Senior Design Project Description – COE Department Project

Department Name	UNCC COE	Date Submitted	5/10/19
Project Title	Safety Glasses Dispensing Machine **UNCC_SAFE**	Planned Starting Semester	F 2019

Personnel:
3-4 Students, 1 EE or CPE recommended. Mechanical for the remainder.

Faculty Mentor:
John "Mac" McAlpine 704.749.4609 jmcalpin@uncc.edu
Thomas Koch, ThomasKoch@uncc.edu, as co-advisor

Project Overview:
This project's is to create a Safety glasses vending machine or dispenser for UNCC lab use. The glasses can be checked in and out with a niner card, credit card or mobile device.

The machine should allow dispensing of safety glasses for lab use. These glasses if not returned the student will be charged for them. If returned they will receive a credit.

Expected Deliverables/Results:

Safety glasses vending machine with the ability to return them for credit.

Some form of return validation should be performed.

Use of RFID to track glasses and or taking photos to validate the return of them are possible suggestions. Implementation will be dependent on the skills of the students under the direction of the mentor.

Disposition of Deliverables at the End of the Project:
One completed vending machine.

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

CAD
Knowledge of Instrumentation systems
Machine Design
FEA
Programming
PLC

Sensors
Hydraulics
Electrical Actuator experience
Vision Systems
RFID
NFC