



Acoustics: Part I - Physical and Acoustical Background

Course Materials

Chapter 2: Simple Vibrating Systems

Chapter 3: Waves and Wave Propagation

Chapter 4: Complex Vibrations and Resonance

Chapter 1: Physical qualities

- Length
 - Metric system
- Speed
 - Velocity
- Force
 - Friction
 - Pressure
- Work
 - Energy
 - Power

- Waveform
 - Simple
 - Sine
 - Simple Harmonic Motion
 - Sinusoidal
 - Square
 - Triangle
 - Complex
 - Frequency
 - Periodic
 - Phase
 - Period
 - Cycle
 - Graph
 - Axes
 - Envelope
 - Initial transient
 - Steady state
 - Amplitude
 - Vibration
- Oscillation
 - Graph
 - Axes
 - Vibration

- Impulse
- Propagation
 - Wave front
 - Radiation
- Medium
 - Density
- Air column
- Transverse wave
- Longitudinal wave
 - Compression, rarefaction
- Pressure Wave
 - Crest, trough
- Intensity
- Wavelength
- Doppler effect
- Absorption
- Reflection
 - Incident wave
 - Echo
- Refraction
- Diffraction
- Interference
 - Beats
 - Constructive
 - Destructive
- Direct
- Free Field

- Standing waves
 - Node
- Air column
- Resonance
 - Helmholtz resonator
- Graphs
 - Logarithmic scale
 - Linear scale
- Appendix
- Components
 - Fundamental
 - Overtones
 - Harmonics