Physics 2415: General Physics II
*Michael Fowler, UVa Physics, Fall 2009*

**Syllabus**

**Lecture Notes:**

Lecture 1: Introducing Electrostatics

Lecture 2: Coulomb’s Law, Superposition

Lecture 3: Dipole Field, Infinite Line and Plane, Conductors

Lecture 4: Gauss’ Law

Lecture 5: Using Gauss’ Law: Spheres, Lines, Planes

Lecture 6: Electrostatics

Lecture 7: (in preparation)

Lecture 8: Capacitance

Lecture 9: Energy in Capacitors

Kirchhoff’s Laws: [Example worked in class](#).

Lecture 22: Mutual Inductance

Lecture 23: LC, LR and LRC Circuits

Lecture 24: Circuits with AC Source

Lecture 25: Waves

[Example worked in class](#)

**New!**

**Spreadsheets:**

Spreadsheet for AC LCR Circuit.

Spreadsheet for Adding Two Sine Waves.

Spreadsheet to Sum Fourier Components.
Flashlets

Waves:

Forces on a Tiny Piece of a Vibrating String.  Air Motion for Sound Wave in Tube.

Assorted Acoustic Animations

Waves at Boundaries:

Sine Wave Hits Wall, Wave Hits Fixed End,

Heavy To Light String.

Light Interference:

Young’s Double Slit Interference Experiment.