

Gifted Education Fund: Off-school Advanced Learning Programmes

Programme No. 2019-001 (For primary and secondary schools)

Title of Programme	Creative Mathematics and Computer Science Learning for Gifted Students: Mentorship and International STEM Programme (為資優學生提供創意數學和計算機科學學習：導師和國際合作計劃)
Programme Provider	Department of Computer Science, City University of Hong Kong
Theme	STEM-related Mentorship Programme
Maximum No. of Participants and Class Level in the 2019/20 school year	60 students (Primary 5 – Secondary 3)
Pre-requisite	Students should possess some basic computer programming knowledge and demonstrate outstanding performance in mathematics in school.
Programme Duration	About 15 months
Medium of Instruction	Course Material: English Class teaching/Discussion: English supplemented with Cantonese
Objectives	<ul style="list-style-type: none"> ● To motivate and equip gifted students with the knowledge and skills to solve advanced mathematics problems by using information technology; ● To deepen the understanding of modern computer science of gifted students through project-based learning and collaboration; and ● To broaden the vision of gifted students through participation in STEM-related programmes outside Hong Kong.
Programme Outline*	<p>Students will learn how to solve mathematical problems related to different topics, such as logic, number theory, graph theory, probability and discrete mathematics, and will learn computer programming to solve these mathematical problems.</p> <ul style="list-style-type: none"> ● First stage (about 5 months): 24 biweekly lectures (about 1.5 hours each) are provided for students in the forms of lectures, project-based learning and excursion. Students will acquire essential mathematics knowledge and skills (e.g. communication skills) to serve as mathematics mentors in a mathematics festival to be organised in Hong Kong. ● Second stage (about 6 months): Preparation for participation in an online mathematics competition - students will develop a software program in a project based on mathematical problems under regular mentorship (about 7 hours per month). ● Third stage (about 4 months): Students will test and improve

	<p>the software program through individual or group work and demonstrate their developed product in above-mentioned mathematics festival. One-to-one mentorship would be provided with about 7 hours per month.</p> <p>* In view of the novel coronavirus epidemic, some sessions of the programme may be conducted online.</p>
Admission Fee	Free of charge
Application method	<p>Please download and complete the application form attached herewith, and send by post <u>on or before 15 May 2020</u> to the following address:</p> <p>Department of Computer Science City University of Hong Kong 83 Tat Chee Avenue Kowloon Tong (Attn: Dr Tan Chee-wei)</p>
Enquiry	<p>Dr Tan Chee-wei (Department of Computer Science, City University of Hong Kong) Tel No.: 3442 7652 Email: cheewtan@cityu.edu.hk</p>
Date of Announcement of Result	By early June 2020 (tentative)