### ASSOCIATE OF APPLIED SCIENCE

**Degree Plan**

**HEATING, REFRIGERATION, AND AIR CONDITIONING TECHNOLOGY**

(*Certificate Option*)

**Effective 2017-2018**

<table>
<thead>
<tr>
<th>COURSE TITLES</th>
<th>COURSE NUMBERS</th>
<th>DONE</th>
<th>ENROLLED</th>
<th>NEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Electricity for HVAC (5)</td>
<td>HRA101</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Principles of Refrigeration (5)</td>
<td>HRA105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Refrigeration and A/C Mechanical Systems (5)</td>
<td>HRA125</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Solar Hot Water Systems (2)</td>
<td>HRA130</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Intro to International Mechanical Code (3)</td>
<td>HRA135</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Piping Design, Sizing, &amp; Installation for HRA (2)</td>
<td>HRA145</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Customer Relations and Record Keeping (2)</td>
<td>HRA150</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Sheet Metal Design, Sizing &amp; Installation for HRA(3)</td>
<td>HRA160</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Residential Gas Heating Systems (4)</td>
<td>HRA205</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Electric and Hydronic Heat (2)</td>
<td>HRA210</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Residential Air Conditioning Systems (3)</td>
<td>HRA216</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Advanced Electricity for HVAC (3)</td>
<td>HRA230</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Heat Pumps and Mini-Splits (3)</td>
<td>HRA240</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Commercial Refrigeration Systems (5)</td>
<td>HRA249</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>* Industrial Math (3)</td>
<td>MTH105</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technical Internship (1-3) optional</td>
<td>INT191,192, or 193</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Group I. Communications (3)**

ENG101(H) English Comp. I required

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

ART; CHI; COM; ENG102+; FRN; GRM;
HUM; MSA; MSC; PHL; SPN; THT

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

Constitution: (3) HST103(H), 104(H) or PSC102(H) required
Social/Behavioral Sciences: (3) select one
ECO; GEO; HST; PSC; PSY; SOC

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

MTH105 Industrial Math required
BIO; CHM; MGT103; MTH105+; PHY

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

CIS125; EDU205

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

COL100/101/136 required

---

**Total Credit Hours: Certificate Only**

51-53

**Degree**

69-71

**CORE GENERAL EDUCATION & INSTITUTIONAL REQUIREMENTS**

**Group I. Communications 3 hrs.**

ENG101(H) English Comp. I required

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

ART; CHI; COM; ENG102+; FRN; GRM;
HUM; MSA; MSC; PHL; SPN; THT

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

Constitution: (3) HST103(H), 104(H) or PSC102(H) required
Social/Behavioral Sciences: (3) select one
ECO; GEO; HST; PSC; PSY; SOC

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

MTH105 Industrial Math required
BIO; CHM; MGT103; MTH105+; PHY

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

CIS125; EDU205

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

COL100/101/136 required

---

Revised Feb 2017