



ISE 509 Practicum in Health Care Systems

Syllabus Units: 3 (Feb 2022)

Instructor: David Belson

Office: GER 204

Office Hours:

Contact Info: belson@usc.edu

Teaching Assistant: Aditya Annasaram

Office:

Office Hours:

Contact Info: . <annasara@usc.edu>

Course Description

Performance improvement projects within hospitals are undertaken by small teams collaborating with hospital staff. Includes study 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 improvement 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 semester's specific hospital projects. Most of the students' time outside the classroom will be on site.

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

Prerequisite(s): 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 perhaps quizzes on basic skills. Online resources 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 with an assigned hospital working in a team. Thus, the student will have to arrange the times needed at the specific hospital. The level of effort, primarily at the hospitals, will be commensurate with a four-unit graduate course.

Readings and Supplementary Materials

Readings and supplementary materials will be provided during the semester. There are recommended readings from:

Health care operations management: a systems perspective, Second Edition, James Langabeer & Jeffrey Helton.

Measures of Success: React Less, Lead Better, Improve More Paperback – 2019 by Mark Graban , Donald J. Wheeler (Foreword)

Yasar A. Ozcan. Quantitative Methods in Health Care Management: Techniques and Applications. Jossey-Bass, 3rd edition, 2019.

Description and Assessment of Assignments

Students will group into teams of 3 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 four-unit graduate course.

Both the final report and presentations are done by teams. Reports, if appropriate are expected to be in the range of 5-10 pages plus attachments. Presentations per team to the class are limited to 20 minutes. Presentations should include timelines, objectives, methods, and results. Client presentations will depend on the client requirements,

Team assignments may be with various organizations which in the past included at LA County Department of Health Services, L. A. Children’s Hospital, VA Medical Center, and others.

Lectures:

Specific lectures will be presented pending the issues that arise in the team projects. Topics will include:

- Process mapping and Lean improvement methods
- Project management
- Decision support methods and dashboards
- Scheduling methodologies
- Queuing
- Simulation modeling

Course Schedule

Session	Topic	Readings and Deliverables:
1	Introduction of instructor, students, general field, background and projects	
2	Selection of project teams (add discussion on group project topics) Basic improvement topics, particularly project management and Lean improvement methods	
	<u>Project startup</u>	

3	Teams assigned, deadlines discussed and set. Healthcare improvement methods	
4	Lean and other performance improvement methods.	
<u>Performance improvement overview</u>		
5	PI methods, problems specific to projects, project management methods. Specific topics will depend on the requirements of each project.	
<u>Ongoing project work, status updates</u>		
6 - 12	Project reviews, status reporting, project work, time mostly spent working with clients and on site	Project milestone 1
<u>Mid project status and review</u>		
13	Mid project status reports	Readings
<u>Project completion</u>		
14-24	Project completion tasks done, time mostly spent working with clients and on site	Milestone 2
<u>Project reviews and revisions</u>		
25-28	Project tasks and preparation of presentations and reports, reviews with client	
<u>Student Presentations and Paper</u>		
29	Student Presentations to clients and class	
30	Student Presentations to class and Wrap Up	
	Final date	Reports and presentation copies due

Grading Breakdown

Grading will be based primarily on the project deliverables.

- Overall quality of deliverable 50%
- Relevance to PI field and client requirements 20%
- Progress and results during semester 10%
- Individual participation 20%

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”

policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on [Research and Scholarship Misconduct](#).

Students and Disability Accommodations:

USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1 (800) 273-8255 – 24/7 on call
suicidepreventionlifeline.org

Free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call
studenthealth.usc.edu/sexual-assault

Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086
eetix.usc.edu

Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report

Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

The Office of Student Accessibility Services (OSAS) - (213) 740-0776
osas.usc.edu

OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

USC Campus Support and Intervention - (213) 821-4710
campussupport.usc.edu

Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity, Equity and Inclusion - (213) 740-2101

diversity.usc.edu

Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call

dps.usc.edu, emergency.usc.edu

Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call

dps.usc.edu

Non-emergency assistance or information.

Office of the Ombuds - (213) 821-9556 (UPC) / (323-442-0382 (HSC)

ombuds.usc.edu

A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

Occupational Therapy Faculty Practice - (323) 442-3340 or otfp@med.usc.edu

chan.usc.edu/otfp

Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.