

3D Printing Airway Trainers: BME 402

Dates: April 3 - April 9, 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 worked on the executive summary and met to work on the silicone mold

Weekly Goals and Accomplishments

- Matt Sheridan
 - Worked on executive summary
 - Met with team to make the airway silicone mold
- Dan Altschuler
 - Worked on executive summary
 - Scaled and reprinted the facial features
- Cody Kryzer
 - Casted mold for new airway
- Lance Johnson
 - Worked on executive summary
 - The team met to make the silicone mold of airway
- Elle Thom
 - Worked on the silicone mold of airway with the team
 - Worked on executive summary draft

Upcoming Goals

- Team
 - Work on fabricating the base of the manikin

- Matt Sheridan
 - Work on base of manikin
 - Add in tumors
- Dan Altschuler
 - Continue working on testing
 - Complete the base
- 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
 - Create tumor mechanism