

FLORIDA STATE COLLEGE AT JACKSONVILLE

NON-COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: ACR 0577
COURSE TITLE: HVAC Controls
PREREQUISITE(S): None
COREQUISITE(S): None
TOTAL CONTACT HOURS: 116 (104-128)

(For Office Use Only:
Vocational Credits 4)

FACULTY WORKLOAD POINTS: 3.86

STANDARDIZED CLASS SIZE
ALLOCATION: 20

COURSE DESCRIPTION:

This course is designed to teach set up, adjustment and troubleshooting of commercial HVAC electrical and mechanical controls.

SUGGESTED TEXT(S): None

IMPLEMENTATION DATE: Fall Term, 1998

REVIEW OR MODIFICATION DATE: Summer Term 2001 (20013)
Fall Term, 2002 (20031)

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Commercial Electrical Generation & Distribution Components	6
II. Interpret Mechanical Components on Commercial Systems	20
III. Identify Pneumatic Control Systems	10
IV. Troubleshoot Pneumatic Control Systems	20
V. Designing Electrical Systems for Commercial Systems	20
VI. Appropriate Commercial Compressors	20
VII. Repair Light Commercial Air Conditioning & Heating Systems	20

PROGRAM TITLE: Commercial Heating and Air Conditioning Technology

COURSE TITLE: HVAC Controls

CIP NUMBER: 0647.020100

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

29.0 TROUBLESHOOT ELECTRICAL CIRCUITS AS USED IN COMMERCIAL HEATING AND AIR-CONDITIONING SYSTEMS -- The student will be able to:

- 29.01 Explain how the principles of designing an electrical system for residential heating and air-conditioning systems apply to commercial heating and air-conditioning systems.
- 29.02 Define and compare single- and multiphase voltage and current related to commercial heating and air-conditioning systems.
- 29.03 Calculate various circuit loads in commercial heating and air-conditioning applications, using Ohm's law.
- 29.04 Calculate the electrical circuit loads used in commercial heating and air-conditioning applications.
- 29.05 Troubleshoot the electrical circuits for commercial heating and air-conditioning systems.



NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

Section 1	
COURSE PREFIX AND NUMBER: ACR-0577	SEMESTER CREDIT HOURS (CC): CONTACT HOURS (NCC): <u>116</u>
COURSE TITLE: HVAC Controls	

Section 2
TYPE OF COURSE: (Click on the box to check all that apply)

<input type="checkbox"/> AA Elective	<input type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input type="checkbox"/> AS Professional Elective	<input type="checkbox"/> AAS Required Professional Course	X Technical Certificate
<input type="checkbox"/> Other _____	X PSAV	<input type="checkbox"/> Apprenticeship
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

Section 3 (If applicable)
INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:

<input type="checkbox"/> Communications	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

Section 4
INTELLECTUAL COMPETENCIES:

X Reading	X Speaking	X Critical Analysis	X Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input type="checkbox"/> Writing	X Listening	<input type="checkbox"/> Information Literacy	<input type="checkbox"/> Ethical Judgment	<input type="checkbox"/> Working Collaboratively

Section 5		
LEARNING OUTCOMES		METHOD OF ASSESSMENT
•	Demonstrate the ability to perform basic installation and troubleshooting skills using the appropriate test and measuring equipment.	Students will participate in classroom discussions and will be given simulated scenarios on equipment in the lab classes. Assessment by instructor 75% of possible 100 points to achieve a passing score.
•	Evaluate the requirements of a maintenance / service task and complete it in a timely manner meeting industry standards.	Students will be evaluated on time taken to find the problem or make the repair and or quality of the repair. Assessment by instructor, 75% of possible 100 points to achieve a passing score.
•	Be able to understand and know how to apply basic safety and shop safety skills	Multiple choice, fill in blank & essay question test. 75% of possible 100 points to achieve a passing score. Plus observations of student s applied safety skills. Assessment by instructor.
•	Knowledge of set up, adjustment, and troubleshooting of HVAC electrical and mechanical controls	Students will participate in classroom discussions and will be given simulated scenarios on equipment in the lab classes. Multiple choice, fill in blank & essay question test. Assessment by instructor, 75% of possible 100 points to achieve a passing score.
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Section 6
Name of Person Completing This Form: Gary Krupa Date: 11/2009