CAD 111
Computer Aided Drafting and Design I

COURSE OUTLINE

Prerequisites:

Basic Computer Literacy
Understanding of Email (send, receive, attachments)
How to download a file, transfer a file, upload a file
How to zip and unzip files

Course Description:

Teaches computer-aided drafting concepts and equipment designed to develop a general understanding of components of a typical CAD system and its operation. Lecture 2 hour. Laboratory 2 hours. Total 4 hours per week. Additional Lab hours required.

Semester Credits: 3 **Lecture Hours:** 2 **Lab/Recitation Hours:** 2

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Course Outcomes

A.   Have a general understanding of CAD operations.
B.   Have a thorough knowledge of the start-up procedures for the system.
C.   Have a working knowledge of steps required for initializing commands to the CAD system using the keyboard.
D.   Have a working knowledge of the steps required for initializing commands for the CAD system using the cursor.
E.   Be able to generate basic geometric constructions.
F.   Understand and be able to perform various tasks associated with modifying and grouping.
G.   Create drawings using various menus.
H.   Be able to command the system to produce a plot of any currently active drawing in the system.

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Required Materials:

USB Flash Drive

<u>Storage devices</u>:
    Required: free cloud based storage account.
    Recommended additional: USB portable

- To complete assignments outside the classroom, the student will need access to a current computer and a high-speed internet service and media player. The college provides an open lab for those students without home access to needed software.
- Students should provide their own stapler and pencil sharpener as these items are not provided in the classrooms.

The following supplementary materials are available:

- Tutoring: available free of charge in the open lab M302.
- VWCC offers an open computer lab format available throughout each semester if needed.
- AutoDesk provides each student with access to a downloadable full version of the AutoCad program. The student can download the program onto their personal computer from the storage site provided in Blackboard.

Textbook:

TITLE: Intro to AutoCAD 2015; A Modern Perspective **Edition: N/A**
AUTHOR:Rjichard
PUBLISHER:PeachPit Press
ISBN:9780133144796

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Academic Week	Topic	
Before Start Date	Read Chapter 1	
Week 1	Introduction Syllabus Review Blackboard Check J Drive: Share area Adjust monitor	Start AutoCAD Define key Work Area terms Set up Work Area and toolbars Dock/ Undocked/ Opening Command Entry Line, circles, arcs, delete Saving Work Assignment turn in demonstration
Week 2	Introduction to hand sketching Grammar of lines Orthographic projections	Single View Multi-view Alignment of views
Week 3	**Check Homework** **Solutions (orthographic drawings from iso)** **Review work area and CAD setup** **Line, circles, erase** **Methods of drawing a line** **Crossing windows**	**Tan tan rad** **Zoom, Panning, set units, work area** **Polar / Angles** **Basic plotting** **Limits** **trim**
Week 4	**Check Homework** **Solutions** **Offset** **Fillet / chamfer** **Ellipse, polygons** **Xline**	**Text** **Object Snaps** **Blue Boxes**
Week 5	**Layers setup** **Line Types** **Line weight**	**Copy, move, rotate, scale** **Using title block** **Review for test**
Week 6	**Bhatch** **Test**	**Test #1**
Week 7	**Array, Polar array** **How to dimension** **Rules / Dimension toolbar** **Dimension layer**	**Long Term Assignment Announced**
Week 8	**Check dimension problems** **Orthographic drawing** **3 views and alignment from iso**	**Long Term Assignment Final Idea Submitted**

	Paper set up	
Week 9		
Week 10	**Continue orthographic drawings.**	
	Auxiliary Views	
Week 11	**Cross sections**	
Week 12		**Test #2**
Week 13	**Paper Space**	
Week 14	**Develop long term assignment.**	
Week 15	**Continue develop work on long term assignment, Have students turn in current status and progress.**	
Week 16		**Test #3 (Exam)**
		Long Term Assignment Completed

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Notes to Instructors
(List information about optional topics, departmental exams, etc)

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2.

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