

Project and Report Grading Sheet

No.	Student Name	ID.	Specialization	ABET (5)	Demo Grade (12)	Report Grade (8)	Total Grade (20)
1			CPE/EE/MECH				
2			CPE/EE/MECH				
3			CPE/EE/MECH				

Group Readiness and Preparation for Demo + Individual Mark (3.5 Mark)

Students should demonstrate complete understanding of any part of the code/HW regardless if they have written it themselves or their partner(s). Student must answer any question related to the code/HW or explain portions of the code when asked to.

	√		Grade
1		Students can easily navigate their code and show the evaluator what they want quickly	/0.5
2		<i>Student 1 Individual Grade</i>	/3
		<i>Student 2 Individual Grade</i>	/3
		<i>Student 3 Individual Grade</i>	/3

Demo - Hardware Part (Proteus) (3.5 Marks)

	√		Grade
3		The Proteus circuit is properly connected with correct H/W elements, the wire connections are tidy and easy to follow on the diagram	/0.5
4		The motors response to the knob adjustments is quick and smooth (no delay)	/0.5
5		The three motors angles are correct at the extreme points, and the range within	/1.5
6		LCD is fully working (if it lights up, yet wrong output, students takes half grade)	/1

Demo - Software Part (MPLAB) (5 Marks)

	√		Grade
A/D programming and data processing			
7		Correct A/D configuration	/0.5
8		Correct equations (transfer functions) for each of the three control knobs	/1.5
9		Correct and efficient A/D channels multiplexing and operation	/0.5
Other H/W and peripherals programming			
10		Using PWM through H/W timers and GPIOs or the dedicated PIC PWM module	/1
Proper SW techniques and documentation			
11		Using proper coding techniques (modular programming, cblocks, macros, code reuse when possible, code safety, interrupts)	/1
12		Functional comments	/0.5

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Report must be submitted in PDF format (and paper format is the university is open)

Project Report + Detailed Testing and Experimentation Procedures (8 Marks)

Report Formatting		
12	Page numbers, Sections and Subsections, Figure and Table numbering and Captions, correct spacing and text justification, professional fonts	/1
13	The report is presented in sound English and technical language	/0.5
Report Flow		
14	Introduction and System Description: Detailed specification of the system and its subsystems	/0.5
15	Hardware System Define system inputs/outputs, <i>justify your H/W configuration choices, why did you choose these configuration options?</i>	/0.5
System Testing Part (ABET Requirement – Criteria 6) - Extremely Important		/5
16	Present the complete experimentation technique which you have done to perform testing of the system:	
	1. Explain the experimentation technique you used to test the inputs and outputs of your equations which relate the potentiometer input to the angle output, <u>show tables and screenshots of watch windows</u> .	/2
	2. Explain the technique you used to verify that the PWM control signal corresponds to the desired angle (<u>Use Proteus Oscilloscope to show pulse output for each motor at minimum/maximum points and values in between</u>)	/2
	3. Explain the experimentation technique you used to test if the project is working in Proteus	/1
17	Conclusion: brief summary of the project, role of each student in the project, major obstacles faced	/0.5

If the evaluator and then instructor suspects that the project has been plagiarized or commissioned by a 3rd party on behalf of the student, the student/group will be reported for investigation. If found guilty, the strictest penalties will be sought according to UJ laws and regulations.