



DNA Sequencing and Genomics

(E4BTE002C)

Introduction	In this course, detail explanations of developmental genetics from traditional Mendelian genetics to modern genomic technologies will be provided. Students can learn concepts of genetics, e.g. mutations, cancers related to genome projects, and recombinant DNA technology. Daily applications will be also introduced, such as gene probes and medical diagnosis, genetic fingerprinting, regulation of transcription and translation, and stem cell application.
Programme Type / Level	Biotechnology Course (Level IV) (Token-required)
Instructor(s)	Dr LEUNG Ho Man Homan (PhD in Biology, Hong Kong Baptist University)
Pre-requisite	<ul style="list-style-type: none">• Biology and Chemistry knowledge of S4 or above level is recommended.• Students are recommended to have fundamental knowledge in scientific instrumentation and biological statistics.
Target Participants	<ul style="list-style-type: none">➤ S4-S6 HKAGE student members➤ Class size: 30
Medium of Instruction	English with English Handouts
Certificate	E-Certificate will be awarded to participants who have: <ul style="list-style-type: none">❖ Attended AT LEAST 5 sessions; AND❖ Completed all the assessments with satisfactory performance.
Intended Learning Outcomes	Upon completion of the programme, participants should be able to: <ul style="list-style-type: none">• describe the traditional genetics theory (Mendelian genetics);• explain molecular genetics, including the central dogma of molecular biology: replication, transcription and translation;• tell examples of the recombinant DNA technology and its various applications;• describe the applications of Human Genome Project and ethical issues associated to them;• explain the principles of applying DNA hybridisation technology to solve medical problems;• appreciate how biotechnology helps to tackle human health problems.
Screening	Please answer the screening question in the online application form. *The screening question is designed to help the applicant understands the course level and the course content. The question must be answered by the student applicant and it can only be attempted once. The answer cannot be changed once the application is submitted. Selection is based on students' performance in answering the question. Only students who can demonstrate motivation and the knowledge of Biotechnology in the screening question can be enrolled in the programme.
Application Deadline	2 Nov 2020, 12:00 n.n
Application Result Release Date	13 Nov 2020
If student members withdraw from the programme after the Application Deadline, the token will be deducted.	

Schedule

Session	Date	Time	Venue
1	5 Dec 2020	10:00 a.m. – 1:00 p.m.	Room 105, HKAGE or Classroom 29, BKKSS Zoom Meeting ¹
2	12 Dec 2020		
3	19 Dec 2020		
4	2 Jan 2021		HKAGE Classroom 29, BKKSS D3-P-03, EdUHK ² Zoom Meeting ¹
5	9 Jan 2021		
6	16 Jan 2021		

¹ Zoom Meeting login details will be sent to students via email.

² EdUHK: Tai Po Campus, The Education University of Hong Kong (EdUHK), 10 Lo Ping Road, Tai Po, New Territories, Hong Kong ([Map](#))

Enquiries

For enquiries, please contact Academic Programme Development Division on 3940 0101 after language selection, press "1".

SCIENCES

科學