香港資優教育學苑 The Hong Kong Academy for Gifted Education 香港特別行政區政府教育局資助 Subvented by the Education Bureau, the Government of the HKSAR



E1STM013C

(Token- required)

[Gifted Programme] STEAM Course (Level I)

Al x Mechanical Engineering Entrepreneur Training

STEMA Robot Coding Academy

Application Deadline 12 May 2025 12:00 noon

Intended Learning Outcomes

Result Release 23 May 2025

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

- 1. explain the principles and applications of mechanical structures, sensor operations, and AI technolog;
- 2. design and construct simple intelligent machines, engaging in the process from concept to realization.
- 3. integrate sensors with STEM components to operate intelligent machines, analyzing their functionalities from basic to advanced levels;
- 4. analyze how mechanical structures and sensors work together to solve problems, improve designs, and present projects confidently.

Gifted Programme Introduction

In today's technological world, AI and mechanical engineering are incredibly important! In this course, students will learn how to use STEAM building blocks, explore the applications of sensors, and get introduced to AI programming. Through teamwork, they will complete various fun and creative designs, such as smart machines and Mars exploration simulations. This course focuses not only on developing practical skills and creative thinking but also aims to help students master fundamental technologies, enhance their problem-solving abilities, and spark their creativity for future technological applications. Students will have the opportunity to gain a deeper understanding of mechanical structures and the principles of sensor operation, as well as learn how to design and build simple smart machines, laying a solid foundation for their innovative thinking.

Schedule

| Session | Date | Time | Venue |
|---------|-------|-----------------------|---|
| 1 | 4 Aug | 1:00 p.m. – 4:00 p.m. | Shop 47B, 1/Floor, maxiMall, 233 Electric Road, North Point, Hong Kong (<u>map</u>) |
| 2 | 5 Aug | | |
| 3 | 6 Aug | | |
| 4 | 7 Aug | | |

Suitable for

- P4 to P6 HKAGE student members in 2024/25 school year
- Class size: 30
- Student members would be selected randomly by the computer system. The decision of HKAGE on the result of the selection should be final.

Pre-requisite

No special prerequisites are needed

Medium of Instruction

Cantonese with Chinese handouts

Certificate

E-Certificate will be awarded to participants who have:

- attended at least 3 sessions; AND
- completed all the assignments with satisfactory performance