

3D Printing Airway Trainers: BME 402

Dates: April 17 - April 23, 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 with anesthesiologists at the hospital to conduct testing and added final touches to the final design in makerspace.

Weekly Goals and Accomplishments

- Matt Sheridan
 - Went to hospital to conduct testing
 - Finished up last final touches on the project
- Dan Altschuler
 - Testing at the hospital
 - Finished up final prototype in the makerspace
- Cody Kryzer
 - Conducted testing at the hospital
 - Visited the makerspace with the team to finalize the prototype
- Lance Johnson
 - Final touches on prototype
 - Testing at the hospital
- Elle Thom
 - Final prototype corrections in the makerspace with the team

Upcoming Goals

- Team
 - The team will present on Friday, finish up the final report and notebook, and then meet with Dr. Campagnola for a final meeting of the semester
- Matt Sheridan
 - Present
 - Finish final submissions
 - Meet for the final advisor meeting
- Dan Altschuler
 - Present on Friday
 - Finish up report and notebook
 - Meet for a final advisor meeting
- Cody Kryzer
 - Final Presentation Friday
 - Finish report and notebook
 - Set up advisor meeting
- Lance Johnson
 - Present final prototype on friday
 - Finish up the report and notebook entries with the team
 - Set up the final advisor meeting
- Elle Thom
 - Plan final advisor meeting
 - Present Friday
 - Submit report and notebooks