



## Maths Ignition - Coordinate Geometry (E1IMO005C)

### Introduction

Maths Ignition is an introductory programme. It is designed as a series of courses on different topics and is developed as a bridging programme to the 'IMO Training' programme.

"Maths Ignition - Coordinate Geometry" is the fifth course of the series. It aims to broaden students' knowledge in coordinate geometry on the basis of junior secondary mathematics curriculum through exploration and investigation approach. Students who have completed 2 out of 5 courses in Math Ignition series might be considered for direct admission to the "Introduction to Olympiad Mathematics 2022 (Phase I)" (E1IMO008C), an intermediate-level programme offered by IMO Hong Kong Committee.

This programme is co-organized with International Mathematical Olympiad Hong Kong Committee (IMOHKC).

### Programme

Introductory Course in Mathematical Olympiad ([Token-required](#))

### Type / Level

### Instructor(s)

Dr Law Ka Ho

### Pre-requisite

Students should be able to:

- Cartesian coordinate systems
- Distance and slope between two points
- Basic ideas on equations of straight lines

### Target Participants

- S1 – S3 HKAGE student members
- Class size: 30

All applicants **MUST** attend the **Aptitude Test** held on **20 Nov 2021** except for those who have attended the Aptitude Test held on 20 Feb 2021, 15 May 2021 or 21 Aug 2021.

**Not for students who have enrolled in any phase of**

**1. "CGMO Training"; OR**

**2. "Introduction to Olympiad Mathematics"; OR**

**3. "International Mathematics Olympiad (IMO) Training" before.**

Remarks:

- Due to the limited seats in computer rooms, students who have attended the Aptitude Test on 21 Aug 2021 would not be allowed to take the test on 20 Nov 2021. Their results on 21 Aug 2021 will be used for this programme.
- Students will be selected randomly in attending the Aptitude Test if the application is over-subscribed. Only selected students could join the Aptitude Test held on 20 Nov 2021.
- A notification email will be sent on **10 Nov 2021** for the application result of the Aptitude Test.
- All unselected students will be regarded as their application of this programme unsuccessful.

This programme is same as "Introductory Course in Mathematical Olympiad: Maths Ignition-Coordinate Geometry (MATS1115)" in 19/20 school year.

## Medium of Instruction

Cantonese with English Handouts

## Certificate

**E-Certificate** will be awarded to participants who have:

- ❖ Attended **AT LEAST 3** sessions AND
- ❖ Completed all the assessments with satisfactory performance.

## Intended Learning Outcomes

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

1. Broaden their mathematical knowledge in the topic of Coordinate Geometry on the basis of junior secondary mathematics curriculum Recognize real-life activities related to probability;
2. Strengthen their problem solving and higher-order thinking skills;
3. Learn more about the scope of International Mathematical Olympiad Training.

## Aptitude Test

Students who wish to apply for this programme must take a general aptitude test on **20 Nov 2021 (2:00 p.m. – 4:00 p.m.)** except for those who have attended the Aptitude Test held on 20 Feb 2021, 15 May 2021 or 21 Aug 2021.

This general aptitude test consists of 100 multiple choice questions which covers a wide range of topics in mathematics. The purpose of the test is to figure out the applicant's knowledge in different fields of mathematics in order to choose the most suitable students for different programmes. Neither under-qualified nor over-qualified students will be admitted.

The next aptitude test is scheduled on **19 Feb 2022**. The result of an aptitude test will be valid for 1 year. If a student takes the test more than once, the latest result will prevail. The following table lists the programmes for which the results of this general aptitude test will apply:

Programme Date	Code	Programme Name	Aptitude test valid			
			<b>20 Feb 2021</b>	<b>15 May 2021</b>	<b>21 Aug 2021</b>	<b>20 Nov 2021</b>
Feb 2022	E1IMO005C	Maths Ignition - Coordinate Geometry	√	√	√	√
Mar 2022	E1IMO007C	CGMO Training 2022 (Phase I)		√	√	√
Mar 2022	E1IMO008C	Introduction to Olympiad Mathematics 2022 (Phase I)		√	√	√
Jul 2022	E1IMO001C	Maths Ignition - Combinatorics			√	√
Aug 2022	E1IMO002C	Maths Ignition - Geometry			√	√
Sep 2022	E1IMO003C	Maths Ignition - Number Theory				√

### Remarks:

1. **All aptitude tests will only be arranged on the designated dates. No make-up test will be arranged;**
2. **No Calculator is allowed;**
3. **Please bring along with your Identification Card, e.g. HKID, student ID;**
4. **Please arrive at the venue 15 minutes prior to the Aptitude Test begins.**

**If students who have selected to join the aptitude test are absent without any reasons and prior notification provided, it will result in a lower priority in joining the aptitude test next time when they apply.**

## Application Deadline

**5 Nov 2021, 12:00 n.n**

## Application Result Release Date

**3 Dec 2021**

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

## Schedule

Session	Date	Time	Venue
<b>Aptitude Test</b>	<b>20 Nov 2021</b>	<b>2:00 p.m. – 4:00 p.m.</b>	<b>Welkin Systems Limited (Mongkok)*</b>
1	26 Feb 2022	<b>2:00 p.m. – 3:30 p.m.</b> <i>(Self-study &amp; exercise submission on Moodle);</i> <b>AND</b> <b>3:30 p.m. – 5:00 p.m.</b> <i>(Live session on Zoom)</i>	<del>Room 203</del> <del>HKAGE</del> <b>Online Learning</b> <b>– Moodle + Zoom</b>
2	5 Mar		<del>Room 203</del> <del>HKAGE</del> <b>Online Learning</b> <b>– Moodle + Zoom</b> <i>(Unless further notice)</i>
3	12 Mar		
4	19 Mar		

\*Address: 7/F Righteous Centre, 585 Nathan Road, Mongkok, Kowloon ([Map](#))

### Remarks:

1. For any assessment to be held in the programme, no make-up will be arranged.

## Sample Notes

1. What is the distance between the straight lines  $3x + 4y = 5$  and  $3x + 4y = 6$ ?
2. What is the radius of the circle  $x^2 + y^2 - 4x + 6y - 8 = 0$ ?

## Enquiries

For enquiries, please contact us on 3940 0101 or email at [programme@hkage.org.hk](mailto:programme@hkage.org.hk).