



Basic Course Information

Semester:	Spring 2024	Instructor Name:	Jacqueline Rodriguez
Course Title & #:	Computer Aided Design and Drafting - AutoCAD	Email:	jacqueline.rodriguez@imperial.edu
CRN #:	21084	Webpage (optional):	
Classroom:	3117	Office #:	none
Class Dates:	02/12/24 - 06/07/24	Office Hours:	With appointment
Class Days:	Monday and Wednesday	Office Phone #:	
Class Times:	6:00 pm – 8:35 pm	Emergency Contact:	Department office Secretary 760-355-5758
Units:	3	Class Format:	Hybrid

Course Description

This introductory course covers the fundamentals of AutoCAD and its application to the creation of technical drawings. Hands-on training utilizing a comprehensive overview of the software package and its applications to residential and commercial technical drafting is emphasized. (CSU)

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

BLDC 110 - with a grade of "C" or better.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Utilize drafting scales, tools and equipment to produce accurate technical drawings, in order to construct and modify two dimensional objects.
2. Utilize computers for both 2D and 3D representation of mechanical parts, forms and objects, to create technical and multi-view drawings in AutoCAD.
3. Apply line types to a technical drawing and apply line weights and line types to drawings in AutoCAD.
4. Construct and label each of the six main views of an object and annotate drawings using dimensioning tools and styles.

Course Objectives

Upon completion of this course the student will:

1. Identify various tools within the AutoCAD user workspace.
2. Apply set-up and format commands to drawings in AutoCAD.
3. Apply various display and view commands to view and navigate drawings.
4. Name tools and commands used to construct basic objects in AutoCAD.
5. Identify methods used to dimension and annotate drawing elements.
6. Set up and format an AutoCAD file.
7. Construct and modify two-dimensional objects.
8. Create technical and multi-view drawings in AutoCAD.
9. Apply line weights and line types to drawings in AutoCAD.
10. Annotate drawings using dimensioning tools and styles.
11. Work with multiple drawing files in AutoCAD.
12. Save and backup files and configure backup commands.
13. Produce a printed copy of a drawing.

Textbooks & Other Resources or Links

Shih, Randy H. . 2021. AutoCAD 2021 Tutorial, First Level: 2D Fundamentals. 1st Stephen Schroff. ISBN: 13: 978-1630573393

Course Requirements and Instructional Methods

COURSE ACTIVITIES INCLUDE:

- LABORATORY ASSIGNMENTS
- QUIZZES
- CHAPTER REVIEWS
- WRITTEN EXAMS
- READING ASSIGNMENTS.

INSTRUCTIONAL METHODOLOGY:

- Distance Learning
Hybrid Only
- Computer Assisted Instruction
AutoCAD
- Discussion
- Lab Activity
- Lecture

- Simulation/Case Study
Drawing simulations
Group Activity

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%

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.

- Every student who has been taking something that is not theirs will gain a disciplinary action.

Other Course Information

ONLINE NETIQUETTE:

- What is netiquette? Netiquette is internet manners, online netiquette, 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 (!!!!)]



IVC Student Resources

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.

1. The Blackboard Support Site provides a variety of support channels available to students 24 hours per day.
2. 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.
3. 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 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> or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
Week 1 to 3	AutoCAD overview <ul style="list-style-type: none"> • Screen layout, workspaces and workspace switching • Quick access toolbar, ribbon tabs and panels and drop-down menu bar • Toolbars, floating vs. docked • Graphics window, cursor coordinates and mouse settings • Command prompt area and status toolbar • Draw and modify toolbar panel • Layers control toolbar panel • Annotation toolbar panel • Layout and model toolbar • Help menu and glossary of terms 	
Week 4 to 6	Set-up and format commands in AutoCAD <ul style="list-style-type: none"> • Starting a new drawing • Using the drawing setup wizard • The CAD database (Templates (.dwt), Design Center) 	

	<ul style="list-style-type: none"> • Drawing units and precision settings • Drawing limits • Grid and snap option • Point styles • Close, save, back-up, file format and save time commands • Cartesian coordinates • World Coordinates System (WCS) • User Coordinates System (UCS): Polar, absolute, relative • Copy/paste and drag/ drop items from one drawing into another drawing • Repeat the last command • Page set-up for plotting 	
Week 7 -8	<p>Display options and viewing commands in AutoCAD</p> <ul style="list-style-type: none"> • Display options • Selection window • Model space versus layout space • Using layout to view print • Creating and working with viewports • Creating and organizing layers 	
Week 9 -13	<p>Basic object construction, drafting settings, drawing aids and modify commands</p> <ol style="list-style-type: none"> a. Draw commands <ol style="list-style-type: none"> i. Points, lines, multilines, rays and construction lines ii. Polylines and splines iii. Circles, ellipses and arcs iv. Rectangles and polygons b. Drafting settings and drawing aids <ol style="list-style-type: none"> i. Ortho ii. Object snap (OSNAP) iii. Polar tracking iv. Object snap tracking v. Dynamic input c. Modify commands 	



	<ul style="list-style-type: none"> i. Move, copy, stretch and rotate ii. Offset, mirror reverse and scale iii. Trim, break, divide, join, extend and lengthen iv. Fillet and Chamfer v. Arrays vi. Explode vii. Edit polylines and splines viii. Align <p>d. Object properties</p>	
<p>Week 14 - 16</p>	<p>1. Dimensioning and annotation</p> <ul style="list-style-type: none"> a. Dimension nomenclature and basics b. Using the dimension style manager c. Applying dimension to the drawing d. Text single and multi-line e. Leaders f. Parametric drawing and dimensioning tools g. Applying geometric constraints h. Applying dimensional constraints i. Additional geometric and dimensional constructions 	
	<p>Lab Outline</p> <ul style="list-style-type: none"> 1. Set-up and formatting of new files <ul style="list-style-type: none"> a. Scale and units. b. Layout and page size c. Title blocks and borders d. Viewports and layers 2. Object construction and modification. 3. Creation of technical drawings and multi-view drawings 4. Application of line weights and types to technical drawings 5. Dimensioning tools and styles 6. Working with multiple drawing files 7. Saving and backup commands 8. Plotting and printing 	



A review exam will be given each week on the chapter being studied. Homework will be reviewed at the end of every chapter. No extra credit will be assigned Homework will be collected weekly.

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. ***Subject to change without prior notice***