

Senior Design Project Description for SPRING 2016

Project Title: Control Access Room Optimization (CH_CARO)

Supporter: Cardinal Health

Supporter Technical Representative: ASSIGNED

Faculty Mentor: _____ ASSIGNED TBD (check one)

Single Team Dual Team _____ (check one)

Personnel (EN/ET): _____ E, _____ Cp, _____ Cv, 1 M, 5 SE

(Complete if the number of students required is known)

Expected person-hours: (250 per student)

Description of Project:

Cardinal Health is a leading supplier of products to the medical and pharmaceutical industries. At their Fort Mill location Cardinal Health assembles more than 25,000 surgical packs per day. The items that go into each kit are delivered to Cardinal Health in packages that are not sterile. This packaging must be removed without compromising the sterility of the packs. The packs are assembled in a Control Access (i.e. Clean) Room. This project is to transform and improve the method of supplying the items in the pack to the packaging cell while removing (detrashing) the items and improving the setup sequencing of the items without compromising the sterility of the packs. The goal is to streamline the entire operation and flow of material from packing cell request to delivery of the material.

Initial Project Requirements (e.g. weight, size, etc.):

This project will require a complete review of the existing operations. The review will include visiting the facility. (Students are encouraged to attend a new employee training session for the workers.) Once the existing operations are understood different methods of transforming the operation must be developed and investigated. Investigations must consider the cell layout, setup of items in sequence for the packing cell and material flow. Scheduling of new orders to the packing cell must be considered. The location and method of detrashing are to be modified and improved. The optimum method of disposing of the trash must be determined.

Current good manufacturing practices are to be considered. Lean manufacturing must be considered.

Expected Deliverables/Results:

Two or three plans must be developed by the end of the first semester. During the second semester these plans will be analyzed and the optimum plan chosen. An implementation plan will be provided for the chosen plan. A cost benefit analysis must be included.

List here any specific skills or knowledge needed or suggested (If none please state none):

At least one student must be able to perform a simulation analysis.

At least one student should be familiar with lean manufacturing

At least one student should be familiar with facilities planning and material handling systems