








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 	<ul style="list-style-type: none">➢ S1 to S3 HKAGE student members in 2019/20 school year only➢ Class size: 30➢ Priority will be given to the students who are awarded Certificate of Merit in Mini Robocon 2020 Phase I Training (TECS2371)
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 assignments with satisfactory performance
Intended Learning Outcomes 	Upon completion of the programme, participants should be able to: <ol style="list-style-type: none">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.
Application Procedure 	<u>This programme is Programmes with No Screening</u> <p>There are no screening questions, written test or other screening methods for this type of programmes.</p> <ul style="list-style-type: none">● Student members can select up to 5 programmes from a list of selection. Applicants have to state the priority when submitting the application. (1st priority, 2nd priority, 3rd priority, etc). 1 token is required for each programme (For programme list, please refer to the issue 17 of Gifted Gateway (click here));● Application can only be submitted once. Once it is submitted, the priority and the programme selection cannot be changed;● If a student member removes a programme from the application before the application deadline by withdrawal, the choice priority will remain unchanged. (For example: A student has selected three programmes and removed the programme with the 1st priority from the application. The choices of 2nd and 3rd priority will remain unchanged with no promotion in priority.);● We will select the students based on the student's choice of priorities and a randomly generated selection by the computer system. If there is time clash between the applied programme and other programmes with offer, HKAGE will consider if the application will be accepted;● Priority will be given to student members who have not completed the applied programmes;● Student members should avoid applying programmes with time clash;● The decision of HKAGE on the result of selection should be final.

Application
Deadline

29 Jan 2020, 12:00 n.n.

Application Result
Release Date

7 Feb 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	9 May 2020	9:30 a.m. – 12:30 p.m. 2:00 p.m. – 5:00 p.m.	Physics Laboratory, Kwai Chung Methodist College (Changed to online lecture) Platform to be used: Zoom
2			
3	16 May 2020		
4			
5	30 May 2020		
6			

Address: Lai Yiu Estate, Kwai Chung, N.T. ([map](#))

Enquiries



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

SCIENCES

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