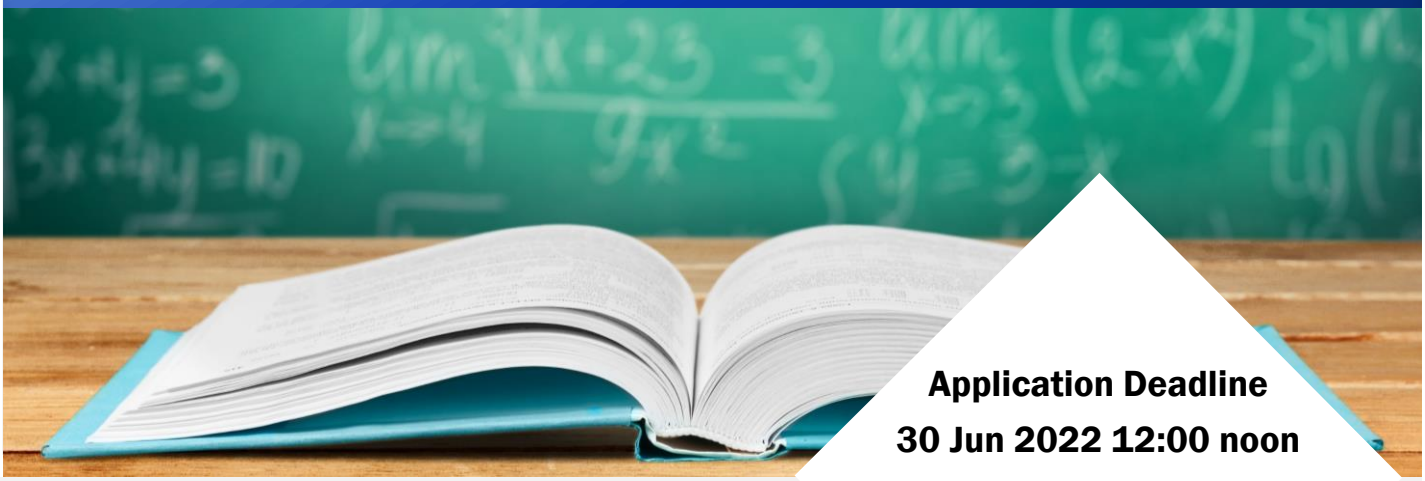
香 港 資 優 教 育 學 苑
The Hong Kong Academy for Gifted Education

S3IMO002C
(Token- required)

Advanced Course in
Mathematical Olympiad

International Mathematics Olympiad Training 2022-23 (Phase I) Level 1

Dr Leung Tat Wing and other trainers



Application Deadline
30 Jun 2022 12:00 noon

Result Release
06 Jul 2022

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.

If student members withdraw from the programme after the Application Deadline, the token will be deducted.

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Introduction

- A comprehensive mathematics programme which covers such as Algebra, Number Theory, Geometry and Combinatorics
- Introduce the basic curriculum of the International Mathematics Olympiad competition
- Broaden student's mathematical knowledge, strengthen their problem solving, higher order and logical thinking skills
- Training consists of 3 Phases: Phase I (Jul – Sep), Phase II (Sep – Dec) and Phase III (Jan – Mar 2023)
- Students with outstanding performance in the programme would be selected as the representatives of Hong Kong in the 64th IMO 2023

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 been a **trainee in any phase of International Mathematics Olympiad (IMO) Training** or
- have completed **any Phase of CGMO** or
- have completed **any Phase of ITOM training with Distinction**

Class size: 50

This programme is the same as E3IMO002C 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

Enquiries 3940 0101 programme@hkage.org.hk

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Schedule

Session	Date	Time	Venue
1	16 Jul	2:00 p.m. – 5:00 p.m.	~~Room 204, HKAGE~~ Room 303, HKAGE
2	23 Jul		~~Room 204, HKAGE~~ Room 303, HKAGE
3	30 Jul		Room 403, HKAGE
4	06 Aug		Room 403, HKAGE
5	13 Aug		Room G01, HKAGE
6	15 Aug		~~Room G01, HKAGE~~ Room 303, HKAGE
7	17 Aug		To be confirmed
8	20 Aug		Room G01, HKAGE
9	22 Aug		Room G01, HKAGE
10	24 Aug		Room G01, HKAGE
11	27 Aug		Room G01, HKAGE
12	30 Aug		Room 303, HKAGE
13	03 Sep		Room 105, HKAGE

Remarks:
- Students **MUST ATTEND** the test held on 03 Sep 2022. No make-up test will be arranged.

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Appendix - IMO-related Programmes

- IMO-related programmes is a series of programmes that provide International Mathematics 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** • CGMO HK Team members will be selected based on their performance in the trainings
Advanced Level	**International Mathematics 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 CGMO training • Three phases of training • IMO HK Team members will be selected based on their performance in the trainings and IMO Preliminary Selection Contest – Hong Kong

*Detail flowchart and timeline, please refer to next page.

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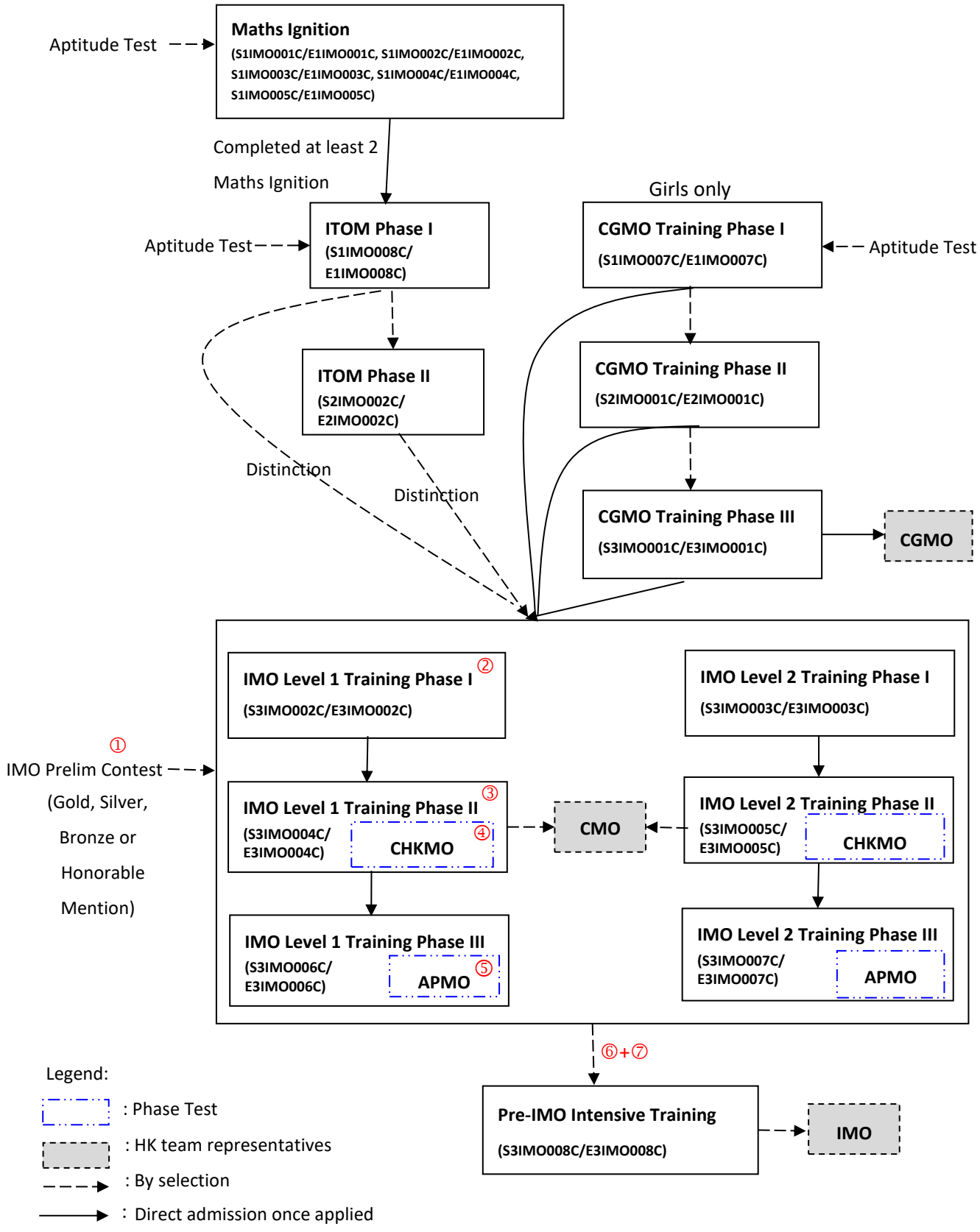
International Mathematical Olympiad Related Programmes



Remarks:

ITOM – Introduction to Olympiad Mathematics
CGMO – China Girl's Mathematical Olympiad
IMO – International Mathematical Olympiad
CHKMO – Hong Kong (China) Mathematical Olympiad
CMO – Chinese Mathematical Olympiad
APMO – Asian Pacific Mathematics Olympiad

IMO HK Team representatives are selected based on their performance in the assessments from ① through ⑦

IMPORTANT information for International Mathematical Olympiad (IMO) Training

Phase Trainings

Eligibility

- IMO Preliminary Selection Contest awardees ① or
- Student members who have been a trainee in 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	Excepted Schedule	Remark
Phase I Training	13 x 3-hr lessons	Jul - Aug	
	Test 1 ② 3 hr, 6 proof problems	Aug	✧ Phase test ✧ No make-up test
Phase II Training	17 x 3-hr lessons	Sep - Dec	
	Test 2 ③ 3 hr, 4 proof problems	Oct	✧ Phase test ✧ No make-up test
	CHKMO ④ 3 hr, 4 proof problems	Dec	✧ Phase test ✧ No make-up tests
CMO	2 days x 4.5 hr, 3 proof problems	Dec or Jan	6# students selected based on Prelim ①, Test 1 ②, and Test 2 ③
Phase III Training	8 x 3-hr lessons	Jan - Mar	
	APMO ⑤ 4 hr, 5 proof problems	Mar	✧ End-of-phase test ✧ No make-up test
Selection Tests for Pre-IMO Intensive Training	Test 3 ⑥ 4.5 hr, 3 proof problems Test 4 ⑦ 4.5 hr, 3 proof problems	Apr or May	18 students selected based on Prelim ①, Test 1 ②, Test 2 ③, CHKMO ④ and APMO ⑤ ✧ No make-up tests
Pre-IMO Intensive Training	IMO HK Team (6 students) & Alternate Team (6 students),		12 students selected based on Prelim ①, Test 1 ②, Test 2 ③, CHKMO ④, APMO ⑤, Test 3 ⑥ and Test 4 ⑦
IMO	2 days x 4.5 hr, 3 proof problems @		IMO HK Team
CGMO	2 days x 4 hr, 4 proof problems @		8# female students selected via CGMO Training (NOT IMO Training)

Subject to change. May vary from year to year.

IMO HK Team representatives are selected based on their performance in the assessments from ① through ⑦

Useful websites

IMO official website:	www.imo-offcial.org
IMO 2017 website:	http://www.imo2017.org.br/
Art of Problem Solving:	www.artofproblemsolving.com
Mathematical Database:	www.mathdb.org
IMO 2016 Facebook page:	www.facebook.com/imo2016
IMO 2016 newsletter IMOment:	www.edb.gov.hk/tc/curriculum-development/kla/ma/IMO/IMOment.html
Mathematical Excalibur:	www.math.ust.hk/excalibur/
reference list recommended by IMOHKC	https://docs.google.com/spreadsheets/d/1l4GNYbY2eDPPKCnD4lpnYuqNenJVo-3NgKUMDh6m5ow/edit?usp=sharing