Magnetic Materials
- Dia-, Para-, and Ferromagnetism - Curie Temperature

Electromagnets

Bohr Magneton - Hysteresis

Transformers
- impedance matching

RC and RL circuits - AC and DC
- car coils - Ruhmkorff

LRC circuits - Dissipated Power - Resonance
- resonance width - metal detectors
- impedance - reactance - tuning of radio

EM Waves - Traveling and Standing Waves
- string and wind instruments
- resonance frequencies
- distance determinations using radar and laser pulses
- carrier wave - amplitude modulation

Poynting Vector

Radiation Pressure
- comet tails

Polarization of EM Radiation
- linear, elliptical and circular

Snell's Law
- refraction - total reflection - fiber optics

Index of Refraction
- speed of light

Dispersion - Prisms

Huygen's Principle

Illusion of Colors
- primary colors - color triangle - Benham top
- Edwin Land's famous color experiment