

Long Beach City College – Electrical Department Variable Speed Drive Classes

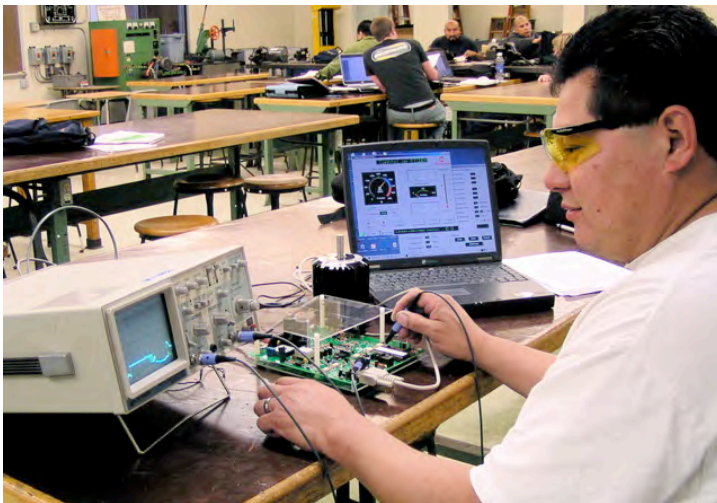
Learn theory of operation, assembly, programming and troubleshooting. The Variable Speed Drive series of courses will be starting this fall the week of September 8, 2008.

The first course in the series is Elect 226, Solid State Fundamentals for Electricians followed by DC Drives, AC Drives and Industrial Drive Systems. Students in Elect 226 learn by



building circuits from simple square wave generators to a complete microcontroller based DC drive board. Techniques are learned for soldering and removing both surface mount and through hole components. Troubleshooting techniques include the use of generators, multimeters, oscilloscopes, PCs and grounding issues.

Right - The drive board built by the students includes a programmable microcontroller, multiple LED and FET outputs, analog to digital conversion, pulse width modulation, communications and a switching power supply among other features. Students keep the board!



Left - A student is conducting tests on a 3-phase drive in the lab. The drive board includes a switching power supply boosting the 120VAC input to 330VDC that is feed to the 3-phase bridge output circuit producing variable frequency AC at up to 230V. The fully programmable board also features serial PC communications, feedback, over voltage and current protection and optical isolation. Students keep the board!

Register for Elect 226, Cl. Nbr. 74107, Mondays 5 to 9:50PM, Room LAC-B204
For additional information and prerequisite requirements contact Leonard Fellman,
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