

Master's Concentration in Healthcare Engineering and Patient Safety (HEPS)

One of the most critical challenges faced by our society is the need for effective, affordable, and accessible healthcare. Industrial engineers can play a high-impact role in achieving this through taking a systems-based approach to manage healthcare delivery. For IOE master's students who plan to use their degree to work in the healthcare industry, the University of Michigan Center for Healthcare Engineering and Patient Safety (CHEPS) offers a concentration that will uniquely position students for success.



Visiting the University of Michigan Clinical Simulation Center

Group work during a Root Cause Analysis (RCA) training event led by CHEPS Director James Bagian and Program Manager Joseph DeRosier



Students with President Dr. Mark S. Schlissel after presenting to the President's Advisory Group

I was actively thinking about what problems I wanted to be looking at and healthcare was what drove, what motivated me. So HEPS was the opportunity to do IOE and look at healthcare in a setting that I knew was really positive. I was very excited when I was looking at the curriculum because I was like, 'Wait. All of these classes seem so cool.' These are the classes I want to take, like the fact that I can take epidemiology next to my engineering classes is great. And really it's just the opportunity to work at CHEPS. I've worked in other research labs and this one is very different. This is like a community. It's very student-centered and learning-centric.
- Hannah Strat, HEPS Class of 2019

The HEPS concentration is a three semester program with its own requirements that is conducted while simultaneously fulfilling the IOE masters requirements. Students in the concentration:

- Work closely with other HEPS students as well as students of medicine, nursing, and public health; faculty members; clinicians; and healthcare industry mentors
- Attend monthly dinners for socializing, networking, and learning about important topics in the healthcare industry
- Complete a year-long project solving a real-world problem within a multi-disciplinary team of engineering and healthcare students and faculty
- Have opportunities to tour healthcare facilities and to shadow physicians and other practitioners within hospital and other clinical settings
- Get customized guidance from a faculty advisor to help select courses and shape their program

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