



Integrating Work-Based Learning into an Existing HVAC Program: A Co-Op Approach

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Let's Start with the WHY?

- A Co-Op is one of the 11 HIPs outlined by the AAC&U
- Research shows that HIPs
 - Create a deeper learning
 - Help retain students
 - Beneficial for underserved backgrounds
 - Greater academic achievement
- Helps students see the career first-hand
 - Is this the career for them?
- They begin to build their resume and networking

How it was done!

- Fall Semester
 - ACR 101 – Fundamentals of Refrigeration
 - ACR 105 – Tools and Service Techniques
 - ACR 106 – Basic Electricity for HVAC
- Spring Semester
 - ACR 104 – Print Reading for HVAC
 - ACR 110 – Heating Fundamentals
 - ACR 122 – Principles of Air Conditioning
- Summer Semester
 - ACR 111 – Gas Heating Principles
 - ACR 131 – Commercial Refrigeration
 - ACR 140 – Automatic Controls
 - ACR 225 – Industrial Air Conditioning
- Fall Semester
 - ACR 210 – Heat Pumps
 - ACR 221 – Residential Load Calculations
 - ACR 250 – Sheet Metal Fabrication
- Spring Semester
 - ACR 160 – Customer Service Relations
 - ACR 201 – Troubleshooting and Maintenance
 - ACR 224 – Codes and Ordinances

How it was done!

- Fall Semester
 - ACR 101 – Fundamentals of Refrigeration
 - ACR 105 – Tools and Service Techniques
 - ACR 106 – Basic Electricity for HVAC
 - ACR 160 – Customer Service Relations
- Spring Semester
 - ACR 110 – Heating Fundamentals
 - ACR 122 – Principles of Air Conditioning
- Summer Semester
 - ACR 104 – Print Reading for HVAC
 - ACR 221 – Residential Load Calculations
 - ACR 224 – Codes and Ordinances
 - ACR 250 – Sheet Metal Fabrication
 - **ACR 251 – SCWE in HVAC**
- Fall Semester
 - ACR 111 – Gas Heating Principles
 - ACR 175 – EPA Section 608 Test Prep
 - ACR 201 – Troubleshooting and Maintenance
 - ACR 210 – Heat Pumps
- Spring Semester
 - ACR 131 – Commercial Refrigeration
 - ACR 140 – Automatic Controls
 - ACR 225 – Industrial Air Conditioning

Who Made it Happen

- The HVAC Advisory Committee
 - Proposed it to the Executive Leadership
 - Approved the changes to the sequence
 - Agreed Upon Terms for student employment.
 - Discussed topics like insurance, work hours, pay, class start times.

What does the Summer Semester Look Like

- Summer Semester is 10 weeks from mid-May to end of July
 - Hottest parts of the year. Students are very busy working.
- Classes Monday through Thursday
- Start time is 5:40pm, all daytime and nighttime students together
- Courses have been modified a couple of times
 - Right now ACR 104 and ACR 224 are fully online.
 - Still needing more time for ACR 221 and ACR 250

Who do the students work for?

- Residential HVAC Companies
- Commercial HVAC Companies
- Commercial Refrigeration Companies
- Facilities Management
- Building Automation Companies
- OEM Manufactures

Work Completed in ACR 251 SCWE in HVAC

- Pre-Reflection Paper
- Monthly Employer Satisfaction Survey
- Online Discussion Post about work they completed each week
- Create a Safety Presentation and post it online in LMS
- Personality Test and Conflict Resolution
- Post Reflection Paper



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