

Last Name \_\_\_\_\_

First Name \_\_\_\_\_

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

Effective 2022-2023

| COURSE TITLES   | COURSE NUMBERS       | DONE | NOW | NEED | INSTALLER CERTIFICATE | TECHNICIAN CERTIFICATE | DEGREE |
|---|----------------------|------|-----|------|-----------------------|------------------------|--------|
| Electricity for HVAC (5)                              | HRA101               |      |     |      | X                     | X                      | X      |
| Principles of Refrigeration (5)                       | HRA105               |      |     |      | X                     | X                      | X      |
| Refrigeration and A/C Mechanical Systems (5)          | HRA125               |      |     |      | X                     | X                      | X      |
| Intro to International Mechanical Code (3)            | HRA135               |      |     |      |                       | X                      | X      |
| Piping Design, Sizing, & Installation for HRA (3)     | HRA145               |      |     |      | X                     | X                      | X      |
| Customer Relations and Record Keeping (2)             | HRA150               |      |     |      | X                     | X                      | X      |
| Duct, Envelope Testing, and Leakage Detection (2)     | HRA155               |      |     |      |                       | X                      | X      |
| Sheet Metal Design, Sizing & Installation for HRA (3) | HRA160               |      |     |      | X                     | X                      | X      |
| Residential Gas Heating Systems (4)                   | HRA205               |      |     |      |                       | X                      | X      |
| Electric and Hydronic Heat (2)                        | HRA210               |      |     |      |                       | X                      | X      |
| Residential Air Conditioning Systems (3)              | HRA216               |      |     |      |                       | X                      | X      |
| Advanced Electricity for HVAC (3)                     | HRA230               |      |     |      |                       | X                      | X      |
| Heat Pumps and Mini-Splits (3)                        | HRA240               |      |     |      |                       | X                      | X      |
| Commercial Refrigeration Systems (5)                  | HRA249               |      |     |      |                       | X                      | X      |
| Technical Internship (1-3) optional                   | INT191,192,<br>or193 |      |     |      |                       |                        |        |
| Group I. <i>Communications</i> (3)                    | ENG101(H)            |      |     |      |                       |                        | X      |
| Group II. <i>Humanities/Communications</i> (3)        |                      |      |     |      |                       |                        | X      |
| Group III. <i>Social/Behavioral Sciences</i> (3)      |                      |      |     |      |                       |                        | X      |
| <i>Civics</i> (3)                                     |                      |      |     |      |                       |                        | X      |
| <i>MO Higher Ed Civics Exam</i>                       | PSC001               |      |     |      |                       |                        | X      |
| Group IV. <i>Math and/or Science</i> (3)              |                      |      |     |      |                       |                        | X      |
| <i>Industrial Math</i> (3)                            | MTH105*              |      |     |      |                       | X                      | X      |
| Group V. <i>Computer Literacy</i> (3)                 |                      |      |     |      |                       |                        | X      |
| Group VI. <i>First Year Experience</i> (1-3)          |                      |      |     |      | X                     | X                      | X      |
| <b>Student Signature/Date</b>                         |                      |      |     |      |                       |                        |        |
| <b>Advisor Signature/Date</b>                         |                      |      |     |      |                       |                        |        |

Total Credit Hours:

24

52

70

**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**

\*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. Computer literacy requirement must be completed with "C" or better.**

Revised March 2022