

Electromagnetism

1. What is electricity?

- There are two types of electricity: static and dynamic.
- Which component of a generator does get voltage?

2. Electric work <- Electric force <- Electric charge <- Electrification <- External energy

- Simple overview of force, work, energy, and power
- What is the process to get electric work?
- What is electrostatic force?
- What is electric field?
- What is electric potential energy?
- Electric potential and voltage

3. Gauss's Law, Electric flux, Corona phenomenon, Electric potential gradient

- Gauss's Law, instead of Coulomb's Law, to calculate the Electric field
- Sample problem, divergence theorem, and Maxwell's first equation
- Corona phenomenon, Critical disruptive voltage
- Electric potential gradient

4. Insulator vs. Dielectric