Lab 3 Report Rubric

Group Rubric (20 points)			
Part 1	**All requirements met.** (10 points)	**Some requirements met.** (4-8 points)	**No requirements met.** (0 points)
Part 2	**Same as above** (10 points)	**Same as above** (4-8 points)	**Same as above** (0 points)

Individual Rubric (30 points)			
Team Evaluation:	Team evaluation is included (5 points)		No team evaluation (0 points)
Lab etiquette:	No lab infractions. (5 points)	A few lab infractions. -1 point per infraction. (2-4 points)	Significant infractions. (0 points)
Lab Report	**See Lab Report** (20 points)		**No Lab Report** (0 points)

Hardware Design Rubric (20 points)			
Part 1 - Design	The circuit diagram is complete. It includes pin numbers on the LCD, H-Bridge, motors, and microcontroller. Appropriate colors are chosen for the wire-wrapping and connectors portion (10 points)	The circuit diagram is vague and does not include pin numbers. Colors for wire-wrapping are not chosen according to any pattern (4-8 points)	No circuit diagram is provided (0 points)
Part 2 - Design	The H-bridge is firmly connected to an external vector board. All connections are solid. A picture is provided. Wire-wrapping and connectors are used where necessary. (10 points)	Parts are not properly soldered onto the vector board. No wire-wrapping is done. A picture is not provided. (4-8 points)	Parts remain on the breadboard. (0 points)

Software Design Rubric (20 points)			
Part 1 - Code	A state-machine is used. ADC and PWM modules are initialized in their own functions and files. Pins can be easily changed. (5 points)	A state-machine is used poorly. ADC and PWM modules have no initialization function. Pins cannot be easily changed. More than two output-compare modules are used. (2-4 points)	Software does not fulfill the requirements at all. (0 points)
Part 2 - Code	**Same as above.** (5 points)	**Some functions do not work properly.** (2-4 points)	Requirements not fulfilled. (0 points)
Code Readability:	Define statements should be used for all LAT and PORT usages. Comments are given for each function as a description. Initialization code is in separate files. Coding guidelines are followed Source control commit history is included. (10 points)	Some requirements missing. (4-8 points)	No requirements met. (0 points)

Quality Assurance Rubric (20 points)			
Part 1 - Tests	Screenshots of the output-compare module are included. Output from the H-bridge is tested using the function generator and oscilloscope Code is written to test the PWM module and ADC module. (5 points)	Tests have been done, but the details are not clear. Other tests appear to have been done, but the details are not clear. (2-4 points)	It is not clear that any test was done. (0 points)
Part 2 - Tests	All of the connections have been tested. At least one other test is included. (5 points)	Same as above. (2-4 points)	No requirements met. (0 points)
Code Readability:	Coding guidelines are followed All test code "includes" code from another header file, presumably made by the software designer. (10 points)	Some requirements missing. (4-8 points)	No requirements met. (0 points)

Systems Integrator Rubric (20 points)			
Part 1 – Circuit Diagram	Same as Hardware, Part 1 (5 points)	Same as Hardware, Part 1 (2-4 points)	No requirements met (0 points)
Part 2 - Connector	The H-bridge is firmly connected to an external vector board. All connections are solid. A picture is provided. Wire-wrapping and connectors are used where necessary. (15 points)	Parts are not properly soldered onto the vector board. No wire-wrapping is done. A picture is not provided. (6-12 points)	Parts remain on the breadboard. (0 points)