

Homework 9
EE 381 Electric & Magnetic Fields (Fall 2025)
Wednesday, October 22, 2025

- 1) PE4.15 Also, find the general equations for the electric field and the electrostatic energy density.
- 2) 4.28 Assume ρ_v has units of nC/m³.
- 3) 4.30
- 4) 4.37 Note: To be clear, you have point charges for parts a) & b).
- 5) 4.47
- 6) 4.53
- 7) 4.62
- 8) 4.64 Modify the problem to add transferring a third point charge of 60 nC from infinity to (0, 0.5 m, 0). Assuming the charges are assembled in the order given, determine the energy stored in the point charge distribution after each charge is positioned.

Due Monday, October 27, 2025

- If not otherwise specified, assume units of meters for all positions and distances.