LC Physics H Course 1

- ***Optics:*** Reflection & Mirrors.
- ***Optics:*** Refraction & Lenses.
- ***Current Electricity:*** Circuits, Ohm's Law, Resistivity, Resistance, Wheatstone & Metre Bridges.
- ***Circuit Problems:*** Resistors, Inductance Coils, Diodes with DC & AC Sources.

LC Physics H Course 2

- ***Sound:*** Sound Intensity, Decibel Scale, Velocity of Sound, Doppler Effect.
- ***Sound:*** Travelling Waves, Standing Waves, Open & Closed Pipes, Sonometer.
- ***Electrostatics:*** Coulomb Law, Definition of Charge, Electroscope.
- ***Capacitance:*** Parrell Plate, Van De Graaf Generator, Energy Heat & Temperature, Calibration, Latent & Specific Heat, Heat Exchangers, Heat Engines, Heat Pumps, Refrigerators.

LC Physics H Course 3

- ***Atomic Theory:*** Rutherford, Millikan, Planck, Bohr, Electromagnetic Radiation & Spectrum, Electron, Photon, Line & Continuous Spectra.
- ***Photoelectric Effect:*** Importance & Photocells.
- ***X- Rays:*** Rontgen, X-Ray Tubes, Applications.
- ***Cathode Ray Tubes:*** Electric & Magnetic Fields, Faraday, Fluorescence.
- ***Semiconductors:*** Theory, Diodes.
- ***Radioactivity:*** Detectors, Nuclear Decay Processes.
- ***Fission & Fusion:*** Nuclear Processes, Reactors, Link to Heat Exchangers & Power.

LC Physics H Course 4

- ***Vectors:*** Addition, Equilibrium.
- ***Newton's Laws:*** Force, Momentum, Momentum Conservation, Friction.
- ***Kinematics:*** Equations & Problem Solving.
- ***Work:*** Energy & Power, Mechanical Energy.
- ***Conservation Centripetal Forces:*** Types of Centripetal Forces, Radians, Problem Solving.
- ***Gravitation:*** Satellites, Weightlessness, Earth Spin, Link to Doppler & Speed of Light.
- ***Simple Harmonic Motion:*** Pendulums, Spring Constants.
- ***Moments:*** Equilibrium, Couples.
- ***Archimedes:*** Flotation, Hot Air Ballons, Density, Boyle's Law.

LC Physics H Course 5

- Mechanics.
- Electricity.
- Sound.
- Optics.
- Heat.
- Light.