

3D Printing Airway Trainers: BME 402

Dates: April 10 - April 16, 2026

Client: Kristopher Schroeder, MD

Advisor: Dr. Paul Campagnola

Team:

Matt Sheridan (Communicator)

Dan Altschuler (Team Leader)

Cody Kryzer (BPAG)

Lance Johnson (BSAC)

Elleana Thom (BWIG)

Problem Statement

Airway management is an integral part of keeping a patient stable in many medical environments. While training medical practitioners with simple airway trainers has improved patient outcomes, this has not had the same effect on patients with abnormal airways. The use of 3D printing from existing patient imaging to create realistic and individualized airway manikins would assist medical professionals, allowing them to practice airway management skills on lifelike models.

Brief Status Update

The team met to finish up the design for the base piece where all the pieces of the manikin attach. This will be used next Monday with our client to perform qualitative testing.

Weekly Goals and Accomplishments

- Matt Sheridan
 - Worked on the base 3D modeling
 - Got prints ready
- Dan Altschuler
 - Finalize 3D prints
 - Wrote outreach
- Cody Kryzer
 - Printed the face and jaw with Dan
 - Met with team to work on the base
- Lance Johnson
 - Made more slides for the airway
 - Helped make the base
- Elle Thom
 - Worked on manikin head
 - Met with team to work on base

Upcoming Goals

- Team
 - Meet with the client for testing. Make a poster for the final presentation. Conduct further testing.
- Matt Sheridan
 - Meet with client for testing
 - Make the manikin
- Dan Altschuler
 - Go to the meeting with our client for testing
 - Fabricate the manikin
- Cody Kryzer
 - Work on base of manikin
 - Create tumors that can be adjustable
- Lance Johnson
 - Create a mechanism for tumors to be adjustable for difficulty
 - Start fabricating base of manikin
- Elle Thom
 - Fabricate manikin base
 - Meet with client for testing