

HEALTHCARE-ACADEMIA INNOVATION COLLABORATION

JOHANNA LOOSER

Aim: Create a set of substrate holding accessories compatible with the new physical vapour deposition (PVD) nano-coating machine purchased by the medical nanotechnology department at the University of the Highlands and Islands

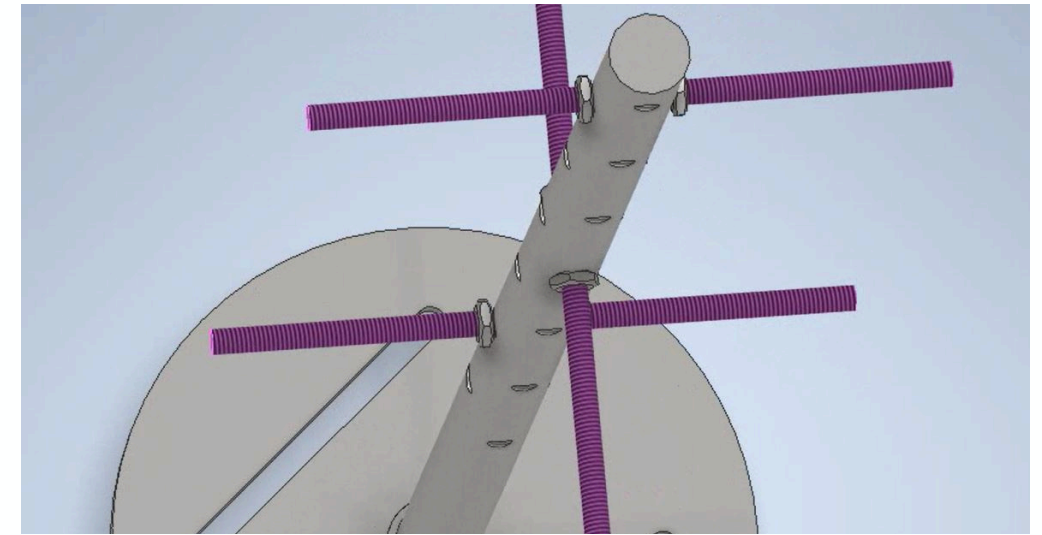
DEFINE

Understand the PVD technique and define requirement specifications. This includes material properties, shape, strength, and usability



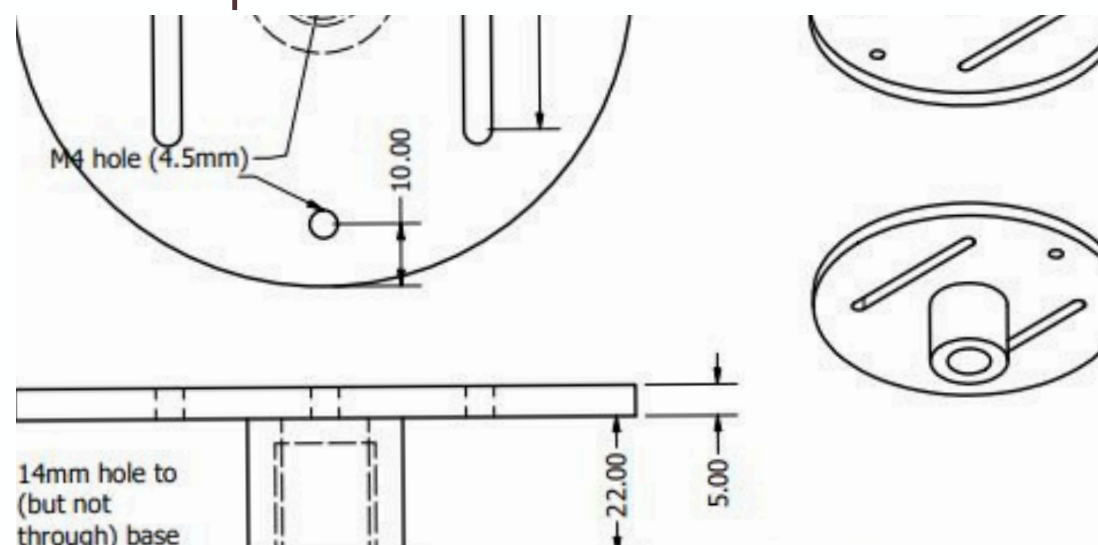
DESIGN

Create designs using CAD software and 3D print prototype models, comparing and improving design features



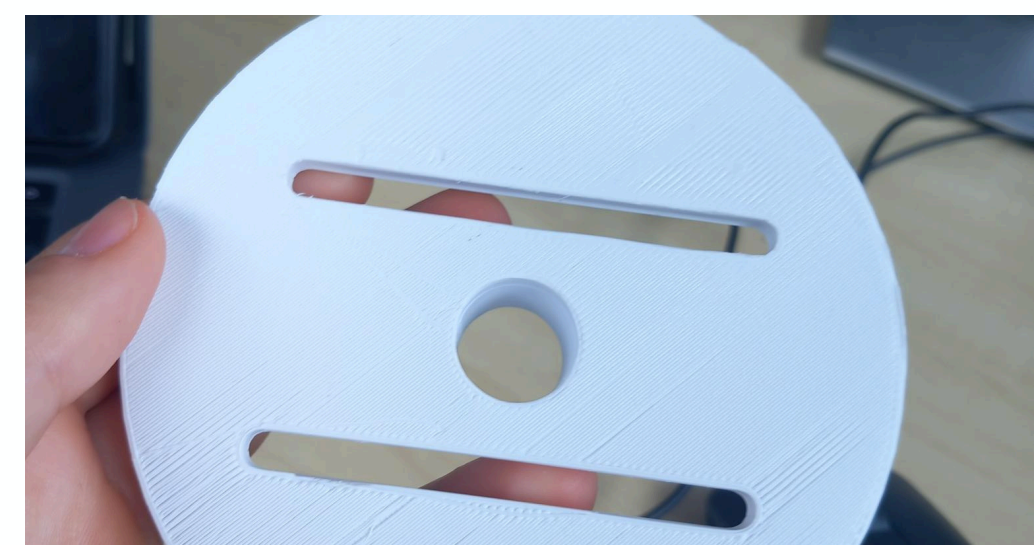
FABRICATE

Work with technicians to fabricate parts based on technical drawings, using a variety of machining techniques



TEST

Perform validation and verification to ensure the parts meet the requirements specified



This collaboration utilises the skills, expertise, and facilities of the Clinical Engineering team at NHS Highland to enable the researchers at UHI to effectively utilise cutting edge technology and contribute to research and development that will be relevant in a healthcare setting.

NHS
Highland
na Gàidhealtachd

UHI

University of the
Highlands and Islands
Oilthigh na Gàidhealtachd
agus nan Eilean

UHI plans to use this device in upcoming NHS research collaborations including coating high traffic contact surfaces, such as door handles, in copper based antimicrobial coating to reduce hospital transmitted infections. This research aims to improve overall patient, staff, and visitor health and safety