MECH-14 Bill Of Materials (BOM) spreadsheets (Rev: C).

Being able to enter data into a spreadsheet program and insert basic formulas into it is a key skill identified by our industry advisors. Another skill they encourage is the ability to look for and find information on components. This project will give you some experience with both of these things. It will also be a good thing to add to your portfolio for when you are interviewing for jobs. Make it look professional!

A Bill Of Materials (often known as a B.O.M. or BOM) is a list of all of the materials needed to build a project. It is used to facilitate ordering, analyze costs and other tasks. Your assignment is to take the list of materials for the power supply project (see page 2), modify it as necessary to match any modifications you have made to the design and enter them into a spreadsheet. Microsoft Excel or Open Office format only. (Note: Open Office is free to download and use.) You will then need to research and find cost information for each item and enter the **vendor,** the **vendor part number** and the **vendor price** (at the quantity 100 price break). Finally you will need to add **formulas** to multiply the unit price times the quantity needed to obtain the **cost** and add all costs into a **grand total**.

Pictures are not necessary but they do show a prospective employer that you are somewhat of an expert at Excel.

List of Materials (modify as necessary to match your design):

Use the parts list as we identify components to put into the project.

Use the price break at 100 pieces for each component. If a 100 piece price is not given, use the next LARGER price

You do **not** need to include shipping costs.

We will be putting the following chassis parts on the spreadsheet as we draw them into the project:

Aluminum Chassis Top & Bottom ($0.032 per square inch, calculate cost of yours), source is Sierra, part number is your drawing number
Transformer (120VAC to 12VAC, 1A or higher current capability).
Voltage Panel meter (0-15V) Use $9.73 as the cost.
Power switch (120V).
Fuse Holder.
Fuse (250mA slow blow).
Potentiometer (5k Ohm).
Potentiometer knob.
Banana jacks (red, black, green)
Banana plugs (red, black)
AC power cord (three prong)
Power cord strain relief
Red 5mm LED
Plastic LED lens
Rubber feet (4)

6-32 machine screws, ¾” (2 for holding down transformer)
6-32 nuts (2)
#6 lockwasher
¼” plastic standoffs (4)
#4 sheet metal screws, ¼” (typically 6 to hold chassis top to bottom)
#4-40 machine screws, ½” (4 to hold PC Board and 2 for feet)
4-40 nuts (6)
#4 lockwasher (6)
#6 locking solder lug

We will be putting the following pc board parts on the spreadsheet as we draw them into the project:

PC Board ($2 per square inch, calculate cost of your board), source is Sierra, part number is your drawing number.
LM317 voltage regulator
Bridge Rectifier (min 20V, 1A)
1N4001 diodes (2)
2200uF electrolytic capacitor (25V min)
10uF electrolytic capacitor (2) (25V min)
0.1uF (100 nF) capacitor disk ceramic general purpose
100 Ohm, ¼ W resistor
430 Ohm, ¼ W resistor
680 Ohm, ½ W resistor
1.0k Ohm, ½ W resistor