

Last Name

First Name

**JEFFERSON COLLEGE  
ASSOCIATE OF APPLIED SCIENCE**

**Degree Plan**

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

Effective 2018-2019

COURSE TITLES	COURSE NUMBERS	DONE	NOW	NEED	CERT	DEGREE
Electricity for HVAC (5)	HRA101				X	X
Principles of Refrigeration (5)	HRA105				X	X
Refrigeration and A/C Mechanical Systems (5)	HRA125				X	X
Intro to International Mechanical Code (3)	HRA135				X	X
Piping Design, Sizing, & Installation for HRA (2)	HRA145				X	X
Customer Relations and Record Keeping (2)	HRA150				X	X
Duct, Envelope Testing, and Leakage Detection (3)	HRA155				X	X
Sheet Metal Design, Sizing & Installation for HRA (3)	HRA160				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, 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
Group IV. <i>Math and/or Science</i> (3)						X
Industrial Math (3)	MTH105*				X	X
Group V. <i>Computer Literacy</i> (3)						X
Group VI. <i>First Year Experience</i> (1-3)					X	X
Student Signature/Date						
Advisor Signature/Date						

**Total Credit Hours:**

52-54

70-72

**GENERAL EDUCATION & INSTITUTIONAL REQUIREMENTS****Group I. Communications 3 hrs.**ENG101(H) English Comp. I **required****Group II. Humanities/Communications 3 hrs.**ART101,103,105; COM100(H),110; ENG102,105,106  
ENG215(H),216(H),225,226,228,229;FRN101102;  
HST201,202; MSC101,131,133,135,137,231,232;  
PHL101,102(H),201,202(H); SPN101,102; THT100(H)**Group III. Social/Behavioral Sciences 6 hrs.**Civics: (3) HST103(H),104(H) or PSC102(H) **required**  
Social/Behavioral Sciences: (3) **select one**  
ECO100,101,102; GEO103; HST103(H),104(H);  
PSC102(H),155; PSY101(H),205; SOC101(H),115**Group IV. Math and/or Science 6 hrs.**MTH105 Industrial Math\* **required**  
MGT103\*;MTH110\*,128\*,131,132,134(H),141  
BIO101(H),102,109,116,120,205,206,211;  
CHM101,102,111(H)  
PHY101,102,105,106,111,223**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.

Revised April 25, 2018