

EMT 1130: ELECTROMECHANICAL MANUFACTURING LAB

Course Description: The student is taught to properly select and use various hand and machine tools used in the assembly, testing and maintenance of electromechanical equipment and devices. Students construct their own Digital Trainers for use in analyzing integrated circuits.

References: Laboratory Manual (Given in class)

Instructor: Cindy Rodrigo
Office Hour: Wednesday 11:00-12:00 P.M.
Room: V633
Phone # (718) 260-5885
E-Mail: CRodrigo@citytech.cuny.edu, EMT1130@gmail.com,
CRodrigo83@gmail.com

Objectives: To learn proper selection and safely use basic hand tools and simple bench tools. To obtain a working knowledge of: drilling, reaming, fastening, filing, sheet metal work, soldering, electrical connections component replacement and troubleshooting. To create and test electronic circuits, that will be made into a Digital Trainer.

Topics:	<u>Sections</u>	<u>Topics</u>
	1	Measurements and Tools Handouts (1 session)
	2	Wiring and Soldering Test (1 session)
	3	Digital Trainer Construction – Bottom section (2 sessions)
	4	Digital Trainer Construction – Top section (2 sessions)
	5	Power Supply wiring (1 session)
	6	L.E.D.'s and Driver wiring (1 session)
	7	DPDT Data switch wiring (2 sessions)
	8	Momentary switch wiring (1 session)
	9	Logic Probe wiring (1 session)
	10	555 Timer circuit wiring (1 session)
	11	Final assembly and testing (2 sessions)

Laboratory Projects: Listed above with the use of a shear, box and pan break, drill press and turret punch. Topics are subject to change per week.

Materials: Tools can be purchased from any hardware store. There are 3 EMT 1130 Lab kits and 1 PC (Printed Circuit) board that **MUST** be purchased from the City Tech bookstore. A DMM (Digital Multi-meter) is optional. Albert's board

Grade: The final grade will be determined on a combination of all the sections in the topics covered above, all handouts and attendance.