

TRINITY VALLEY COMMUNITY COLLEGE
STUDENT LEARNIG OUTCOMES
LEARINING ENHANCEMENT ANNUAL PLANS (LEAPs)

Academic Program name:

A/C & Refrigeration

Person Responsible:

Brent Hoffman

**All items must have significant input of faculty*

July 15th, 2005 (Deans & Division Chairs should complete items 1 – 6 for the 2005 year)

1. **Desired Outcome** (A statement of what student will be able to ... demonstrate..., know..., do..., ect...-That is, as a result of your course and/or program, what will student be able to achieve that they were not able to prior to the learning experience [s]).

All students will be able to demonstrate an understanding of the principles of Air Conditioning and Refrigeration. This includes being able to identify the basic components of a refrigeration system, as well as perform simple refrigeration system adjustments and electrical repairs.

2. **Implementation Strategy** (Describe the tactic[s] to be used to influence this outcome.)
Example: Community service experiences will be used to have students to gain a better understanding of poverty.

Student[s] will:

- Attend daily classes
- Use interactive software
- Observe videos,
- Perform hands-on training
- Read from a variety of sources-textbooks and handouts

3. **Assessment Method** (The method or methods you will use to determine if students achieve the desired outcome?)
Example: A test, portfolio, a scoring rubric, a focus group with students, observation of student performances, ect...

Throughout this cycle the knowledge of each student in A/C and Refrigeration will be evaluated using locally developed written tests; along with observation of performance skills that identifies the student's level of understanding. Individual student's level of performance must demonstrate an acceptable understanding of the course curriculum.

4. **Assessment Criteria** (This answers the question "how do you know" that students [in aggregate] are able to Achieve the desired outcome.)
Example: 75% of students will be able to perform at a certain level on an assessment activity.

80% of all students will have achieved an acceptable level of performance in demonstrating and understanding the principles of A/C and Refrigeration.

5. Narrative description of the relationship of the outcome to TVCC's General Education Outcome. (if applicable).

A/C & Refrigeration is one of several vocational programs at TVCC. When students obtain vocational training in this field, the students will master several important objectives that apply to Occupational Education. An understanding of the Principles of A/C & Refrigeration requires students to read, use critical thinking, and hands-on training, which relate to other TVCC General Education Outcomes.

6. Select the TVCC General Education Outcome that this objective relates to (Indicate by marking the appropriate box with an "X")

Oral Communication Written Communication Reading Comprehension
 Computer Literacy Critical Thinking Mathematics

August 2005 thru June 2006 (Faculty, Division Chair & Deans should engage in item 7)

7. Implementation and Ongoing assessment throughout the year.

July 15th, 2006 (Faculty, Division Chairs & Deans should complete items 8 & 9 for the 2005-2006 year)

8. Narrative of the observed results using the assessment method & criteria described above.
(What did you observe?)

9. Description of the changes that are made as a result of what was learned.
(What types of changes were made to your course, program, curriculum, instructional technique, implementation strategies, ect... as a result of what you learned?)

- **Example of a cycle—Academic Year 2005-2006**
 - Deans have LEAPs for all programs approved by July 15, 2005 (items 1-6).
 - Departments conduct ongoing assessment of LEAPs from Aug. 2005 thru June 15, 2006 (item 7).
 - Departments shall document the results of their LEAPs by July 15, 2006. (items 8-9)
 - Deans & Dean of Institutional Effectiveness, compile and annual Learning Outcomes Report.

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July 15th, 2005 (Deans & Division Chairs should complete items 1 – 6 for the 2005 year.)

1. **Desired Outcome** (A statement of what student will be able to ... demonstrate..., know..., do..., ect...-That is, as a result of your course and/or program, what will student be able to achieve that they were not able to prior to the learning experience [s]).

This course is structured to acquaint the student with an understanding of A/C controls. All students will be able to understand the operation of the intricate controls used in A/C and Refrigeration, what to expect from these controls, and how to adjust, repair and replace these controls. The students will be given an opportunity to observe these controls in use and allow the student to exercise his skills.

2. **Implementation Strategy** (Describe the tactic[s] to be used to influence this outcome.)
Example: Community service experiences will be used to have students to gain a better understanding of poverty.

Student[s] will:

- Attend daily classes
- Use interactive software
- Observe videos,
- Perform hands-on training
- Read from a variety of sources-textbooks and handouts

3. **Assessment Method** (The method or methods you will use to determine if students achieve the desired outcome?)
Example: A test, portfolio, a scoring rubric, a focus group with students, observation of student performances, ect...

Throughout this cycle the knowledge of each student in A/C and Refrigeration will be evaluated using locally developed written tests; along with observation of performance skills that identifies the student's level of understanding. Individual student's level of performance must demonstrate an acceptable understanding of the course curriculum.

4. **Assessment Criteria** (This answers the question "how do you know" that students [in aggregate] are able to achieve the desired outcome.)
Example: 75% of students will be able to perform at a certain level on an assessment activity.

80% of all students will have achieved an acceptable level of performance in demonstrating and understanding the principles of A/C controls.

5. Narrative description of the relationship of the outcome to TVCC's General Education Outcome. (if applicable).

A/C & Refrigeration is one of several vocational programs at TVCC. When students obtain vocational training in this field, the students will master several important objectives that apply to Occupational Education. An understanding of the Principles of A/C Controls requires students to read, use critical thinking, and hands-on training, which relate to other TVCC General Education Outcomes.

6. Select the TVCC General Education Outcome that this objective relates to
(Indicate by marking the appropriate box with an "X")

Oral Communication Written Communication Reading
Comprehension
 Computer Literacy Critical Thinking
Mathematics

August 2005 thru June 2006 (Faculty, Division Chairs & Deans should engage in item 7)

7. Implementation and Ongoing assessment throughout the year.

July 15th, 2006 (Faculty, Division Chairs & Deans should complete items 8 & 9 for the 2005-2006 year)

8. Narrative of the observed results using the assessment method & criteria described above.
(What did you observe?)

9. Description of the changes that are made as a result of what was learned.
(What types of changes were made to your course, program, curriculum, instructional technique, implementation strategies, ect... as a result of what you learned?)

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July 15th, 2005 (Deans & Division Chairs should complete items 1 – 6 for the 2005 year)

1. **Desired Outcome** (A statement of what student will be able to ... demonstrate..., know..., do... ect...-. That is, as a result of your course and/or program, what will student be able to achieve that they were not able to prior to the learning experience [s]).

All students will be able to demonstrate an understanding of Gas & Electric Heating systems and make effective evaluation of repairs to these systems. All students will also be able to accurately size equipment to a building or house by calculating the heat loss and heat gain on a load calculating chart.

2. **Implementation Strategy** (Describe the tactic[s] to be used to influence this outcome.)

Example: Community service experiences will be used to have students to gain a better understanding of poverty.

Student[s] will:

- Attend daily classes
- Use interactive software
- Observe videos,
- Perform hands-on training
- Read from a variety of sources-textbooks and handouts

3. **Assessment Method** (The method or methods you will use to determine if students achieve the desired outcome?)

Example: A test, portfolio, a scoring rubric, a focus group with students, observation of student performances, ect...

Throughout this cycle the knowledge of each student in A/C and Refrigeration will be evaluated using locally developed written tests; along with observation of performance skills that identifies the student's level of understanding. Individual student's level of performance must demonstrate an acceptable understanding of the course curriculum.

4. **Assessment Criteria** (This answers the question "how do you know" that students [in aggregate] are able to achieve the desired outcome.)

Example: 75% of students will be able to perform at a certain level on an assessment activity.

80% of all students will have achieved an acceptable level of performance in demonstrating and understanding the operation of Gas & Electrical Heating Systems.

5. Narrative description of the relationship of the outcome to TVCC's General Education Outcome. (if applicable).

A/C & Refrigeration is one of several vocational programs at TVCC. When students obtain vocational training in this field, the students will master several important objectives that apply to Occupational Education. An understanding of Gas & Electric Heating Systems requires students to read, use critical thinking, and hands-on training, which relate to other TVCC General Education Outcomes.

6. Select the TVCC General Education Outcome that this objective relates to (Indicate by marking the appropriate box with an "X")

- Oral Communication Written Communication Reading
Comprehension
 Computer Literacy Critical Thinking
 Mathematics

August 2005 thru June 2006 (Faculty, Division Chair & Deans should engage in item 7)

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