

Basic Course Information

Semester:	Fall 2020	Instructor Name:	Frank Miranda
Course Title & #:	Air Conditioning Vent Duct Systems ACR 106	Email:	Frank.Miranda@imperial.edu
CRN #:	10797	Webpage (optional):	www.imperial.edu
Classroom:	3115	Office #:	3118
Class Dates:	8/17-12/12	Office Hours:	N/A
Class Days:	Tuesday & Thursday	Office Phone #:	(760)355-6372
Class Times:	T 8:00 -10:05 am R 8:00-11:10am	Emergency Contact:	(760)355-6361
Units:	3		

Course Description

This is a course of study covering duct systems used in the heating, ventilation, air conditioning, and refrigeration industry. This course is comprised of the study of designing duct systems, duct materials, layout procedures, shop and hand tools, sheet metal ducts and components, duct board and flex duct components, and safety practices.

Student Learning Outcomes

1. Cut and form a simple layout pattern for galvanized sheet metal air conditioning square air duct.(ILO1, ILO2,ILO3, ILO4)
2. Cut and form a simple layout pattern for galvanized sheet metal air conditioning offset air duct.(ILO1, ILO2,ILO3, ILO4)
3. Cut and form a simple layout pattern for galvanized sheet metal air conditioning square to round air duct.(ILO1, ILO2,ILO3, ILO4)

Course Objectives

Upon successful completion of this course, the students will:

1. Demonstrate knowledge of designing HVAC/R duct systems.
2. Demonstrate knowledge of duct systems.
3. Demonstrate knowledge of duct materials.

4. Demonstrate knowledge of layout and procedures for duct components.
5. Demonstrate knowledge of sheet metal duct components.
6. Demonstrate knowledge of duct board and flex duct components.

Textbooks & Other Resources or Links

Leo A. Meyer: “Layout for duct fittings” Lama books, ISBN: 0-88069-028-3

Course Requirements and Instructional Methods

Lab practices will be face to face for the first six weeks of the semester and continued instruction will be synchronous online with the use of Canvas.

Visit a sheet metal shop and monitor duct design and manufacturing process. Reading and Writing: Write a 2000 word report that will be shared and discussed in class.

Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement.

Course Grading Based on Course Objectives

A= 90%-100% Excellent

B= 80%-89% Good

C= 70%-79% Satisfactory

D= 60%- 69% Pass, less than satisfactory

F= 59%&Below Failing

The course grade will be determined by various factors such, as class participation, classroom assignments, chapter reviews & drawing project, midterm & final exams. The grading range is as follows:

Class Participation 25%

Laboratory 25%

Midterm 25%

Final Exam 25%

Attendance, Late Assignments:

Absences and tardiness provide an opportunity to miss valuable instruction presented by the instructor, guest speakers, and site administrators. Tardiness will contribute to lower scores on assignments and subsequently a lower course grade. All assignments are due on the specified completion dates and all students have the same and equal time to complete all assignments as per the course calendar. Considerations will be given to those late assignments accompanied by a written medical statement from a physician. **25% of possible points will be penalized for late work. Any assignment can be turned in prior to the due date!**

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See [General Catalog](#) for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

Classroom Etiquette

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the [General Catalog](#).

- Children in the classroom: Due to college rules and state laws, no one who is not enrolled in the class may attend, including children.

Online Netiquette

- What is netiquette? Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.
- Students are to comply with the following rules of netiquette: (1) identify yourself, (2) include a subject line, (3) avoid sarcasm, (4) respect others' opinions and privacy, (5) acknowledge and return messages promptly, (6) copy with caution, (7) do not spam or junk mail, (8) be concise, (9) use appropriate language, (10) use appropriate emoticons (emotional icons) to help convey meaning, and (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

Academic Honesty

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to "cite a source" correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the [General Catalog](#) for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from

others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

Additional Student Services

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- **[Blackboard Support Site](#)**. The Blackboard Support Site provides a variety of support channels available to students 24 hours per day.
- **[Learning Services](#)**. There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your [Campus Map](#) for the [Math Lab](#); [Reading, Writing & Language Labs](#); and the [Study Skills Center](#).
- **[Library Services](#)**. There is more to our library than just books. You have access to tutors in the [Study Skills Center](#), study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the [Disabled Student Programs and Services](#) (DSP&S) office as soon as possible. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodations.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee.

- **[Student Health Center](#)**. A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC [Student Health Center](#) at 760-355-6128 in Room 1536 for more information.
- **[Mental Health Counseling Services](#)**. Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC [Mental Health Counseling Services](#) at 760-355-6196 in Room 2109 for more information.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC [General Catalog](#).

Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC [Library Department](#) provides numerous [Information Literacy Tutorials](#) to assist students in this endeavor.

Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
Week 1	Unit 1 Intro to class/layout Patterns	
Week 2	Unit 2 Making connections	
Week 3	Unit 3 Triangulation	
Week 4	Unit 4 Rectangular Transitions	
Week 5	Unit 5 Offsets	
Week 6	Unit 6 Rectangular Duct Elbows	
Week 7	Unit 7 Square to rounds	
Week 8	Unit 8 Round tappers	Midterm
Week 9	Unit 9 Round Tees	
Week 10	Unit 10 Round Elbows	
Week 11	Roof Elbows	
Week 12	Flex Ducts	
Week 13	Duct board	
Week 14	Reading HVAC duct prints	
Week 15	Estimating Duct materials	
Week 16		Final Exam

*****Tentative, subject to change without prior notice*****