THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

GLOBAL ENGAGEMENT OFFICE
環球事務處

Opening Minds • Shaping the Future
啟迪思維・成就未來

Junior Researcher Mentoring Programme 2023

Code:	JRMP2023_45
School / Department:	Department of Applied Physics
Name of Research Team Member(s):	Dr Tsang Yuen Hong, Associate Professor
Research Topic:	Application for Teaching Industry 4.0 in Design - DOBOT Magician Robotic Arm
Short Description of the Research Project:	Robotic arm is a very essential tool for automating repeated and precision needed tasks. The use of robotic arms in education and research is now very common and important. The use of robotic arms is increasingly prevalent in different sectors, such as warehouse management, product sorting, product delivery, agriculture, etc. Industrial automation is heavily dependent on robotic arms. The automobile, Instrumentation and Control (IC) engineering, food and processing industries, and e-commerce sectors are now adopting the use of robots to make their workforce time efficient and cost-effective. The use of robotic arms in various labs will allow students to upgrade themselves with new technologies and will eventually contribute to their capability to find solutions to different problems. Experiments will be created by using robotic arms for different courses in the department. Different experiments integrating innovative ideas will be designed and executed using these robotic arms. These experiments will mainly focus on but are not limited to scientific research. Our plan is to design a project in which robotic arms will be used to make cocktails by mixing different liquids in specific measurements.

No. of Places Offered:	2
Frequency of Meetings:	Monthly
Special Requirement(s):	The participating students should have basic knowledge about how the DOBOT robotic arm function; be able to learn to use 'DOBOT Studio' software; and have basic knowledge of any programming language like python.

The information presented above is subject to change.