Games X Maths (E1MAT012C)

Introduction	Throughout the course, students will be engaged in a range of challenging and interesting games related to topics in mathematics. Throughout these activities, students would learn to use mathematics as a tool and acquire a range of problem-solving skills such as systematic thinking, logical reasoning, generalisation, inquiring, visualisation, modelling and developing strategies for daily-life application. Students will also collaborate with each other to design and create their own strategy games, which allow them to demonstrate the learning outcomes and apply their imagination and creativity.
Programme Type / Level	Across Domains and Interdisciplinary Course (Level 1) ([Token-required])
Instructor(s)	Ms. Tsang Pui Ting & Ms. Chong Lai Pan, World Class Arena Asia Limited (WCAAL)
Pre-requisite	Basic arithmetic skills
Target Participants	➢ P4 to P6 HKAGE student members ➢ Class size: 30
Medium of Instruction	Cantonese with Chinese and English handouts
Certificate	**E-Certificate** will be awarded to participants who have: ❖ Attended **AT LEAST 3** sessions AND ❖ Completed all the assignments with satisfactory performance.
Intended Learning Outcomes	Upon completion of the programme, the participants should be able to: 1. investigate and develop the higher-order thinking skills (e.g. analysis, evaluation, reasoning, designing) and problem-solving skills (e.g. classification, generalisation, make deduction and inferences, inquiring, formulating and testing hypotheses, working backward, etc.) used in analysing mathematical games; 2. develop problem-solving skills to solve problems related to algebra, permutations and combinations, probability, sorting and optimisation; 3. apply mathematical and analytical skills to construct mathematical models and solutions for real-life problems; 4. apply imagination and creativity to design and create their own strategic games; 5. develop collaboration, communication and presentation skills so that they can articulate their own views and ideas with others.
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 mathematical logical thinking in the screening question can be enrolled in the programme.

Application Deadline	3 Aug,2020 12:00n.n	**Application Result Release Date**	14 Aug,2020

Student members may withdraw from the programme on or before the deadline. Otherwise, the token will be deducted.

Schedule

Session	Date	Time	Venue
1	5 Dec 2020	9:30a.m.-12:30 pm	~~HKAGE Room203~~ Zoom Meeting
2	12 Dec		
3	~~19 Dec~~ 6 Mar	~~9:30a.m.-12:30 p.m~~ ~~2:00p.m.- 5:00p.m~~	~~HKAGE Room203~~ Buddhist Kok Kwong Secondary school Rm 27
4	~~2 Jan 2021~~ 13 Mar	1:00p.m.- 4:00p.m	~~HKAGE Room203~~ Buddhist Kok Kwong Secondary school Rm 28

Sample Example for the Programme

2. A game for two players.

One player, known as code-maker. The other player, known as code-breaker.
The secret code consists of a series of symbols, which are chosen from 3 symbol Ⓐ, Ⓑ and Ⓒ. (The code-maker can repeatedly use the same symbol)

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The code-breaker attempts to duplicate the exact symbols and positions of the secret code.
The code-maker responds by using ●, ○ and ⊗ .
● indicates a correct symbol in the right position
  (without indication of which symbol it corresponds to).
○ indicates a correct symbol in the wrong position.
⊗ indicates a wrong symbol that does not appear in the secret code.

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The player wins the game when he/she manage to guess all the symbols in the code sequence and when they all in the right position.

Are you able to make use of the following guesses and responses to find out the secret code?

Reference
"HOW TO SOLVE IT" BY G. POLYA

Enquiries

For enquiries, please contact us at 3940 0101 after language selection, press "1".