non-local Part-time student	HK\$281,000	HK\$70,250

- MSc(FTDA)

	Tuition Fees	Admission Deposit
Local Part-time student	HK\$250,000	HK\$62,500
Non-local Part-time student	HK\$325,000	HK\$81,250



2023 Sep intake

- Total number of applications: **over 4,000**
- Total intake number: **around 600**
- Academic performance: good to excellent



2023 Orientations for new students



Shanghai



Beijing



Chengdu



Shenzhen

Welcoming Reception 2023



2024 Intake Procedure

MSc(CS)

- Look at the results first: school, major and scores
- **Written Test:** Mathematics, Algorithms, Statistics
- Interview: English communication skills

MSc(ECom&IComp)

- Look at the results first: school, major and scores
- Also **look at work experience (optional) or idea for start-ups**
- Interview: English communication and expression skills

MSc(FTDA)

- Look at the results first: school, major and scores
- Also **look at work experience (optional)**
- Interview: English communication and expression skills



Q: Did our graduates get good jobs?

- Ranked 10th in the graduate employability (QS ranking) 2022
- Multiple offers (HK, mainland China, some overseas too)
- 100% employment rate

Q: Which companies they joined?

Huawei, Tencent, Facebook, IBM, Deutsch Bank, China Minsheng Bank, PricewaterhouseCoopers, Bank of China (Hong Kong), Microsoft, Shenzhen Institute of Technology, Jones Lang LaSalle Limited, Alibaba Group, UCF Group and more ...





MSc(CS)



MSc(ES&IC)



MSc(FTDA)

Q & A



香港大学计算机科学系硕士

小红书号: 6814273570

香港大学计算机科学系硕士课程小红书官方账号。

小红书

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在小红书找到我

