Air Conditioning Technology
One Year Program: Scope & Sequence

Semester 1
ARC103 - Heating, Ventilation and Air Conditioning I
(18 Weeks)

District Pre-Assessment

Unit 1 (9 Weeks)

Modern Refrigeration HVAC Excellence
- Professional Development: Careers & Certification, Safety, & Service Calls
- Service Basics: tools & Supplies, & Working with Tubing & Piping
- Refrigerants: Intro to Refrigerants, Equipment & Instruments for Servicing & Handling, & Working with Refrigerants

Certification: OSHA 10,
CTSO Integration (Leadership Skills): Officer Elections, Officer Training, Chapter Meeting
Professional Standards: 1A-D, 5A-E
Academic Standards: 1,1A,1B,1C,1D ELA.11-12.W.5 5.NF.B.3 5.NF.B.6 5.NF.B.7
Work-based Learning: 1st Interview, Resume, Practice Job Applications, Guest Speaker, Simulated Lab Experience.
Technical Standard: 1.0-11.0

Unit 2 (9 Weeks)

Modern Refrigeration HVAC Excellence
- Basic Electricity, Magnetism, & Electronics: Basic Electricity, Electrical Power, & Basic Electronics
- Motor & Electrical Control Systems: Electric Motors, Electrical Control Systems, Electrical Troubleshooting, & Servicing Electrical Motors

CTSO Integration (Leadership Skills): Chapter Meeting,
SkillsUSA Fall Leadership Conference, Community Service Project, Fundraiser Event
Work-based Learning: Construction Career Days, Resume Writing, Job Applications, Career Application Activities, Mock Service Calls, ARS Expo, Guest Speaker
Technical Standard: 12.0 - 23.0

Semester 2
ARC104 - Heating, Ventilation and Air Conditioning II
(18 Weeks)

Unit 3 (9 Weeks)

Modern Refrigeration HVAC Excellence
- Indoor Air Fundamentals: Air Movement & Measurement, Air Quality, Air Distribution, & Ventilation System Service

Certification: EAP 609
CTSO Integration (Leadership Skills): SkillsUSA Regional Conference, Chapter Meeting, Community Service Project Professional Skills: 3A-E, 9A-C,
Work-based Learning: Budgeting, Job Shadowing, Guest Speaker, Student Based Enterprise, Spring Preventive Maintenance, Guest Speaker, Simulated Lab Experience
Technical Standard: 27.0-33.0 & 35.0-37.0

Unit 4 (9 Weeks)

Modern Refrigeration HVAC Excellence

Certification: EPA 608 & 410A Safety
Work-based Learning: Job Interviews, Guest Speakers, Simulated Lab Experience
Technical Standard: 38.0 - 43.0

District Post-Assessment

Common AZCCR Math Standards (CAMS)
English Language Arts Standards (ELAS)
Environmental Protection Agency (EPA)
Occupational Safety and Health Administration (OSHA)
Modern Refrigeration and Air Conditioning

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