IPB University — Bogor Indonesia | Departemen Ilmu Komputer

Microsoft

IEEE IPB University IEEE Student Branch

CSAGRI Summer Course IPB

CERTIFICATE

Awarded to

Thanakit Yuenyongphisit

as

PARTICIPANT

at International Summer Course Computer Science for Agriculture :
Internet of Things for Smart Urban Farming (CSAgri) 2022
organized by the Department of Computer Science, Faculty of Mathematics and Natural Sciences, IPB University
and IEEE Student Branch IPB University
9th - 17th September, 2022

Chairman of Department of Computer Science - IPB University

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Attachment 1 : Learning Outcome

Upon successful completion of this summer course, the participants are expected to understand the main components of an embedded system and IoT: controllers, sensors, actuators, communications and power; how they should be combined and designed to be in accordance to an agricultural-specific task; as well as the way an embedded system and IoT technology works in a real agricultural environment. Also, the participants are expected to be able to design and create/build a real embedded system and IoT system for agriculture.

Attachment 2 : Score Recapitulation

Attendance Score	14/14 (100%)
Activity Score	6/7 (85.71%)
Final Project Score	34.5/50 (69%)
Final Score	**76.76**

Attachment 3 : Learning Hours Recapitulation

No	Date	Summer Course Activities	Duration (Minutes)
Registration			
1	May 16th - September 4th, 2022	Discussion with academic supervisors, registers to the summer course, applying for related funding to attend the summer course.	180
		Sub Total	**180**
Preparation for Summer Course			
1	September 4 - 9th, 2022	Preparing for necessary documents (ex: letter from university) and equipments (LMS registration, summer course kit preparation, preparing for virtual meeting, etc).	300
2	September 4 - 9th, 2022	Doing the pre-summer course reading materials, etc.	240
		Sub Total	**540**
Course Introduction			
1	September 9th, 2022	Opening session and Safety Introduction	120
2	September 9th, 2022	Course Introduction, brief explanation of the program	120
3	September 10th, 2022	Networking participants	120
4	September 17th, 2022	Feedback and Closing session	120
		Sub Total	**480**
General Lecture (GI)			
1	September 14th, 2022	Workshop on Current Technology and Machine Learning in Agriculture (Prof. Agus Buono)	120
2	September 14th, 2022	Agricultural Engineering (Prof. Naoshi Kondo)	120
		Sub Total	**240**

No	Date	Summer Course Activities	Duration (Minutes)
Conceptual Lecture (CL)			
1	September 11th, 2022	Introduction to IoT for Agriculture	120
2	September 11th, 2022	Smart Urban Farming	120
3	September 12th, 2022	Basic techniques on IoT security	120
4	September 12th, 2022	IoT network and connectivity	120
5	September 13th, 2022	Precision agriculture (Dr. Samsuzana)	240
6	September 13th, 2022	IoT for Smart Urban Farming (Dr. Wida Susanty)	240
7	September 14th, 2022	Data World in Agriculture	120
		Sub Total	**1080**
Hands on Practical (HP)			
1	September 10th, 2022	Brainstorming of Idea for Final Project	120
2	September 11th, 2022	Microcontroller programming	120
3	September 11th, 2022	Sensors and its applications	120
4	September 12th, 2022	Actuators and its applications	120
5	September 12th, 2022	IoT remote monitoring and connecting IoT device to cloud platform	120
6	September 15th, 2022	Preparing Final project video and presentation	120
		Sub Total	**720**
Virtual Excursion			
1	September 10th, 2022	Streaming video via OCW LMS about: (1) Agribusiness & Technology Park of IPB, (2) I-Surf Lab, and (3) Vocational School Garden	120
		Sub Total	**120**
Independent Task (IT)			
1	September 14th, 2022	Preparing Final project video and presentation	120
2	September 15th, 2022	Preparing Final project video and presentation	360
3	September 16th, 2022	Preparing Final project video and presentation	480
		Sub Total	**960**
Project Presentation			
1	September 17th, 2022	Video and final project presentations by Summer Course participants	360
		Sub Total	**360**
Final Report			
1	After 17 September 2022	Drafting and Finalizing Summer Course Activity Report to be submitted to relevant parties as the requirements for inclusion in the MBKM or Enrichment Course program in participant's respective university.	780
		Sub Total	**780**
		Total Learning Hours (Minutes)	**5460**
		Total Learning Hours (Hours)	**91**
		Attendance (%)	**100**
		Final Learning Hours (Total Learning Hours * Attendance %)	**91**
		Total Learning Hours (Credits)	**2.00**