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The Hong Kong Academy for Gifted Education
香港特別行政區政府教育局資助
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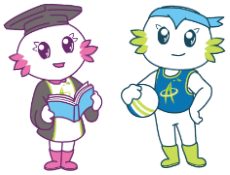


Learn about Gigi & Yoyo

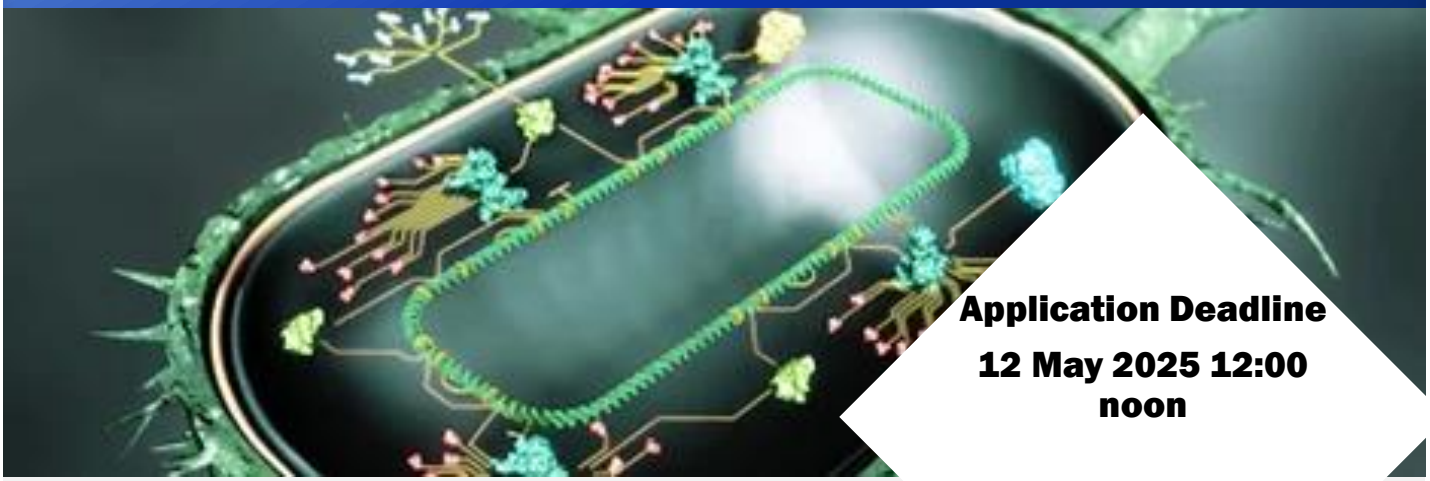
E1STM014W
(Token- required)

[ Gifted Programme ]

Biology Workshop (Level I)

# Exploring Synthetic Biology

Dr. Christine Yu
Assistant Principal from G.T. (Ellen Yeung) College



**Application Deadline**
**12 May 2025 12:00 noon**

**Result Release**
**23 May 2025**

## Intended Learning Outcomes

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

1. describe the basic concepts of synthetic biology, including its innovations, engineering design principles, and the engineering cycle;
2. explain that DNA contains information for the synthesis of proteins in the central dogma of molecular biology and apply this concept to the working principle of the SARS-CoV-2 vaccine;
3. conduct bioinformatic analysis of SARS-CoV-2 while valuing the importance of data integrity and ethical considerations in research.

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

## Gifted Programme Introduction

Get ready to explore the exciting world of synthetic biology! This field combines biology, engineering, technology, and computer science to create amazing innovations. In this workshop, students will learn the basics of synthetic biology, including key engineering design principles. The workshop will also cover how information for protein synthesis is carried by DNA, how the central dogma of molecular biology is linked, and how the principles are applied to the working of the SARS-CoV-2 vaccine.

## Schedule

| Session | Date | Time | Venue |
|---|---|---|---|
| 1 | 28 Jun | 10:00 a.m. – 1:00 p.m. | Biology Lab,<br>G.T. (Ellen Yeung) College (map) |

## Suitable for

- P6 to S2 HKAGE student members in 2024/25 school year
- Class size: 24
- 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 English handouts

## Certificate

E-Certificate will be awarded to participants who have:

- attended ALL sessions; AND
- completed all the assignments with satisfactory performance

**Enquiries** 3940 0101 programme@hkage.org.hk