

Engineers 3-D print face shields for doctors and healthcare workers

April 2 2020, by Sean Barton



Engineers from the University of Sheffield are using 3-D printing techniques to make face shields for frontline NHS workers. Credit: University of Sheffield

Engineers from the University of Sheffield are responding to a national call for help in the fight against coronavirus by 3-D printing face shields for doctors and healthcare workers.

The response, led by Dr. Pete Mylon from the University's Faculty of

Engineering, is utilising the world class engineering facilities in the University's Diamond building to rapidly manufacture face shields for frontline NHS staff working in hospitals and [healthcare](#) practices.

Following a national call for help made by the 3DCrowd UK initiative, started by a small group of makers last week with the aim of providing PPE to healthcare workers using 3-D printing, Dr. Mylon got to work by assembling an interdisciplinary team of engineers with a range of different specialisms.

The team includes experts in all stages of the manufacturing process, including 3-D printing and disinfection, so that the face shields can be quickly manufactured in bulk to help meet the needs of doctors and healthcare workers in Sheffield and throughout the Yorkshire region.

The team has developed a manufacturing process that allows them to maintain social distancing. All materials entering the building are cleaned and the completed face shields are disinfected prior to shipping.



Credit: University of Sheffield

Following their quick response, the University of Sheffield team is now the Yorkshire hub for the 3DCrowd UK initiative and will be making face shields primarily for frontline doctors and healthcare workers across the region from the University's iForge Makerspace.

The iForge—a first of its kind in the UK—is a pioneering facility run by engineering students that gives engineers at the University an opportunity to collaborate, create and make outside of their academic studies. The

space contains state-of-the-art equipment and has links with industry.

The team has set up a [Just Giving page](#) and is looking for additional support in acquiring plastics and distribution.

Dr. Mylon, project lead and founder of the iForge from the University's Department of Mechanical Engineering, said: "Doctors, nurses and other healthcare workers across the country are in need of PPE. Many staff are anxious about not having the right equipment and potentially exposing themselves to infection. I knew we could do something to help with the fantastic facilities we have at the University of Sheffield. Our multidisciplinary team is able to cover the complete manufacturing process for our face shields."

Dr. Sam Pashneh-Tala, an expert in bioengineering from the University of Sheffield's Department of Materials Science and Engineering, who is also involved in the project, added: "The University of Sheffield has a wide range of manufacturing equipment and, crucially, the expertise needed to use it. Our skills in design and manufacture have allowed us to respond quickly and scale up the manufacturing of PPE for use by [healthcare workers](#)."

More information: To support the University of Sheffield engineers in making PPE for frontline NHS workers, visit:

<https://www.justgiving.com/campaign/iforge-face-shields>

Provided by University of Sheffield

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