

AAE 364L – Experiment #3 Grading Sheet
The Control of an Inverted Pendulum

Name _____

Possible Points

Cover Page - 1

Title, Name, Course, Date, TA etc.	1	
Subtotal	1	

Introduction - 4

Objectives/Goals/Purposes	2	
Intended Methods	2	
Subtotal	4	

Procedure - 10

Definition of Variables including State Variables	2	
Schematic and Description of Apparatus	3	
Procedure of Experiments	5	
Subtotal	10	

Results - 20

Part (i),(ii) Gains from pole placement and LQR, matrix Q and R for LQR	5	
Part (i),(ii) Plots of system poles, using pole placement and LQR	5	
Part (iii),(iv) Gain from LQR, matrix Q and R for LQR	5	
Part (iii),(iv) Plot of system poles	5	
Subtotal	20	

Analysis and Discussion – 30

Nonlinear EOMs	2	
Linearized EOMs and equilibrium points	2	
State variables, state vector, system matrices A,B,C,D for both long and medium pendulum	6	
Part (i)	10	
Part (ii)	10	
Subtotal	30	

Conclusion and Recommendation – 10

Main Points	5	
Theoretical/Experimental Limitations	3	
Personal Lessons Learned and Suggestions for Improvement	2	
Subtotal	10	

Style, Participation, and Prelab – 25

Organization	4	
Grammar	3	
Neatness	3	
Participation	5	
Prelab	10	
Subtotal	25	

Total	100	
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