

# Pythia GPA Practice Work Sheet

<b>Instrumentation Set</b>						
1		Compressor Shaft Speed (PCN 1)				
2		Compressor exit total pressure (P3)				
3		Compressor exit total temperature (T3)				
4		Exhaust total temperature (T8)				
5		Exhaust total pressure (P8)				
6		Fuel flow rate				
<b>Implemented Degradation</b>						
Component:		Compressor				
Efficiency Index drop $\eta_c$ (%):		-1				
Flow capacity Index drop $\Gamma_c$ (%):		-3				
<b>GPA Diagnostic Results</b>						
Fault Case	Component		Linear GPA		Non-Linear GPA	
			Degradation (%)	GPA Index	Degradation (%)	GPA Index
<b>1</b>	Compressor	$\eta_c$				
		$\Gamma_c$				
<b>2</b>	Burner	$\eta_b$				
<b>3</b>	Turbine	$\eta_t$				
		$\Gamma_t$				