



S3IM0003C

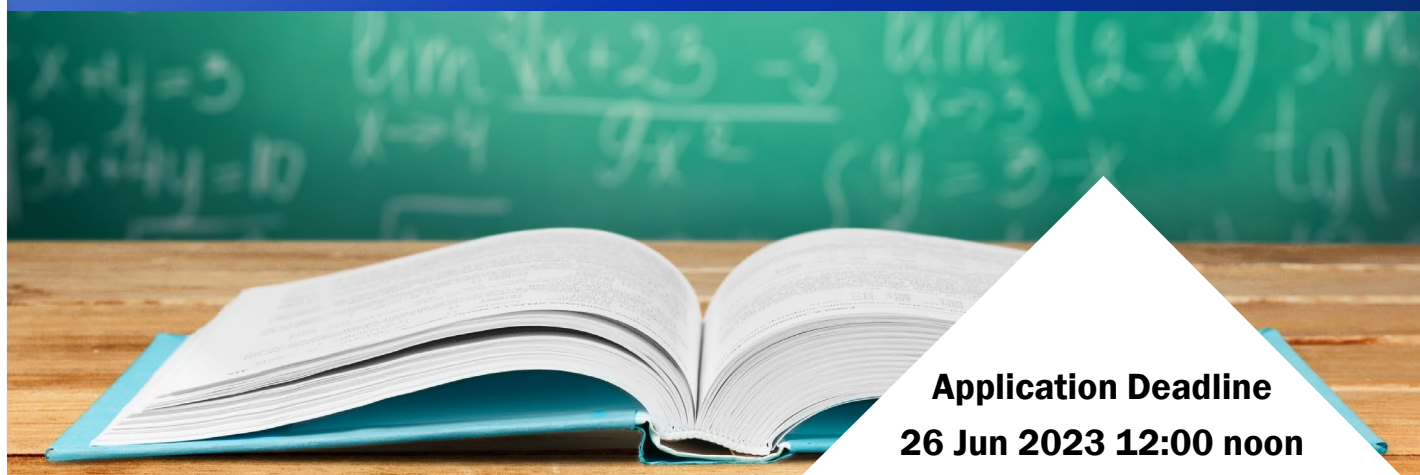
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Advanced Course in  
Mathematical Olympiad

# International Mathematical Olympiad Training 2023-24 (Phase I) Level 2

Dr Ching Tak Wing and other trainers

English version only 只供英文版



**Application Deadline**  
**26 Jun 2023 12:00 noon**

**Result Release**  
**3 Jul 2023**

## **Intended Learning Outcomes**

Upon completion of the programme, participants should be able to:

1. broaden their mathematical knowledge in a variety of areas on the basis of senior secondary mathematics curriculum;
2. learn more about the scope of International Mathematical Olympiad Training;
3. strengthen their problem solving and higher-order thinking skills.

## ◆ Introduction

- A comprehensive mathematics programme which covers such as Algebra, Number Theory, Geometry and Combinatorics
- Introduce the basic curriculum of the International Mathematical Olympiad competition
- Broaden student's mathematical knowledge, strengthen their problem solving, higher order and logical thinking skills
- Training consists of four phases: Phase I (Jul – Aug), Phase II (Sep – Dec), Phase III (Jan – Mar 2024) and Pre-IMO Intensive training.
- Students with outstanding performance in the programme would be selected to represent Hong Kong in the 65<sup>th</sup> IMO 2024

The International Mathematical Olympiad Training programmes are co-organized with International Mathematical Olympiad Hong Kong Committee (IMOHKC)

## ◆ Target Participants

Non-HKAGE student members who

- were awarded **Honourable Mention or above in IMO Preliminary Selection Contest – Hong Kong**

HKAGE student members who

- were awarded **Honourable Mention or above in IMO Preliminary Selection Contest – Hong Kong** **or**
- have completed **any phase of International Mathematical Olympiad (IMO) training** **or**
- have completed **any Phase of China Girls Mathematics Olympiad (CGMO) training** **or**
- have completed **any Phase of Introduction to Olympiad Mathematics (ITOM) training with Distinction**

Class size: 60

This programme is the same as E3IM0002C/E3IM0003C in the school year 2021/22

## ◆ Certificate

E-Certificate will be awarded to participants who have:

- attended **at least 10 sessions**; and
- completed all the assignments with satisfactory performance

## ◆ Medium of Instruction

Cantonese with English Handouts

## ◆ Schedule

Session	Date	Time	Venue
1	15 Jul	2:00 p.m. – 5:00 p.m.	Room 204, HKAGE
2	18 Jul		Room 204, HKAGE
3	20 Jul		Room 204, HKAGE
4	22 Jul		Room 204, HKAGE
5	25 Jul		Room 204, HKAGE
6	27 Jul		Room 204, HKAGE
7	29 Jul		Room 204, HKAGE
8	1 Aug		Room 204, HKAGE
9	3 Aug		Room 204, HKAGE
10	5 Aug		Room 204, HKAGE
11	8 Aug		Room 204, HKAGE
12	17 Aug		Room 203, HKAGE
13	22 Aug		Room 105, HKAGE

Remarks:

1. Students **MUST ATTEND** the test held on **22 Aug 2023**. No make-up test will be arranged.
2. Students will be **notified of their course level through email** on or before 3 Jul 2023.

## ◆ Appendix - IMO-related Programmes

- IMO-related programmes is a series of programmes that provide International Mathematical Olympiad (IMO) related training. It aims to equip students with the mathematics knowledge and curriculum of IMO, problem solving skills, and high-order thinking skills progressively.
- The programmes are divided into three levels: Introductory, Intermediate, and Advanced level.
- There are different enrollment methods, e.g. aptitude test. For details, please refer to each programme's poster

### Introductory Level

#### Maths Ignition (MI) Programmes

- For S1-S3 HKAGE student members
- Introductory training in Mathematical Olympiad by topics
- Application for five MI programmes will be open in Apr, Jul & Oct each year
- Enroll through **aptitude test**

### Introductory to Intermediate Level

#### Introduction to Olympiad Mathematics (ITOM)

- For S1-S6 HKAGE student members
- Two phases of training
- Application will be open in Jan each year
- Enroll through **aptitude test**
- Students who have completed at least 2 MI programmes could enroll directly

### Introductory to Advanced Level

#### China Girls Mathematics Olympiad (CGMO) Trainings

- For S1-S6 HKAGE female HKAGE student members
- Three phases of training
- Application will be open in Jan each year
- Enroll through **aptitude test**
- Students who have completed any phases of IMO/CGMO/ITOM training could enroll directly
- CGMO HK Team members will be selected based on their performance in the trainings

### Advanced Level

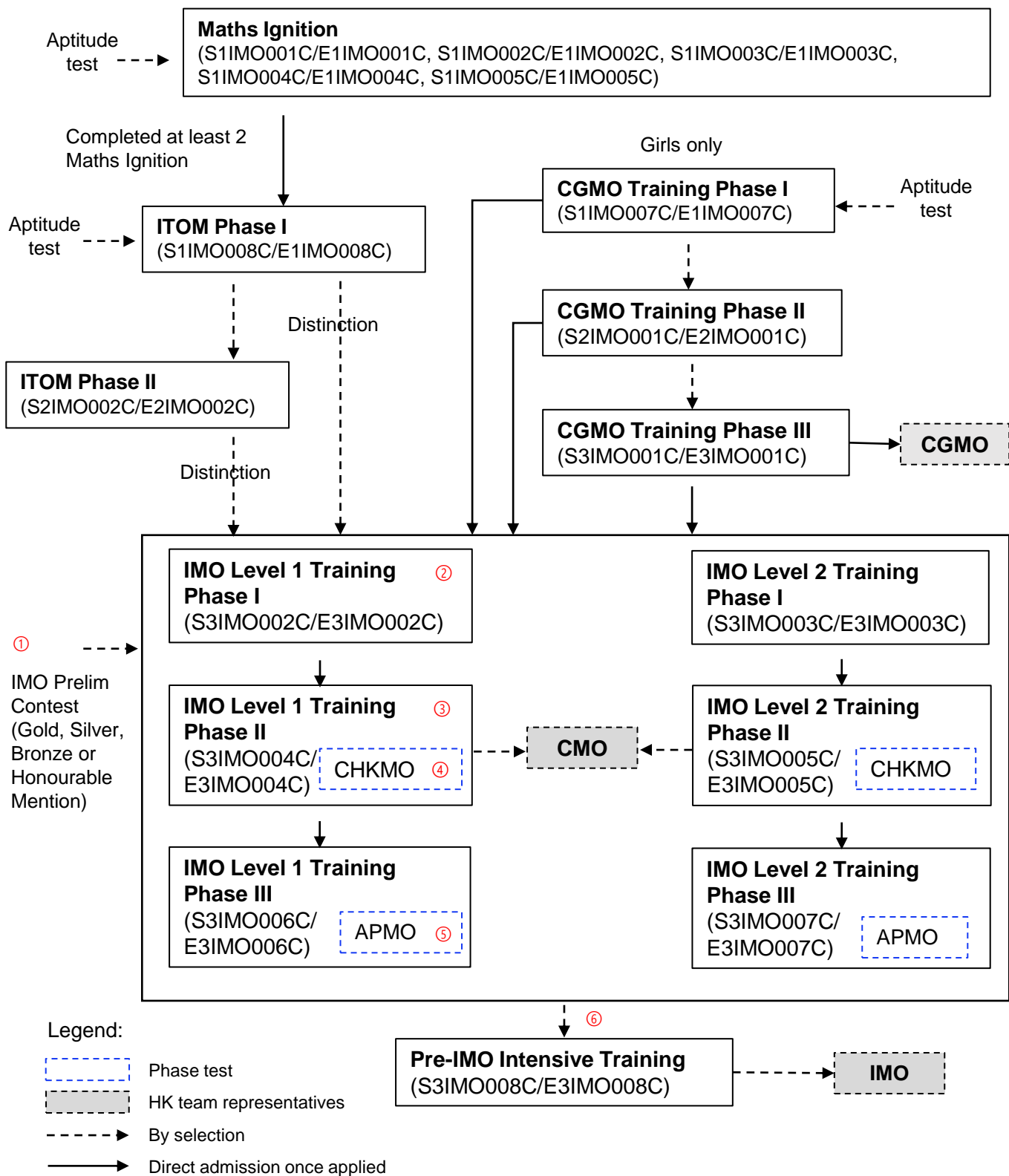
#### International Mathematical Olympiad (IMO) Trainings

- For all awardees of IMO Preliminary Selection Contest - Hong Kong; OR students who got the certificate of distinction in any phases of ITOM training; OR students who have completed any phases of IMO/CGMO training
- Four phases of training
- IMO HK Team members will be selected based on their performance in the tests and trainings

\*For detailed flowchart and timeline, please refer to the next page.

# International Mathematical Olympiad Related Programmes

(English version only 只提供英文版)



IMO2024 HK Team representatives are selected based on their performance in the assessments from ① through ⑥  
 IMO2025 HK Team representatives are selected based on their performance in the assessments from ② through ⑥

## IMPORTANT information for International Mathematical Olympiad (IMO) Training

### IMO Training

#### Eligibility

- IMO Preliminary Selection Contest awardees ① or
- Student members who have completed any phase of the IMO Training or
- Student members who have completed any phase of CGMO Training or
- Student members who have completed any phase of ITOM Training with Distinction

Training /Competition	Content	Tentative schedule	Remark
Phase I Training	13 x 3-hr lessons	Jul - Aug	
	Test 1 ② 3 hr, 6 proof problems	Aug	<ul style="list-style-type: none"> <li>▪ Phase test</li> <li>▪ No make-up test</li> </ul>
Phase II Training	17 x 3-hr lessons	Sep - Dec	
	Test 2 ③ 3 hr, 4 proof problems	Oct	<ul style="list-style-type: none"> <li>▪ Phase test</li> <li>▪ No make-up test</li> </ul>
	CHKMO ④ 3 hr, 4 proof problems	Dec	<ul style="list-style-type: none"> <li>▪ Phase test</li> <li>▪ No make-up test</li> </ul>
Phase III Training	8 x 3-hr lessons	Jan - Mar	
	APMO ⑤ 4 hr, 5 proof problems	Mar	<ul style="list-style-type: none"> <li>▪ End-of-phase test</li> <li>▪ No make-up test</li> </ul>
Selection Tests for Pre-IMO Intensive Training	Test 3 ⑥ 2 days x 4.5 hr, 3 proof problems	Apr or May	<ul style="list-style-type: none"> <li>▪ About 20 students to be selected based on previous tests</li> <li>▪ No make-up tests</li> </ul>
Pre-IMO Intensive Training	IMO HK Team (6 students) & Alternate Team (6 students)		<ul style="list-style-type: none"> <li>▪ 12 students to be selected based on previous tests</li> </ul>
IMO	2 days x 4.5 hr, 3 proof problems		<ul style="list-style-type: none"> <li>▪ IMO HK Team</li> </ul>
CMO	2 days x 4.5 hr, 3 proof problems		<ul style="list-style-type: none"> <li>▪ About 6 students to be selected based on previous tests</li> </ul>
CGMO	2 days x 4 hr, 4 proof problems		<ul style="list-style-type: none"> <li>▪ About 8 female students selected via CGMO training</li> </ul>

IMO2024 HK Team representatives are selected based on their performance in the assessments from ① through ⑥  
 IMO2025 HK Team representatives are selected based on their performance in the assessments from ② through ⑥

## Useful websites

IMO official website:	<a href="http://www.imo-official.org/">http://www.imo-official.org/</a>
IMO website:	<a href="http://imo2023.jp/">http://imo2023.jp/</a>
Art of Problem Solving:	<a href="http://www.artofproblemsolving.com/">http://www.artofproblemsolving.com/</a>
Mathematical Excalibur:	<a href="http://www.math.ust.hk/excalibur/">http://www.math.ust.hk/excalibur/</a>