

Mathematics (MATH)

Program Overview

Mathematics permeates almost every discipline of science and technology. It is not only a tool for understanding the abstract models of real world phenomena while solving practical problems, but it is also the language of commerce, engineering and other sciences such as biology, physics and computing.

The BSc program in Mathematics is a four-year program that includes seven tracks:

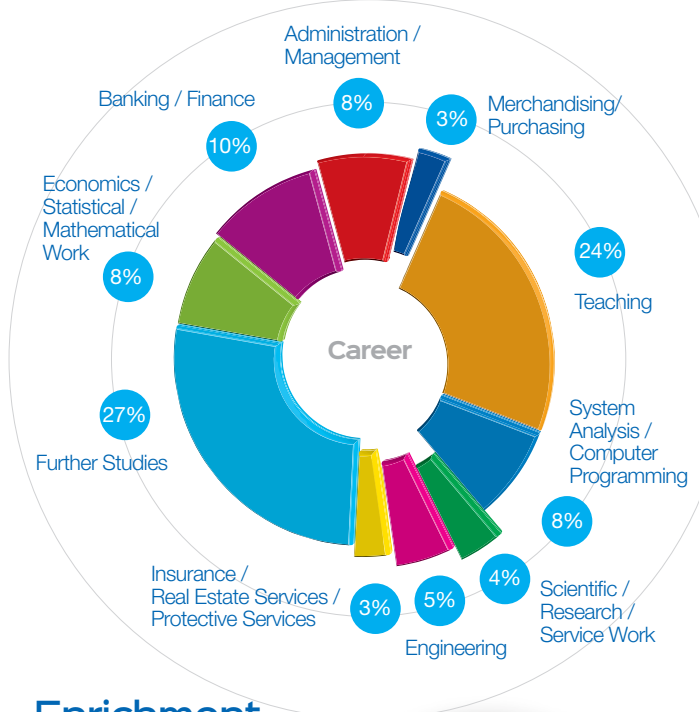
- Applied Mathematics Track
- Computer Science Track
- General Mathematics Track
- Mathematics and Physics Track
- Pure Mathematics Track
- Pure Mathematics (Advanced) Track*
- Statistics and Financial Mathematics Track

* The Pure Mathematics (Advanced) Track is specially designed for mathematically gifted students. Students in this track will study a series of mathematics courses at a deeper level, which better prepare the students to pursue postgraduate studies

Career Prospects

About a quarter of MATH graduates pursue further studies, with a majority of them enrolled at well-known institutions abroad. Another quarter of MATH graduates choose careers in teaching. The remaining graduates are employed in various business and service sectors, working in areas including but not limited to administration and management, computer programming, data analysis, accounting, insurance, marketing, sales, purchasing, banking and finance, and academia.

Career Placements in 2018



Enrichment Activities in 2018-19



THE HONG KONG
UNIVERSITY OF SCIENCE
AND TECHNOLOGY

BSc in Mathematics

JUPAS Catalogue No: JS5102

For Further Information

Phone: (852) 2358 7460

Fax: (852) 2358 1643

Email: mathug@ust.hk

www.math.ust.hk

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DEPARTMENT OF
MATHEMATICS
SCHOOL OF SCIENCE, HKUST



BSc in Mathematics

JS5102 – Science (Group A) (SSCI-A)

Major Program

Seven Tracks
(See adjacent page)

Minor Program

Minor in Actuarial
Mathematics

Minor in Mathematics

HKUST Entry Requirements

English Language 3

Chinese Language 3

Mathematics (Compulsory Part) 2

Liberal Studies 2

Elective 1 3

Elective 2 or M1/M2 3

Science School Requirements

JUPAS Catalogue No:

JS5102 – Science (Group A) (SSCI-A)

JS5103 – Science (Group B) (SSCI-B)

In addition to HKUST entry requirements, applicants have to meet the following conditions:

School/Program-specific Subject (Elective 1)

One of: Biology/ Chemistry/ Physics/ Combined Science/ Integrated Science/ M1/ M2

Score Calculation for the Best 5 subjects:

- (1) Eng + (2) Math + (3) Best weighted science elective + (4) Best weighted/other elective + (5) Best other elective
- With the weighting which include:

1.5 x English

2 x Respective Science Electives
(e.g. **M1/M2/Physics in choosing SSCI-A Program**, and Biology/Chemistry in choosing SSCI-B Program)

1.5 x Other Science Elective
(e.g. **Biology/Chemistry/Combined Science in choosing SSCI-A Program**, and M1/M2/Physics/Combined Science in choosing SSCI-B Program)

Remarks:

We will take the highest score of at most TWO weighted science electives.

BSc in Mathematics

Fundamental math courses: Students in all tracks take three semesters of calculus, linear algebra, two semesters of real analysis, and a capstone project course.

Pure Mathematics Track

For students interested in pure mathematics. In addition to fundamental math courses, students take advanced courses in applied mathematics, statistics, analysis, algebra and geometry.

Pure Mathematics (Advanced) Track

Same as the Pure Mathematics Track, but students take the honors versions of the fundamental math courses.

Applied Mathematics Track

For students interested in the application of mathematics to the sciences. In addition to fundamental math courses, students take additional courses in applied mathematics.

Statistics & Financial Mathematics Track

For students interested in probability and statistics and the application of mathematics to finance. In addition to fundamental math courses, students take courses in statistics, probability and financial mathematics.

Computer Science Track

For students interested in both mathematics and computer science. In addition to fundamental math courses, students take a substantial number of computer science courses.

Mathematics & Physics Track

For students interested in both mathematics and physics. In addition to fundamental math courses, students take a substantial number of physics courses.

General Mathematics Track

For students who want the greatest flexibility in their choice of mathematics electives. In addition to fundamental math courses, students may choose additional electives from pure and applied mathematics and statistics.

The S.S. Chern Class in Mathematics



Students with demonstrated mathematical excellence are eligible for admission to the prestigious “S.S. Chern Class” once they have declared their major as either Mathematics (MATH), Mathematics and Economics (MAEC), or Data Science and Technology (DSCT). Depending on the academic performance, a Chern Class student can receive up to HK\$50,000 scholarships by graduation.

Talented high
school students

honors in
- IMO
- APMO
- CMO
- HKIMO

top scorers in
- China JEE
- Taiwan GSAT

ELIGIBILITY FOR THE CHERN CLASS

enroll in
School of
Science
HKUST

complete
Honors
Calculus II

Major in
MATH/MAEC

Chern
Class
Student

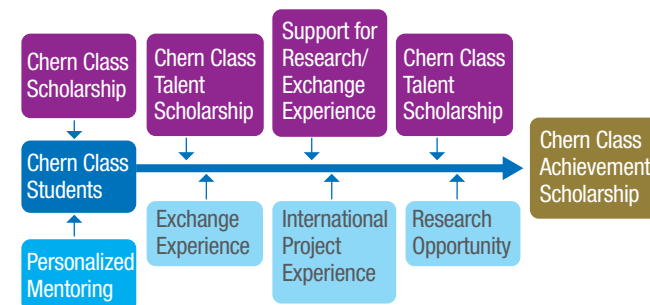
HKUST students

Students in IRE
Program (JS5101)

excel in Calculus I or
Honors Calculus I

excel in Honors
Calculus II

SUPPORTS AND AWARDS



www.math.ust.hk/ug/chern_class