Content
Students specializing in health systems are expected to develop skill in analysis of critical issues in health care, including, health promotion and disease prevention, health care delivery systems including long term care, quality improvement and management, health care technology, and program and systems evaluation. The qualifying examination in health systems assesses students’ skills and knowledge in the design, measurement and modeling of health care systems the evaluation of health care programs, and the application of technology and information systems to health care.

Format
Closed book four-hour written exam completing one question in each of the following areas:
   1. Foundations of health systems engineering
   2. Decision making and modeling in health care
   3. Healthcare information systems
   4. Health care program evaluation and performance evaluation

Recommended readings
Austin, C. Health information systems. Ann Arbor, MI: Health administration press.


Willam W. Stead and Herbert S. Lin, editors, Committee on Engaging the Computer Science Research Community in Health Care Informatics (2009), Computational Technology for Effective Health Care: Immediate Steps and Strategic Directions. Washington, DC: National Research Council of the National Academies.

IOM reports (Washington, DC: National Academy Press)
   Improving the quality in long term care (2001)
   Assessing medical technologies
   To err is human
   Crossing the quality chasm
   Building a better delivery systems: An Engineering-health care partnership (joint with NAE)

**Recommended courses**
ISyE 417 Health Systems Engineering
ISyE 610 Design of Program Evaluation Systems
ISyE 617 Health Information Systems
ISyE 691 Decision Making in Health Care

**Faculty**
Oguzhan Alagoz (coordinator)
Patricia Flatley Brennan
David Zimmerman