

Problem 2-12

$$\oint_{\text{gs}} \vec{E} \cdot d\vec{A} = \frac{q_{\text{enc}}}{\epsilon_0} \Rightarrow E(4\pi r^2) = \frac{\rho}{\epsilon_0} \frac{4}{3} \pi r^3 \Rightarrow \vec{E} = \frac{\rho r}{3\epsilon_0} \hat{r}$$