



REQUEST FOR APPROVAL OF A COURSE

COURSE NAME: NBE 058
RESIDENTIAL HEATING AND
AIR CONDITIONING®

PROGRAM: NON-CREDIT BASIC EDUCATION

SUBMITTED BY: ROBERT HEEDER

DATE: APRIL 10, 2000

New Course Revised Updated

DATE APPROVED: MAY 11, 2000

CATALOG DESCRIPTION:

Residential heating and air conditioning consists of the concepts of heat transfer, refrigerant, safety, and the proper use and handling of tools. Also, the basic principles of electricity, natural gas and propane will be emphasized, as well as EPA regulations for Freon recovery and reclaiming. This course is repeatable.

UNITS: 0 HOURS: Lecture: _____ Laboratory: _____ Lecture/Lab: 24 Clinic/Field:

ENTRY LEVEL SKILLS, PREREQUISITES, AND/OR COREQUISITES:

Courses applicable to the degree must be of sufficient difficulty that if students are to succeed in the course they must enter it with certain competency. Such requisites may either be recommended or validated as requirements. To assure open access, a way must always be provided and publicized whereby students not initially eligible for enrollment in any course because of the prerequisites can gain the necessary competencies.

None

Requested Credits Classification: (Applicant)

Degree Applicable Noncredit
 Non-Degree Applicable Revised

COURSE OUTLINE

This outline should contain sufficient information to:

- (a) Permit the curriculum committee to correctly determine whether the course should be classified as noncredit, non-degree credit, or degree credit under Title 5, Sections 55002 and 55805.5.

- (b) Clarify the minimal obligations of the instructors of the course. (All instructors should be familiar with this outline and should use it in planning their courses, though their own syllabi may add objectives, goals, content, assignments and/or materials, may describe topics and objectives somewhat differently, and may place them in a different sequence.)

OBJECTIVES:

Limit these to the maximum number of critical objectives that can be effectively monitored and assessed. Formulate at least some of them in terms of student accomplishments concrete and specific enough that it can be determined to what extent they have in fact been achieved. For degree-applicable courses, include objectives in the area of “critical thinking” by requiring such outcomes as the ability to independently analyze, synthesize, explain, assess, anticipate and/or define problems, formulate and assess solutions, apply principles to new situations, etc.

Student will demonstrate ability to repair air and heating units in residential areas.

Student will demonstrate ability to reclaim and store Freon and other pollutants for future use.

Student will be able to explain principles of heat transfer, refrigerant safety, and safety in electronically-charged heating and cooling units.

TEXTS, OTHER READINGS AND MATERIALS:

(List typical or required primary sources, texts, and other materials; or reference college bookstore computerized listings, etc.)

Teacher and commercial prepared materials.

Determining whether or not materials are “college level” is a subtle matter, often not reducible to even the best readability formula. Certainly most of the material should be certifiable as at least 10th grade, but some well written works of merit may have a lower readability measure while other tests may have a high readability measure only because they are poorly written. Of probably more importance than readability per se is the complexity and breadth of the ideas presented. The value of the content and the quality of the presentation should always be given greater weight than readability alone.

_____	Primarily College Level	_____	Material Compared to/Offered at other Colleges
<u> X </u>	Primarily Not College Level	_____	Written for Higher Level Education
		<u> X </u>	Other: <u>Non-Credit Basic Education</u>
			(How Determined)

Page level courses should stress general principles of wide applicability. Where such principles are presented initially in terms of specific applications, they should be generalized and students asked to apply them to novel situations.

Topics:

Air Conditioning and Heating Home Units

Heat Transfer

Refrigerants

Principles of Electricity

Natural Gas and Propane Use and Storage

EPA Safety Regulations

EXPECTED STUDENT OUTCOMES:

On completion of this course, the student will be able to:

Apply corrective procedures in home and commercial air conditioning and heating units.

Explain and demonstrate the principle of heat transfer.

Explain proper procedures of refrigerants.

Abide by and explain EPA safety regulations.

<u>COMPLIANCE:</u>		<u>YES</u>	<u>NO</u>	<u>N/A</u>
Prerequisites:	Are appropriately established.	___	___	<u>X</u>
Apprenticeship:	Provides sufficient number of hours approved by Dept. Of Apprenticeship Standards. Covers safety and hazardous material as required.	___	___	<u>X</u> <u>X</u>
Instruction:	Instructional content and requirements are clear.	<u>X</u>		
Language:	Clear to other ESL or equivalent English courses. Clear level of 1st language literacy prerequisite.	___	___	<u>X</u> <u>X</u>
Special Class:	Progress is measured. Non-duplicative; need for class is clear. Appropriate intervention for specified disability.		___	<u>X</u> <u>X</u> <u>X</u>
Special Topics:	Scope and requirements are clear.	___	___	<u>X</u>

SIGNATURES

COURSE INITIATOR: _____ **DATE:**

SECRETARY: _____ **DATE:**

CHAIR OF CURRICULUM COMMITTEE: _____ **DATE:**

SUPERINTENDENT/PRESIDENT: _____ **DATE:**

This application is recommended for use in the local approval of courses. It has been designed by State Chancellor's Office to incorporate new provisions in Title 5, adopted by the Board of Governors and written into law in 1986-87. These new regulations have resulted from the sustained cooperation and the vision of faculty and curriculum officers throughout the state. In carefully defining the characteristics of a college level course, they provide the opportunity of colleges to rethink the significance of their degrees and assure high credibility to the Associate degree earned anywhere in California.