Clarification on class policy (grading, tests etc.)

Review

Charge -
like charges repel
unlike charges attract

Units -
Coulomb for charge
Amperes for current

Coulomb's law -
\( F = \frac{1}{4\pi \varepsilon_0} \frac{q_1 q_2}{r^2} \) for two charges
Superposition for more than two charges

Quantization of charge
\( q = ne \quad n = \pm 1, \pm 2, \ldots \quad \)
\( e = 1.6 \times 10^{-19} \text{C} = \text{charge of electron} \)

Conservation of charge

Electric field
\( \vec{E} = \frac{\vec{F}}{q_0} \quad q_0 \text{ positive} \)

Electric field lines
originates on positive charge
terminates on negative charge
density of lines \( \propto \) to field strength

Field due to a point charge
\( E = \frac{1}{4\pi \varepsilon_0} \frac{q}{r^2} \)

Field due to an electric dipole
\( E = \frac{1}{2\pi \varepsilon_0} \frac{p}{r^3} \) on dipole axis
where \( |p| = qd \) and points from negative to positive