

Introduction to Major / Minor Programmes in Mathematics

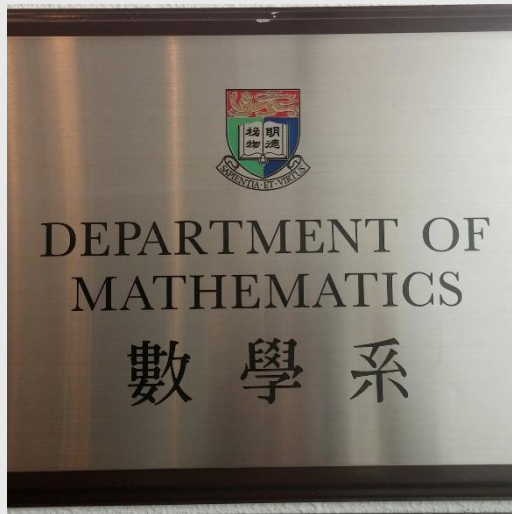


YM CHAN
Department of Mathematics, HKU

1 General Introduction



DEPARTMENT OF MATHEMATICS
The University of Hong Kong



HKU Students across faculties

Statistics



Risk
Management

Quantitative
Finance

Actuarial
Science

Engineering

Business & Economics



General
Introduction

Departmental Members



Massachusetts
Institute of
Technology



INDIANA UNIVERSITY



Stanford
University

HARVARD
UNIVERSITY



香港城市大學
City University of Hong Kong



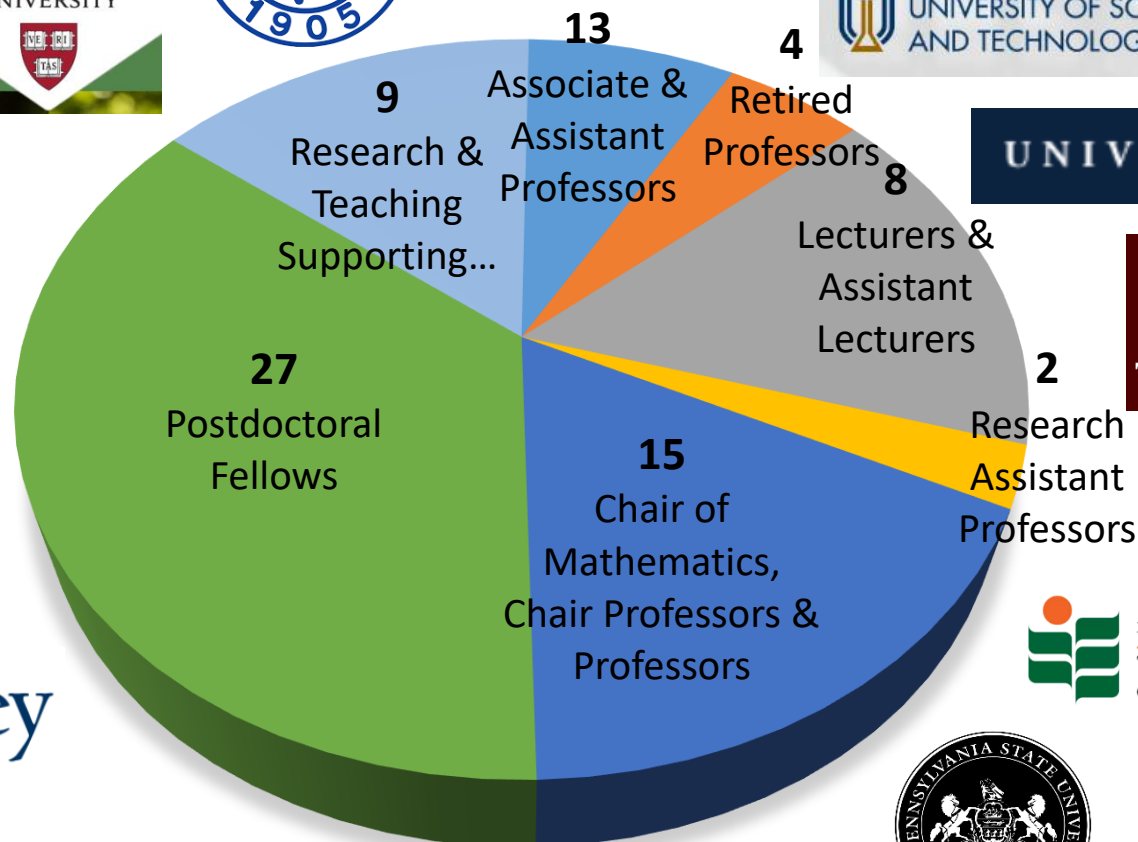
香港中文大學
The Chinese University of Hong Kong



香港大學
THE UNIVERSITY OF HONG KONG



PRINCETON
UNIVERSITY





Feb 5

News

Fields Medalist Professor Ngô Bảo Châu Joins HKU as Chair Professor

The University of Hong Kong (HKU) welcomes Professor Ngô Bảo Châu, recipient of the 2010 Fields Medal, to join the Department of Mathematics under the Faculty of Science, commencing June 2026....

Fields Medalist Professor Ngô Bảo Châu Joins HKU as Chair Professor



Prof. Ngô Bảo Châu



DEPARTMENT OF MATHEMATICS
The University of Hong Kong



Why HKU Mathematics?

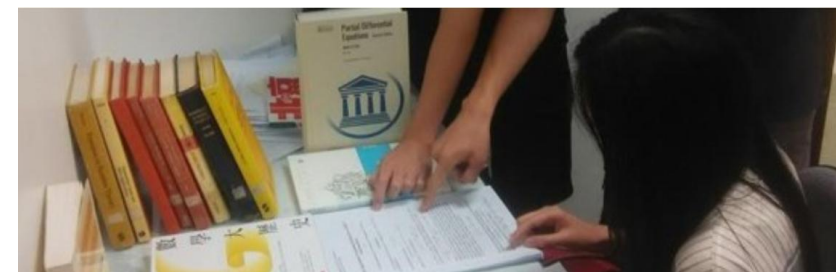
- ✓ The **longest** history in HK
- ✓ Good **solid** education in mathematics
- ✓ The highest standard of excellence in **research**
- ✓ Great **career** prospects
- ✓ Internship, Peer **teaching**, Summer **research**
and **Exchange** opportunities





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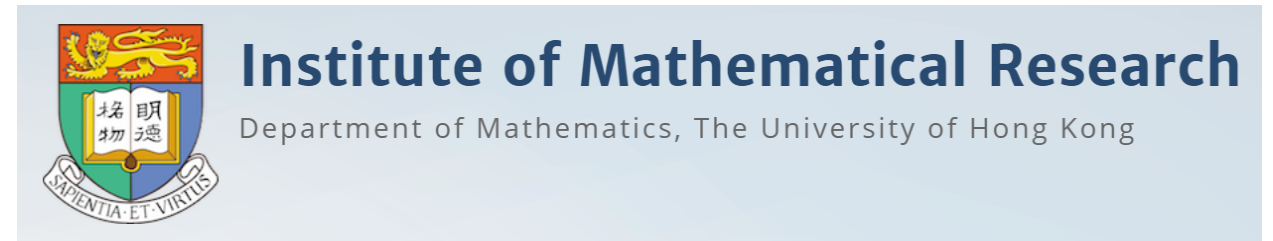
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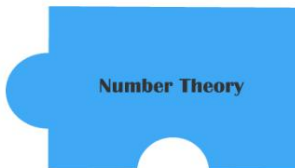
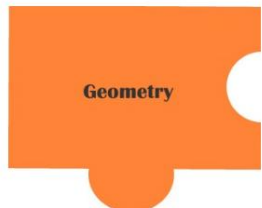


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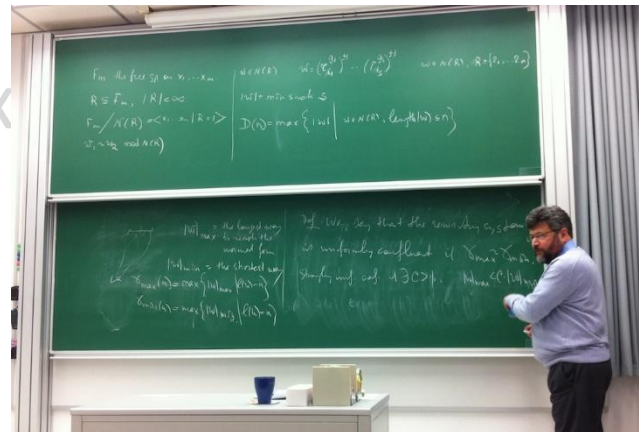
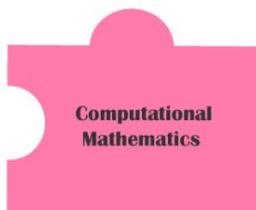


Research Groups



aspects

ner research and Ex



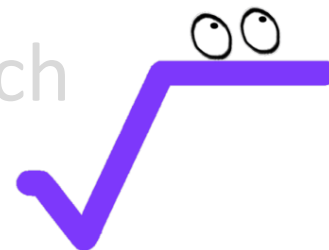


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The University of Hong Kong



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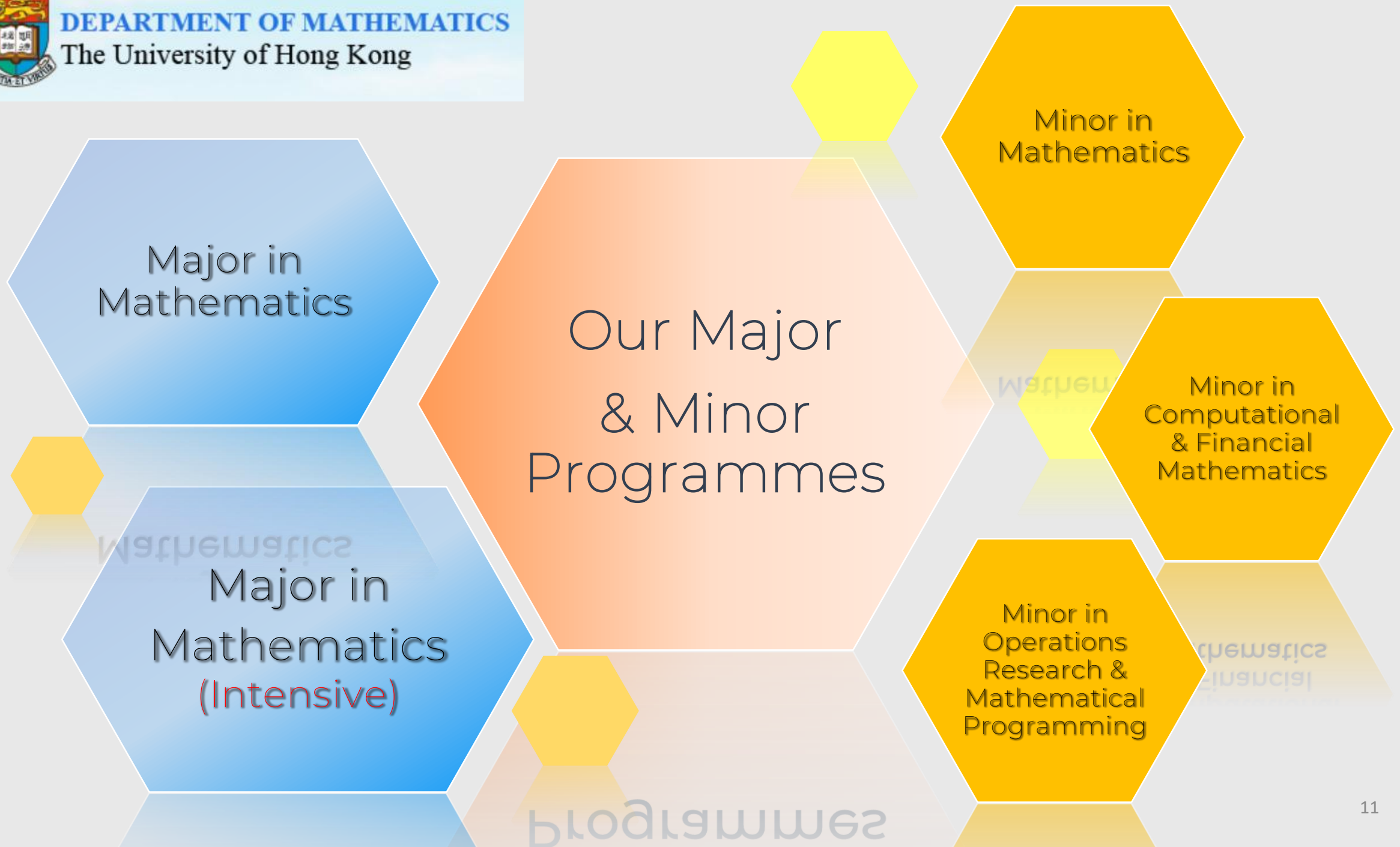




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Major in Mathematics

MATH1013
University
Mathematics II

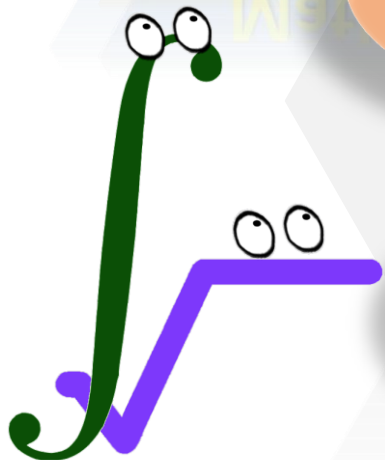
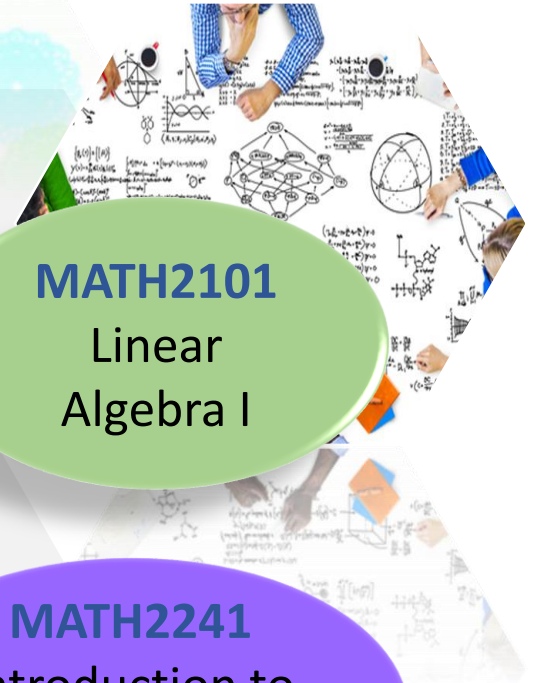
MATH2102
Linear
Algebra II

MATH2012
Fundamental
Concepts of
Mathematics

MATH2211
Multivariable
Calculus

MATH2101
Linear
Algebra I

MATH2241
Introduction to
Mathematical
Analysis



Major in Mathematics



Throughout the curriculum there is also emphasis on experiential learning through

MATH3999

Directed
Studies in
Mathematics

MATH4911 Mathematics Capstone Project
MATH4999 Mathematics Project

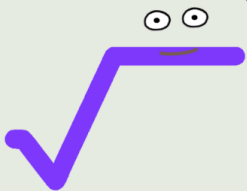
Projects



MATH4966
Summer
Internship

Summer
internships

Guided
studies

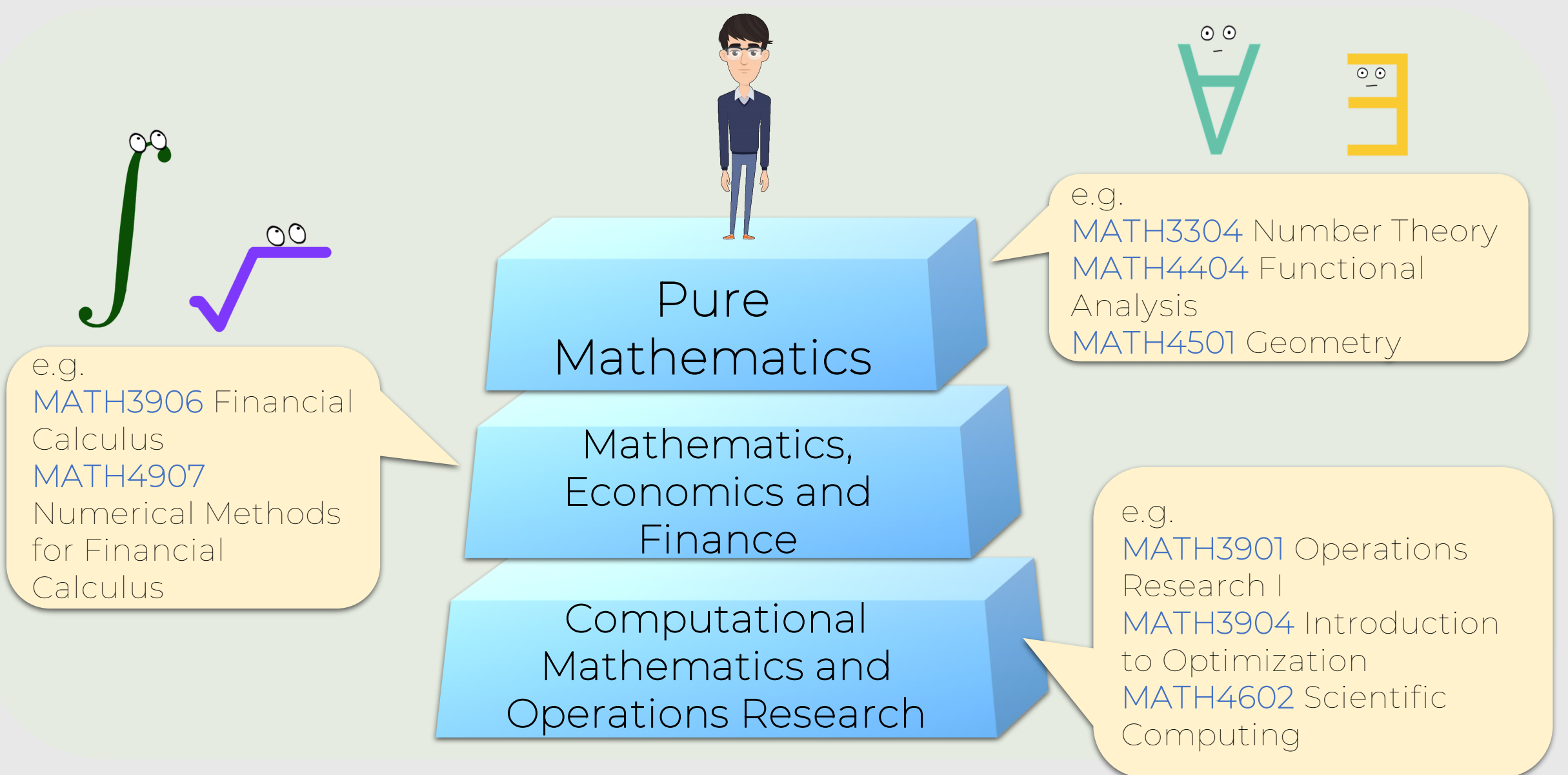


Seminars

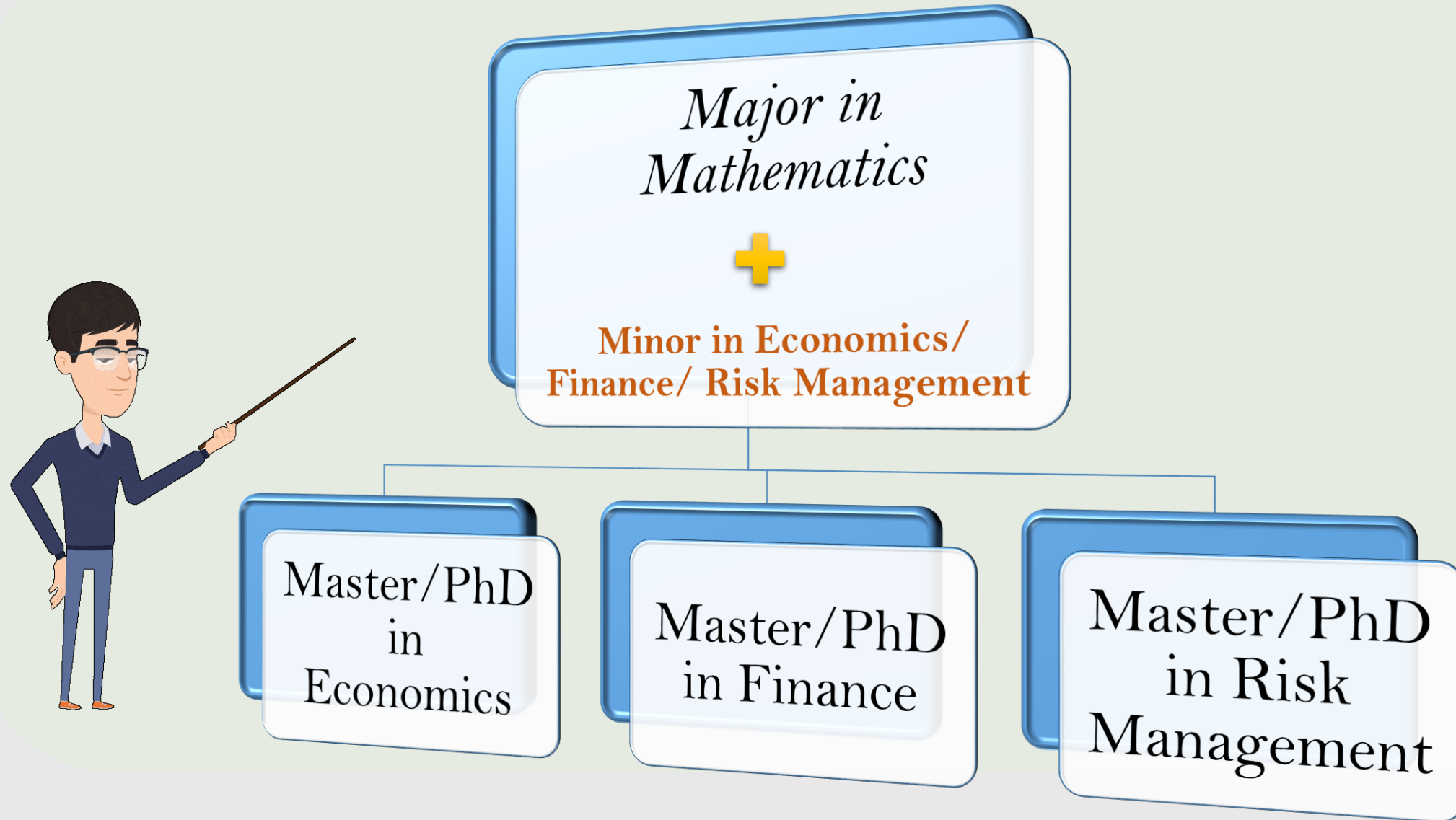


MATH4910
Senior
Mathematics
Seminar

Major in Mathematics



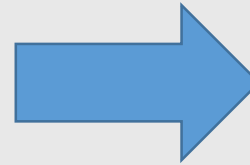
Major in Mathematics



Major in Mathematics

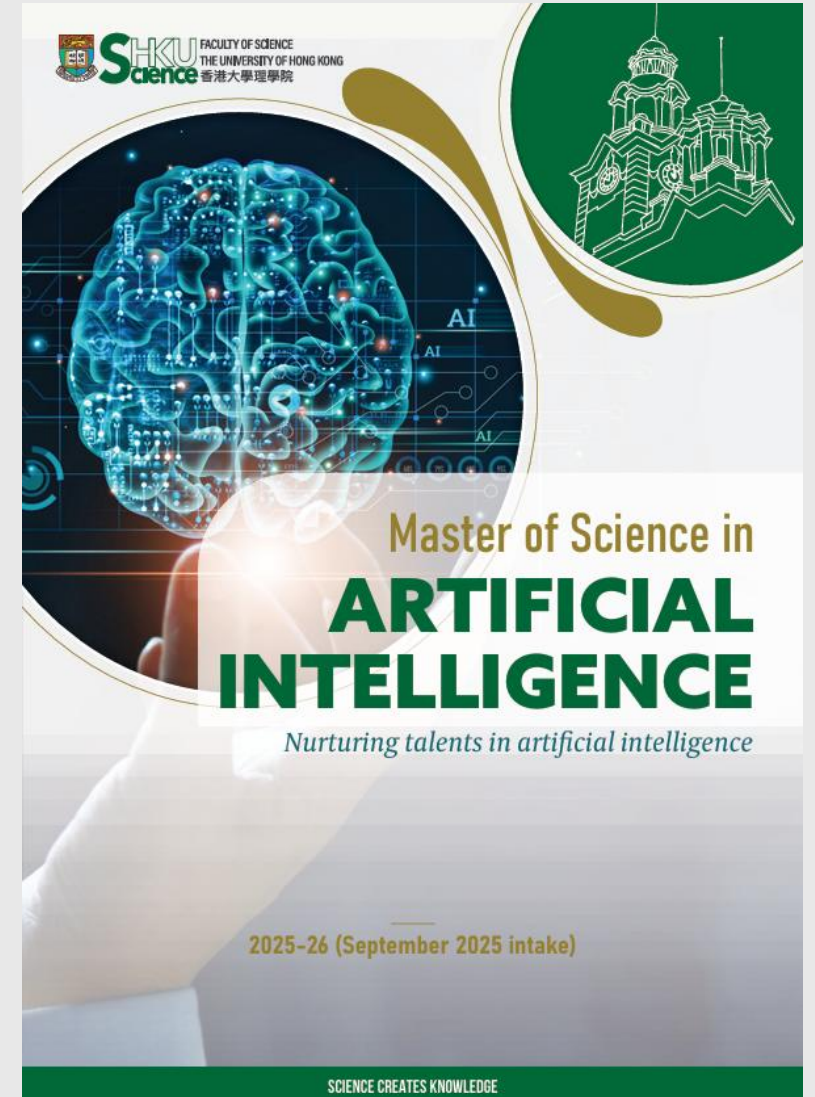


*Major in
Mathematics*



Offering Departments:
Department of Mathematics (Host)
School of Computing and Data Science

Master of Science in Artificial Intelligence
MSc (AI)





Major in
Mathematics

Major in
Mathematics
(Intensive)



Major in Mathematics

Required courses (96 credits):

Introductory level courses
(48 credits)

+

Advanced level courses
(42 credits)

+

Capstone requirement
(6 credits)



Major in Mathematics (Intensive)

Required courses (144 credits):

Introductory level courses
(48 credits)

+

Advanced level courses
(84 credits)

+

Capstone requirement
(12 credits)

Students must have **level 2 or above** in HKDSE Extended **Module 1 or 2 of Mathematics or equivalent** to take these majors. Students who do not fulfill this requirement are advised to take **MATH1011 University Mathematics I**.



Our Minor Programmes

Minor in Mathematics

Required courses (36 credits):
Introductory level courses (18 credits)

+

Advanced level courses (18 credits)



Minor in Computational & Financial Mathematics

Required courses (42 credits):
Introductory level courses (18 credits)

+

Advanced level courses (24 credits)

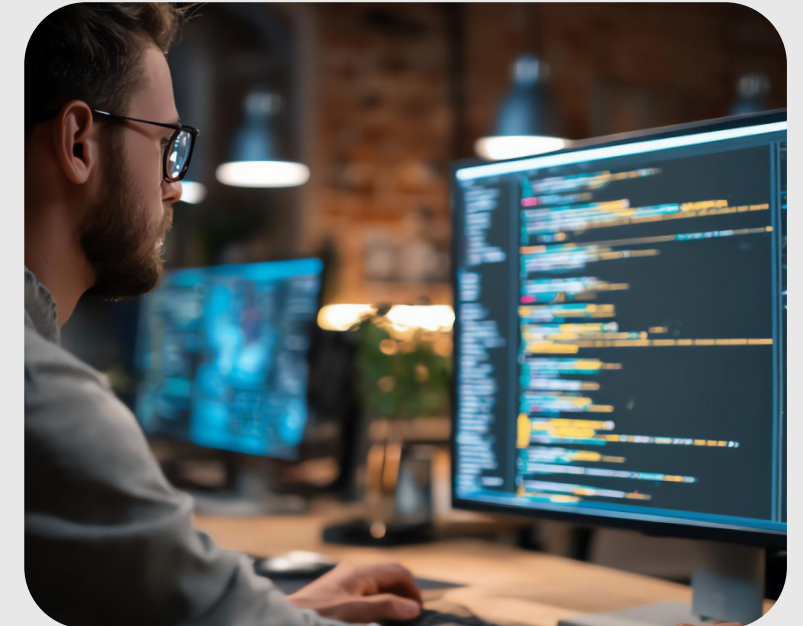


Minor in Operations Research & Mathematical Programming

Required courses (42 credits):
Introductory level courses (18 credits)

+

Advanced level courses (24 credits)



Major in
Economics

Major in
Computer
Science

Major in
Statistics

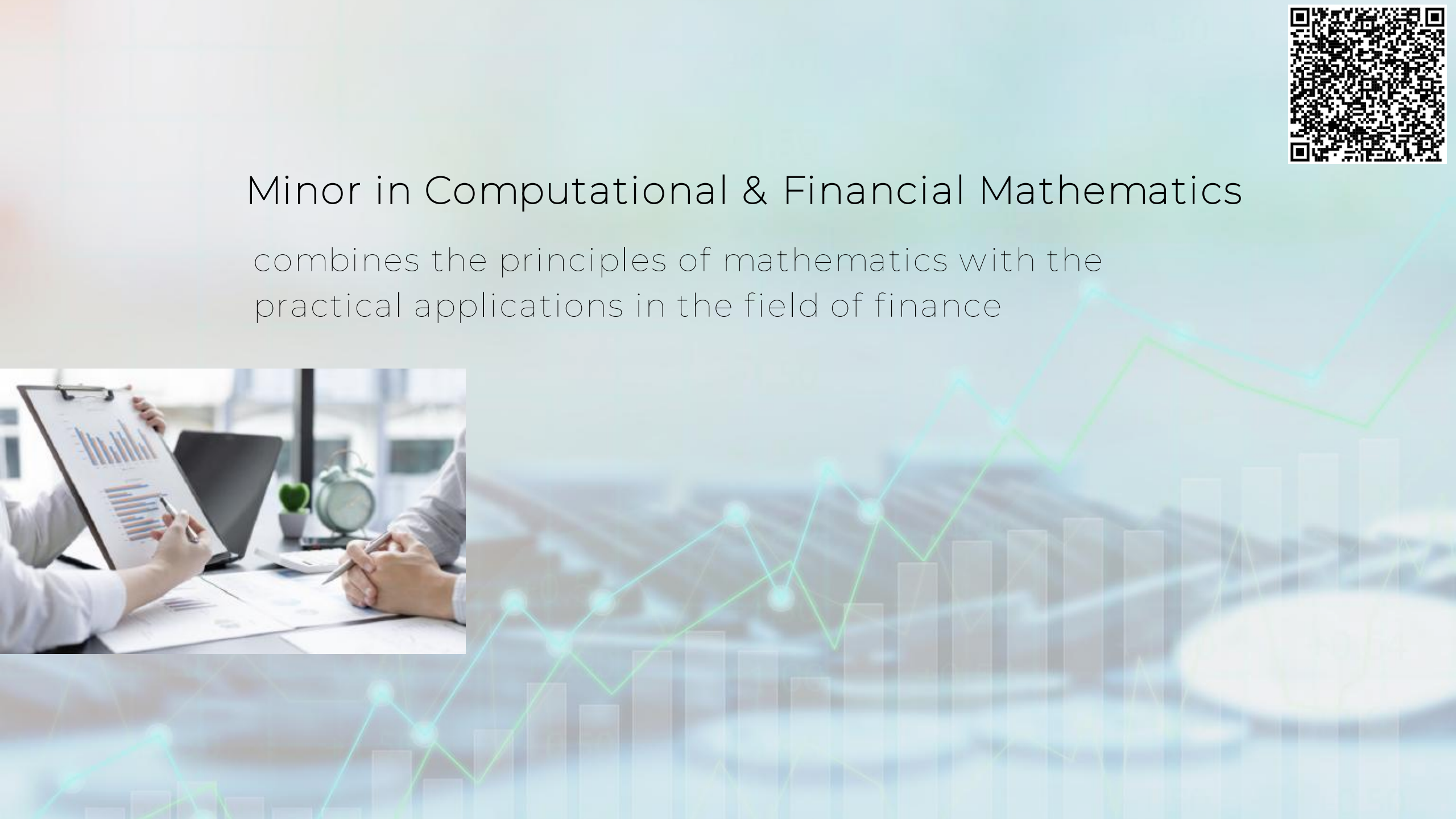
Minor in Mathematics





Minor in Computational & Financial Mathematics

combines the principles of mathematics with the practical applications in the field of finance



Minor in Operations Research & Mathematical Programming

- provides students with a strong foundation in operations research, which is a discipline that applies mathematical methods to optimize complex systems and decision-making processes.
- emphasizes the study of mathematical programming techniques, including linear programming, integer programming and nonlinear programming.

Career Prospects & Graduate Studies

What can I do with
a major in
Mathematics?



Mathematics Major graduates find employment in commerce (banking and finance), service industry (insurance and the Government) and education (secondary schools and universities) sectors

Many of our graduates pursue their interests in other disciplines instead, where their mathematical training is a crucial advantage

Job Opportunities



Academia and Educational Roles



- ▶ Teaching mathematics or mathematics-related subjects in schools
- ▶ Scientific researchers in tertiary-education institutions
- ▶ Curriculum Developers
- ▶ Publishing and Textbook Writing

Finance and Economics Careers



- ▶ Quantitative Analyst
- ▶ Financial Analyst
- ▶ Risk Manager

Data Science and Analytics



- ▶ Data Scientist
- ▶ Data Mining Engineer
- ▶ AI Development Engineer
- ▶ Machine Learning Engineer
- ▶ Research Scientist

Consulting and Management Services



- ▶ Management Consultant
- ▶ Transportation Consultant

Public Sectors



- ▶ Logistics Companies
- ▶ Airport Authority Hong Kong
- ▶ Hong Kong Observatory

Further Enquiries

4th floor of Run Run Shaw Building (邵逸夫樓)



Department of Mathematics
The University of Hong Kong
Room 408, Run Run Shaw
Building

Tel: 2859 2250 / 2859 2257

E-mail: math@hku.hk



www.math.hku.hk



HKU.MATH

