

Master of Science in FINANCIAL TECHNOLOGY

The curriculum is built on data science, artificial intelligence, and information technology, and provides students with the FinTech skills necessary to navigate the changing landscape of the finance industry. Students will develop in-depth mastery of disruptive technologies in finance, including financial automation (e.g., robo-advisors), financial cryptography (e.g., blockchain technology), and digital financial services (e.g., financial inclusion).

CURRICULUM OVERVIEW

The MSc in FinTech Programme is an intensive **one-year full-time or two-year part-time** programme by coursework, taught in 3 trimesters per academic year.

The curriculum consists of two specialisations:
Intelligent Process Automation (IPA)
and *Digital Financial Services (DFS)*.

The programme consists of a total **30 Academic Units (AU)**, with 12 AU of compulsory modules, 12 AU from the chosen specialization's electives, and 6 AU from other electives.

The "**Intelligent Process Automation (IPA)**" specialisation (previously known as "Artificial Intelligence" track) is designed for the students who are interested in the

technical aspects of Financial Technology. The candidates opting for IPA specialisation should have a good bachelor's degree in a quantitative major or have a good track record in mathematics and programming subjects (especially for non-science/engineering graduates).

The "**Digital Financial Services (DFS)**" specialisation (previously known as "Operations and Compliance" track) is designed for students who are interested in the managerial aspects of Financial Technology. The candidates opting for DFS specialisation should have a good bachelor's degree in a relevant programme (e.g., quantitative majors, business, etc.) or relevant working experience in the finance industry.



Leading edge and up-to-date curriculum



World-class faculty from three NTU schools
School of Physical & Mathematical Sciences (SPMS), School of Computer Science & Engineering (SCSE) and Nanyang Business School (NBS)



Practical lectures and insights given by senior practitioners from the finance industry



Hands-on experience with the Practicum module (through internship or project)

COURSE LIST

COMPULSORY COURSES

- MH8800 - Foundations of Statistical Modelling
- MH8801 - Introduction to FinTech
- MH8802 - FinTech Ecosystem and Innovations
- MH8803 - Principles of Finance and Risk Management
- MH8811 - Python Programming
- MH8812 - Python for Data Analysis
- MH6811 - Machine Learning in Finance*

PRESCRIBED ELECTIVE COURSES

for Intelligent Process Automation (IPA) Specialisation

- MH8805 - Algorithmic Trading and Robo-Advisors
- MH8807 - Blockchain Systems I: Concepts and Principles
- MH8808 - Blockchain Systems II: Development and Engineering
- MH8831 - Introduction to Cybersecurity
- MH6812 - Advanced Natural Language Processing with Deep Learning*
- MH6301 - Information Retrieval and Analysis*

PRESCRIBED ELECTIVE COURSES

for Digital Financial Services (DFS) Specialisation

- MH8331 - Financial and Risk Analytics I
- MH8332 - Financial and Risk Analytics II
- MH8341 - Data Management and Business Intelligence
- MH8821 - Anti-Financial Crime and Compliance
- MH8822 - Regulatory Technology
- MH8823 - Financial Inclusion and Decentralized Finance
- MH8824 - Fundamentals of FinTech Entrepreneurship
- MH8825 - FinTech Entrepreneurial Practice

UNRESTRICTED ELECTIVE COURSES

- MH8101 - Operations Research I
- MH8102 - Operations Research II
- MH8141 - Time Series Analysis
- MH8804 - Quantitative Methods in Finance
- MH6809 - Practicum**

*3 AUs for asterisk modules & **6 AUs for practicum;
1.5 AUs for non-asterisk modules

Notes:

- Prescribed Electives of one specialisation can be Unrestricted Electives for another specialisation.
- On average, full-time students take 4 classes a week and part-time students take 2 classes a week.
- All courses are conducted at the NTU main campus in the evenings of weekdays or Saturdays.

The requirements for graduation are:

- Successful completion of all requirements as prescribed by the programme of study; and
- Attaining a minimum CGPA of 2.50 at the completion of the programme of study.

ADMISSION REQUIREMENTS

IPA Specialisation - A good bachelor's degree in a quantitative major or a good track record in mathematics and programming subjects (especially for non-science/engineering graduates).

DFS Specialisation - A good bachelor's degree in a relevant programme (e.g., quantitative majors, business, etc.) or relevant working experience in the finance industry.



A good TOEFL score (92 or more) or IELTS score (6.5 or more) for graduates of universities in which English is not the medium of instruction



A good GMAT score or GRE score is preferred but not required



A minimum of two years of relevant working experience is preferred but not required

Applicants need to select either one of IPA or DFS specialisations by choosing the corresponding programme code in the admission application. (The change of specialisation is generally not allowed. However, applicants can apply for the two specialisations separately in two admission applications, where the preferred specialisation should be indicated.)



FOR MORE INFORMATION

Contact Us

For general enquiries, email mscfintech@ntu.edu.sg.

For academic enquiries, email the Programme Director, Asst Prof PUN Chi Seng, cspon@ntu.edu.sg

 NTUMScFintech

 NTUMScFintech

 NTUMScFintech