



[**Gifted Programme**]

E3BTE003C

(Token-required)

Biotechnology Course (Level III): Unveiling Tricks in Genetics and Microbiology

Dr YK YUE



Application Deadline
16 Dec 2024 12:00 noon

Result Release
19 Dec 2024

Intended Learning Outcomes

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

1. state different forms of microbial contaminants in food or public areas;
2. carry out analytical study on food safety or environmental hygiene study;
3. describe the roles of genetics materials and flow of the genetic information in biota;
4. explain how the genetic defects could be developed and resulted in diseases;
5. discuss the technical concerns and applications in genetic study;
6. reflect critically on food safety and public hygiene.

◆ Gifted Programme Introduction

When we perform experiments and read scientific articles or news, we may only focus on experiments, or the conclusions of articles. Sometimes, the basic theories may be overlooked; while in other occasions, the concluding remarks could be interpreted from another point of view. In this course, selected “tricks” commonly encountered in genetic and microbial studies will be discussed. For instances, why diseases can be diagnosed using polymerase chain reaction (PCR), or what are technical concerns while we are cooking or using disinfectants. Lectures provide a strong base of knowledge of the topics and related applications. Hands-on experiments allow students to build up practical skills in the focused areas. In group discussion and presentation, students report their findings and ideas. At the end of the course, students can have a comprehensive understanding of genetics and microbiology.

◆ Schedule

Session	Date	Time	Venue
1	4 Jan 2025	9:00 a.m. – 12:00 noon	Physics Laboratory, 4/F (Old Wing), BKKSS
2		1:00 p.m. – 4:00 p.m.	
3	11 Jan 2025	9:00 a.m. – 12:00 noon	
4		1:00 p.m. – 4:00 p.m.	
3	18 Jan 2025	9:00 a.m. – 12:00 noon	
4		1:00 p.m. – 4:00 p.m.	
5	8 Feb 2025	9:00 a.m. – 12:00 noon	Classroom 28, 2/F (New Wing), BKKSS
6		1:00 p.m. – 4:00 p.m.	

Address: Buddhist Kok Kwong Secondary School (BKKSS), Sha Kok Estate, Shatin, N.T., Hong Kong ([MAP](#))

◆ Suitable for

- S3 to S6 HKAGE student members in 2024/25 school year
- Class size: 30

◆ Pre-requisite

- Students with primary interest on biology, biotechnology, and biomedical science;
- Biology knowledge of S3 or above level is recommended.

◆ Medium of Instruction

English with English Handouts

◆ Screening

Please answer the screening questions in the online application form.

*The screening questions are designed to help the applicant understand the course level and the course content. The questions must be answered by the student applicant and it can only be attempted once. The answers cannot be changed once the application is submitted. Selection is based on students' performance in answering the questions. Only students who can demonstrate motivation and knowledge of biotechnology in the screening questions can be enrolled in the programme.

◆ Certificate

E-Certificate will be awarded to gifted students who have:

- attended **at least 4 sessions**; and
- completed all the assignments with satisfactory performance.