

## FLORIDA STATE COLLEGE AT JACKSONVILLE

## COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: ACR 1310

COURSE TITLE: Refrigeration Controls

PREREQUISITE(S): None

COREQUISITE(S): None

CREDIT HOURS: 3

CONTACT HOURS: 5

CONTACT HOUR BREAKDOWN:

    Lecture / Discussion: 2

    Laboratory: 3

FACULTY WORKLOAD POINTS: 3.5

STANDARDIZED CLASS SIZE ALLOCATION: 24

COURSE DESCRIPTION:

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

SUGGESTED TEXT(S): None

IMPLEMENTATION DATE: Fall Term, 2004 (20051)

REVIEW OR MODIFICATION DATE: Fall Term, 2008 (20091) - Outline Review 2007 - Was ACR 1122 number change per SCNS

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Interpret Mechanical Components on Commercial Systems	10
II. Test/Troubleshoot Refrigerant-Pressure-Regulating Devices	20
III. Apply Skills to Repair Commercial Refrigeration	10
IV. Types of Cases Functions of Each	10
V. Diagnose, Maintain and Repair Ice Making Systems	5
VI. Troubleshoot Controls Used in Commercial Refrigeration Systems	10
VII. Maintain and Troubleshoot Commercial Refrigeration Systems	10

PROGRAM TITLE: Air Conditioning, refrigeration & Heating Systems Technology

COURSE TITLE: Refrigeration Controls

CIP NUMBER: 0615050100

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

18.0 UTILIZE AND OPERATE MECHANICAL REFRIGERATION SERVICING AND TESTING EQUIPMENT -

The student will be able to:

- 18.01 Identify the effects of superheat and subcooling on a system.
- 18.02 Identify and explain the functions of servicing and testing equipment (such as vacuum pumps, micron gauges, EPA-approved equipment, leak detectors, and charging systems).
- 18.03 Operate a refrigerant recovery system.
- 18.04 Explain the standards for and ways to measure, test, maintain, and evacuate a mechanical heating, air-conditioning, and refrigeration system.
- 18.05 Evacuate the refrigerant system with various vacuum methods.
- 18.06 Demonstrate compliance with Environmental Protection Agency (EPA) rules and regulations and, if possible, take the EPA test.
- 18.07 Charge various air-conditioning and mechanical refrigeration systems by various methods.
- 18.08 Demonstrate the effects of superheat and subcooling on a system.



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

<i>Section 1</i>	
COURSE PREFIX AND NUMBER: <u>ACR 1310</u>	SEMESTER CREDIT HOURS: <u>3</u>
COURSE TITLE: <u>Refrigeration Controls</u>	

*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 checked="" type="checkbox"/> AAS Required Professional Course	<input checked="" type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other _____		
<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"/> Communication	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

*Section 4*

INTELLECTUAL COMPETENCIES:

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

<i>Section 5</i>	
LEARNING OUTCOMES	METHOD OF ASSESSMENT
• Utilize manual and power tools.	ARI Module Certification Score 70% or better
• Apply electrical skills.	ARI Module Certification Score 70% or better
• Read and interpret building codes.	ARI Module Certification Score 70% or better
• Read blueprints.	ARI Module Certification Score 70% or better
• Apply advanced refrigeration skills.	ARI Module Certification Score 70% or better
• Apply piping, soldering and brazing skills.	ARI Module Certification Score 70% or better
• Demonstrate knowledge of advanced refrigeration.	ARI Module Certification Score 70% or better
• Communicate effectively.	ARI Module Certification Score 70% or better
• Demonstrate problem solving skills.	ARI Module Certification Score 70% or better
• Identify safe working conditions and observe safety precautions.	ARI Module Certification Score 70% or better

*Section 6*

Name of Person Completing This Form: Jim Yurko