



Commercial Applications Lab

Program: Electrician Technician

Course: EL150 Commercial Applications

Objectives: Under the supervision of your instructor, you should be able to do the following:

- Layout and wire a basic room in a commercial environment using knowledge from previous labs.

Lab Equipment:

- Commercial Bay
- 1 – Recessed can light

Required Tools:

- 1-Tape Measure
- 1 - Drill gun with Phillips bit
- 1- Flat screwdriver
- 1- Phillips screwdriver
- 1- Pair of strippers
- 1- Pair of diagonal cutters
- 1 – MC cutter

Materials:

- 6- 4S boxes with brackets
- 1- 3/0 ring covers
- 4- Single gang ring covers
- 1- Two gang ring cover
- 7- Ground screws
- 2- 15-amp breakers
- 1- Single pole switches
- 3- Duplex receptacles
- 2- Keyless light fixtures
- 2- Bulbs
- 15- Wire nuts
- 30' - #14/2 MC cable
- 20' - #14/3 MC cable
- 15 – 3/8" one-hole straps
- 14 – 1/2" MC cable connectors (2 screw type)

Safety (PPE):

- Safety glasses/goggles
- Hard hat

Resources: N/A



Required Time: One Day

Shop Maintenance:

- All work will cease 20 minutes prior to the end of class.
- All work areas must be cleaned.
- Tools and equipment must be cleaned and returned to the designated areas (cage, tool room, cabinets etc.)
- Any broken or missing tools must be reported immediately.
- Tools and equipment are students' responsibility

Procedures: (Eye protection must always be worn)

- 1- Layout the room using diagram A.
- 2- Install all the boxes per diagram A.
- 3- Install and secure MC cable.
- 4- Run appropriate wire for room to work properly. (Make sure the outlets and switches are separate circuits)
- 5- Install all devices.
- 6- Power room from breaker in sub panel and verify all is working correctly.
- 7- Troubleshoot any problems that arise.

Diagram "A"

- Receptacles are 16" to top of the box
- Switches are 45" to top of box
- Wall lights are 72" to center



Diagram A

