

Experimental Physical Chemistry
Sample Grading Sheet: Expt. 1 (Error Analysis)

TITLE	/5
OVERVIEW:	/15
• Context, data, rxn eqn	
• Arrhenius equation	
• linearize & define variables	
• general plan	
PROCEDURE:	
A) LLS ANALYSIS	/24
• design of spreadsheet	
• connective tissue (explanations of eqns)	
• calculation checks	
• equations for α & β	
• equations for s_{α} and s_{β}	
• equations for r_i and D	
• values for s_{α} and s_{β}	
• value for t @ 95%, ref.	
• values for α , β , λ_{α} , λ_{β}	
• units & SF	
B) DEA	/20
• equations for A , E_a in terms of α & β	
• DEA eqn	
• Calculation, w/units	
• Values for A , E_a , errors	
• units, SF	

C) DATA PRESENTATION	/14
• Spreadsheets, including labeled columns and rows	
• Summary table: <ul style="list-style-type: none"> • Fit equation • Defs of α and β • α, β e/error, units, SF • A, E_a w/err, units, SF • % errors 	
• plots <ul style="list-style-type: none"> • linear w/your line • exp w/Excel line 	
DISCUSSION	/10
• goodness of fit:	
• exp vs. linear fit	
STYLE AND PRESENTATION	/12
• numbered equations, Figure & Table titles, etc.	
• legibility and organization	
• formatting elements: <ul style="list-style-type: none"> • NB double-spaced: overview, expt details, data workup, disc. • references 	

Overall Score: /100