Work and Δ Potential Energy $W = F d cos(\theta)$ Electric Gravity • Brick raised $y_i \rightarrow y_f$ • Charge moved $x_i \rightarrow x_f$ (left) • $F_{\rm F} = qE$ • $\overline{F_G} = mg$ (down) • $W_F = -qEd$ • $W_G = -mgh$ • $\Delta U_{\rm F} = +qEd$ • $\Delta U_G = +mgh$ $y_f \rightarrow$ d h V_i F_G=mg Physics 102: Lecture 2, Slide 8