



Programme

Outcomes

FinTech graduates are expected to be able to

- derive and develop financial and managerial insights from big data
- design and engineer innovative solutions to meet financial service needs
- optimize financial decisions in complex business environment
- understand and analyze the social, economic, security, and legal impacts from their solutions

Career Prospects

The industry creates a great amount of employment opportunities to accommodate innovative young talents. Some students of the program have taken internship opportunities at HKMA, Haitong International, DBS, Hang Seng Bank, ZhongAn Insurance, and so on.

FinTech programme graduates will be ideally suited for positions requiring strong technological and quantitative skills. Besides the traditional careers in the financial service industry, the graduates will be very competitive for jobs with innovative nature, such as

- Insurance (automatic underwriting and claiming, precision marketing, risk management)
- Asset and wealth management (data-driven investment strategy design, robot advisor, algo trading)
- Internet finance (P2P lending, crowdfunding, mobile payment system, credit analytics, electronic currencies)
- Retail and Investment banks, security companies, and other trading platforms (IT system development, financial infrastructure architecture)
- Government regulatory agencies (Data analytics, Regtech)
- FinTech related startups

The Programme also provides a good foundation for pursuit of further advanced studies.

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Bachelor of Engineering Programme in Financial Technology

金融科技學工程學士課程



Programme Mission

To educate and equip students with the essential knowledge and capabilities to apply technological innovations to financial services; to nurture leadership and entrepreneurship for the next generation of financial talents in support of Hong Kong's endeavor to grow to an international FinTech hub.

Admission Requirement

Applicants applying on the strength of the HKDSE examination results will be admitted through the Joint University Programmes Admissions System (JUPAS) (JUPAS Code - JS4428). Please visit the JUPAS website (www.jupas.edu.hk) for eligibility and details of JUPAS application.

Non-JUPAS applications are encouraged.

Study Scheme

Students are required to complete a minimum of 75 units of major courses to graduate. The curriculum consists of a combination of FinTech foundation courses, required and elective courses, and practicum and research component courses. Students are also encouraged to take other courses offered by the Engineering, Business, and Law Faculties.

Major Programme Requirement (Tentative)		Major Programme Requirement (Tentative)	
(All are 3-unit courses unless specified)		(All are 3-unit courses unless specified)	
	Units		Units
1 Faculty Package	9	4 Elective Courses	14
ENGG1110/ESTR1002 Problem Solving By Programming		ACCT2111 Introductory Financial Accounting	
ENGG1120/ESTR1005 Linear Algebra for Engineers		CSCI2040 Introduction to Python (2-unit)	
ENGG1130/ESTR1006 Multivariable Calculus for Engineers		CSCI2120 Introduction to Software Engineering (2-unit)	
2 FinTech Foundation Courses	13	CSCI3150/ESTR3102 Introduction to Operating Systems	
CSCI1120/ESTR1100 Introduction to Computing Using C++ or		CSCI3160/ESTR3104 Design and Analysis of Algorithms	
CSCI1130/ESTR1102 Introduction to Computing Using Java		CSCI3320 Fundamentals of Machine Learning	
ENGG2440/ESTR2004 Discrete Mathematics for Engineers		CSCI4160 Distributed and Parallel Computing	
ENGG2760/ESTR2018 Probability for Engineers (2-unit)		CSCI4180 Introduction to Cloud Computing and Storage	
ENGG2780/ESTR2020 Statistics for Engineers (2-unit)		CSCI4430/ESTR4120 Data Communication and Computer Networks or	
MATH1510 Calculus for Engineers		IERG3310/ESTR3310 Computer Networks	
3a Required Courses	30	ECON2021 Basic Macroeconomics	
CSCI2100/ESTR2102 Data Structures		ENGG1820 Engineering Internship (1-unit)	
CSCI4130/IERG4130/ESTR4306 Introduction to Cyber Security		FINA3020 International Finance	
ECON2011 Basic Microeconomics		FINA3030 Management of Financial Institutions	
FINA2310 Fundamentals of Business Finance		FINA3070 Corporate Finance: Theory and Practice	
FTEC2101 Optimization Methods		FINA3210 Risk Management and Insurance	
FTEC3001 Financial Innovation & Structured Products		FINA4010 Security Analysis	
FTEC3002 Introduction to Financial Infrastructures		FTEC4001 Advanced Database Technologies	
SEEM2520 Fundamentals in Financial Engineering		FTEC4002 Behavioral Analytics	
SEEM3550/ESTR3506 Fundamentals in Information Systems		FTEC4003 Data Mining for FinTech	
SEEM3590/ESTR3509 Investment Science		FTEC4004 E-payment Systems and Cryptocurrency Technologies	
3b Research Component Courses	6	FTEC4005 Financial Informatics	
FTEC4998 Final Year Project I		FTEC4006 Internet Finance	
FTEC4999 Final Year Project II		FTEC4007 Introduction to Blockchain and Distributed Ledger Technology	
3c Practicum Course	1	IERG4080/ESTR4312 Building Scalable Internet-based Services	
FTEC2602 Financial Technology Practicum (1-unit)		IERG4210 Web Programming and Security	
3d Legal Course	2	MKTG4120 Quantitative Marketing	
FTEC2001 FinTech Regulation and Legal Policy (2-unit)		SEEM3410 System Simulation	
		SEEM3450/ESTR3502 Engineering Innovation and Entrepreneurship	
		SEEM3570/ESTR3508 Stochastic Models	
		SEEM3580 Risk Analysis for Financial Engineering	
		SEEM4730/ESTR4508 Statistics Modeling and Analysis in Financial Engineering	
		Total:	75

Students enrolled in the Financial Technology programme may consider to pursue a second bachelor degree in Integrated Business Administration (IBBA) subject to the prescribed admission requirements. For details, please visit to the website of the Faculty of Engineering at <http://www.erg.cuhk.edu.hk/erg/ergbba>

Dual Degree

Programme

Background

Starting from the academic year of 2019-2020, Department of Systems Engineering and Engineering Management (SEEM), The Chinese University of Hong Kong (CUHK) offers a dual degree programme (DDP) together with Department of Financial Mathematics (FMA), Peking University (PKU). Under this framework, students of this programme will obtain Bachelor degree of Engineering in Financial Technology offered by CUHK and Bachelor degree of Science in Financial Mathematics offered by PKU upon completion of the graduation requirements of the concerned programmes.

Study Plan and Graduation Requirements

All the students of the DDP are required to take mathematical foundation courses at PKU in the first two years, and study in CUHK in the third and fourth years to finish FinTech-related course requirements.



Admission

Students of the 4-year Bachelor of Engineering Programme in FinTech who are Hong Kong residents eligible for Mainland Travel Permit for Hong Kong and Macau Residents (回鄉證) and graduated from a Hong Kong middle school are eligible for application for the DDP. The applicants should meet the following requirements:

1. Applicants to the 2+2 programme must first have been admitted by the BENG FinTech programme.
2. For JUPAS applicants, they must have achieved 5* or above in Mathematics or Mathematics Module 1 (Calculus & Statistics) or Mathematics Module 2 (Algebra & Calculus). For Non-JUPAS applicants with international qualifications, they must have achieved the highest grade in their mathematics subject.

A joint selection committee consisting of representatives from both universities will be established to shortlist and interview students who want to join the DDP. For CUHK FinTech Major students who want to participate in the DDP, they will be interviewed by the joint selection committee in mid-August after they are formally registered as CUHK students. The interview with PKU students for the DDP will be scheduled with PKU.

