THE HEALTH INNOVATION CENTER

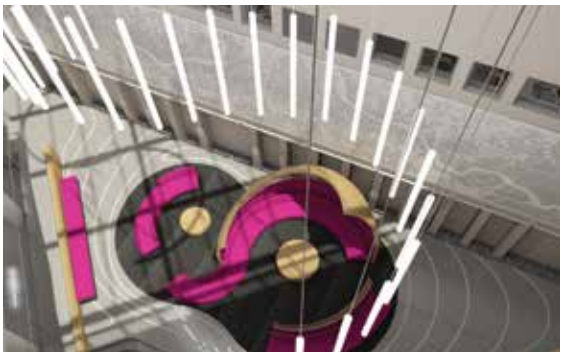
AT NORTHERN KENTUCKY UNIVERSITY

NKU NORTHERN KENTUCKY UNIVERSITY

NORTHERN KENTUCKY UNIVERSITY IS INCREASING ITS IMPACT

More than 2,000 dedicated faculty and staff serve approximately 14,000 students each year. With more than 70 different degrees, 17 Division-I sports, online programs, graduate programs and more than 200 student organizations and clubs, NKU is poised to continue its development.

The past few years have seen many exciting changes for the university, including the addition of Griffin Hall (home of the College of Informatics), the expansion of the Campus Recreation Center and the groundbreaking of the Health Innovation Center, which is scheduled to open in 2018. As we approach our 50th anniversary in March 2018, we can't wait to see what the future holds.



THE HEALTH INNOVATION CENTER

Why Now?
NKU's Center for Economic Analysis and Development estimates a growing gap between available regional health care positions and local, qualified graduates. Over the next five years, experts are predicting more than 50,000 new health care jobs in our region alone. There is strong student interest in the health sciences. But, year after year, our campus is turning away qualified health science applicants because we simply don't have the room.

Utilizing the Health Innovation Center, NKU will train students to meet the regional and statewide health care workforce needs, and transform the field of health sciences in higher education.

How is the Health Innovation Center Different?
In an increasingly technological and collaborative world, the Center will transform how we educate students in the health sciences. The Center will be:

- **Interprofessional**: In hospitals and research labs across the country, employees from all educational backgrounds work in tandem. The best way to prepare students for the future is to foster similar interprofessional experiences in their educational career. The Center is designed intentionally with space that encourages collaboration for all six university colleges by offering classes with mixed disciplines.

- **Technology-Centered**: Technology is used to simulate real-world health care experiences such as an emergency room visit. In one lab students can interact with an electronic medical mannequin controlled by professors to mirror a situation encountered in an ER. The students' responses can be recorded to allow for 360-degree feedback.

- **A Model for Experiential Learning**: Students practice various nursing and medical assistant techniques using hospital and medical center equipment. Opportunities range from giving injections to helping a patient relearn self-care.

- **Research Focused**: Labs are designed for faculty and student neuroscience research, including crucial Alzheimer's and addiction research.

The Health Innovation Center will transform regional health care. To ensure the Center's success, we have designed three main types of spaces within this state-of-the-art facility: space for learning, space for collaboration and space for practice.

Space for Learning
The spaces for learning are designed for 21st century active learning with movable tables and chairs to work alone or in teams. The idea behind the learning spaces is to disrupt traditional lecture style classes. Students can listen to online lectures at home and then spend class working together to solve problems. The spaces for learning include state-of-the-art monitors and projection ability providing a top-tier learning environment.

Examples of the spaces for learning include:

- **Learning Studio:** One room consisting of two adjacent 60-person active learning classrooms that can become one room.

- **Large Classroom:** This single 66-person classroom features projection surfaces on multiple walls for small group work, access to flat-panel screens and wireless collaboration software, and rectangular tables that allow for easy collaboration.

- **"Egg" Classrooms:** The HIC will include two (2) 35-person oval configured classrooms enclosed in glass, which will be a prominent feature of the third and fourth floors.

- **Student Classrooms:** Students from the College of Arts & Sciences and the College of Health Professions will regularly meet for classes in flexible state-of-the-art classrooms throughout the HIC.

"In health care, the model is an integrated team and these walls between disciplines have been dissolving. Our patients do not come to us needing care from one discipline. They come to us with complex disease processes requiring an integration of multiple disciplines. Frequently, in education we become siloed and we teach and research without knowing what else is going on around us. This isolation makes us less effective. It does not afford us the opportunity to see problems in the context of the big picture, which means our solutions are small. These small solutions do not address the problem in its entirety and thus the problem continues to persist. We have to be able to see how things are interconnected and the Health Innovation Center will allow us to do that."

Francoise Knox-Kazimierczuk PhD, RD CSSD, LD, ATC, CSCS
Department of Allied Health

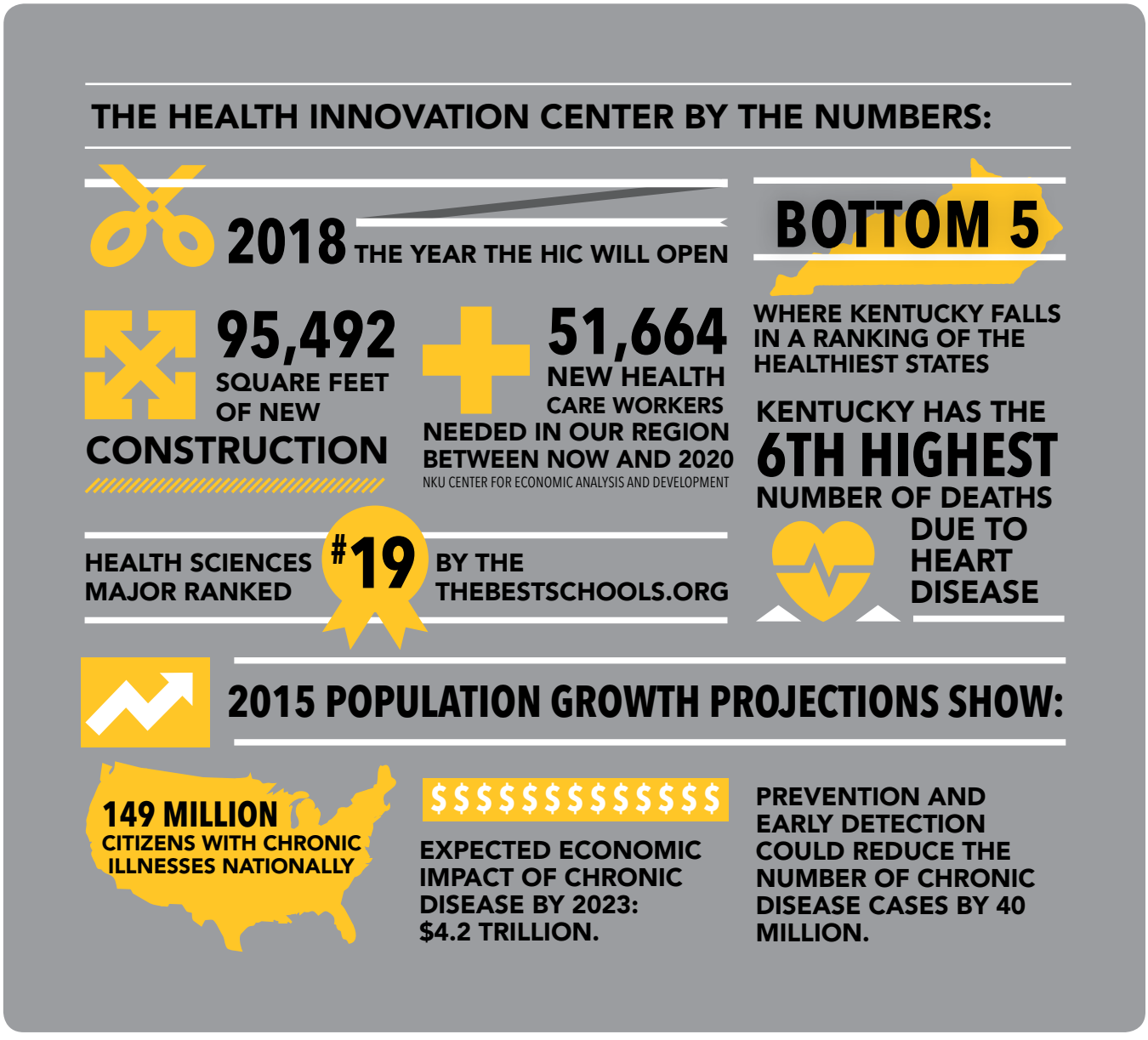
"The Health Innovation Center gives faculty the ability to realize their full potential in the area of experiential learning. I can now offer laboratory coursework to more students in facilities that are intended to support learning in neuroscience. These labs will offer more students unique, hands-on experiences that distinguish them upon graduation to employers and graduate schools alike. The equipment and the infrastructure will be at the forefront of teaching, and it will enable our students to investigate the brain and behavior in ways unparalleled by other universities in the area."

Mark Bardgett, Ph.D
Department of Psychological Science

Space for Collaboration

The spaces for collaboration are intentionally designed spaces for students and faculty to use for group meetings, community engagement events, or just as a place to relax after a day of classes. These spaces facilitate innovation and learning as students from multiple disciplines work together in teams.

An example of this type of space are the Group Study Rooms, which are equipped with flat-panel screens and writable walls to seat 6-8 students. These rooms are located next to classrooms throughout the HIC.



Space for Practice
With technology and thoughtfully designed space, we can simulate real-life health care situations like interviewing a patient, reading an X-ray or administering an injection. The building will be home to the St. Elizabeth Healthcare Simulation Center, featuring six simulation rooms that include an operating room and intensive care unit. Well prepared nurses, respiratory therapists and radiological technologists are critical in emergency situations. The spaces for practice, as described below, allow for exploration and learning in a safe environment.

- **Neuroscience and Biopsychology Teaching Labs:** These two 24-student labs are state-of-the-art teaching labs configured in adaptable and flexible "pods."

- **Radiology Suite:** This suite consists of six labs, including a state-of-the-art operating room. Equipment includes small and large computer radiography, small and large digital radiology and advanced imaging.

- **Innovation Lab:** This lab is the building's "maker space"—a place designed for people to invent, learn and create. This space gives students access to state-of-the-art technology such as 3D printers, laser cutters and a milling machine to precisely cut objects.

- **Neuroscience Research Lab:** This lab accommodates six faculty researchers and 12–15 student and post-doctoral researchers. It includes a histology lab and a tissue culture lab to study human tissue and identify treatment options based on diagnosis.

- **Nursing Skills Labs:** These two areas combine the atmosphere of a hospital environment with sophisticated learning technology instrumental for student success. The "patients" are recipients of a variety of nursing interventions, including body repositioning, injections, intravenous catheters, feeding tubes, wound care and oxygenation therapy.

- **Health Assessment Lab:** This area allows students to learn and practice assessment and interview techniques.

- **Functional Living Lab:** This lab simulates a home-health environment with a kitchen, living area, bed and bathroom. Students can practice working with patients on activities of daily living and professors monitor students from an observation room.

- **Respiratory Lab:** This lab includes exam tables and the equipment needed to train students to provide respiratory care in hospital, home and surgery settings.

- **Movement Studio:** This studio will be the largest one on the NKU campus. It will be used by dance classes and for creative and dance therapy courses. Dance therapy has been used to successfully help individuals suffering from depression, schizophrenia and cancer.

- **Kinesiology Studio:** This space will be used for advanced human performance analysis and testing, instruction and research. It will be equipped with a high-performance treadmill, metabolic cart, a "Bod Pod" to measure body fat and lean body mass, a bone density instrument to determine osteoporosis risk and force plate to measure gait and running patterns for athletes.

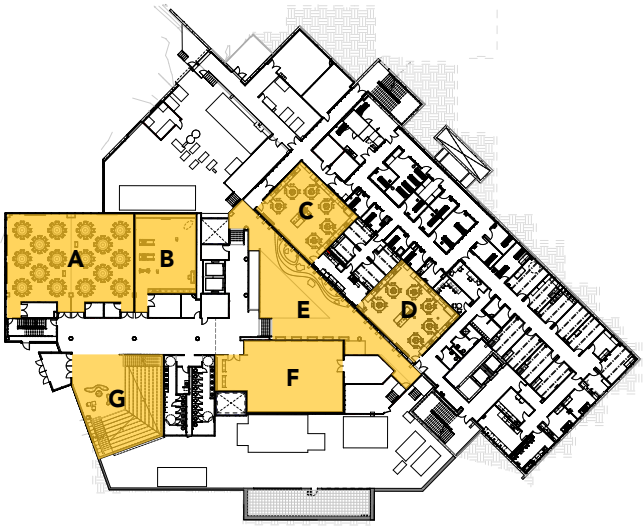
"The kinesiology space gives students a better understanding of the role of physical activity in preventing disease, rehabilitating injuries and improving fitness. Investing in equipment that matches top-tier clinical and research sites trains students to perform advanced assessments they will encounter in hospitals and clinics. This type of training is simply not possible with our current equipment. The spaces for practice provide hands-on training to our students, allowing multiple opportunities for students to practice and repeat procedures, learning at their own pace in a safe and controlled environment."

Cory Scheadler, Ph.D
Department of Kinesiology and Health

HIC FLOOR PLANS

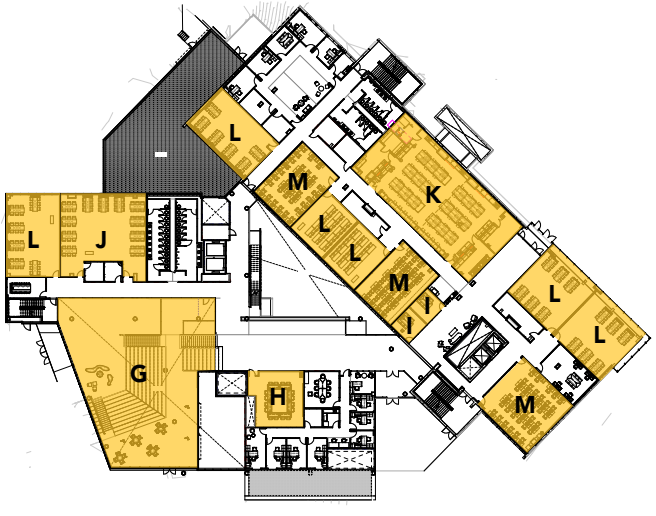
Floor One

- A. LEARNING STUDIO
- B. KINESIOLOGY STUDIO
- C. NEUROSCIENCE TEACHING LAB
- D. BIOPSYCHOLOGY TEACHING LAB
- E. ATRIUM
- F. MOVEMENT STUDIO
- G. THE COMMONS



Floor Two

- H. VISUALIZATION WALL
- I. GROUP STUDY ROOMS
- J. LARGE CLASSROOM
- K. NEUROSCIENCE RESEARCH LAB
- L. STUDENT CLASSROOMS



Floor Three

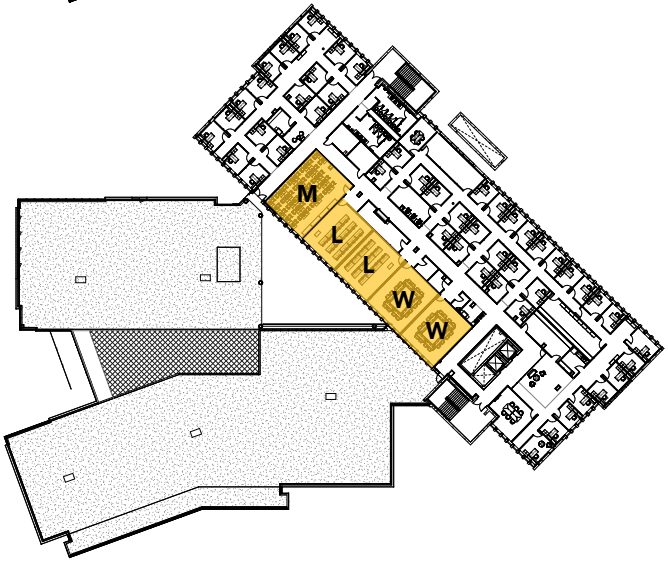
- M. COMPUTER LABS
- N. "EGG" CLASSROOMS
- O. HEALTH ASSESSMENT LAB
- P. INNOVATION LAB
- Q. NURSING SKILLS LABS
- R. STANDARDIZED PATIENT SUITE
- S. FUNCTIONAL LIVING LAB

Floor Four

T. RADIOLOGY SUITE
U. COHP DEAN'S SUITE
V. RESPIRATORY LAB

Floor Five

W. PROBLEM BASED LEARNING ROOMS



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