Syllabus

ISE 599 048-31582D Practicum in Health Care Systems, 2 Units

Instructor: David Belson, Ph.D., belson@usc.edu

31582D 048 2.0 Lecture 6:40-8:20pm Wednesday

Office Hours: By Appointment

Students: Open to undergraduate and graduate students in good standing from any engineering or health care related major. Also open to students from schools and departments with adequate interest and background in operations and in health care.

Prerequisite: Students in this course will be successful if they have the ability to work well on-site in an industry (health care) environment. The course may cover a wide range of topics and it is not expected that anyone will have familiarity will all of the topics. Students will be expected to fill in the gaps in background via self-education with guidance from the instructor. There will be a healthcare performance improvement project in this course set up at a hospital or clinic. 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.

Course Texts: Online materials and readings to be provided by the instructor.

Course objectives:

At the first meeting of the course, students will be offered opportunities to work as an intern at projects at a hospital or clinic that have been previously arranged by the instructor. The experience from this course will be similar to an intern situation whereby a hospital or clinic has access to the student to assist them in important performance improvements and the student will gain technical and industry experience. Previously similar courses by the instructor have resulted in full time employment by the students.

This course will provide students with background knowledge in the basics of improving healthcare operations as well as intern-like experience in doing so. Students will be expected to work in individually or 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 some direction will be provided by hospital or clinic staff.

The grade will depend, in part, on class participation, as well as presentations of project status and a final project presentation and report. Evaluation will be done in conjunction with the hospital or clinic.

There will be no final exam for this class.

Grading policy:

Class participation& homework (10%) based on attendance and appropriate discussion
Interim report (20%)
Final product, report and presentation (70%) based on relevance, originality, project success, clarity. Included is feedback from site.

Students will be provided with feedback during the semester regarding their grading status.

Schedule (This may be revised as the semester progresses)*

Week	Topic
1	Introduction, overview, what is operations improvement? Project alternatives available will be presented.
2	Selection of project sites and teams. Process flow diagrams for health care process analysis general terminology. Defining objectives and scope.
3	Status reporting. Discussion & collaboration regarding individual projects.
4	Lean method and related tools, identification of waste in a health care setting, project management HW #1 (project presentations)
5	Reeingineering and time study. Developing new ways to do repetitive tasks.
6	Discussion & collaboration regarding individual projects. Team organization and leadership
7	Facility planning for healthcareHW #2 (project presentations)
8	Discussion & collaboration regarding individual projects. Presentation of progress reports.
9	Discussion & collaboration regarding individual projects. Tracking progress in improvement projects.
10	Scheduling and staffing methods in healthcare. Alternative designs and simulation. HW #3 (project presentations)
11	Materials management & supply chain tools. Inventory control policies and PAR levels.
12	Discussion & collaboration regarding individual projects. Spread of improvements within site.
13	Finalizing projects, creating lessons learned and documenting the results and assuring sustaining changes. HW #4 (project presentations)
14	Project presentations, discussion. Review with instructor and hospital and clinic staff. Final Report, and related documentation.
15	Project presentations, discussion. Review with instructor and hospital and clinic staff. Final Report, and related documentation.

* Guest lecturers will be used as an additional speaker at selected sessions.

Academic Integrity

We know that as students of systems architecting and engineering, you hold yourselves to the highest standards of conduct and we, too, will expect that from you. We also expect you to abide by the expectations of the University; to familiarize with those, please see the USC

publication SCampus, which can be found online at www.usc.edu/dept/publications/SCAMPUS. The provisions of this publication will be explicitly enforced.

In addition, during this class, students may be exposed to private or controlled information in a manner that is consistent with University, State and Federal Policy. Students will be trained in and expected to know the rules with respect to handling this data and any willful violation of these rules will result in immediate dismissal from the class and a failing grade.

If you have questions about what is allowed, please discuss it with the professor.

Students with Disabilities

Any Student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to the professor (or to TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30 a.m. - 5:00 p.m., Monday through Friday. The phone number for DSP is (213)740-0776.