### HVAC/R CODES, REGULATIONS & STANDARDS

#### Course Syllabus

<table>
<thead>
<tr>
<th>Course Number:</th>
<th>ARCO-0497</th>
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<tbody>
<tr>
<td>OHLAP Credit:</td>
<td>No</td>
</tr>
<tr>
<td>OCAS Code:</td>
<td>None</td>
</tr>
<tr>
<td>Course Length:</td>
<td>30 Hours</td>
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<tr>
<td>Career Cluster:</td>
<td>Architecture &amp; Construction</td>
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<tr>
<td>Career Pathway:</td>
<td>Maintenance/Operations</td>
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<tr>
<td>Career Major(s):</td>
<td>HVAC Technician</td>
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#### Pre-requisite(s):
Introduction to HVAC/R Safety, Tools and Equipment

#### Course Description:
This course covers the essential knowledge and skills necessary to adhere to the codes and standards pertaining to the HVAC/R industry, regulations affecting ozone depletion, state and local codes, OSHA, and government licensing requirements.

#### Textbooks:
- *Refrigeration & Air Conditioning Technology, 7th Ed, (2013)*, Whitman /Johnson/ Tomczyk Silberstein / Publisher Delmar Cengage

#### Course Objectives:

**A. Understand Codes and Standards.**

1. Describe the reasons for codes.
2. Describe the three model codes:
   - b. Southern Building Code Congress International (SBCCI), Standard Mechanical Code
   - c. International Conference of Building Officials (ICBO), Uniform Mechanical Code
3. Identify the codes and standards for the applicable area, locality and state.
4. Discuss the relationship between codes and manufacturers' installation instructions.
5. Identify pertinent standards published by the following organizations:
   - a. AGA
   - b. AMCA
   - c. ANSI
   - d. ARI
   - e. ASHRAE
   - f. IEC
   - g. ISO
   - h. SMACNA
   - i. UL
B. Explain Regulations Affecting Ozone Depletion.
1. Explain ozone depletion.¹
2. Explain significance of the Montreal Protocol.¹
3. Explain significance of the Clean Air Act.¹
4. Explain EPA requirements:¹
   a. Technician certification¹
   b. Refrigerant recover, recycle, and reclaim¹
   c. Disposal of systems¹
   d. Labeling¹
   e. Shipping¹
   f. Leak detection¹
   g. Significant New Alternatives Policy Program (SNAP)¹
   h. Recordkeeping¹
5. Know Department of Transportation (DOT) requirements concerning transportation of refrigerants.¹
6. Determine if refrigerant container is DOT-approved and whether it needs to be retested.¹
7. Determine if recovery/recycle equipment is certified and meets requirements.¹
8. Dispose of empty non-refillable cylinders.¹
9. Use recovery/recycle equipment and prepare system for disposal.¹
10. Obtain federal EPA technician certification.¹

C. Become Familiar with Other Regulations.
1. Explain global warming.¹
2. Know OSHA Work Rules.¹
3. Explain Indoor Air Quality (IAQ) standards (ASHRAE Std.62).¹
4. Explain impact of state and local codes on system application and retrofit.¹
5. Explain proper disposal of oil, components, and other materials.¹
6. Explain state and local licensing requirements.¹
7. Explain DOT regulations.¹

¹ODCTE objective

Teaching Methods: The class will primarily be taught by the lecture and demonstration method and supported by various media materials to address various learning styles. There will be question and answer sessions over material covered in lecture and media presentations. Supervised lab time is provided for students to complete required projects.

Grading Procedures: 1. Students are graded on theory and shop practice and performance.
2. Each course must be passed with seventy (70%) percent or better.
3. Grading scale: A=90-100%, B=80-89%, C=70-79%, D=60-69%, F=50-59%.

Description of Classroom, Laboratories, and Equipment: Tulsa Technology Center campuses are owned and operated by Tulsa Technology Center School District No. 18. All programs provide students the opportunity to work with professionally certified instructors in modern, well-equipped facilities.
The student may be eligible to take state, national or industry exam after completion of the program. College credit may be issued from Oklahoma State University-Okmulgee or Tulsa Community College. See program counselor for additional information.

The student must maintain a grade point average of 2.0 or better.