

## REFR2215 - Advanced Electrical Applications

Credits:	3 (0/3/0)
Description:	This course covers the application of electrical principles used in commercial, industrial, hospital and supermarket refrigeration systems. Safety is emphasized.
Prerequisites:	<ul style="list-style-type: none"> <li>• Completion of HVAC/R diploma.</li> </ul>
Corequisites:	
Pre/Corequisites*:	
Competencies:	<ol style="list-style-type: none"> <li>1. Practice all safety guidelines regarding electricity.</li> <li>2. Install a low-pressure time-delay bypass circuit for low ambient conditions.</li> <li>3. Test run and start capacitors for opens, shorts and capacitance values using a volt-ohm meter.</li> <li>4. Install a hard start kit on a single-phase air conditioner.</li> <li>5. Demonstrate the use of current relays for compressor starting.</li> <li>6. Program a commercial multistage electronic controller.</li> <li>7. Diagnose compressor electrical failure using manufacturer's data.</li> <li>8. Wire various advanced electrical circuits from wiring diagrams.</li> <li>9. Employ ladder diagrams to evaluate large commercial refrigeration operating systems.</li> <li>10. Replace a positive temperature coefficient (PTC) device with a potential relay and start capacitor.</li> <li>11. Learn the correct ways to program and operate mechanical and electronic time clocks.</li> </ol>
MnTC goal areas:	None

\*Can be taking as a Prerequisite or Corequisite.