



UNC CHARLOTTE

The WILLIAM STATES LEE COLLEGE of ENGINEERING

Senior Design Project Description for SPRING 2017

Project Title: Energy Reduction Audit (CARD_ENRGY)

Supporter: Cardinal Health

Supporter Technical Representative: ASSIGNED

Faculty Mentor: _____ ASSIGNED TBD (check one)

Single Team Dual Team _____ (check one)

Personnel (EN/ET): 2 E, _____ Cp, _____ Cv, _____ M, _____ 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. This facility has several major energy consumers – lighting, chiller, boiler, compressed air, ventilation. The goal of this project is to analyze the various energy consumers and develop the costs and benefits to modifying and updating the users.

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

Energy consumption must be obtained for all modes of plant operation, including times when the facility is not operating. The team must visit the facility in Fort Mill SC to perform this review. Once the analysis is determined a plan must be developed to monitor energy consumption and develop a design to reduce all the forms of energy consumption described above. The design will include cost estimates and payback to reduce energy consumption.

The cost/benefit ratio for the recommended modifications will be provided at the start of the project.

Expected Deliverables/Results:

The deliverable will be a report summarizing the current energy consumption and recommendations to reduce it. The recommendations will include a cost benefit analysis.

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

None.