

P-TECH Taiwan's Rapid Response to COVID-19

P-TECH students, college students and graduate students team up to produce face shields and ear guards for medical personnel

School

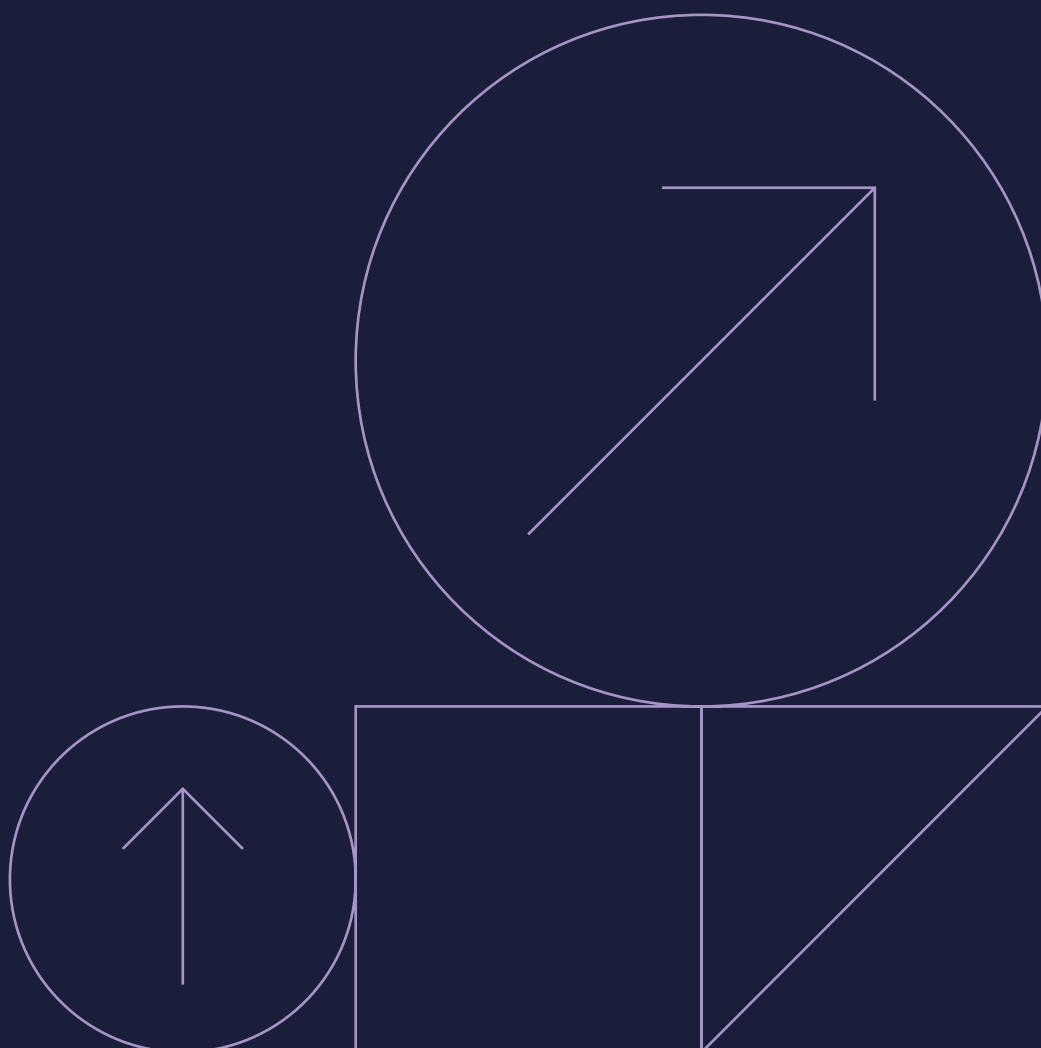
National Kaohsiung University
of Science and Technology

Location

Kaohsiung City, Taiwan

Pathway

Department of Mold
& Die Engineering

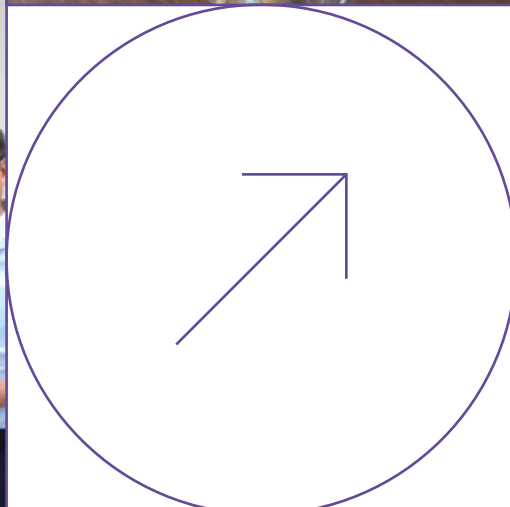


When Dr. Jui-Hung Cheng heard from one of his friends working in a hospital about the shortage of protective equipment he immediately decided to form a team comprising of his P-TECH, university and graduate class to leverage 3D printing technologies to produce face shields and ear guards for medical personnel.

The team tested several versions, yet kept running into challenges to meet the level of customization required. They worked with a partner to come up with a solution to customize the cover of the shield. And, the team worked several days and nights in order to produce 200 face shields for one local hospital's volunteers who were responsible for checking visitors' temperature at the entrance of the hospital to avoid contact of droplets. They also printed 200 ear guards for medical personnel that have to wear face masks all day to relieve the pain on their ears.

"At the beginning of the pandemic when medical supplies were not sufficient, I knew some of the medical personnel used foam, tape and staples on their face shields. Things were challenging for them. And I thought we could do something to help," said Dr. Jui-Hung Cheng. "It was a very good opportunity for my students to work together and contribute what they had learned to the society," said Cheng.

Face shields
made by 3D
printing



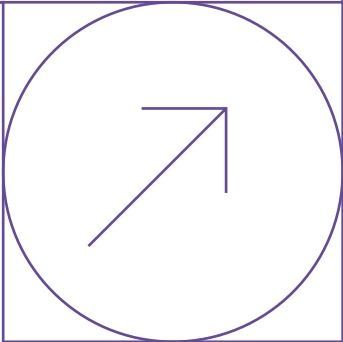
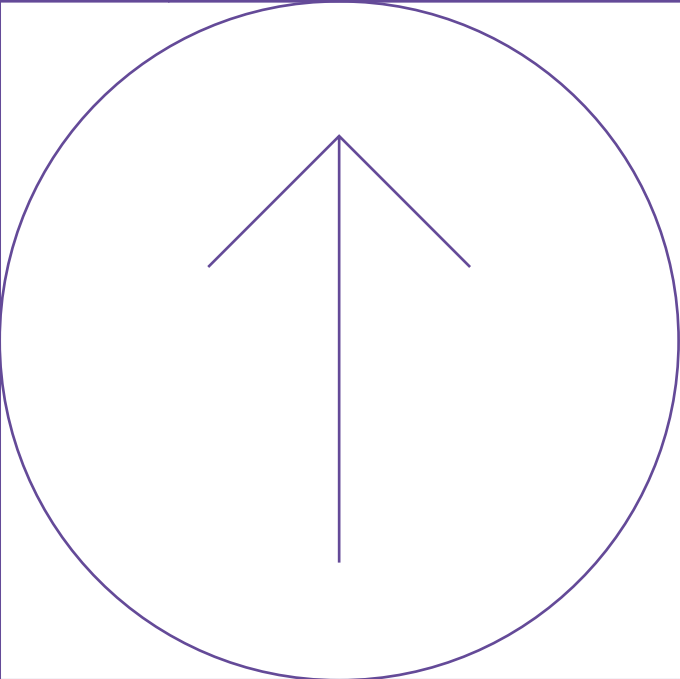
Dr. Jui-Hung
Cheng (right)
with his P-TECH
students before
the Coronavirus





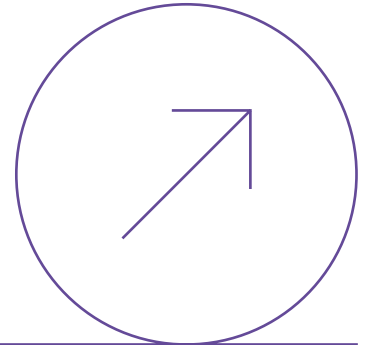
3D-printed
ear guards

“I was happy to work in the project team and help our front-line medical personnel by contributing what we have and what we know,” said Kai-Lun (Kevin) Cheng, a P-TECH student in Dr. Cheng’s project team. “I helped check the status of 3D printing to make sure the machine functioned well,” said Cheng.



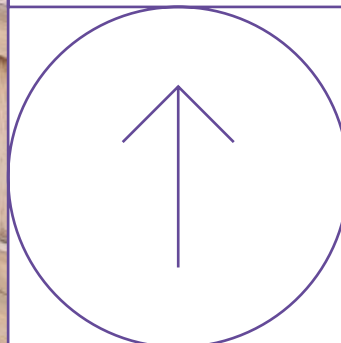
Simulation of wearing
the face shield and
using the ear guard





“In the future, I’d like to learn more about metal 3D printing, the design of product, automation, and to create and produce my own products even to file for patents” said Cheng.

In times like this, a P-TECH community with leaders such as Dr. Cheng’s team and Kai-Lun (Kevin) are especially poised to lend their skills and passion to address the most pressing needs on hand.



Kai-Lun (Kevin)
Cheng, P-TECH
student in
Dr. Cheng’s
project team

