

## REFR2212 - Advanced Refrigeration Lab

| Credits:           | 3 (0/3/0)  |
|--------------------|--|
| Description:       | This course gives students the opportunity to work on more complicated refrigeration systems through individual or paired groups on field trips, off-site meetings and hands-on projects. Safety is emphasized.  |
| Prerequisites:     | Completion of HVAC/R diploma.  |
| Corequisites:      |  |
| Pre/Corequisites*: |  |
| Competencies:      | <ol> <li>Determine if non-condensables are present in a refrigeration or air conditioning system.</li> <li>Repair a major leak using proper procedures as outlined by the Environmental Protection Agency (EPA).</li> <li>Inspect a solenoid valve for worn or leaking parts.</li> <li>Solve an evaporator coil freeze-up complaint.</li> <li>Adjust an evaporator pressure regulator valve to maintain desired product temperature.</li> <li>Measure discharge and suction pressures to calculate compression ratio.</li> <li>Test the operation of an electronic oil pressure safety control.</li> <li>Demonstrate brazing techniques using oxyacetylene and TurboTorches.</li> <li>Use an electronic leak detector to locate a refrigerant leak.</li> <li>Maintain cooler temperature using a low-pressure control.</li> <li>Demonstrate how various commercial ice machines produce and harvest ice.</li> <li>Compare electronic and mechanical oil pressure safety controls.</li> </ol> |
| MnTC goal areas:   | None   |

<sup>\*</sup>Can be taking as a Prerequisite or Corequisite.