

LAB TERM PROJECT

Project Name: **Design and Wiring of Residential Room**

Project Description:

You will assume the role of a residential electrical installer. Your job is to design the circuits of a room, layout the wiring diagram, and install the rough and finish wiring. You will use the tools you are learning in class to calculate the load and boxes (for switches, receptacles and luminaries). You will also install the main service panel and breakers for these circuits. You will use your book as a reference guide to design your room. This room is a **Study/Bedroom**.

PART 1 – Project Specifications:

1. Begin with a frame walk-through to decide where the switches, receptacles and luminaries will go in the room.
2. Do a sketch of these locations, similar to how they are done in the book – for your own use, and for planning your room wiring.
3. Decide on the number of circuits that will be run from the service panel. Be sure to use more than one. Remember to include outside wiring as well. Get creative!
4. Select type of switches, receptacles and luminaries and create a job list so these items can be purchased from the local electrical supply or hardware store.
5. Create a calculations sheet that shows the wire calculations for each box (box capacity), as well as the loads for each circuit (similar to what is used in the book for the chapters about each room in the house).
6. Create a formal electrical drawing of this room that could be used to obtain the permit. (Look at the plans that came with the book for a sample.)
7. Put everything together in a folder in the above order to turn in.

(This assignment is worth 100 Pts.)

Due Date: 5/12/14

PART 2 – Project Installation (LAB work):

Now, that your room is planned you will install these components as a group. We will decide as a class which components will be used for the room in the LAB and install it together as a class. (This LAB assignment is worth 50 Pts.)

Extra Credit (10 pts.):

Create a formal cost sheet for all the material and supplies for your project. (Look up the prices.)

More Extra Credit (10 pts.):

Orally present your room to the class, to potentially be chosen as the room we install in the Lab.

Note: This is a project that you may present to an industry interviewer. So, take pictures. The better job you do and the better it looks, the better impression you can make! Therefore the more \$ you can ask for when they hire you!!!