Hello, this a video for Engineering Measurement & System Monitoring unit

For learning outcome, one is to measure electrical quantities such as resistance, voltage, current and power.

I will go over the equipment used is this video and then another video to show it connected together. This has to be done as a practical in the college and report on the findings

Next we have a Power supply output of AC and DC, but the voltage has to be checked using our Multimeter set on volts .

Board here is with resistors, each resistor can be connected using leads.

Here we have a digital multimeter, it is turned off, first position volts, straight line means DC volts and squiggle means AC volts, resistance measured in ohms, reason for megaohms is that it is measuring the resistance of the air which is a high resistance, measuring resistance does not require power in the circuit to measure. Always connect to the “com” connection and the other lead is dependant on what is getting measured. For example, we can check the reading of our resistor in ohms. In connection with resistance we can change the meter to measure continuity which indicates a beep when a circuit is complete, which is a very useful function for fault finding without a power supply. Then we can turn round to volts DC which has a straight line whereas AC volts has a squiggle. We are also going to use amps but remembering that measuring amp in done inline with the flow of current whereas voltage measurement is across a component or supply because it is the potential difference. This needs to be done correctly otherwise it could damage the meter. Always remember to turn the multimeter off when finish with it.

Lastly the power meter, the input is from the power supply and the output goes to the circuit. The scale of the reading can be changed to milliwatts or watts.

Thank you for listening. Further videos will follow to connect all the components together to measure the quantities.