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IMSH™

Society for Simulation in Healthcare

JANUARY 15 - 19, 2022 | LOS ANGELES, CA

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Do you want to build a Bioskills Lab?

- Dawn Swiderski, BSN, MSN, RN, CCRN, CHSE, FOSSH
- Lisa Corcoran, BS



Atrium Health

- John Keech, MD, FACS
- Julie Hartman, DC, MS, CHSE



UNIVERSITY OF IOWA
HEALTH CARE

No conflicts of interest to disclose



Atrium Health

Do you want to build a bioskills lab?

Lisa Corcoran, Surgical Skills Lab Manager

Dawn Swiderski, AVP, Simulation Services



Atrium Health

Carolinas
Simulation
Center





Carolinas Simulation Center

Located on the Atrium Health - Carolinas Medical Center Campus

Healthcare System Focus (all levels of learners and disciplines)

- 10,000 sq feet
 - Procedural suite (task trainers, butcher products, AR/VR, FLS/FES/RFS)
 - Scenario based (ED/ICU, OR, Peds, L&D, Med/Surg)
 - Standardized Patients
 - Debrief rooms
 - Maker lab
- Accredited Center
 - American College of Surgeons Comprehensive Education Institute
 - Society for Simulation in Healthcare (Core, Assessment, Research, Teaching/Education, Systems Integration)

Carolinas Surgical Skills Center

Located in Atrium Health Mercy Hospital next to the OR

- 1,600 sq ft (6 bioskills stations)
- Learners include GME residents/fellows (orthopedics, GYN, EM including peds fellows), surgeons from a variety of specialties.
- Industry sponsored courses
- 700 learners and 1900 learner contact hours over 2020-2021 (limited due to social distancing guidelines)
- Pre-COVID annually approximately 1000 learners and 3000 learner contact hours.





A photograph of an operating room with several surgeons in blue scrubs and masks. A large screen on the wall displays a close-up of a surgical procedure. An overhead surgical light fixture is visible at the top left.

Main Types of Industry Courses

- Industry sponsored orthopedic courses
 - Spine
 - Hip
 - Knee
 - Shoulder
- New equipment | instruments
- New procedures
- Specimens and instruments provided by company

Main Types of Resident/Fellows Courses

- Orthopedic Residents | Fellows
 - Dissection for anatomy and surgical approaches
 - Monthly procedural sessions
 - Fracture reduction and fixation
 - Fluoroscopy
 - Arthroscopy
 - Arthroplasty
 - Surgical procedures
 - Intern boot camp
 - Suturing | knot tying
 - Compartment pressures
 - Casting | splinting
 - Internal/external fixation techniques
 - Spine instrumentation



Repurposed or Remodeled?

Designed for industry sponsored courses in 2009

Previous operating room

Became a part of Carolinas Simulation Center in 2012

Equipment

- Donated in-kind by industry
 - Surgical lights (8)
 - Arthroscopic towers (3)
 - Laparoscopic towers (3)
 - Instrumentation (complete specialty surgical trays)
- C-arms (3)
- Surgical instrumentation
- Industrial high-heat washer for sanitizing instruments
- Special courses require equipment and instruments to be shipped to center
- Freezer and refrigerator
- Lift for specimens
- Radiolucent tables for specimens



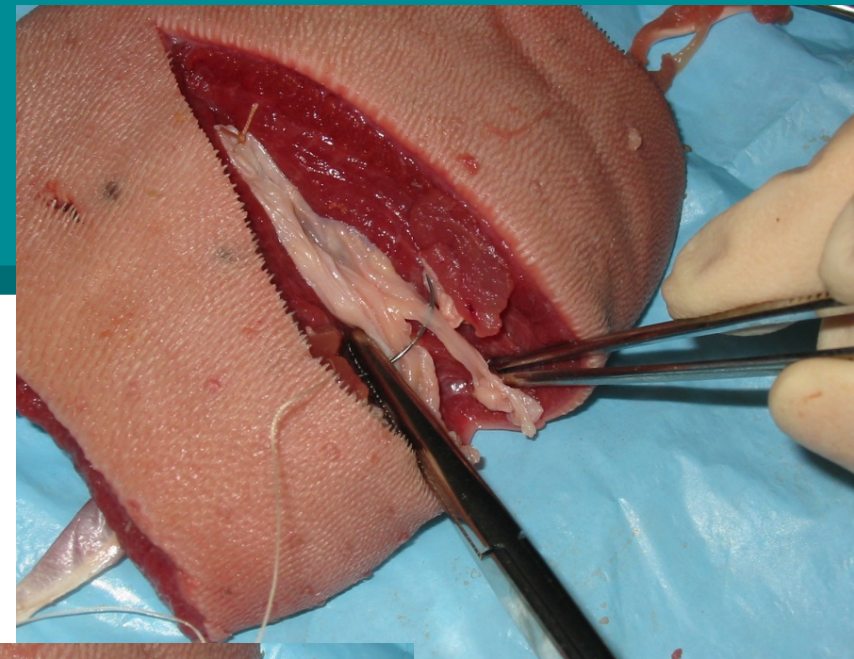
Technology

- Large monitors (3) and speakers
 - VGA, HDMI, DVI input
- Teleconferencing capabilities
- Arthroscopic VR simulator
- Auditorium (60) next door with full A/V capabilities



Tissue

- Fresh frozen from a variety of vendors
 - Full or part specimens
- Industry sponsored or GME department specific
- Repurposing of specimens for affordability (up to 3 thaw cycles)
- Occasional butcher product procedural labs
 - Cow tongue
 - Pig feet
 - Turkey legs
 - Chicken



Budget

- Return on value (ROV)
- Return on Education (ROE)
- Repurposing of specimens
 - Cost reduction strategy
- ~\$500,000
 - Revenue neutral
- FTE n=2
- Pass through cost
 - Supplies
 - Specimens
 - Catering
- Equipment



Plans for the Future

Increase courses for GME programs and other healthcare system teammates

Trauma Courses

Airway, central line, intraosseous placement, chest tubes

Capital replacement for equipment

Contact information

- Lisa.Corcoran@atriumhealth.org
- Dawn.Swiderski@atriumhealth.org



University of Iowa

Center for Procedural Skills and Simulation, Iowa City, IA

Do you want to build a Bioskills lab?

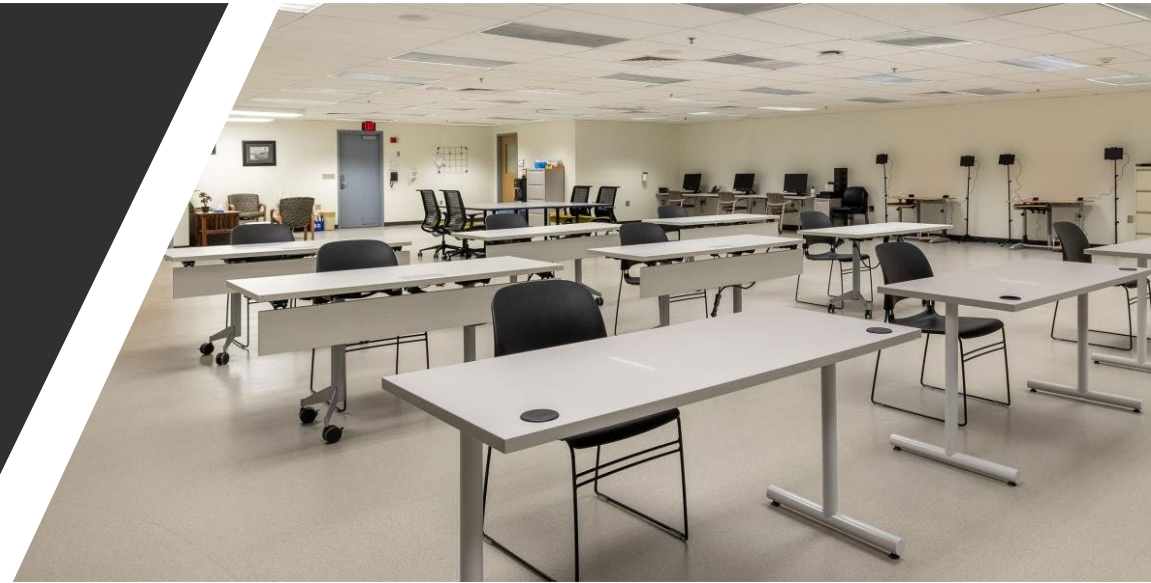
John Keech, MD, FACS, CPSS Director

Julie Hartman, DC, CHSE, CPSS Operations Manager

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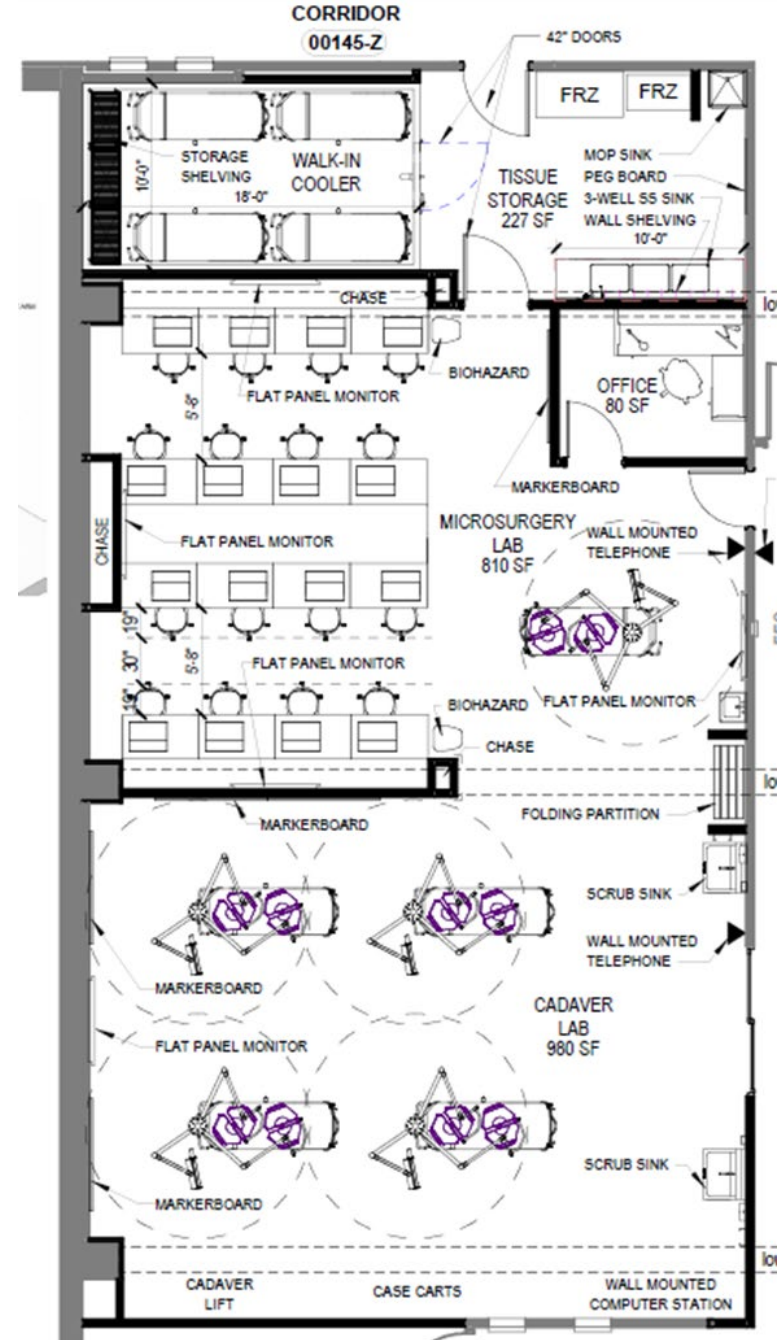
Center Demographics

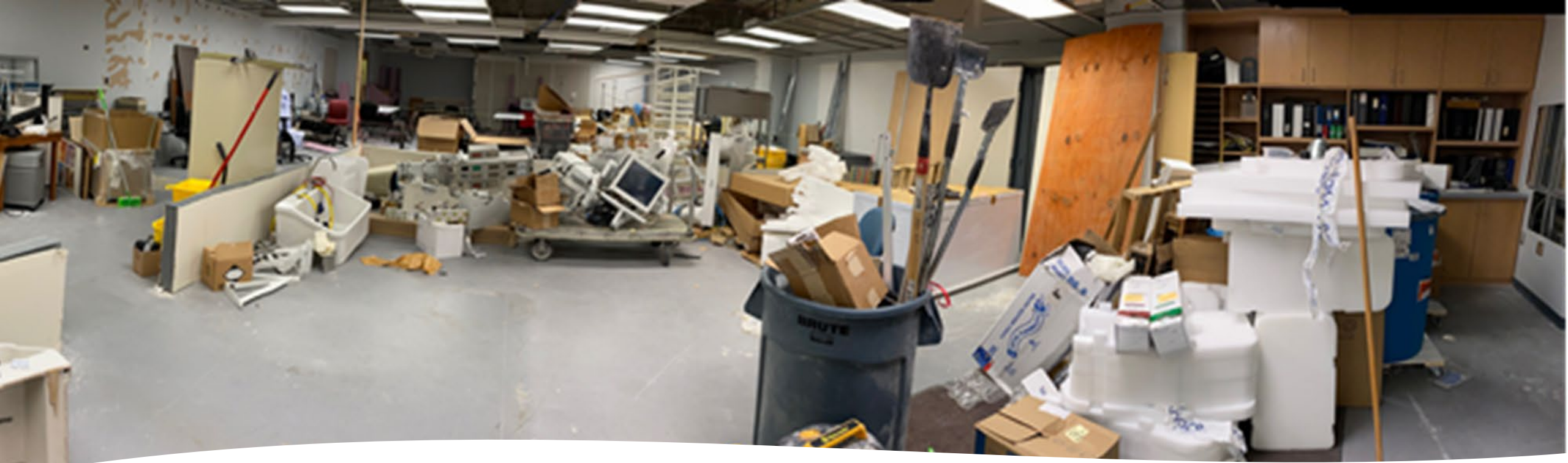
- CPSS 8,314 sq ft
- Academic Medical Center
 - Medical Students
 - Nursing
 - Residents
 - Allied Health Professionals
 - Faculty
 - General Staff



Bioskills Lab Demographics

- BioSkills Lab 2,259 sq ft
 - North Lab
 - South Lab
 - Office
 - Tissue prep
 - Walk-in cooler
- Opened in November 2021
 - 69 learners (Surgery Faculty and Residents) for 212 learner hours
- 1.0 FTE dedicated staff, 4 additional CPSS staff





Repurposed or Remodeled?

- Previous office space
- Remodeled through Capital Management process with RDG as outside architect

Equipment

North Lab

16 microscopes

Individual workstations with sinks, suction

Temporal bone drilling, suturing, small procedures



South Lab

Open floor plan with OR booms

Donated OR tables and equipment

Full cadaver labs, OR teamwork simulations, skills lab sessions



Technology

- North Lab
 - Video cameras integrated into microscopes that feed to wall monitors
- South Lab
 - Video cameras integrated into boom lights
- Both
 - Conference room capabilities
 - Education platform recording
 - CAE simulation recording
 - Mobile video recording



Tissues

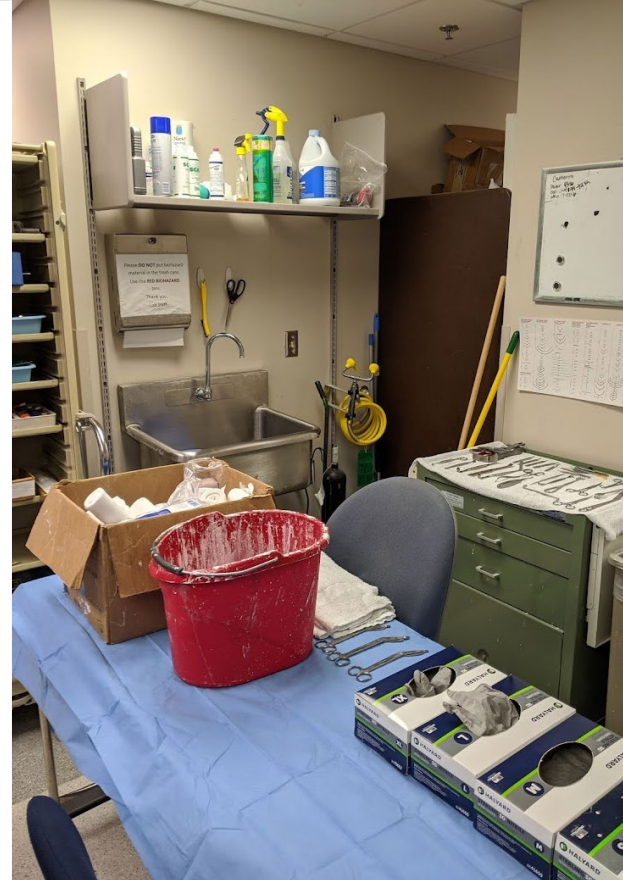
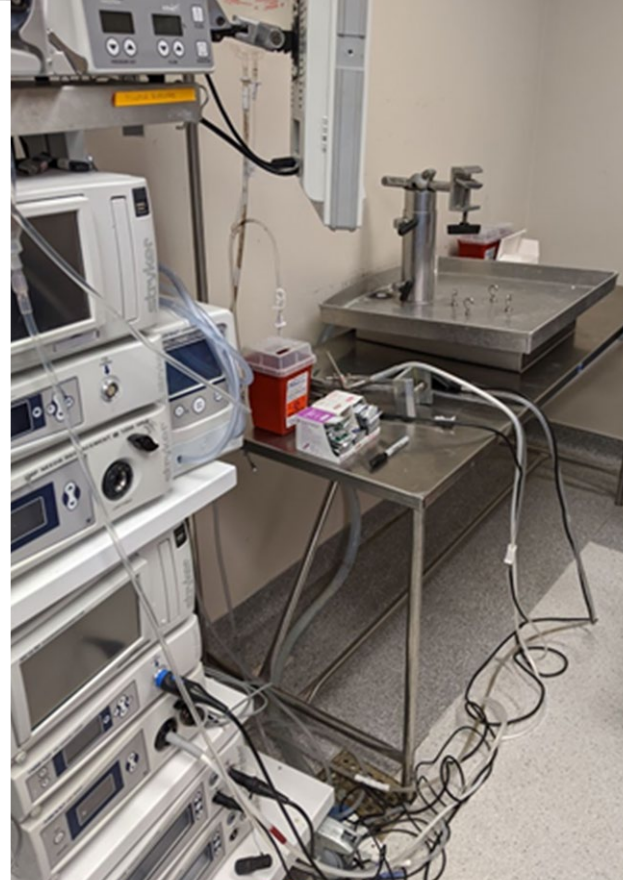
- Animal parts
 - Grocery store/butcher
 - Laboratory tissue supply
- Cadaver tissues
 - Partnership with UI Deeded Bodies Program
 - Full body
 - Specific anatomical structures



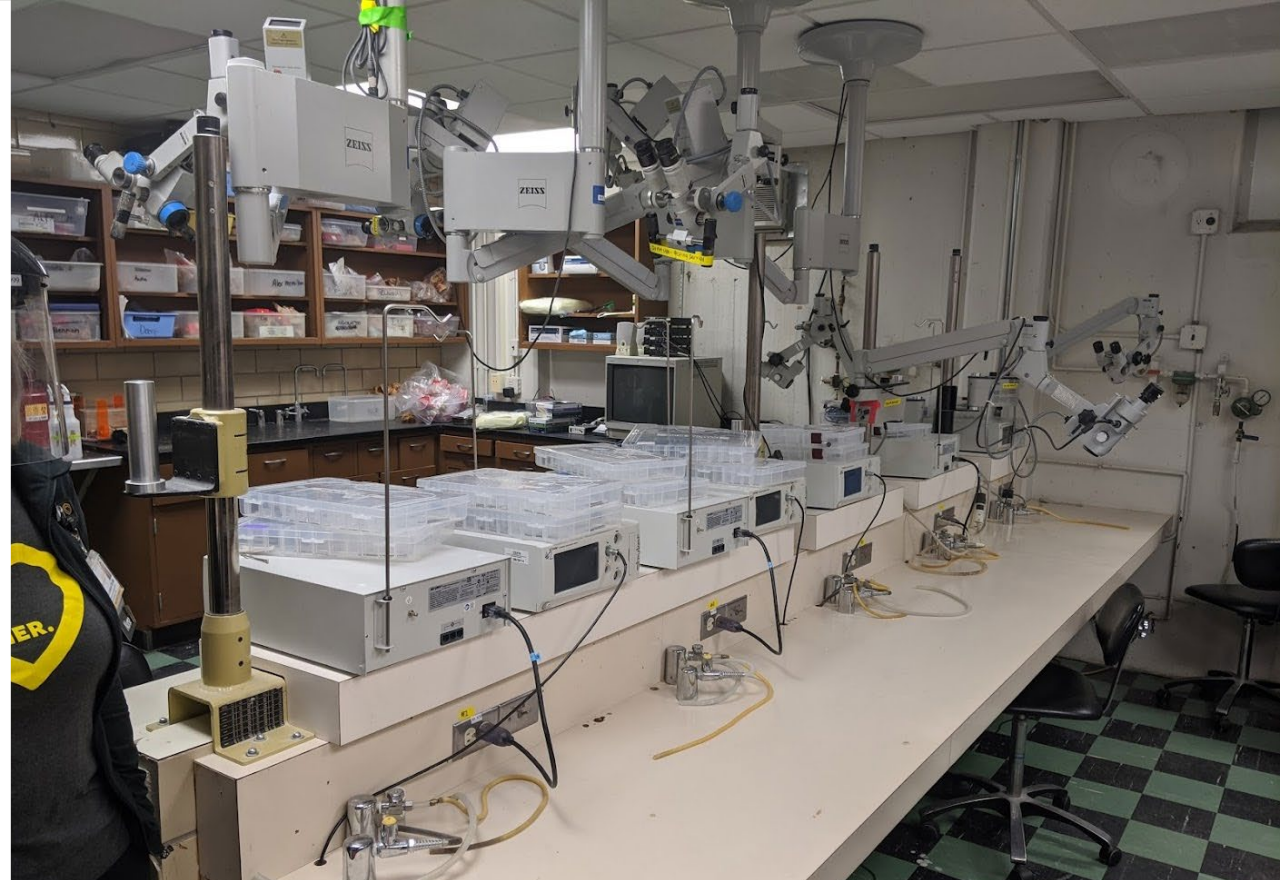


Budget

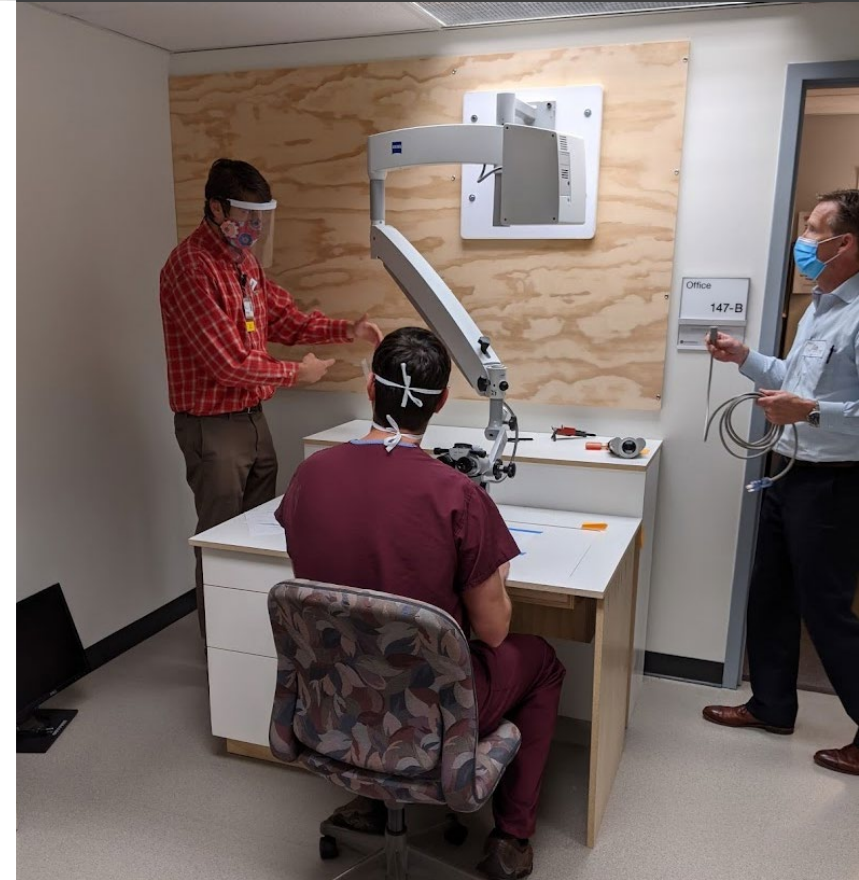
- CPSS budget supported by Chief Medical Officer
- Free resource to UIHC learners
- Fee schedule for industry-sponsored events
- \$1.9 million construction budget



Orthopedics original lab



Otolaryngology original lab



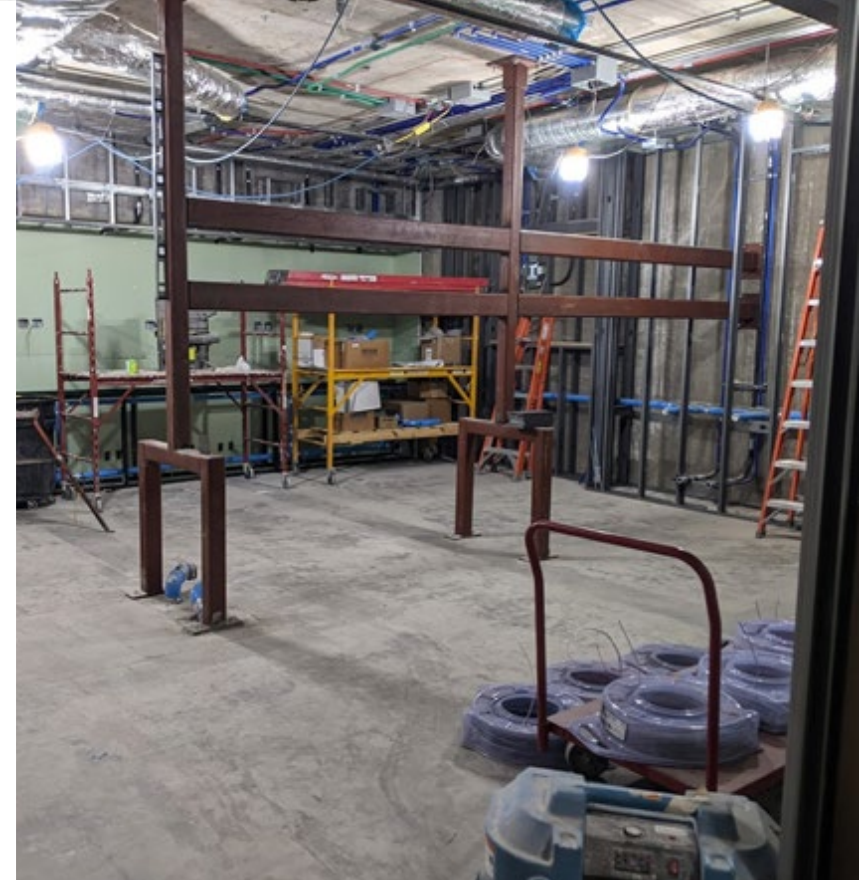
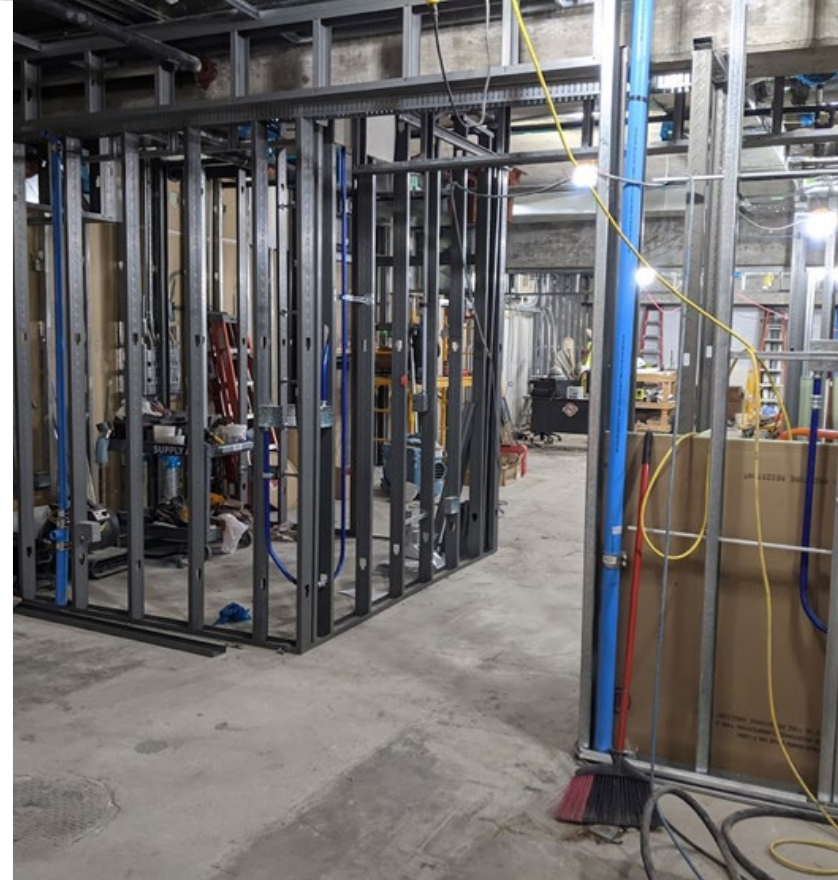
Mock-up microscope station



How it started



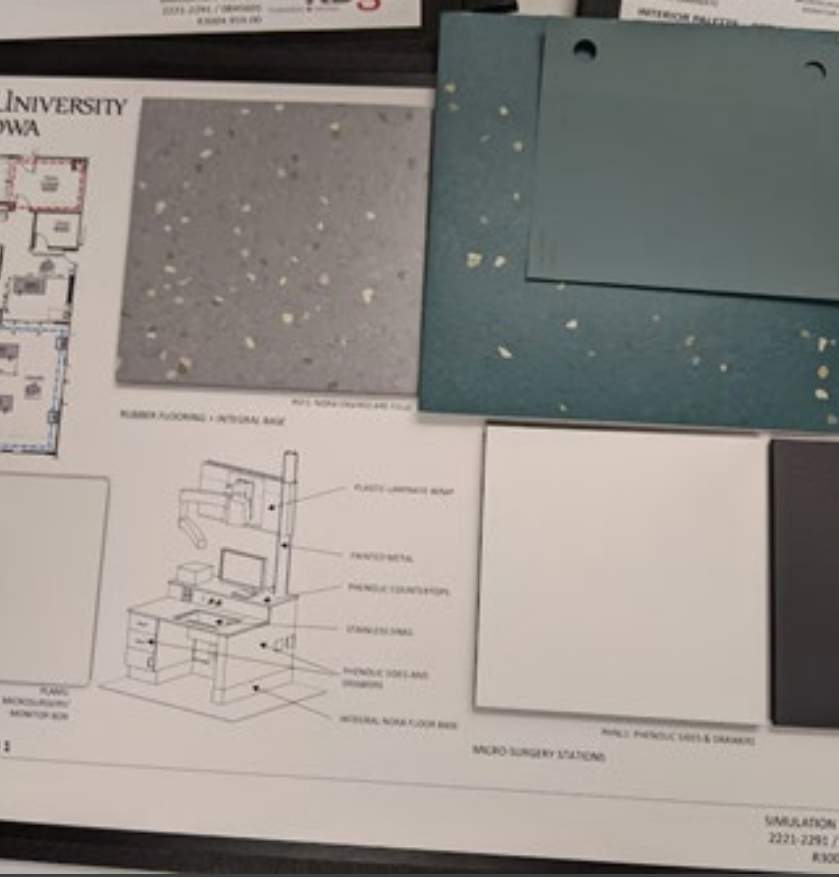
February 2021



March 2021



April/May 2021



June 2021



July 2021



August 2021



September 2021



October 2021



Grand Opening November 1, 2021

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uihc.org/cpss