


# Robotics 101 Summer Camp (A2ROB001C)

<p>Introduction</p>	<p><i>Do you know what is programming?</i></p> <p><i>Are you interested in team-based, hands-on and experiential ways of learning?</i></p> <p><i>Would you like to have a taste of the undergraduate programming course?</i></p> <p><i>Here is your chance!</i></p>  <p><b>Robotics 101 Summer Camp</b> is a 5-day workshop to be held at The Hong Kong University of Science and Technology (HKUST) with university professors introducing the basics of python programming, automatic control and robotics. It aims to develop students' software programming ability, as well as providing the first-taste of university-level learning pedagogy to students. With a combination of lectures and labs, students are able to build their own robot with teammate to gain practical skills. On the last day of the summer camp, there would be a competition to demo the robots and share ideas with others.</p>
<p>Programme Type</p>	<p>Course (<a href="#">Token required</a>)</p>
<p>Facilitators/Instructors</p>	<p>Dr Ling Shi, Professor, Department of Electronic and Computer Engineering, HKUST</p> <p>Dr Winnie Leung, Assistant Professor of Engineering Education, Division of Integrative Systems and Design, HKUST</p>
<p>Target Participants</p>	<ul style="list-style-type: none"> <li>➢ S3 to S5 HKAGE members (School Year 2021/21)</li> <li>➢ Capacity: 30</li> </ul>
<p>Medium of Instruction</p>	<p>English (supplemented with Cantonese and Putonghua, if necessary)</p>
<p>E-certificate</p>	<p>Participants who attended <b>all sessions</b> and completed <b>the student feedback form</b> will be awarded with an e-certificate of Completion by HKAGE.</p> <p>Participants who <b>also</b> fulfil the performance requirements will be awarded an e-certificate with a remark of Merit or Distinction.</p>

**Schedule**



Session	Date	Time	Venue	Theme and Activity
1	16 Aug 2021 (Monday)	10:00 a.m. – 1:00 p.m.	G010, CYT, HKUST 	Introduction to Raspberry PI and Robotics
2		2:00 p.m. – 5:00 p.m.		Python Basics
3	17 Aug 2021 (Tuesday)	10:00 a.m. – 1:00 p.m.		Introduction to Robotics Basics
4		2:00 p.m. – 5:00 p.m.		DC Motor
5	18 Aug 2021 (Wednesday)	10:00 a.m. – 1:00 p.m.		Control Theory for Everyday Use
6		2:00 p.m. – 5:00 p.m.		Control in Mobile Robot
7	19 Aug 2021 (Thursday)	10:00 a.m. – 1:00 p.m.		Feedback Control Application
8		2:00 p.m. – 5:00 p.m.		Project Workshop
9	21 Aug 2021 (Saturday)	10:00 a.m. – 1:00 p.m.		Project Demo by all teams
10		2:00 p.m. – 5:00 p.m.		Researcher expert sharing and debriefing.

**\*Students could manage their lunch at the HKUST Campus.**

**\*Students are recommended to bring their own laptop to install programming environment to facilitate learning.**

The programme sessions may be cancelled or rescheduled and the delivery mode may change according to the development of coronavirus epidemic and EDB guidance.

If the Education Bureau announces that all whole-day schools' classes will be cancelled due to inclement weather, the programme will be cancelled or rescheduled.

For updated arrangements of inclement weather and coronavirus epidemic, please pay close attention to email notification and announcement in HKAGE website.

**Intended Learning Outcomes**

Upon completion of the programme, participants should be able to:

- Describe at least two principles of Control Theory.
- Apply at least two techniques in Python programming.
- Apply knowledge and skills to operate a robot.
- Apply good verbal communication and interpersonal skills when working in teams.

**Application Procedures**

Please **answer the screening questions on the online form.**

Students who show deep commitment, strong interest and understanding of the learning activities and are eager to enhance their STEM knowledge/skills through hands on activities are preferred.

**Application Deadline**

**2 Aug 2021  
(Monday, 12 noon)**

**Application Result Release Date**

**6 Aug 2021  
(Friday)**

**Enquiries**

For enquiries, please contact Ms Kung at 3940 0101 (after language selection, press 6) or email to [ale@hkage.org.hk](mailto:ale@hkage.org.hk).