

Lead in

The current Unit is an introduction to Electrical Engineering.

Before you start working on it, do you think you can guess what Electrical Engineering is about? And what about Electronic(s) Engineering? In what way(s) are these two terms related? Discuss in pairs or in groups.

The following activities will help you to get a better idea:

► **Activity 1:** The following sentences describe what Electrical Engineering involves. Fill in the gaps choosing from the list below:

application / referred / sub-disciplines / field

Electrical Engineering ...

- ❖ is a scientific _____.
- ❖ deals with the study and _____ of electricity, electronics and electromagnetism.
- ❖ covers _____ that deal with telecommunications, computer engineering, control systems, signal processing etc.
- ❖ is sometimes _____ to as *Electrical and Electronics Engineering*.

► **Activity 2:** Nowadays, the lines between the two terms are beginning to blur. So, let's try to draw a distinction between Electrical Engineering (*the umbrella term*) and Electronic(s) Engineering (*the subfield*). Fill in the following table using the ideas listed below:

- ❖ deals with the study of large-scale electrical systems such as power transmission systems
- ❖ focuses on the use of electricity to transmit information
- ❖ deals with the study of small-scale electronic systems including computers and integrated circuits
- ❖ is an offshoot of Electrical Engineering
- ❖ focuses on the use of electricity to transmit energy
- ❖ deals with the study of electric current and electromagnetism
- ❖ deals with high voltage transmission of power
- ❖ is concerned with low power applications

Electrical Engineering	Electronic(s) Engineering

► **Activity 3:** Now use the information and the vocabulary provided above and write a definition of Electrical Engineering. Don't forget to include the distinction between Electrical and Electronic(s) Engineering: _____



"Information theory began as a bridge from mathematics to electrical engineering and from there to computing."

James Gleick, American author & historian of science

