



Department of Mathematics, The Chinese University of Hong Kong

香港中文大學數學系

CUHK – TUYF Partnership Project 香港中文大學-TUYF 合作項目

Gifted Mathematics Program for Secondary School Students (2025-26)

中學生資優數學培訓計劃

Date and Time 日期和時間	<p>Phase 1: Nov 2025 – Jan 2026 Phase 2: Feb 2026 – Mar 2026 Phase 3: Apr 2026 – May 2026 Time: 2:00 pm – 5:00 pm of Saturdays <i>*Admitted students will be asked to confirm their enrollment again before each phase begins.</i></p> <p>第一階段：2025 年 11 月 - 2026 年 1 月 第二階段：2026 年 2 月 - 2026 年 3 月 第三階段：2026 年 4 月 - 2026 年 5 月 時間：星期六下午 2:00 - 5:00 *在計劃的每個階段開始前，被錄取的學生需要重新確認入讀課程</p>
Course Instructors 課程導師	<p>(1) Lectures 講課</p> <ul style="list-style-type: none">• HON Yiu Chung Benny 韓耀宗 (Ph.D.)• MAK Hugo Wai Leung 麥偉樑 (Ph.D.)• SHIU Wai Chee 邵慰慈 (Ph.D.) <p>(2) Guest Lectures conducted by WU Chufang 吳楚芳 (Ph.D.)</p> <p>All instructors have enormous experience in gifted education, curriculum design and student supervision, and have received research and teaching awards from various institutions and organizations. They have also devoted into promoting Science and Mathematics in public events, and are experts in Pure Mathematics, Applied and Computational Sciences.</p> <p>所有教授在資優教育、課程設計和學生督導方面擁有豐富的經驗，並曾獲得不同機構和組織頒發研究和教學獎項。他們也致力在公共活動中推廣科學和數學，也是純粹數學、應用和計算科學領域的專家。</p> <p>(2) Practice Classes / Tutorials 練習課/導修課</p> <ul style="list-style-type: none">• outstanding Undergraduate Students of CUHK Mathematics 香港中文大學數學系優秀本科生

Tuition Fee 學費	Free of charge* 免費 *Wholly sponsored by The TUYF Charitable Trust Fund if a candidate passes our screening test and is being selected *如果學生通過甄別試及獲選拔，學費將由 TUYF 慈善信託基金全額贊助
Medium of Instruction 教學語言	English and Cantonese (with English course materials) 英語及廣東話，輔以英文教材
Venue 地點	CUHK Campus 香港中文大學校園
Targeted Students 對象	Mainly talented Form 2-4 students, but exceptionally talented Form 1 students are also welcome to apply and attend the screening test 主要為中二至中四的數學資優生，但特別優異的中一學生也可報名和參與甄別試
Quota 名額	Maximum 60 最多 60 人
Method of Application 申請方法	<p>School Nomination / Self-Nomination via the following link Deadline: 26 September 2025 (Friday) 23:59 請透過以下連結提交學校提名/自我提名 截止日期：2025 年 9 月 26 日（星期五）23:59</p> <p>Link for Application 申請連結： https://cloud.itsc.cuhk.edu.hk/webform/view.php?id=13715710</p> <ul style="list-style-type: none"> • School Nomination 學校提名 <ol style="list-style-type: none"> 1. Each school can nominate <u>up to 4</u> gifted Form 1-4 students (preferably Form 2-4) 每所學校<u>最多可提名 4 名</u>中一至中四資優學生 (以中二至中四為佳) 2. Each nominated student should provide a copy of the latest academic report and two most representative certificates related to Mathematics to the authorized school teacher, and the teacher can attach all relevant documents via the submission platform after collection. 每位被提名的學生需向其學校老師提供最新的學業報告及兩份最具代表性、與數學相關的證書，老師收集後可透過提交平台上傳所有文件。 • Self-Nomination 自我提名 <p>Each nominee should complete the application form, and provide a copy of the latest academic report and two most representative certificates related to Mathematics via the submission platform 每位自我提名者需填寫申請表，並透過提交平台上載最新的學業報告及兩份最具代表性、與數學相關的證書。</p>

	<p>Remark: Only submissions via the above link will be accepted and reviewed.</p> <p>備註：僅接受和審閱透過以上連結提交的內容。</p>
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Course Objectives 課程目標

It is designed for students who are interested in Mathematics and demonstrate mathematical potentials, or those who appreciate Mathematics as a tool in other scientific disciplines, and would like to do problem solving in more rigorous manners.

本課程適合對數學感興趣並表現出數學潛能、或欣賞數學之美及數學可如何應用在不同科學領域的學生，亦適合希望以更嚴謹方式解決數學問題的學生。

The course mainly focuses on training students' capabilities in logical thinking and deduction based on fundamental mathematics rules and assumptions, experience how elementary scientific explanations can be applied into proving or disproving a mathematical proposition.

本課程主要培養學生透過基本數學定律和假設來促進邏輯思考和推理能力，並讓學生體驗如何運用基本的科學解釋來證明數學命題或給予反例。

The course also equips exceptionally talented secondary school students in acquiring advanced mathematical knowledge that may not be covered in current HKDSE curriculum, but is particularly useful when learning and advanced mathematical subjects in the future. A solid mathematical foundation is expected to be built after completing the course.

本課程亦能幫助才華洋溢的中學生掌握一些香港中學文憑考試（HKDSE）課程可能未涵蓋的高等數學知識，而這些知識在未來學習高等數學科目時特別有用。完成課程後，學生有望建立紮實的數學基礎。

This program also aims at providing a platform for gifted students to communicate with each other, cultivate their friendship and interests in pursuing in-depth mathematical investigation or even mini-research. Outstanding participants may be selected for the Elite Student Mentorship Programme mentored by mathematical scholars.

本計劃還旨在為有天賦的學生提供一個互相交流的平台，培養他們的友誼和進行深入數學探討或小型研究的興趣。成績優異者更有機會被選入由數學學者指導的精英學生指導計劃。

Assessment Scheme 評核方式

Regular Assignments / Quizzes

定期家課 / 小測

Attendance and Recognition 出席率和認可

After the end of each phase, all students who have completed the Program Requirements (with at least 70% attendance rate) and obtain a passing grade in the aforementioned assessment scheme will be issued a certificate issued by the Department of Mathematics, The Chinese University of Hong Kong.

在課程的每個階段結束後，所有完成課程要求（出席率達至少 70%），並在以上評核方式中取得及格成績的學生將獲得由香港中文大學數學系頒發的結業證書。

Top 5 students in the course will also be given book coupons as recognition of achievement.
在本課程中排名前五的學生也將獲得書券作為認可和嘉許。

Remarks 備註

1. Course schedule and academic coverage of this gifted course are subject to modifications whenever necessary.

課程時間表及課程內容為暫定，會應需要而進行修改。

2. About Class Arrangements of Bad Weather Scenario 關於惡劣天氣的課堂安排

Typhoon Signal No. 3 or below, or Amber / Red Rainstorm Warning Signal: Lecture will proceed as scheduled.

三號颱風訊號或以下，或黃色/紅色暴雨警告：課堂將如期進行。

Typhoon Signal No. 8 or above, or Black Rainstorm Warning Signal:

- Lecture will be **cancelled** and **rescheduled**.
- If the signal is **lowered 2 hours before** the lecture commences, the lecture will **proceed as scheduled**.

八號或以上颱風訊號，或黑色暴雨警告：

- 課堂會取消並作重新安排。
- 若颱風訊號在課堂開始前兩小時降下，課堂會如期進行。

For extreme weather conditions and large-scale traffic suspension, an announcement will be made via email before noon on the lecture date.

如遇極端天氣狀況及大規模交通中斷，將於課堂當天中午前以電郵方式發佈公告。

Schedule and Course Coverage

(1) Screening Test 甄別試

Qualified applicants will be invited to attend a screening test on **11 October 2025 (Sat), from 10:30 am – 12:00 noon (1.5 hours)**. Notification will be released to each qualified applicant on or before 6 October 2025 (Monday) via registered email address. Applicants who cannot receive the notification email may consider their applications unsuccessful.

合資格的申請者將獲邀出席 **2025 年 10 月 11 日（星期六）上午 10:30 至中午 12:00（1.5 小時）的甄別試**。通知及詳情將於 2025 年 10 月 6 日（星期一）或之前透過已登記的電郵地址發送給每位合資格的申請者。申請者如未能收到電郵通知，則可視其申請不成功。

- **NO** in-advance preparation is needed, the test will cover different areas of elementary Mathematics. Please refer to the “Sample Questions” file.
- **NO** make-up screening test will be given. **Only one round of screening** will be conducted. Absentees will **NOT** be considered further by the Program.

學生無需事先為甄別試作任何準備，考試將涵蓋基礎數學的不同領域。請參閱“範例問題”文件。

甄別試不設補考，僅進行一輪甄選。缺席者將不會被本計劃作進一步考慮。

(2) Enrollment Notification and Course Schedule 錄取通知及課程日期

Screening results and admission offers will be released to the school coordinator, authorized teacher, nominee or self-applicant via registered email address **on or before 24 October 2025 (Friday)**, and admitted students should confirm and submit the “Acceptance of Offer” **on or before 29 October 2025 (Wednesday)**.

評審結果及錄取通知將於 **2025年10月24日（星期五）或之前**透過登記的電郵地址發送給學校協調老師、授權教師、受提名人或自行申請者，而獲錄取的學生須於 **2025年10月29日（星期三）或之前**交回「接受錄取書」。

Course Schedule 課程日期

Phase 1 Dates (6 lessons) 第一階段日期 (6 節課)

15/11/2025, 22/11/2025, 6/12/2025, 10/1/2026, 24/1/2026, **31/1/2026**

Phase 2 Dates (6 lessons)*: 第二階段日期 (6 節課) *

7/2/2026, 14/2/2026, 28/2/2026, 14/3/2026, 21/3/2026, 28/3/2026

Phase 3 Dates (6 lessons)*: 第三階段日期 (6 節課) *

11/4/2026, 18/4/2026, 25/4/2026, 2/5/2026, 9/5/2026, 16/5/2026

* *Exact Dates to be confirmed in due course.* * 確實日期將在適當時候確認。

Make-up Dates (if necessary) 補課日期 (如有需要) : 7/3/2026

Time: 2:00 pm – 5:00 pm of Saturdays 時間：星期六下午 2:00 至 5:00

Assessment: In-class Practice and Homework Assignments (習題、家課) will be assigned from time to time.

(3) Course Coverage 課程內容

Including but not limited to the following topics:

Elementary Set Theory, Relations between Sets (e.g., Subsets, Countable Sets, Countability etc.), Formal Definition of Functions and Mapping (from the perspectives of Sets), Methods of Proof (e.g., Proof by Contradiction, Mathematical Induction of various forms), Binomial Theorem, Sequences and Series, Limit of Sequences, Polynomials, Inequalities, Basic Linear Algebra (including Matrices and Determinants, Linear Transformation and Geometric Significance), Geometry and Coordinate Geometry, Combinatorics and Graph Theory, Probability, Elementary Calculus and Applications

包括但不限於以下課題：

初等集論、集合間的關係（例如：子集、可數的集、可數性等）、函數和映射的定義（從集合角度）、證明方法（例如，反證法、各種形式的數學歸納法）、二項式定理、序列和級數、序列的極限、多項式、不等式、基本線性代數（包括矩陣與行列式、線性變換和幾何意義）、幾何與坐標幾何、組合數學與圖論、機率論、初等微積分及其應用

The course will focus on both logical thinking and problem solving techniques, with the aid of suitable examples.

本課程將透過適當例子解釋相關數學概念，重點在於培訓學生邏輯思維和解決難題的技巧。

Application Procedures and Enquiry 申請流程和報名諮詢

1. School Nomination / Self-Nomination - Submission of Application (with supporting documents) via prescribed link: on or before **26 September 2025 (Friday) 23:59**
2. Admission Assessment (Screening Test) for notified applicants:
on **11 October 2025 (Saturday) 10:30 am – 12:00 noon**
3. Release of Admission Result: on or before 24 October 2025 (Friday) via registered email address
4. Confirmation of Offer: **on or before 29 October 2025 (Wednesday)**
5. Phase 1 begins in November 2025 (Further details will be announced to admitted students)

1. 2025 年 9 月 26 日（星期五）23:59 或之前:

學校提名/自我提名 - 透過指定連結提交申請（連同相關證書及文件）

2. 2025 年 10 月 11 日（星期六）上午 10:30 至中午 12:00: 獲通知的申請者參與入學評估（甄別試）
3. 2025 年 10 月 24 日（星期五）或之前: 透過填寫的電郵地址公佈錄取通知
4. 2025 年 10 月 29 日（星期三）或之前: 錄取學生確認入讀
5. 2025 年 11 月：第一階段開始（更多詳情將另行通知被錄取的學生）

Contact 聯絡方法

Email address 電郵地址: outreach@math.cuhk.edu.hk

Phone 電話: (852) 3943 7962

Ms. Sin 洗小姐