

ISE 509 Practicum in Health Care Systems (draft) Spring 2020 Units: 3

Term—Day—Time: TBD Location: UPC

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Office Hours: TBD

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Course Description

Performance improvement projects within hospitals are undertaken by small teams collaborating with hospital staff. Study and application of tools to improve and optimize operations.

Learning Objectives

Identifying and implementing operational improvements in healthcare delivery is challenging. Student teams will gain experience and confidence in overcoming common roadblocks by completing projects within the hospital setting. Data gathering, observation of work and analysis of data will be part of all projects. Class meetings will be used to share these experiences and increase understanding of improvement methods and systems engineering as it applies to healthcare. Students will become comfortable working in the demanding healthcare environment. Assessment of student work will include feedback from the hospital regarding level of effort and development of useful solutions.

During the semester, lectures and readings will cover process mapping, supply chain management, basic optimization, statistical sampling, work measurement and other topics but will be adjusted to focus on tools relevant to the specific hospital projects. Most of the students' time outside the class room will be on site.

A final presentation will be made to the hospital and also in class. At end of the course students will be able to identify, design and implement operational improvements in a healthcare setting.

Prerequisite(s):

Co-Requisite(s): None

Concurrent Enrollment: None

Recommended Preparation: Spreadsheet use and general familiarity with the healthcare industry.

Course Notes

Letter grade based on interim reports, final report, hospital assessment and quizzes on basic skills. Online resources, such as Blackboard, will be used to share information, readings and lecture notes. Some guest lecturers will be used. Blackboard or similar will be used to share information among team members.

Technological Proficiency and Hardware/Software Required

Students will be required to spend time at an assigned hospital working in a team. Thus, the student will have to arrange to be present for the times needed at the specific hospital. Hospitals will be in the Los Angeles area and as close as possible. The level of effort, primarily at the hospitals, will be commensurate with a three unit graduate course.

Readings and Supplementary Materials

Readings and supplementary materials will be provided during the semester. A recommended reading, but not required, is Health care operations management : a systems perspective, Second Edition, James Langabeer & Jeffrey Helton.

Description and Assessment of Assignments

Students will group into teams of 2 to 5 students and work at individual hospitals. Each team will have one project at one hospital for the semester. Hospitals will have identified their priority projects for the class.

Projects will vary in terms of specific improvement methods needed but will include such topics as productivity improvement, Lean methods, supply chain management, optimization, technology implementation, patient satisfaction improvement and quality.

Project management will be an important element to assure that objectives are met within the semester. Students will be expected to work individually and with collaborative teams to develop requirements and solutions. Specific requirements will be provided in collaboration with staff at the hospital or clinic with which the team works. The instructor will provide supervision but direction will also be provided by hospital or clinic staff. Previously, similar courses by the instructor have resulted in full time employment by the students. The level of effort, primarily at the hospitals, will be commensurate with a three unit graduate course.

Both the final report and presentations are done by teams. Reports are expected to be in the range of 5-10 pages. Presentations per team are limited to 15 minutes. Presentations should include time lines, objectives, methods and results. Presentations during the semester are not graded.

Team assignments are likely at Keck Medical Center, Cedars-Sinai Medical Center, LA County Department of Health Services, White Memorial Hospital, L. A. Children's Hospital, VA Medical Center Westwood, and others.

Grading Breakdown

Grading will be based on the project deliverables.

Assignment Submission Policy

Final report and/or presentation must be delivered by the last scheduled day of class. These are in lieu of a final.

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" <https://policy.usc.edu/student/scampus/part-b>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Discrimination, sexual assault, intimate partner violence, stalking, and harassment are prohibited by the university. You are encouraged to report all incidents to the *Office of Equity and Diversity/Title IX Office* <http://equity.usc.edu> and/or to the *Department of Public Safety* <http://dps.usc.edu>. This is important for the health and safety of the whole USC community. Faculty and staff must report any information regarding an incident to the Title IX Coordinator who will provide outreach and information to the affected party. The sexual assault resource center webpage <http://sarc.usc.edu> fully describes reporting options. Relationship and Sexual Violence Services <https://engemannshc.usc.edu/rsvp> provides 24/7 confidential support.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://ali.usc.edu>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* <http://dsp.usc.edu> provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu> will

provide safety and other updates, including ways in which instruction will be continued by means of Blackboard, teleconferencing, and other technology.

Additional Policies

Student must meet scheduling requirements of hospital, if any. The students will need to get to the location of the work with their own transportation, to the site of a project, and to develop necessary relationships with the people at the site of the project.