Puma Vibration Control Training
Course Outline

Section 1: starting at 8:30 includes:

- Introduction
- System Hardware Description
- Environmental Testing overview
- Spectral Dynamics Viewer
- Lab (Practice putting plots and data into Excel and customize your displays)
- Review/Discussion period

Section 2: Vibration Basics

- Definition of terms
- Sample theory
- Filters
- Intro to FFT process
- Vibration types

Random Vibration Control

- Random theory/usage
- Amplitude Characterization
- Gaussian Distribution
- Spectrum Definitions
- Degrees of Freedom
- Control tradeoffs
- Control Strategies
- Control Parameters, discussion and building profiles to be run on the shakers provided. (What happens when I change lines of resolution or DOF?)
- Lab
- Review/Discussion period

Section 3: Sine Vibration Control

- Sine theory/ usage

- Amplitude relationships
- Sampling and Quantization
- Aliasing
- Signal Processing
- Tracking Filters
- Control Strategies
- Compression
- Level sequence
- Control Parameters, discussion and building profiles to be run on the shakers provided. (What's a tracking filter and why is important to me?)
- Lab
- Review/Discussion period

Section 4: Classical Shock and Shock Synthesis Control

- Pulse Definitions/Characteristics
- Compensation
- SRS
- Wavelets
- Control Parameters, discussion and building profiles to be run on the shakers provided. (Will this spec run on my shaker?)
- Lab
- Review/Discussion period
- Other applications of interest