Engin 103	Topics:
March 6, 2008	Project 1 -Part II Presentations
	Logbook questions
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Project 1 Part II Presentations:

Excerpt from Project 1 specifications (see link in e-syllabus): "In the second day, you will show the class the predictability of your system. The predictability will be checked as follows: you will be required to show a sufficient number of data (X,Y)'s you measured using your system, and the best model or equation Y'=f(X) you found with Excel in relating these data. Next you will be required to use this model to make a prediction Y' for some new value X, given by the audience, with your model. Next you will run your system for that input X, obtaining the actual output Y. Your system will be considered predictable if Y' and Y differ by less than 10%."

Project 1 leaders: please copy this document and fill in your team response below. Then save as a web page: name "p1p2.html" and upload to your *files* folder.

Team	Picture of system	a) Your best model" A=; B=;	f) Explain your thoughts on what design							
#		C=; D=	obtained $Y_1=; Y_2=;$	elements most influenced the						
		b) What are the requested $X=$	Y ₃ =;	predictability obtained						
		and predicted output Y'=	d) List their average Y_{av}	g) Explain what can be done to further						
		along with their units	e) $ Y'-Y_{av} /Y_{av} *100 = \%$	improve its predictability						
1		a) Our best model was the	c) Y1=28.5 Y2=28.75 Y3=30	f) The thoughts that really influenced our						
—		quadratic being 26.47 for an	d) The average was 29.08	design elements would be a more stable						
		average.	e) 8.97% Error	trebuchet. We built two side arms which						
		b) The X predicted was 16		would make the trebuchet much steadier						
		inches and the Y output was		and also more predictive.						
		29.08 inches		g) To further improve our project we could						
		What were A,B,C,D?		have added a few pieces of wood to make it						
				a little steadier and also hold the base of the						
				trebuchet, leaving no opportunity for						
				movement.						

2	a)? b)X=56cm; Y'=266.9cm	c) Y ₁ =268.9cm; Y ₂ = 247.9cm; Y ₃ = 274.9cm d) Y _{ave} =263.9cm; e) 1.13%	f) The length of the lever and the weight attached.g)Stop the little sway in the arm and increase the stability of one of the weights.
<u>3</u>	 a)? b) X=3.5in; Y'=355.28in	c) Y ₁ =280in; Y ₂ = 320in; Y ₃ = 275in d) Y _{ave} =291.67in; e) 21.8%	f)? g)?
4	a)? b) X=2.74N; Y'=1.21N	c) Y ₁ =1.5N; Y ₂ = 1.5N; Y ₃ = 1.51N d) Y _{ave} =1.503N; e)19.51%	f)? g)?

According to Project 1 specifications (e-syllabus) the grading criteria are as follow:

Items	P	Points for both Part I and Part II									
Project completed and prese	7	70									
Project performance (predic	5	50									
Good design (spreadshe	ata 3	0									
modeling)											
Project presentation and we	5	0									
									_		
Project 1 -part II/ Teams	3	4	5	6	7	8	10				
Project completed (35)											

Spreadsheet and data modeling (15)										
System predictability (25)										
Presentation and web page (25)										
Total part I (100)										
back_					_					
back										
<u>back</u>										
back										

LOGBOOK: example of a logbook page

-Use a quadrille notebook; number all pages; date all entries

-Write your notes for all activities, thoughts, problems and solutions, and learning conclusions related to Engin 103. You should write down progress, outcomes, and conclusions on projects and teamwork; conclusions from class work (including LabVIEW) and homework.

-In addition you should answer in the logbook all questions listed in these notes in blue, as shown below:

21) Insert the spreadsheet made by your team for the system presented. Make a table of the coefficients and parameter s for the different models considered by the team, similar to that submitted in CW4. Explain which model was chosen to be the best and why.

22) For each of the other teams, list their predictability results (in percentage error between prediction and average measurement done in class) and comment on whether these results were expected based on their designs. back