

Nursing Students Prepare for the Future with Virtual Reality

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Using virtual reality headsets, nursing students practice clinical skills in the health assessment lab.

[Watch the video on Utah State Today](#)

Nursing students are now able to practice clinical skills in virtual reality thanks to a new VR unit created in collaboration with the Teaching and Learning Technologies (TLT) Office.

Housed within the Office of the Executive Vice President, TLT is charged with educational innovation and creates technology tools for faculty and students. While nursing faculty and the TLT team were discussing the potential of creating a virtual system to help students gain experience filling out patient charts, TLT director Kevin Reeve brought up a virtual reality learning tool that his team had been developing. Nursing clinical/simulation coordinator LoraLynn Allen immediately saw the potential.

The Nursing suite in the Sorenson Center for Clinical Excellence features several state-of-the-art high-fidelity manikins that can be used to simulate different medical scenarios, as well as other models and tools to help students learn skills like placing IVs and giving injections. But with the incredibly broad variety of skills that nursing students must develop to work in the fast-paced healthcare field, Allen was eager to explore new ways for students to learn and practice.

"Within nursing, we do a lot in our simulation lab, and we try to create a much realism as possible," said Allen. "Aside from the skills that we really need to practice hands-on with a person, a lot of what we're practicing is

recognition and muscle memory. We dove in and felt like we could do something with VR."

With the help of TLT programmers Andrew Martin and Ludovic Attiogbe, the new VR unit was developed for the health assessment course lab, in which students learn to assess different body systems when working with patients. Using one of six Oculus Meta Quest headsets and two hand controllers that allow them to intuitively interact with their virtual environment, students complete an electrocardiogram by placing 12 leads on a patient to measure and assess their heart rhythm.



The new VR unit allows students to practice clinical skills on a virtual patient.

According to Allen, performing an electrocardiogram is a valuable learning experience for nursing students, but the Nursing department doesn't have a training setup for that specific skill. The VR setup provides an effective way for students to gain "hands-on" experience with the task, and it also integrates directly with learning management system Canvas, making it easier for faculty to review student work and give feedback.

The program's first run took place in February and was a huge success. "The students loved it," said Allen. "One student walked in and said, 'This is great – I get to play video games during class.' They felt like it was a really great learning experience."

Martin, who has been working on the VR tool since the end of August along with his team, said that it was rewarding watching students interact with the program after six months of development. "It's fun to see it come to fruition and see that the students seemed to enjoy it," he said. "We're excited to work on more tools like this."

Allen is also excited by the potential of expanding the VR options for the Nursing program. Compared to some of the other simulation tools, the headsets are simple to set up, and Allen feels that the inherently engaging nature of VR will motivate students to run simulations multiple times to see the different scenarios. "It creates a lot of equality in the things students can experience," Allen said. "They all

get clinical experiences as part of the program, but one student might see a patient with a heart attack and another might see a patient with a stomach issue in the same unit. I think they're going to want to seek out this experience, to go put on a headset and practice. They're excited to be part of something so innovative."

Martin is hopeful that the Nursing program's success will spark other programs' interest in incorporating VR learning tools into their curriculum. "This is the first VR program that's come from our team," he said. "We're hoping that this will show other faculty that they can start thinking of ideas that they can use, that they have the option to have this in their classrooms."

Learn more about the [USU Nursing program](#) or [Teaching and Learning Technologies](#).