iEXCEL^{SM} Visualization Hub: Technology Overview

The iEXCEL Visualization Hub, located in the Michael F. Sorrell Center for Health Science Education, is equipped with 2D/3D, virtual and augmented reality technologies. Early acquisition of these technologies helps educators, learners and researchers begin the journey into visualization and prepares them for the opportunities available when the Global Center opens in the fall of 2018.

Interactive Digital iWall – a 2D curved interactive iWall that consists of 12 touch screens. This experiential tool enables new ways of thinking and allows users to present content in real time, transforming collaboration and communication.

3D CADWall – an interactive and collaborative, multi-channel 3D high-resolution display wall. Research and development, learning and education are enhanced with this 3D virtual immersive reality environment. Users are able to "fly through" high-definition images of the human body, virtually manipulate cells and organs, and/or learn new skills.

iBench – an intuitive stereoscopic 3D system that is responsive to user's movements and actions. The iBench enables easy, fast and reliable interactions with realistic 3D virtual objects and environments.

iMirror – an innovative augmented reality and gesture input-based solution for experiential learning. Users can see how internal organs function superimposed on their own body or learn via a gesture-based 'game' to further engagement.

HoloLens – a self-contained computer enabling interaction with high-definition holograms. Users are able to manipulate holograms with gestures, communicate with apps using their voice and navigate with a glance. This form of mixed reality allows users to interact with both digital content and the physical world around them by giving holograms real-world context and scale.

Head-Mounted Displays (HMDs) – a 3D head-mounted augmented reality display with 360° capabilities that opens up a new world of possibilities for students, faculty and health care professionals. These HMDs allow users to visualize challenging concepts, for instance, users could view and manipulate complex compounds and molecules in microscopic detail when learning biochemistry.