**Healthcare Systems Engineering Co-op**

HSyE is seeking industrial engineering co-op students for positions in a variety of federally-funded projects to apply industrial and systems engineering methods to important healthcare problems in order to improve care, population health, efficiency, safety, and overall costs.

**Description and Responsibilities:**

This is an exceptional opportunity to gain rich experience applying industrial engineering and operations research to healthcare, working with some of the best healthcare systems in the U.S. Two to five openings exist for industrial engineering co-op students to work in our Healthcare Systems Engineering Institute and with many of the best health systems in Boston. Some of our projects include:

* Building mathematical and simulation models related to the opioid and heroin co-epidemic,
* Using statistical process control to improve surgical site infection surveillance,
* Applying systems engineering to improve earlier detection and treatment for children with autism,
* Developing a safe and reliable opioid prescription management system for adults with chronic pain,
* Studying state policies for foster children that have experienced trauma, and
* Improving safety of perioperative care for children undergoing spinal fusion surgery.

Our partners include Massachusetts General Hospital, Brigham and Women’s Hospital, Boston Medical Center, Mt. Auburn Hospital, Maine Medical Center, Atrius Health, Boston Children’s Hospital, Duke University Medical Center, Harvard School of Public Health, and many others.

Each student will work with senior faculty and postdocs on multiple projects with leading healthcare systems. You will work on interdisciplinary teams consisting of undergraduate coops, graduate students, clinicians, and healthcare managers. You will gain strong insight and experience in healthcare and industrial engineering - invaluable as you start your careers.

**Responsibilities include:**

\* Assist with two or more projects in local health systems

\* Support the overall team and project needs, depending on the specific projects

\* Data analysis, process observation and flow mapping, six sigma projects, computer simulation, linear programming, queuing analysis, scheduling, staffing, and supply chain management projects

\* Assist with preparing project reports and develop professional presentations

\* Gain responsibility for certain aspects of each project.

\* Provide general ad hoc support for projects as needs arise

**Qualifications:**

Open to sophomores through seniors. Successful candidates will possess strong industrial engineering methods, ability to work independently and in groups, time management skills, commitment to excellence, a "can do" work ethic, and a desire to make a difference. High quality work standards and task completion are expectations for continued employment. Good technical writing skills or experience coding in Python is a plus.