



# Introductory Workshop in Physics: Physics Remote Laboratory Workshop (SCIS1022)

## Introduction

This course aims at teaching students to build a remote experiment on their own. In this course, students will build a specific heat capacity experiment by using Arduino and Raspberry Pi to control the equipment and collect the experimental data. The experiment will then be performed via a webpage. Students could analyse the data generated, explain the scientific theory behind the specific heat capacity experiment, and experience and apply the technology of remote controlling hardware in the course.

## Programme Type / Level

Introductory Workshop in Physics (Level 1): ([Token-required](#))

## Instructor(s)

WONG Wang Cheung  
YUNG Fai Ho Tony

## Pre-requisite

No special prerequisites are needed

## Target Participants



- S1 – S3 HKAGE student members
- Class size: 35

## Medium of Instruction



English with English handouts

## Certificate



**E-Certificate** will be awarded to participants who have:

- ❖ Attended all sessions ; **AND**
- ❖ Completed all the assignments with **satisfactory performance**

## Intended Learning Outcomes



Upon completion of the course, students should be able to:

1. explain the scientific theory of specific heat capacity with experimental data;
2. explain the technology of remote controlling over real experimental equipment;
3. use Arduino and Raspberry Pi to control the experimental equipment for performing the specific heat capacity experiment.

## Screening



### **This programme is Programmes with No Screening**

There are no screening questions, written test or other screening methods for this type of programmes.

- Student members can select up to 5 programmes from a list of selection. Applicants have to state the priority when submitting the application. (1<sup>st</sup> priority, 2<sup>nd</sup> priority, 3<sup>rd</sup> priority, etc). 1 token is required for each programme (For programme list, please refer to the issue 14 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 1<sup>st</sup> priority from the application. The choices of 2<sup>nd</sup> and 3<sup>rd</sup> 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

18 Apr 2019  
12:00 n.n

Application Result Release  
Date

26 Apr 2019

Student members may withdraw from the programme on or before the deadline. Otherwise, the token will be deducted.

## Schedule



Session	Date	Time	Venue
1	13 Aug	9:30 a.m. – 12:30 p.m.	Room 105, HKAGE
2		1:30 p.m. – 4:30 p.m.	

## Enquiries



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

SCIENCES

科學