

### Basic Course Information

Semester:	<b>Spring 2026</b>	Instructor Name:	<b>Kevin Lizarraga</b>
Course Title & #:	<b>ACR 105</b>	Email:	<b>kevin.lizarraga@imperial.edu</b>
CRN #:	<b>21089</b>	Webpage (optional):	
Classroom:	<b>3115</b>	Office #:	
Class Dates:	<b>02/17/26 - 06/12/26</b>	Office Hours:	<b>Monday – Thursday 5:00-6:00PM Via Phone or Zoom</b>
Class Days:	<b>Friday</b>	Office Phone #:	<b>7608862265</b>
Class Times:	<b>8:00 -10:15 am</b>	Emergency Contact:	<b>Department office Secretary 760-355-5758</b>
Units:	<b>3</b>	Class Format:	<b>Face-to-face (Laboratory &amp; Lecture)</b>

### Course Description

This course of study covers duct systems used in the heating, ventilation, air conditioning, and refrigeration (HVACR) industry. The course consists of studying and designing duct systems, including duct materials, layout procedures, shop and hand tools, sheet metal ducts and components, duct board and flex duct components, as well as safety practices.

### Course Prerequisite(s) and/or Corequisite(s)

N/A

### Student Learning Outcomes

IVC as an institution has adopted five Student outcomes(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 Responsibility

4. Information on Literacy
5. Global Awareness

### **Course Objectives**

Upon successful completion of this course, the student will:

1. Demonstrate Knowledge of designing HVAC/R duct Systems.
2. Demonstrate Knowledge of duct systems.
3. Demonstrate Knowledge of duct material.
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**

1. Textbook Modern Refrigeration and Air Conditioning, 22<sup>nd</sup> Edition, eBook Author: Andrew D. Althouse, Carl H. Turnquist, A.F. Bracciano, D.C. Bracciano, and G.M. Bracciano ISBN# 978-1-63563-877-6.

### **Course Requirements and Instructional Methods**

#### **COURSE ACTIVITIES INCLUDE:**

- **LABORATORY ASSIGNMENTS**
- **QUIZZES**
- **CHAPTER REVIEW**
- **WRITTEN EXAMS**
- **READING ASSIGNMENTS.**

#### **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

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

Class assignments and participation 25%

Laboratory 25%

Midterm 25%

Final Exam 25%

### **Course Policies**

- 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.
  - 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.

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the importance 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.

## **IVC Student Resources**

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> [Links to an external site.](#) or click the heart icon in Canvas.

## **Anticipated Class Schedule/Calendar**

<b>Date or Week</b>	<b>Activity, Assignment, and/or Topic</b>	<b>Pages/ Due Dates/Tests</b>
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Week 1	Syllabus & Introduction	
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Week 2	Intro to Heat load calc.	
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Week 3	Intro to Heat load calc.	
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Week 4	Test and review	
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Week 5	Intro to Calculation software	
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Week 6	Software Use in class	
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Week 7	Software use in class	
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Week 8	Test/Mid Term	
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<b>Date or Week</b>	<b>Activity, Assignment, and/or Topic</b>	<b>Pages/ Due Dates/Tests</b>
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Week 9

BluePrint Calc

Week 10

Blue Print Cal

Week 11

Building observation

Week 12

Building observation

Week 13

Building observation

Week 14

Building observation

Week 15

Final

Week 16

Last Class

**\*\*\*Subject to change without prior notice\*\*\***

