Introduction to AutoCAD 2014

- **AutoCAD 2014 Drawing Screen**

  - Screen consists of several areas

    - Quick Access Toolbar
    - Application Menu
    - Ribbons & Panels
    - Menu bars (must toggle access)
    - Tool Palettes (CTRL +1, 2, 3, & 4)

    - Command Prompt area
    - Dynamic Input Mode
    - Status bar(s) Left & Right Side
    - Scroll bars
    - Graphics cursor

  - On /Off button Looks:

    - On Teal Color
    - Off flat gray look

  - Right Click on any button to get more options and to set up the command.

- **Function Keys (Toggles)**

  - F1 - AutoCAD Help Screens
  - F2 - Toggle Text/Graphics Screen
  - F3 – Object Snap Settings
  - F4 - Toggle Tablet Modes
  - F5 - Isoplanes (Right, Left, Top)
  - F6 – Dynamic UCS

  - F7 - Toggle Grid Modes
  - F8 - Toggle Ortho Modes
  - F9 - Toggle Snap Modes
  - F10 - Toggle Polar Tracking
  - F11 - Toggle OTRACK
  - F12 – Toggle Dyn Input Mode

- **Communicating with AutoCAD**

  - Command Line /Command Prompt

  - [3P/2P/Ttr (tan tan radius)]

  - Items identified inside the square brackets are referred to as options. Typing in this option from the keyboard activates it.

      – Dynamic Input

- **Choosing Commands in AutoCAD**

  - Ribbon Tabs, Context Tabs, Panels & Subpanels

  - Pick from menu bar

  - Select from Toolbars

  - Dialog Boxes

  - Right click shortcut menus

  - Type command on Command Prompt Line

  - Command Aliases

  - Dynamic Input (tab key, arrow keys)

- **Menu Bar (formerly Pull down menus)**

  – Select pull-down through left mouse button

  – Move mouse to command and click left button to select command

    - A Dialogue box will appear if a … is present (like Hatch command)

    - An additional menu will appear if an arrow is present

- **Tool Bar Selection**

  – Use mouse to track over Toolbar image for button detection and identification

  – A Left mouse button click will select command

- **Activating Tool Bars**

  – Right mouse click on any toolbar button will bring up the toolbar activation menu

  – Choose Toolbars from the View pull down menu to bring up the customize user interface dialogue

- **Docking Toolbars**

  – Placing toolbars around the edge of your screen is called docking

- **Dialog Boxes and Icon Menus**

  – Settings and other controls can be changed through dialog boxes

- Select a picture to select a hatch pattern

- Right Mouse Clicking

  - It will get you everywhere!

- Command and area specific menus will appear upon right mouse clicking

- Remember: Right Mouse Clicks

  - Are used to Start and Stop a command

  - Show Pop-up option's menus when in a command

- **Right Mouse Click Menus**

  - A Short-Cut menu will appear within a command, no command, or when an object is selected.

    This is a quick access to the Options menu, as well as your most recent commands.

- **Command Aliases**

  - Used to customized the key strokes on a keyboard to execute a command

  - ACAD.pgp (**P**ro**G**ram **P**arameters file) is the text file that holds the alias information Command Aliases

  - Used for speed by experienced users

  - Eliminates the need to remember and type the full command names

    - Can be customized to add or change commands

- **Starting a New Drawing**

  - To begin a new drawing, select the NEW command

  - Four Options

    - Open an existing drawing

    - Start from scratch

    - Use a template

    - Use a Wizard

    - Opening an Existing Drawing

- Choose OPEN or use opening an existing drawing in the start-up dialogue

    - Drawing files have extensions of .dwg

- Drawing lines to accurate distances

    - Coordinate Entry Methods

    - Direct Distance mode (Point and Shoot method)

        - Use with Polar Tracking for accuracy

    - Point the crosshairs in the needed direction and type the distance that the line should be. Line is drawn to the distance inputted at the angle that was projected.

- **Object Snaps**

    - Uses geometry to locate specific positions

    - Only used in conjunction with another command

        - Activation of Object Snaps (these methods are one time use only)

            - Typing the first 3 letters of the object snap name at command prompt line

            - Holding down the SHIFT KEY while clicking the RIGHT mouse button (pop-up menu)

- **Running Object Snaps**

    - Object snaps never stop working for you

        - Right click on OSNAP button on status bar select settings

        - Turn On/Off by OSNAP button

- **Polar Tracking**

    - Assists in creating orthogonal lines (ORTHO) at specific angles

        - Set up in drafting settings

        - On / Off by POLAR button

- **Polar Tracking & Temporary Tracking Points**

    - Set the angle of usage and draw a line

- A tool tip will appear showing both distance and angle of the line (Only shows up when line is equal to the angle setting)

  – Use in conjunction with Object Snaps

- Creates temporary tracking points

- Very powerful tool

- Hold cross hair on an object to acquire a tracking point

  – To remove an acquired point, pass crosshairs back over it

- **Setting Polar Snap**

  – When SNAP and POLAR are both turned on and the cursor is moved to draw a line, not only will the angle be set but the cursor will also jump to the next increment set by the polar snap value.

  – Setting a Relative Polar Angle

- **Setting a relative polar angle**

  – **Absolute**—This is the default setting when dealing with Polar Angle measurement. This setting controls all angle measurements based on the position of the current user coordinate system, the icon located in the lower left corner of all AutoCAD drawing screens.

  – **Relative to last segment**—When changing the Polar Angle measurement to Relative to last segment, the Polar Tracking angle is based on the last line segment drawn.

- **More on Object Snap Tracking (OTRACK)**

  – The advantage of using Object Snap Tracking is in the ability to choose or acquire points to be used for construction purposes.

  – Excellent for finding centers of shapes and edges of objects.

- **Temporary Tracking Points**

  – Users can highlight the edges of 2 existing geometry objects and project intersections between the geometry.

  – Great for finding midpoints of surfaces

  – Up to 3 tracking points can be placed, but only 2 are used at a time

- **Other Methods of Accurate Input**

- Absolute Coordinate Mode

  - Cartesian Coordinates

    - Same as it is in math

    - Position of point based on the 0,0 location in the drawing

      » X,Y

- Relative Coordinate Mode

    - Position of next point is relative to last coordinate point

      » @X,Y

- Polar Coordinates (aka: Vector Coordinates)

    - Used to input a distance and the direction angle

    - Format: *@Distance<Angle*

- Designers will use combinations of all methods of input to create a drawing

- To draw a line that is 4 inches long at 45 degrees the polar coordinate would look like: @4.00<45

  - Combining Drawing Methods

- Absolute, Relative, Polar coordinates methods

- **Saving a Drawing File**

  - Save

  - Save as

    - Allows input of a drawing name or location every time

    - Provides the ability to change file saving version

      - AutoCAD 2004, AutoCAD 2000, (and corresponding AutoCAD LT products)

      - Drawing Template (DWT)

      - DXF File

      - Saving a Drawing File

- **AutoSave (Savetime SysVar)**

  – Select from right click menu - options…

  – Open and Save Tab

    - Place Time in box (minutes)

    - Use FILES tab to specify where to place auto save files

- **Help**

  – Activate the command on the command line <enter>, then, hit the F1 Key

- **Productivity and Performance Tools**

  – Tray settings

  – Display notifications from services

  – Right Click Customization

    - Time sensitive right click

- **Exiting an AutoCAD 2010 Session**

  – Close

    - Closes the drawing but does not leave the software

  – Exit

    - Closes the drawing AND leaves the software

  – Both of these give an extra chance to save the changes in your work.