Some Formulas:

Electron charge and mass: $q_e = 1.6x10^{-19}$ C; $m_e = 9.11x10^{-31}$ kg;
Kinematics: $x_f = x_i + vt$; $v_f = v_i + at$; $x_f = x_i + v_i t + ½ at^2$; $v_f^2 = v_i^2 + 2a(x_f - x_i)$; F =ma;
1 eV = 1.6 x 10^{-19} J

Coulomb Law $F = k|qQ|/r^{2;}$ $k = 9 \times 10^9 N. m^2/ C^2$

Electric Field (due to a charge) $E = k|Q|/r^2$

Electric Field & Force F = qE

Electric Potential V = kQ

Electric Field & Potential: Ed = V

Electric Potential Energy Difference $\Delta PE = q\Delta V$

Capacitance Q = CV

Capacitance in Series: $1/C_s = 1/C_1+1/C_2 +1/C_3$

Capacitance in Parallel: $C_p = C_1+ C_2+ C_3$

Energy Stored in a capacitor: $E_{cap} = QV/2 = CV^2/2 = Q^2/2C$

Current $I = \Delta Q/\Delta t$: Ohm's law: V=IR

Resistance: $R = \rho L/A$; temperature variation: $R = R_0(1+\alpha\Delta T)$

Resistivity temperature variation: $\rho = \rho_0(1+\alpha\Delta T)$

Power = work done/time taken = energy change /time taken

Power $P = IV = I^2R=V^2/R$

Area of a circle= πr^2; circumference of a circle: $2\pi r$