

iEXCEL[™] Program in the Davis Global Center

Global leadership in transforming human performance and effectiveness in health care



iEXCEL is distinguishing Nebraska with a transformative model for health care education, training and research. This model is built around, and incorporates a wide range of modeling, simulation and visualization technologies set in safe, simulated settings that prepare health care professionals to provide the highest quality of patient care.

iEXCEL aims to:

- · Improve patient outcomes by reducing medical errors and improving the safety and quality of health care
- Create an educational model for the health professions that serves a new generation
 of digital learners
- Address health care provider and visualization technologist shortages by offering specialized and advanced training courses
- · Stimulate unique workforce and economic development opportunities for Nebraska
- · Drive global innovation, commercialization and tech transfer opportunities

The Dr. Edwin G. & Dorothy Balbach Davis Global Center (Davis Global Center) serves as the headquarters for iEXCEL. This multi-level, 192,000 gsf clinical simulation facility became fully operational in 2020 on the University of Nebraska Medical Center campus in Omaha, Nebraska. The Global Center for Health Security is also located within the Davis Global Center, thus sharing simulation and visualization and data capture assets and staff expertise.

The Davis Global Center serves as the hub for a statewide network of interconnected simulation centers. These conjoined centers will promote experiential training opportunities and stimulate new and unique research endeavors made possible by the availability of advanced modeling, simulation and visualization technologies. Collectively, these technologies will accelerate the development of a transformational model for individuals and interdisciplinary teams, at all levels of training and re-training.

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health care professionals to practice skills and team work by using high-fidelity, life-like simulators and real-world clinical equipment. Replicated clinical spaces reflect a wide range of specialties including labor and delivery, emergency medicine, trauma, imaging, physical and occupational therapies, and pediatric and intensive care. Task and advanced skills trainers are used to learn and practice clinical procedures.

Fosters collaboration among

Interdisciplinary training and research for confronting biological threats from infectious diseases, including Ebola. Supported by the U.S. Department of Health and Human Services, this specialized training unit prepares and equips federal teams and local, national and global health care providers with the skills necessary to respond to highly infectious diseases. Inspires creativity and innovation in education, training and research by adopting the latest visualization technologies including 3D immersive environments, augmented and virtual reality (AR/VR), interactive 2D tools and holography. These technologies help learners and researchers visualize difficult concepts as well as encourage the discovery of unprecedented solutions to learning and health care challenges.

Provides opportunities for learners to enhance basic and advanced surgical skills through recreated life-like environments with booms, lights and monitors. Learners also practice procedural skills using fresh cadaveric tissue and surgical equipment.

iEXCEL and the Davis Global Center:

- Contribute to the Nebraska workforce and economic development.
- Create well-paying jobs and generate a projected \$39.3 million annually in economic impact for Nebraska. (Tripp Umbach, 2016)
- Attract new business and industry to Nebraska.
- Offer specialized training opportunities in simulation technology, 3D and augmented/virtual reality (AR/ VR) content development.
- Collaborate with industry and the community to provide new reasearch and development opportunities for faculty and learners.
- Result in new and relevant learning methods, including 3D and AR/VR content, clinical and surgical training modules, and research and development opportunities.
- Provide ongoing training and develop new health care processes and products in partnership with Nebraska Medicine to benefit health care professionals and improve patient outcomes.
- Ensure proficiency in training, education and practice, meeting the needs of learners of all levels of training.



 Dedicated to rural outreach using advanced collaboration technologies and simulation mobile units.

unmc.edu/iexcel

