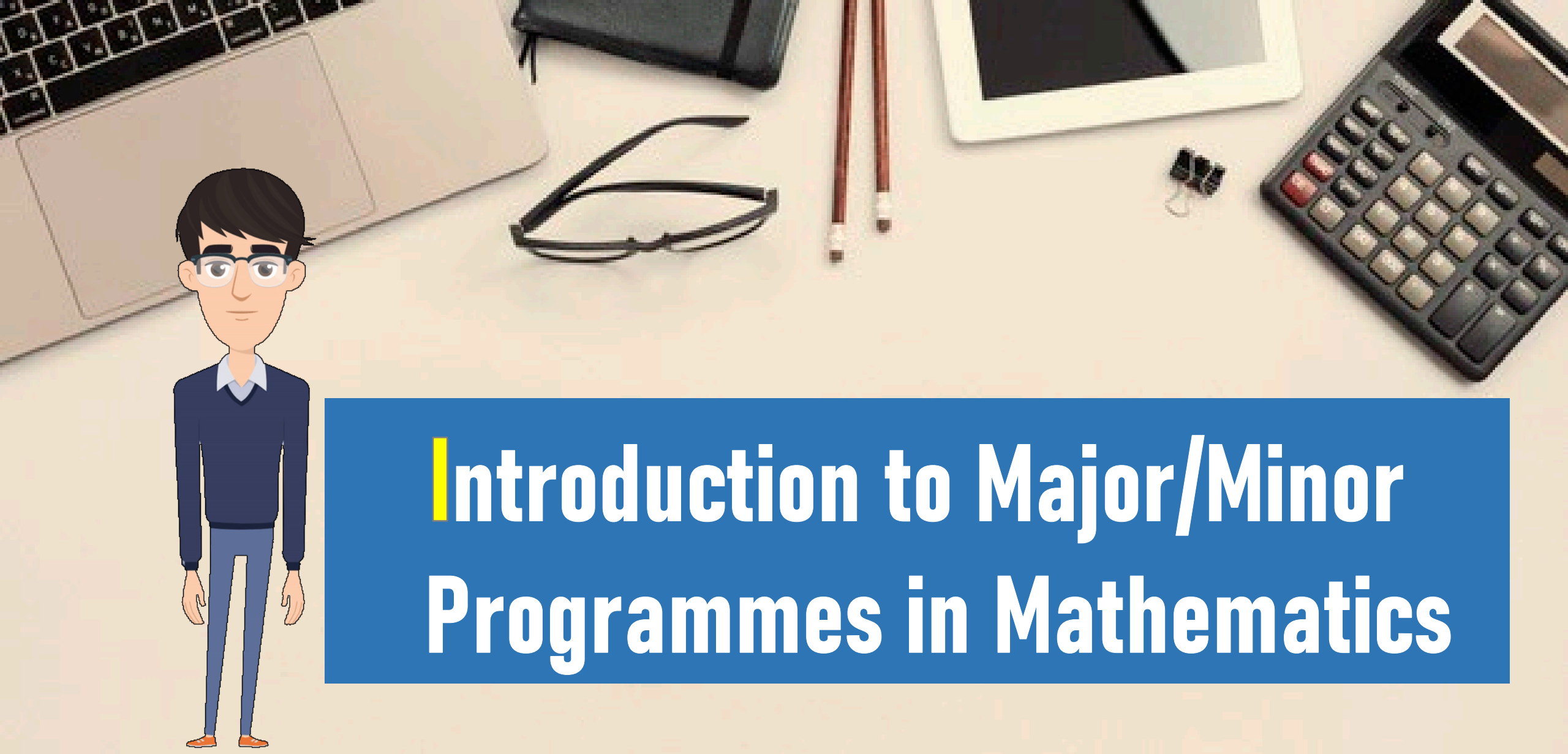


Introduction to Major/Minor Programmes in Mathematics

Dr. Y.M. Chan

Department of Mathematics, The University of Hong Kong

General Introduction

DEPARTMENT OF MATHEMATICS
The University of Hong Kong

HKU Students across faculties

Statistics

Risk Management

Quantitative Finance

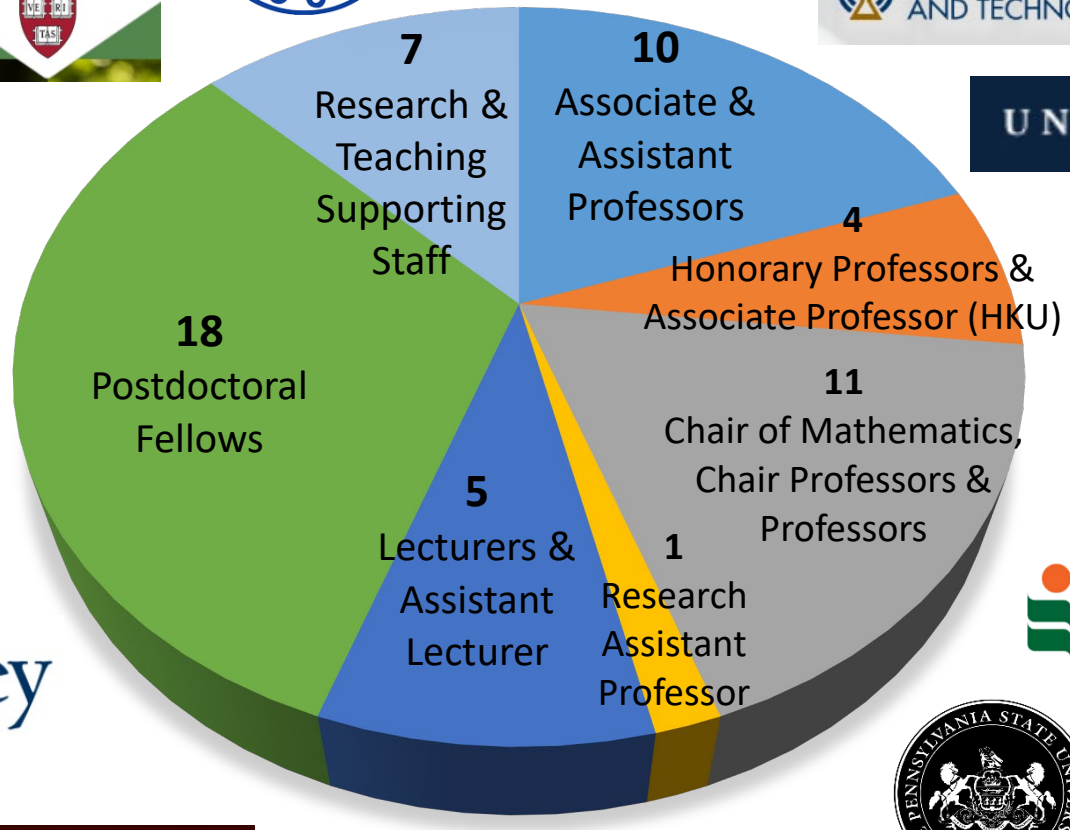
Actuarial Science

Engineering

Business & Economics

General Introduction

Departmental Members



General Introduction

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**, Summer **research** and **Exchange** opportunities
- ✓ Bridge between **academics** and the **community**

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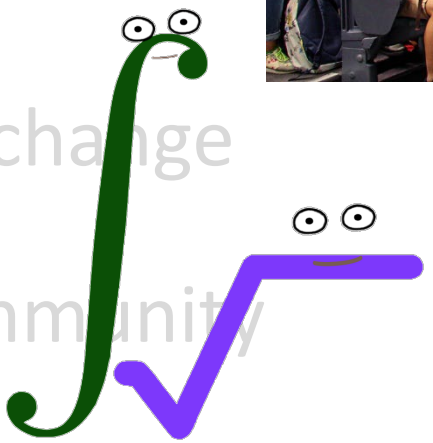

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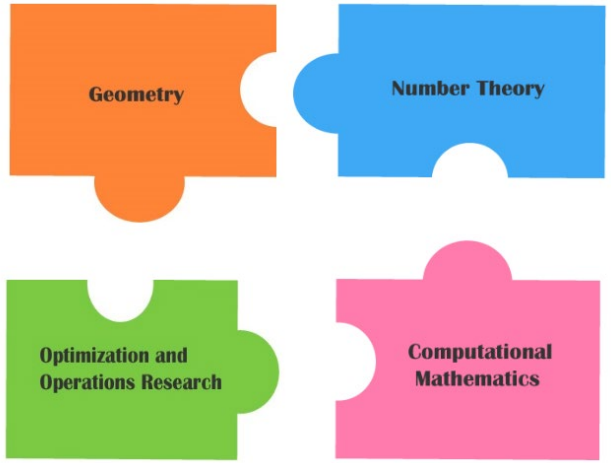
Institute of Mathematical Research
Department of Mathematics, The University of Hong Kong

Research Groups



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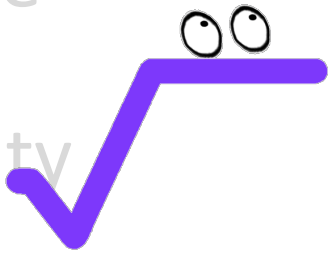

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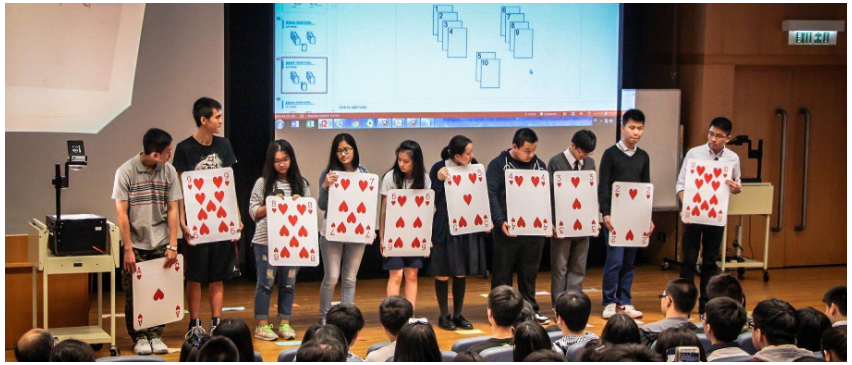


Our Major & Minor Programmes

Major in Mathematics

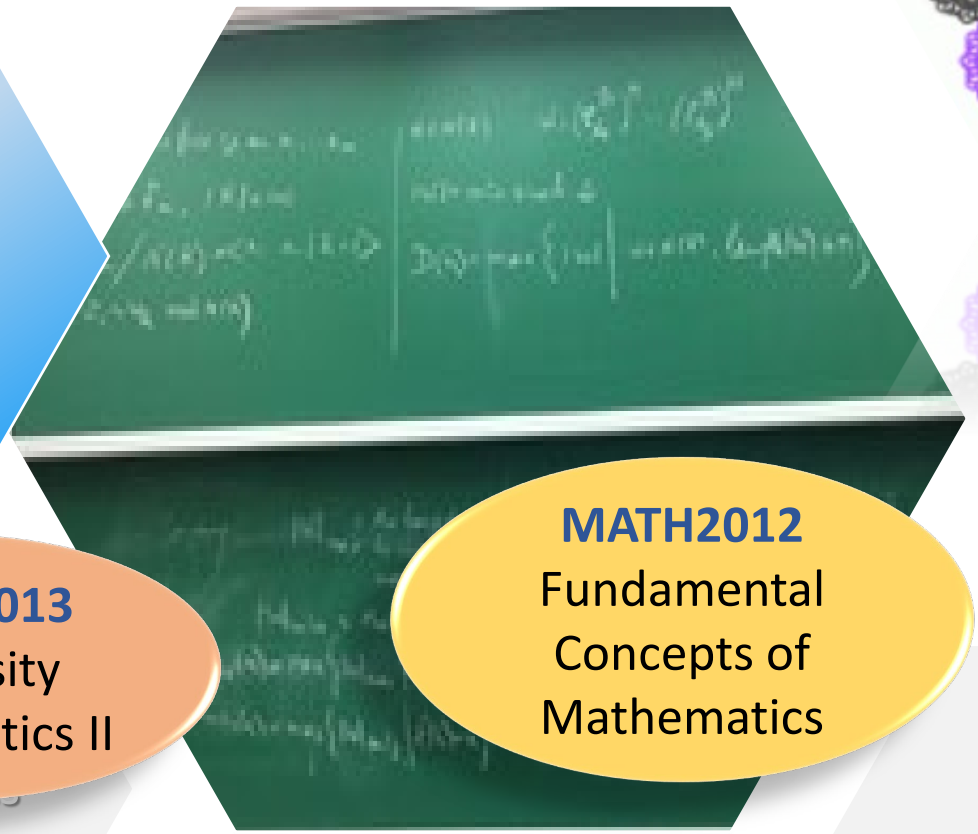
Major in Mathematics (Intensive)

Minor in Mathematics

Minor in Computational & Financial Mathematics

Minor in Operations Research & Mathematical Programming

Major in Mathematics



MATH1013
University Mathematics II

MATH2012
Fundamental Concepts of Mathematics

MATH2101
Linear Algebra I

MATH2102
Linear Algebra II

MATH2211
Multivariable Calculus

MATH2241
Introduction to Mathematical Analysis

Major in Mathematics

Throughout the curriculum there is also emphasis on experiential learning through

MATH4911 Mathematics Capstone Project
MATH4999 Mathematics Project

MATH3999
Directed Studies in Mathematics

MATH4966
Summer Internship

Projects

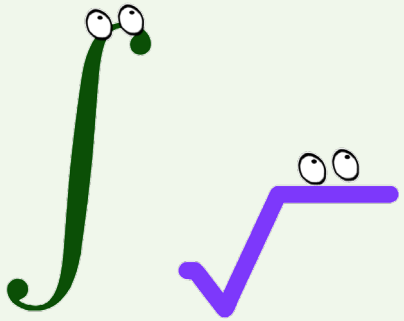
Summer internships

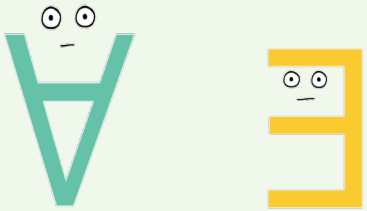
Guided studies

Seminars

MATH4910
Senior Mathematics Seminar

Major in Mathematics





Pure Mathematics

e.g.
MATH3304 Number Theory
MATH4404 Functional Analysis
MATH4501 Geometry

Mathematics, Economics and Finance

e.g.
MATH3906 Financial Calculus
MATH4907 Numerical Methods for Financial Calculus

Computational Mathematics and Operations Research

e.g.
MATH3901 Operations Research I
MATH3904 Introduction to Optimization
MATH4602 Scientific Computing

Major in Mathematics

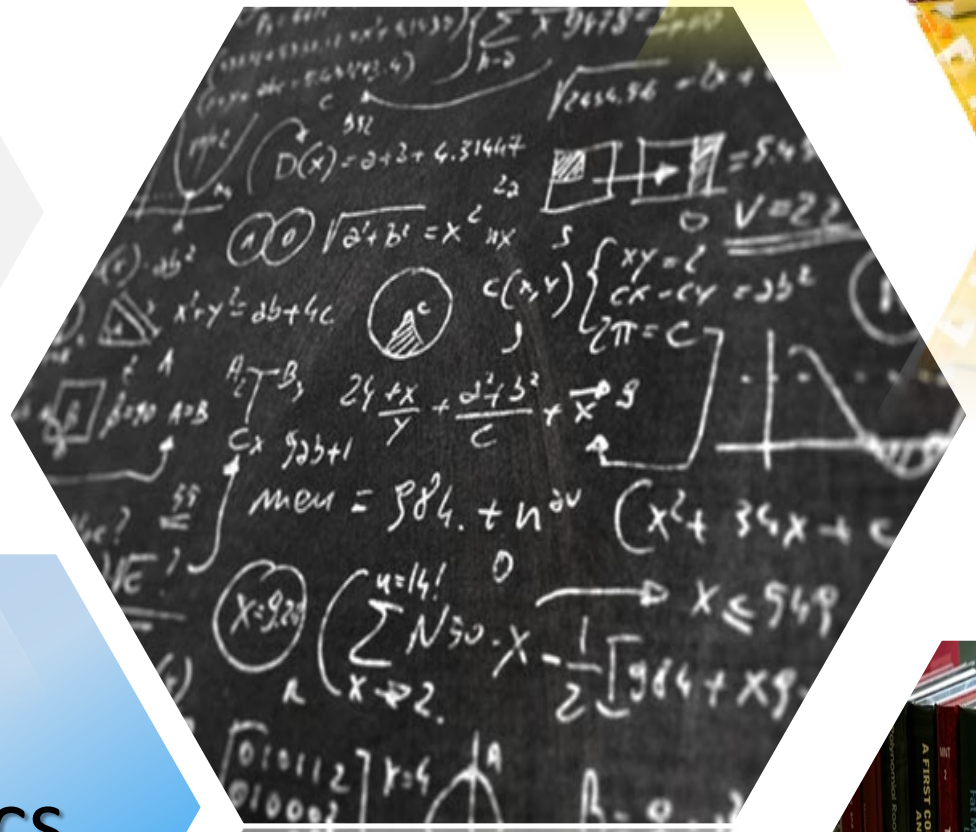
Major in Mathematics

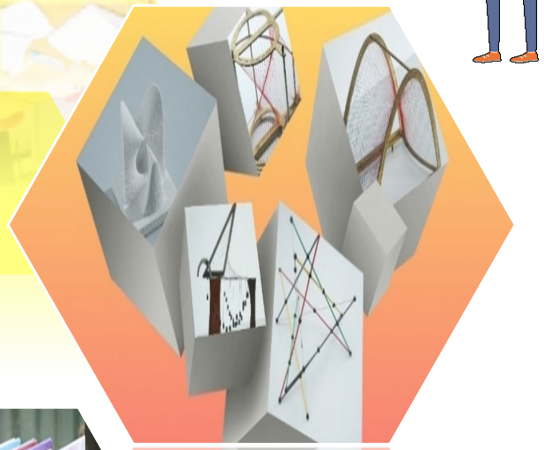
+

Minor in Economics/ Finance/ Risk Management

- Master/PhD in Economics
- Master/PhD in Finance
- Master/PhD in Risk Management

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)

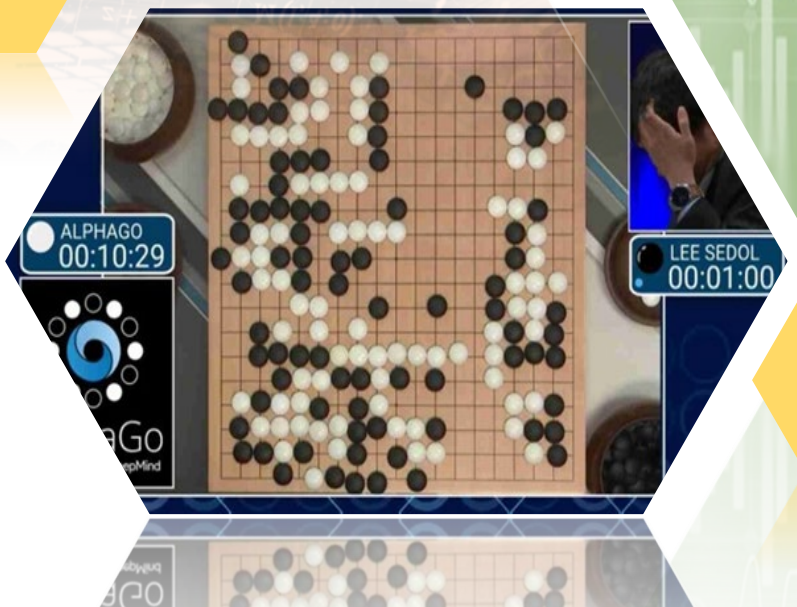
+

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**.



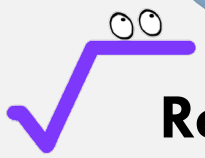
Minor in Mathematics

Minor in Computational & Financial Mathematics

Minor in Operations Research & Mathematical Programming

Our Minor Programmes

Minor in Mathematics



Required courses (36 credits):

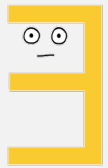
Introductory level courses (18 credits)
+
Advanced level courses (18 credits)

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



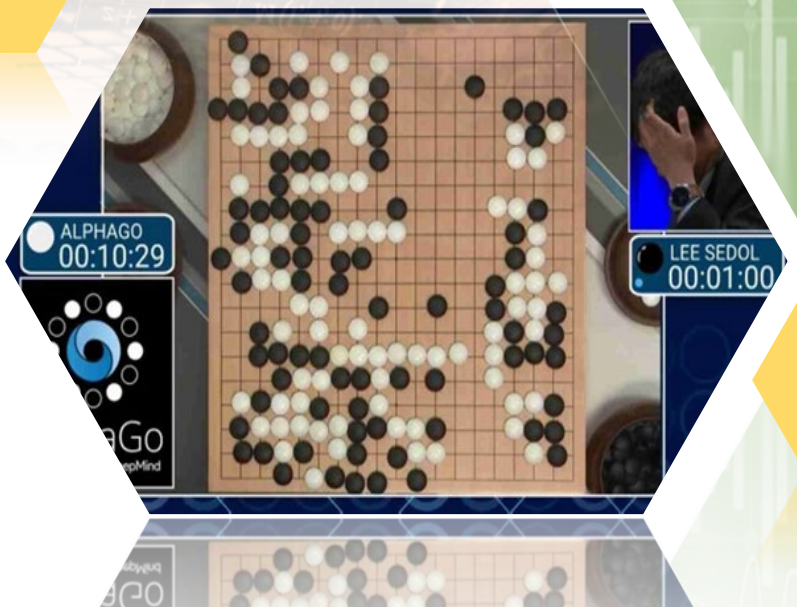
Required courses (42 credits):

Introductory level courses (18 credits)
+
Advanced level courses (24 credits)

Minor in Mathematics

Minor in Computational & Financial Mathematics

Minor in Operations Research & Mathematical Programming



Minor in Mathematics

Minor in Computational & Financial Mathematics

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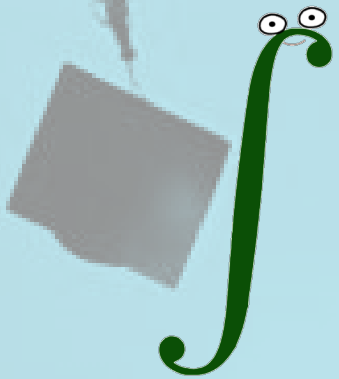
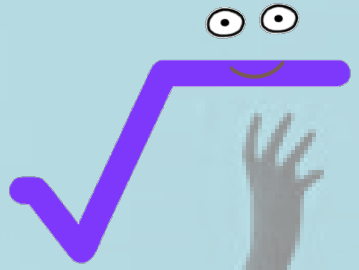
Career Prospects & Graduate Studies

What can I do with a major in Mathematics?

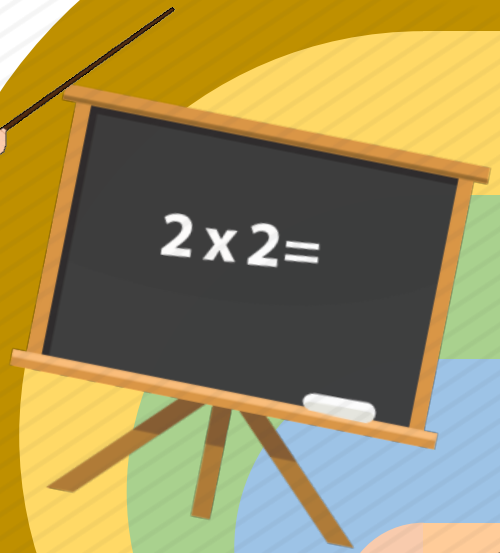




Mathematics Major graduates find employment in commerce (banking and finance), service industry (insurance and the Government) and education (secondary schools and universities) sectors

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

Career Prospects & Graduate Studies



Job Opportunities

- Teaching mathematics or mathematics-related subjects in schools
- Scientific researchers in tertiary-education institutions
- Officers and curriculum developers
- Publishing and textbook writing
- Research and development for private companies

Career Prospects & Graduate Studies

HK Observatory

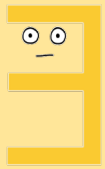
Logistics companies

Airport Authority Hong Kong

Job Opportunities

Banks (data mining)

AI Technology Center



Transportation consulting firms

Insurance companies

Software companies

Further Enquiries

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

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