



in collaboration with



TECH DOME PENANG  
INSPIRING THE FUTURE

# SPACE SCIENCE AND ARTIFICIAL INTELLIGENCE (AI) TECHNOLOGY EDUCATION CAMP

**'Rooting Locally, Connecting Globally,  
FORESEEING Future'**

## **Date & Venue:**

6 – 8 September 2022  
SEAMEO RECSAM, Penang  
(Mode: Face to Face)

## **Target Participants:**

Primary & Secondary Students  
from Southeast Asian Countries  
(\*students aged 11 – 18)

*\*Teachers are required to accompany*



## BACKGROUND & RATIONALE

Understanding Artificial Intelligence (AI) and practice computer programming in computer education is very important in the fourth industrial revolution, but there is lack of teaching and learning model and guidelines for primary and secondary educators and students to develop the learning of artificial intelligence and computer programming education. A camp with the title of 'Space Science and Artificial Intelligence (AI) Technology Education (SSAIT) Camp' with the collaboration of UNESCO APCEIU and Tech Dome will be organized to cultivate the new generations to adapt the age of digital transformation via fun-learning activities using AI learning tools. Education drone workshop on Unmanned Aerial Vehicle (UAV) using LiteBee Wing Education Drone and Next-Gen Artificial Intelligence (AI) & Robotics workshop using Quarky Innovator Kit during the SSAIT camp aim to impose AI Education and space science knowledge among the students.

During this camp, the future leaders will learn about coding, AI, how to learn, and how to work together through impressive AI education tools. Project-based learning (PBL) is an effective instructional strategy to help the students to develop 21<sup>st</sup> century skills and subject content knowledge for their further education, future career, citizenship, and life. We hope to develop 21<sup>st</sup> century skills (hard skills and soft skills) such as computational thinking, higher order thinking skills, communication skills, logical thinking, innovativeness, critical-thinking skills, innovative problem-solving skills to solve real-world problems and hence promote the awareness of the public regarding the global issues and their impact and solve the global issues via scientific approaches. We aim to integrate scientific knowledge and cultivate mindset of Global Citizenship Education (GCED) among educators and students on global issues through collaborations and partnership and to enhance the understanding of global health problems on Earth, and global collaboration to protect our planet and our environment.

SSAIT camp expects to develop and grow capacities that will enable SEAMEO member countries students to improve their knowledge, understanding, and practical experience in those aspects of space science and technology that have the potential to have a more significant impact on the 17SDGs.

## KEY FEATURES

STEAM activities

- Constructivist-based
- Project-based learning
- Team-based learning
- Task-based learning
- Fun-learning hands-on activities
- Edutainment workshops
- Mini competitions
- Coding with AI tools

## LEARNING OBJECTIVES

At the end of the course, the participants will be able to:

- learn fundamental programming and AI skills
- learn the basic physical knowledge of drone flying
- understand the LiteBee drone, about its appearance, component, hardware and software
- learn how to fly the drone by the controller and by mobile app
- understand LiteBeeGo and learn how to program with it
- design a simple digital game with basic program knowledge
- practice flying skills by getting over the barrier
- develop 21<sup>st</sup> century skills via AI learning tools



## REQUIREMENT & EQUIPMENT

- Teachers are required to accompany the students.
- Participants are required to bring their **own laptops** (at least Windows 10 and above) AND **smartphones** for the camp.
- Other equipment / materials needed for the workshop will be provided by the organiser.

## PROGRAMME SCHEDULE

Day 1: 6 September 2022 (Tuesday)	
Time	Activity
8.30 a.m. – 9.00 a.m.	Registration
9.00 a.m. – 10.30 a.m.	Education Drone / Flying Drone <ul style="list-style-type: none"><li>• Introduction</li><li>• How can an object fly?</li><li>• Meet LiteBee drone</li><li>• Assembling and Construction</li></ul>
10.30 a.m. – 11.00 a.m.	Group Photo and Morning Tea
11.00 a.m. – 1.00 p.m.	<ul style="list-style-type: none"><li>• Build, Code and Fly</li><li>• Programming software</li></ul>
1.00 p.m. – 2.00 p.m.	Lunch
2.00 p.m. – 5.00 p.m.	<ul style="list-style-type: none"><li>• Design a game by coding</li><li>• Flying the drone</li><li>• To practice flying skills by getting over the barrier</li><li>• Done Extension</li><li>• Application of drone</li><li>• Small group discussion</li></ul>
5.00 p.m.	Afternoon Tea

Day 2: 7 September 2022 (Wednesday)	
Time	Activity
8.30 a.m. – 10.30 a.m.	AI Robotic – Quarky DIY Robot Kit With AI <ul style="list-style-type: none"><li>• Say Hello to Quarky</li><li>• Light, Display, Fun</li></ul>
10.30 a.m. – 11.00 a.m.	Morning Tea
11.00 a.m. – 1.00 p.m.	<ul style="list-style-type: none"><li>• Fun with Music</li><li>• Play Time</li></ul>
1.00 p.m. – 2.00 p.m.	Lunch
2.00 p.m. – 5.00 p.m.	<ul style="list-style-type: none"><li>• Introduction to AI with Quarky</li><li>• Weather Management System</li><li>• Small group discussion</li></ul>
5.00 p.m.	Afternoon Tea

Date: 8 September 2022 (Thursday)	
Time	Activity
8.30 a.m. – 10.00 a.m.	AI Robotic – Quarky DIY Robot Kit With AI <ul style="list-style-type: none"> <li>Waste Management System</li> <li>Road Safety with Quarky</li> </ul>
10.00 a.m. – 10.30 a.m.	Morning Tea
10.30 a.m. – 12.00 p.m.	<ul style="list-style-type: none"> <li>Face Recognition with Quarky</li> </ul>
12.00 p.m. – 2.00 p.m.	Lunch
2.00 p.m. – 4.00 p.m.	<ul style="list-style-type: none"> <li>Home Automation System</li> </ul>
4.00 p.m. – 4.30 p.m.	Q & A Session Evaluation Closing & Certificate Presentation Ceremony
4.30 p.m.	Afternoon Tea

*Note: This programme schedule may be subjected to changes without prior notice*

## FACILITATORS

- 1) *Tech Dome Penang*
- 2) **Ms. Thong Ying Li**, Education Specialist, *Training & Research Division, SEAMEO RECSAM*

## PARTICIPATION FEES

- \*Type 1: RM 380 per participant (Without Accommodation)
- \*\*Type 2A: RM 575 per participant (Twin Sharing) 4 days 3 nights
- \*\*Type 2B: RM 640 per participant (Twin Sharing) 5 days 4 nights
- \*\*Type 3A: RM 740 per participant (Single Occupancy) 4 days 3 nights
- \*\*Type 3B: RM 860 per participant (Single Occupancy) 5 days 4 nights

## ACCOMMODATION AT RECSAM INTERNATIONAL HOUSE

### 4 Days 3 Nights

Check-in: 5 September 2022, 2.00 p.m. onwards

Check-out: 8 September 2022, after the workshop

### 5 Days 4 Nights

Check-in: 5 September 2022, 2.00 p.m. onwards

Check-out: 9 September 2022, by 12.00 p.m.

## FOOD

\*WITHOUT ACCOMODATION with 3 meals: Morning Tea, Lunch and Afternoon Tea

\*\*WITH ACCOMODATION with 4 meals: Breakfast, Morning Tea, Lunch and Afternoon Tea

## REGISTRATION, PAYMENT & CLOSING DATE

Places are limited to a maximum of **30 pax** and will be given on a first-come, first-served basis.

To enroll, please register and pay online by **30 August 2022** via [shorturl.at/dhQR3](https://shorturl.at/dhQR3) or scan the following QR code. Upload your payment slip for confirmation of registration.



## PAYMENT (INTERNET BANKING)

Pay to: SEAMEO RECSAM

Bank: MAYBANK GELUGOR BRANCH, PENANG

Account Number: 5571 5700 0647

## FOR ENQUIRIES

Ms. Thong Ying Li

Ms. Bhavani Ramasamy

Ms. Noraini bt. Daud

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