Demonstration of Stabilised temperature of a closed volume

Abstract

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In the present day, stabilized cooling or heating plays a very important role in keeping the ambient temperature as per the need. In Human-machine interactive locations, both require different working conditions. Temperature requirements for machines may be different from that required for humans. Therefore the need arises to localise and address temperature requirements for machines and temperature requirements for humans.
In this project, the student has to demonstrate a stable temperature in a closed volume using a Peltier cooler[1]. The student has to design suitable electronics and methodology to control and stabilize the temperature inside the closed volume. The student will demonstrate with minimum deviation the data taken and the results obtained therein using the setup.
The project requires a good understanding of elementary electronics and creative thinking.
Reference:
[1] https://en.wikipedia.org/wiki/Thermoelectric_cooling

Academic Project Requirements:

1) Required No. of student(s) for academic project: 1

2) Name of course with branch/discipline: M.Sc. Physics

3) Academic Project duration:

(a) Total academic project duration: 18 Weeks
(b) Student's presence at IPR for academic project work: 5 Full working Days per week

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