香 港 資 優 教 育 學 苑
The Hong Kong Academy for Gifted Education

Theories Behind the Operation of a Robot

(SCIS2042)

Introduction	Nowadays, robots are very commonly used in various fields in our daily life, like medical surgeries, engineering, etc. The aim of the course is to introduce some basic physical principles like moment arms, centre of gravity, rotational dynamics and some electronic principles under which robots operate.
Programme Type / Level	Mechanics and Electricity I Course (Level 3) (Token-required)
Instructor(s)	Mr. Ng Chun Keung, Kwai Chung Methodist College Panel Chairperson of Physics (Co-organized with Kwai Chung Methodist College)
Pre-requisite	Students should know the basic principles of physics like forces, circuits and corresponding knowledge.
Target Participants	➢ S1 – S3 HKAGE student members ➢ Class size: 30 ➢ Priority will be given to the students who are awarded Certificate of Merit in Mini Robocon 2019 Phase I Training (TECS2371)
Medium of Instruction	English with 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, participants should be able to: 1. Have enriched knowledge in basic principles of robotic mechanics, e.g. gear ratios, types of levers and their applications; 2. Have enriched knowledge for understanding the robotic electronics systems, e.g. knowing the operations of logic gates; 3. Apply their knowledge to design and make robots.
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 basic knowledge of Robotics in the screening question can be enrolled in the programme.
Application Deadline	**11 Feb 2019**
Application Result Release Date	**22 Feb 2019**

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

Schedule

Session	Date	Time	Venue
1	23 Apr	9:30 a.m. – 12:30 noon	Physics Laboratory, Kwai Chung Methodist College
2	25 Apr		
3	27 Apr	9:30 a.m. – 12:30 noon 2:00 p.m. – 5:00 p.m.	
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Address: Lai Yiu Estate, Kwai Chung, N.T. (map)

Enquiries

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