# ASSOCIATE OF APPLIED SCIENCE
## HEATING, REFRIGERATION, AND AIR CONDITIONING TECHNOLOGY DEGREE PLAN

**Effective 2022-2023**

<table>
<thead>
<tr>
<th>COURSE TITLES</th>
<th>COURSE NUMBERS</th>
<th>DONE</th>
<th>NOW</th>
<th>NEED</th>
<th>INSTALLER CERTIFICATE</th>
<th>TECHNICIAN CERTIFICATE</th>
<th>DEGREE</th>
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<tbody>
<tr>
<td>Electricity for HVAC (5)</td>
<td>HRA101</td>
<td></td>
<td>X</td>
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<tr>
<td>Principles of Refrigeration (5)</td>
<td>HRA105</td>
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<tr>
<td>Refrigeration and A/C Mechanical Systems (5)</td>
<td>HRA125</td>
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<td>X</td>
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<tr>
<td>Intro to International Mechanical Code (3)</td>
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<tr>
<td>Piping Design, Sizing, &amp; Installation for HRA (3)</td>
<td>HRA145</td>
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<td>Customer Relations and Record Keeping (2)</td>
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<td>Duct, Envelope Testing, and Leakage Detection (2)</td>
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<td>Sheet Metal Design, Sizing &amp; Installation for HRA (3)</td>
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<td>Residential Gas Heating Systems (4)</td>
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<td>Electric and Hydronic Heat (2)</td>
<td>HRA210</td>
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<td>Residential Air Conditioning Systems (3)</td>
<td>HRA216</td>
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<td>Advanced Electricity for HVAC (3)</td>
<td>HRA230</td>
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<td>Heat Pumps and Mini-Splits (3)</td>
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<td>Commercial Refrigeration Systems (5)</td>
<td>HRA249</td>
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<td>Technical Internship (1-3) optional</td>
<td>INT191,192, or193</td>
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**Group I. Communications (3) | ENG101(H) | X**

**Group II. Humanities/Communications (3)**

See MOTR CORE 42 list for choices

Cannot use Performance classes

**Group III. Social/Behavioral Sciences (3)**

Civics (3)

MO Higher Ed Civics Exam

PSC001

**Group IV. Math and/or Science (3)**

Industrial Math (3)

MTH105*

**Group V. Computer Literacy (3)**

CIS125*; EDU205*

**Group VI. First Year Experience (1-3)**

COL100*, COL101*, or COL136* required

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**GENERAL EDUCATION & INSTITUTIONAL REQUIREMENTS**

**Group I. Communications 3 hrs.**

ENG101(H) English Comp. I required

**Group II. Humanities/Communications 3 hrs.**

See MOTR CORE 42 list for choices

Cannot use Performance classes

**Group III. Social/Behavioral Sciences 6 hrs.**

3 hours must fulfill Civics requirement

See MOTR CORE 42 list for choices

**Group IV. Math and/or Science 6 hrs.**

MTH105 Industrial Math* required

MGT103*; MTH110*, 128*;

See MOTR CORE 42 list for additional choices

**Group V. Computer Literacy 3 hrs.**

CIS125*; EDU205*

**Group VI. First Year Experience 1-3 hrs.**

COL100*, COL101*, or COL136* required

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*These courses listed in the General Education and Institutional Requirements are not part of the MOTR CORE 42 general education program, and are not guaranteed to transfer to other institutions.

**NOTE:** Students must complete at least 15 credit hours at Jefferson College to meet the residency requirement for graduation.

Revised March 2022