Notes for ECE 26400 - Advanced C Programming

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Contents

Course Introduction

Equations

1. $\vec{F} = \frac{1}{4\pi\epsilon_0}\frac{q_1 q_2}{r^2}\hat{r}$
2. $\vec{E_1} = \frac{1}{4\pi\epsilon_0}\frac{q_1}{r^2}\hat{r}$
3. $\vec{F_2} = E_1 q_2$

Eletric field

We can represent eletric fields as lines emenating from a point charge. The greater the density of the lines, the greater the strength of the electric field. Note that at the origin, the force is undefined (infinite), since $|r| = 0$.

Consider the relative strengths of the electric and gravitational fields. The gravitational force is given by $F_g = G$

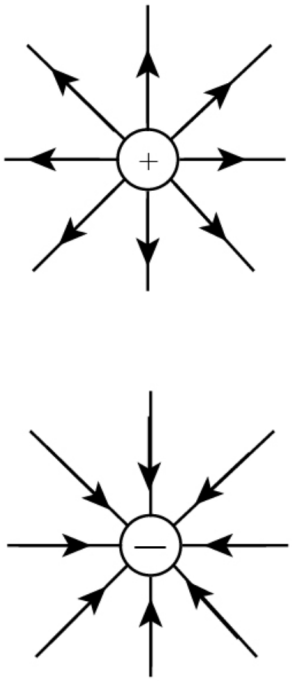

Figure 1: An eletric field coming from point charges. Notice how the densities of the lines vary with distance from the source.