

Senior Design Project Description

Company Name	Baldor/ABB	Date Submitted	7.10.2017
Project Title	Warehouse Management System Enhancement (BALDOR_WAR)	Planned Starting Semester	Fall

Personnel

Typical teams will have 4-6 students, with engineering disciplines assigned based on the anticipated Scope of the Project. 250 hours are expected per person.

Complete the following table if this information is known, otherwise the Senior Design Committee will develop based on the project scope:

Discipline	Number	Discipline	Number
Mechanical		Electrical	
Computer		Systems	4
Other (Logistics)			

Project Overview:

The Baldor operation has two warehouse locations that service the Kings Mountain facility. One is in Lawndale NC and one is in Kings Mountain. The growth in the business is creating the need to review the warehousing operations to determine where improvements can be made to reduce costs, increase accuracy, enhance the material flow and reduce defects.

Create/enhance current inventory management/material flow process in an ETO (engineer to order) manufacturing environment. Current inventory management system is insufficient. Parts are lost/misplaced and overall production material flow is “not functioning” well.

Initial Project Requirements:

The manufacturing operation is a mix of build to order and build to stock production. This production is fed with material and parts from two locations. The objective of the project will be to first baseline the current warehousing operation and then develop recommendations for improvements. The Project team will agree with the Industry Supporter which recommendations can be piloted in the second semester.

The client believes that improvements can be made in the inventory management operation with opportunities to modernize the equipment and implement Lean Manufacturing principles that can result in less scrap, shrinkage, improved quality, reduced costs and overall improved material process flow. Student team will gather data to baseline the “as-is” state and design a “future state”.



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Expected Deliverables/Results:

1. Recommendations for improving the warehouse operations at the Lawndale and Kings Mountain, NC locations
 - a. Recommendations will cover items such as barcoding, inventory accuracy, shrinkage/loss, defects, material flow, quality, ERP System, WIP reduction and cost
2. Pilot test selected recommendations and provide results to Industry Supporter so they can continue the implementation. For recommendations not piloted, detailed specifications for the recommendation to be delivered in written reports so that they can be implemented by future Senior Design teams or the Supporter.

Disposition of Deliverables at the End of the Project:

Pilot testing to be done at the two locations, and hardware or software produced to be delivered to the Industry supporter at the conclusion of the Expo.

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

- Systems optimization and Lean Manufacturing. Topics such as Supply chain management, database system knowledge and logistics. It would be envisioned that recommendations (for things like bar coding, RFID, etc.) would include off-the shelf systems, not custom designed systems.
- Design Reviews to be done at Supporters site.