

A Health Care Experience Class

ISE 509 31509D & 31726D Practicum in Health Care Systems,
3 Units



Health care seeks trained people to solve its unique problems. Job opportunities at hospitals are extensive. Employment has often resulted from this course in the past. The pandemic raised the challenges still further

Hospitals are changing more than ever thanks to the pandemic. All sorts of new issues are in their supply chain, clinical workflow, and data analytics which desperately need your help. ISE 509 will offer a unique and valuable experience. Last year, a group of students and I completed a meaningful project at a large hospital's emergency department to improve performance and another implementing telemedicine. In another, we analyzed data to improve staffing.

You will work with a hospital's doctors and nurses to find solutions to their pressing operational problems. The projects (see below) will involve learn about their problems and constraints.

This spring's 2023 course offers you the opportunity gain experience in the real environment of the health care setting. You will learn and use the latest tools for improving real systems through work with hospitals and clinics as well as with experts in the field. Available online and in person.

Course Description:

Students will choose their project from several available on or before the first meeting. Typical past projects include: improving patient flow in surgery, reducing emergency department delays, employing new technology, simulation modeling, improving a clinic's productivity, patient safety, applying Lean methods, data analytics, and more.

We will have guest speakers from various health care organizations. The hospitals have developed ways for meaningful work to be done online and are anxious for your help!



Past student projects at: Keck Medical Center, Cedars-Sinai Medical Center, VA Hospitals, LA County Hospitals, Salinas Valley Hospital, safety net neighborhood clinics, Kaiser Hospitals, San Francisco General Hospital, and rural hospitals.

Questions to belson@usc.edu

This semester we have challenging projects that are important to large healthcare systems, including

<u>Title</u>	<u>Description</u>	<u>Skills and topics involved</u>
Improve productivity and operational controls at new upscale facility	Staffing and scheduling of care, patient satisfaction	Observations onsite, workflow analysis, business decisions
Developing prioritization algorithms for patient movement	Optimization of current practices	Modeling from data, logistics, use of certain software
Determining the impact of changes to capacity & effect on the community	Regulations are changing as pandemic ends	Relationships between economics and other data
Emergency Department Throughput and Flow improvement	look at entire ED flow is critical for the system's success	Process mapping, time data, barriers, opportunities
SI system dashboarded for Patient Safety	Diverse data to be extracted and made useful	Programming, analytics, data mine & mgmt
Specialty Clinic Amb Care Patient Flow Improvement	Reduce waste, capacity increase	Observation, Lean, process improvement