

Intensity of electric field	$\vec{E}_2 = K \frac{q_1}{r_{12}^2} \vec{u}_{12}$ $\vec{E}_2 = K \frac{q_1}{r_{12}^3} \vec{r}_{12}$
Force between two charges	Coulomb's Law: $\vec{F}_2 = K \frac{q_1 q_2}{r_{12}^2} \vec{u}_{12}$ $\vec{F}_2 = K \frac{q_1 q_2}{r_{12}^3} \vec{r}_{12}$
Force for a charge in electric field	$\vec{F} = q \cdot \vec{E}$
Electrostatic potential	$V_E = K \frac{q}{r}$
Potential energy	$E_P = K \frac{q_1 q_2}{r}$ $E_P = q V_E$
Work to move a charge q from A point to B point.	$W = -\Delta E_P$ $W = -q (V_B - V_A)$

Symbol	Magnitude	S.I. unit
E	Intensity of electric field	N/C = V/m
F	Force	N
q	Electric charge	C
r	Distance	m
V_E	Electrostatic potential	V = J/C
E_P	Potential energy	J
W	Work	J
ϵ_0	Permittivity of vacuum = $8.854\ 187\ 817 \times 10^{-12}$	$C^2 \cdot N^{-1} \cdot m^{-2}$
K	Constant K : (for vacuum: $K = \frac{1}{4\pi\epsilon_0} \cong 9 \times 10^9$)	$N \cdot m^2 \cdot C^{-2}$
\vec{u}_{12}	Unitary vector	m/m