

## REFR2212 - Advanced Refrigeration Lab

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| 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:     | <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. Determine if non-condensables are present in a refrigeration or air conditioning system.</li> <li>2. Repair a major leak using proper procedures as outlined by the Environmental Protection Agency (EPA).</li> <li>3. Inspect a solenoid valve for worn or leaking parts.</li> <li>4. Solve an evaporator coil freeze-up complaint.</li> <li>5. Adjust an evaporator pressure regulator valve to maintain desired product temperature.</li> <li>6. Measure discharge and suction pressures to calculate compression ratio.</li> <li>7. Test the operation of an electronic oil pressure safety control.</li> <li>8. Demonstrate brazing techniques using oxyacetylene and TurboTorches.</li> <li>9. Use an electronic leak detector to locate a refrigerant leak.</li> <li>10. Maintain cooler temperature using a low-pressure control.</li> <li>11. Demonstrate how various commercial ice machines produce and harvest ice.</li> <li>12. Compare electronic and mechanical oil pressure safety controls.</li> </ol> |
| MnTC goal areas:   | None  |

\*Can be taking as a Prerequisite or Corequisite.