



## **EL545**

### **Compressors and Process Fit for Mechanical Engineers**

- Introduction
  - Pumps, then Compressors
  - Basics of an impeller/diffuser pair
- Energy, Entropy
  - Ideal gas
  - Ideal processes
- Real gas, enthalpy, and processes
  - Put them together: Efficiency
  - Compressor Maps
- Real gas, enthalpy, and processes (continued)
  - Overview of dimensionless parameters
  - ASME Performance Test Code 10 (PTC 10)
- Equation of State (EOS)
  - EOS: volume
  - EOS: enthalpy and entropy
- Off Design Operation
  - Computer techniques and error analysis
  - How to Get Meaningful Performance Data from Typical Plant Instrumentation
- Anti-surge and Other Controls
- Review & Final Problem