Electric field:

$$\vec{E} = \frac{1}{4\pi\epsilon} \iiint_V \frac{dq}{\left|\vec{R} - \vec{R}_i\right|^3} (\vec{R} - \vec{R}_i)$$

With a line charge:

$$dq = \rho_0 \, dl$$

With a sheet charge:

$$dq = \rho_S \, dS$$

Total charge on a surface:

$$q_{total} = \iint \rho_s dS$$

Cartesian:

$$dS = dxdy$$

Cylindrical:

$$dS = rdrd\theta$$

Spherical:

$$dS = \rho^2 \, sin\theta \, d\theta \, d\phi \, d\rho$$