

ELT-111 CIRCUIT ANALYSIS I

Ohm's Law Power and Energy

LECTURE NOTES

Ohm's Law Power and Energy

$$V = IR \quad I = V/R \quad R = V/I$$

Voltage and Current directly proportional

Current and Resistance inversely proportional

Plotting Ohms Law – Linear relationship

Power – The rate of doing work

$$P = IV \text{ (delivered)}$$

$$P = IE \text{ (supplied)}$$

Energy – Can be given off in the form of heat, etc.

Kilowatt hours – Unit used to measure power used in homes.

Efficiency – Ratio of power out to power in

Circuit breakers – Safety device that allows resetting.

GFCI's – Safety devices generally found in bathrooms that trip on surge of current

Fuses – Safety device that burns open when current level is exceeded.