

Minnesota State

Community and Technical College
Workforce Development Solutions
COURSE SYLLABUS FORM

Title: HVAC Apprentice Electrical Training

Project/Course Number: IND3120

Contact Hours: 12 hours

Category: Trades & Industry

Sub-Category: Electrical

Project/Course Description:

This class will cover electrical fundamentals, an introduction to test equipment & motors, and Variable Frequency Drives (VFD). The class is geared toward the HVAC apprentice and will include hands-on exercises to facilitate learning.

Project/Course Outcomes - Participants Will Learn To:

- Integrate workplace electrical safety into their daily routines
- Interpret Ohm's Law; voltage, current and resistance
- Complete and/or analyze basic electrical circuits: series/parallel
- Describe schematic basics
- Recognize basic test equipment and their applications and uses
 - Multimeters
 - Voltage Testers
 - Clamp-on Ammeter
- Translate motor basics
- Identify and understand a motor nameplate
- Define typical VFD and motor arrangement
- Contrast the pros and cons of using VFDs
- Utilize VFD terminology and basic operation
- Prepare a VFD, entering parameters
- Recognize common problems and troubleshooting methods – basic faults

Resources:

Instructor: Qualified Instructor
Materials: Handouts
Physical Set-Up: Classroom/Meeting Room

Product Director/Corporate Academic Dean: G.L. Tucker, Executive Director - WDS

Date: March 31, 2017