

Imperial Valley College
Industrial Technology Division
ACR 102 Residential Air Conditioning Systems
Spring 2013

Instructor: Frank Miranda

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Office Hours:	Monday	10:30 – 11:30 a.m.
	Tuesday	10:30 – 11:30 a.m.
	Friday	8:35 – 9:35 a.m.

Available By Appointment

Secretary/Division Office: 10

Division Coordinator: Jose Lopez 760- 355-6361 Fax: 760- 355-6552

Credits/Units: 3 credits

CRN: 20525

Semester: Spring, January 14, – May 10, 2013

Class:

Evenings:	Monday:	6:30 – 8:25 p.m.	Lecture
	Wednesday:	6:30 – 9:40 p.m.	Lab

Location: Room 1101

A. Course Description

This course of study includes the installation of residential heating, ventilation, air conditioning and refrigeration systems. This course is comprised of study of building and electrical codes, HVAC/R installation materials. Which includes skills in brazing sheet metal work and construction. Installation of split systems, heat pumps & gas packs. Also applicable safety practices.

B. Course Objective

Upon successful completion of this course, the student will:

- 1, Demonstrate competency and mastery of the body-of-knowledge in employee responsibilities within the HVAC/R industry.
2. Demonstrate knowledge of applicable building and electrical codes.
3. Demonstrate knowledge of the materials used for installing HVAC/R equipment.
4. Demonstrate knowledge of tubing and piping.
5. Demonstrate knowledge of brazing and soldering techniques.
6. Demonstrate knowledge of basic sheet metal installation.
7. Demonstrate ability to install package and split, heat pump, cooling only, and gas electric air conditioners.

C. Course Instructional Schedule

Unit 34	Indoor Air Quality
Unit 35	Comfort and Psychometrics
Unit 36	Refrigeration Applied to Air Conditioning
Unit 37	Air Distribution and Balance
Unit 38	Installation
Unit 39	Controls
Unit 40	Typical Operating Conditions
Unit 41	Troubleshooting

D. Grading Criteria

- a. Tardiness: 3 tardies equal 1 absence (I.V.C. Gen. Catalog Pg. 25-26) 2005-2006
- b. Absences: 3 absences equals automatic drop. (I.V.C. Gen Catalog Pg. 25-26) 2005-2006

E. Exam and Grading Procedures:

There will be a mid-term and final exam. Each will be worth 25% of the student's final grade. The student will be evaluated on classroom participation and test each week on chapters that have been assigned and/ or covered in class. These classroom assignments will be worth 25% of the student's grade. The remaining 25% of the student's grade will be based on the student's performance in the lab section of the class. All homework and tests must be completed and delivered to the instructor.

3. Grading Systems	Percent of Overall Grade
A= 90%-100%	25% Completed Lab Assignments
B= 80%-89%	25% Completed Classroom Assignments
C=70%-79%	25% Midterm Exam
D=60%-69%	25% Final Exam
F= Less than 60%	

Based on Attendance, Homework, Hands On, Test and Final Exam.

F. Students with Disabilities

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs & Services (DSP&S) office for assistance as soon as possible.

DSP&S
Room 2117
Health Sciences Building
(760) 355-6312

G. Student Learning Outcome

I.V.C. as an institution has adapted five Student Learning Outcome (SLO's). They are inter-connected with each other. They will be inherent throughout this course.

1. communication skills
2. crucial thinking skills
3. personal responsibilities
4. information literacy
5. global awareness

H. Classroom Room Management Procedures

The use of cell phones is prohibited during instruction time,
10 minute breaks allowed at professor discretion,
Tardiness and early departure is loss of credits.
Call-in if absence or tardy 2 hours before class time.
Please pick up after yourself before leaving room (trash cans in room and outside)
Safety rules and other procedures are found in the I.V.C. Gen. Cat. 2008-2009
pgs. 27-28

I. Harassment Statement

All forms of harassment are contrary to basic standards of conduct between individuals and are prohibited by state and federal law, as well as this policy, and will not be tolerated. The District is committed to providing an academic and work environment that respects the dignity of individuals and groups. The District shall be free of sexual harassment and all forms of sexual intimidation and exploitation.

The District seeks to foster an environment in which all employees and students feel free to report incidents of harassment without fear of retaliation or reprisal. Therefore, the District also strictly prohibits retaliation against any individual for filing a complaint of harassment or for participating in a harassment investigation. Such conduct is illegal and constitutes a violation of this policy.
(I.V.C. General Catalog 2008 – 2009 pg. 22)

J. Resources, Library, Counseling, Parking, etc.

Refer to the I.V.C. Gen. Cat. 2008 -2009 pgs. 19-21

K. Equipment and Supplies

Textbook

Whitman, William, Johnson and Tomczyk John. "Refrigeration & Air Conditioning Technology." 7th Edition. Delmar Thomson Learning, ISBN: 1-4018-3765-4

- a. Personal Protective Equipment
 - 2.1 Safety Glasses
 - 2.2 Leather Gloves
 - 2.3 Ear plugs
 - 2.4 Work footwear
 - 2.5 Proper shirt and pants