



CMCE New York City College of Technology

Construction Management & Civil Engineering Technology

CMCE 1110 Construction Drawing I

AutoCAD Shortcuts

1. Manage Drawings

Ctrl+N	New Drawing
Ctrl+S	Save drawing
Ctrl+O	Open drawing
Ctrl+P	Plot dialog box
Ctrl+Tab/Ctrl+Shift+Tab	Switch to next / switch to previous drawing
Ctrl+Page Up/Page Down	Switch to next tab / switch to previous tab in current drawing
Ctrl+Q	Exit
Ctrl+A	Select all objects

2. Toggle Drawing Modes

F3	Toggles object snap mode
F7	Toggle grid mode
F8	Toggle ortho mode
F9	Toggle snap mode
F10	Toggle polar mode
F11	Toggle object snap tracking
F12	Toggle dynamic input mode

4. Manage Workflow

Ctrl+C	Copy object
Ctrl+X	Cut object
Ctrl+V	Paste object
Ctrl+Shift+C	Copy to clipboard with base point
Ctrl+Shift+V	Paste data as block
Ctrl+Z	Undo last action
Ctrl+Y	Redo last action
Ctrl+[Cancel current command (or ctrl+V)

3. Manage Screen

Ctrl+0 (zero)	Clean Screen
Ctrl+1	Property Palette
Ctrl+2	Design Center Palette
Ctrl+3	Tool Palette
Ctrl+4	Sheet Set Palette
Ctrl+6	DBConnect Manager
Ctrl+7	Markup Set Manager Palette
Ctrl+8	Quick Calc
Ctrl+9	Command Line

5. Toggle General Features

Ctrl+D	Toggle coordinate display
Ctrl+G	Toggle Grid
Ctrl+E	Cycle isometric planes
Ctrl+F	Toggle running object snaps
Ctrl+H	Toggle Pick Style
Ctrl+Shift+H	Toggle Hide pallets
Ctrl+I	Toggle Coords
Ctrl+Shift+I	Toggle Infer Constraints

6. Command Shortcuts

3D Command Shortcuts

3A	3DARRAY / Creates a 3D matrix of objects in a rectangular or polar arrangement.
3DO	3DORBIT/ Rotates the view in 3D space, but constrained to horizontal and vertical orbit only.
3DW	3DWALK/ Changes the 3D view in a drawing interactively to create the appearance of walking through the model.
3F	3DFACE/ Creates a three-sided or four-sided surface in 3D space.
3M	3DMOVE/ In a 3D view, displays the 3D Move gizmo to aid in moving 3D objects a specified distance in a specified direction.
3P	3DPOLY/ Creates a 3D polyline.
3R	3DROTATE/ In a 3D view, displays the 3D Rotate gizmo to aid in revolving 3D objects around a base point.
3S	3DSCALE/ In a 3D view, displays the 3D Scale gizmo to aid in resizing 3D objects.

A Command Shortcuts

A	ARC / Creates an arc.
ADC	ADCENTER / Manages and inserts content such as blocks, xrefs, and hatch patterns.
AA	AREA / Calculates the area and perimeter of objects or of defined areas.
AL	ALIGN / Aligns objects with other objects in 2D and 3D
AP	APPLOAD / Load Application
AR	ARRAY / Creates multiple copies of objects in a pattern.
ARR	ACTRECORD / Starts the Action Recorder.
ARM	ACTUSERMESSAGE / Inserts a user message into an action macro.
ARU	ACTUSERINPUT / Pauses for user input in an action macro.
ARS	ACTSTOP / Stops the Action Recorder and provides the option of saving the recorded actions to an action macro file.
ATI	ATTIPEDIT / Changes the textual content of an attribute within a block.
ATT	ATTDEF / Redefines a block and updates associated attributes.
ATE	ATTEDIT / Changes attribute information in a block.

B Command Shortcuts

B	BLOCK / Creates a block definition from selected objects.
BC	BCLOSE / Closes the Block Editor.
BE	BEDIT / Opens the block definition in the Block Editor.
BH	HATCH / Fills an enclosed area or selected objects with a hatch pattern, solid fill, or gradient fill.
BO	BOUNDARY / Creates a region or a polyline from an enclosed area.
BR	BREAK / Breaks the selected object between two points.
BS	BSAVE / Saves the current block definition.
BVS	BVSTATE / Creates, sets, or deletes a visibility state in a dynamic block.

C Command Shortcuts

C	CIRCLE / Creates a circle.
CAM	CAMERA / Sets a camera and target location to create and save a 3D perspective view of objects.
CBAR	CONSTRAINTBAR / A toolbar-like UI element that displays the available geometric constraints on an object.
CH	PROPERTIES / Controls properties of existing objects.
CHA	CHAMFER / Bevels the edges of objects.
CHK	CHECKSTANDARDS / Checks the current drawing for standards violations.
CLI	COMMANDLINE / Displays the Command Line window.
COL	COLOR / Sets the color for new objects.
CO	COPY / Copies objects a specified distance in a specified direction.
CT	CTABLESTYLE / Sets the name of the current table style
CUBE	NAVVCUBE / Controls the visibility and display properties of the ViewCube tool.
CYL	CYLINDER / Creates a 3D solid cylinder.

D Command Shortcuts

D	DIMSTYLE / Creates and modifies dimension styles.
DAN	DIMANGULAR / Creates an angular dimension.
DAR	DIMARC / Creates an arc length dimension.
JOG	DIMJOGGED / Creates jogged dimensions for circles and arcs.
DBA	DIMBASELINE / Creates a linear, angular, or ordinate dimension from the baseline of the previous or selected dimension.
DBC	DBCONNECT / Provides an interface to external database tables.
DCE	DIMCENTER / Creates the center mark or the centerlines of circles and arcs.
DCO	DIMCONTINUE / Creates a dimension that starts from an extension line of a previously created dimension.
DCON	DIMCONSTRAINT / Applies dimensional constraints to selected objects or points on objects.
DDA	DIMDISASSOCIATE / Removes associativity from selected dimensions.
DDI	DIMDIAMETER / Creates a diameter dimension for a circle or an arc.
DED	DIMEDIT / Edits dimension text and extension lines.
DI	DIST / Measures the distance and angle between two points.
DIV	DIVIDE / Creates evenly spaced point objects or blocks along the length or perimeter of an object.
DJL	DIMJOGLINE / Adds or removes a jog line on a linear or aligned dimension.
DJO	DIMJOGGED / Creates jogged dimensions for circles and arcs.
DL	DATALINK / The Data Link dialog box is displayed.
DLU	DATALINKUPDATE / Updates data to or from an established external data link.

DO	DONUT / Creates a filled circle or a wide ring.
DOR	DIMORDINATE / Creates ordinate dimensions.
DOV	DIMOVERRIDE / Controls overrides of system variables used in selected dimensions.
DR	DRAWORDER / Changes the draw order of images and other objects.
DRA	DIMRADIUS / Creates a radius dimension for a circle or an arc.
DRE	DIMREASSOCIATE / Associates or re-associates selected dimensions to objects or points on objects.
DRM	DRAWINGRECOVERY / Displays a list of drawing files that can be recovered after a program or system failure.
DS	DSETTINGS / Sets grid and snap, polar and object snap tracking, object snap modes, Dynamic Input, and Quick Properties.
DT	TEXT / Creates a single-line text object.
DV	DVIEW / Defines parallel projection or perspective views by using a camera and target.
DX	DATAEXTRACTION / Extracts drawing data and merges data from an external source to a data extraction table or external file

E-G Command Shortcuts

E	ERASE / Removes objects from a drawing.
ED	DDEDIT / Edits single-line text, dimension text, attribute definitions, and feature control frames.
EL	ELLIPSE / Creates an ellipse or an elliptical arc.
ER	EXTERNALREFERENCES / Opens the External References palette.
EX	EXTEND / Extends objects to meet the edges of other objects.
EXIT	QUIT / Exits the program.
EXP	EXPORT / Saves the objects in a drawing to a different file format.
EXT	EXTRUDE / Extends the dimensions of a 2D object or 3D face into 3D space.
F	FILLET / Rounds and fillets the edges of objects.
FI	FILTER / Creates a list of requirements that an object must meet to be included in a selection set.
FSHOT	FLATSHOT / Creates a 2D representation of all 3D objects based on the current view.
G	GROUP / Creates and manages saved sets of objects called groups.
GCON	GEOCONSTRAINT / Applies or persists geometric relationships between objects or points on objects.
GD	GRADIENT / Fills an enclosed area or selected objects with a gradient fill.
GEO	GEOGRAPHICLOCATION / Specifies the geographic location information for a drawing file.

H-L Command Shortcuts

H	HATCH / Fills an enclosed area or selected objects with a hatch pattern, solid fill, or gradient fill.
HE	HATCHEDIT / Modifies an existing hatch or fill.
HI	HIDE / Regenerates a 3D wireframe model with hidden lines

I	suppressed.
IAD	INSERT / Inserts a block or drawing into the current drawing.
IAT	IMAGEADJUST / Controls the image display of the brightness, contrast, and fade values of images.
ICL	IMAGEATTACH / Inserts a reference to an image file.
IM	IMAGECLIP / Crops the display of a selected image to a specified boundary.
IMP	IMAGE / Displays the External References palette.
IN	IMPORT / Imports files of different formats into the current drawing.
INF	INTERSECT / Creates a 3D solid, surface, or 2D region from overlapping solids, surfaces, or regions.
IO	INTERFERE / Creates a temporary 3D solid from the interferences between two sets of selected 3D solids.
J	INSERTOBJ / Inserts a linked or embedded object.
L	JOIN / Joins similar objects to form a single, unbroken object.
LA	LINE / Creates straight line segments.
LAS	LAYER / Manages layers and layer properties.
LE	LAYERSTATE / Saves, restores, and manages named layer states.
LEN	QLEADER / Creates a leader and leader annotation.
LESS	LENGTHEN / Changes the length of objects and the included angle of arcs.
LI	MESHSMOOTHLESS / Decreases the level of smoothness for mesh objects by one level.
LO	LIST / Displays property data for selected objects.
LT	LAYOUT / Creates and modifies drawing layout tabs.
LTS	LINETYPE / Loads, sets, and modifies linetypes.
LW	LTSCALE / Changes the scale factor of linetypes for all objects in a drawing.
	LWEIGHT / Sets the current lineweight, lineweight display options, and lineweight units.

M-O Command Shortcuts

M	MOVE / Moves objects a specified distance in a specified direction.
MA	MATCHPROP / Applies the properties of a selected object to other objects.
MAT	MATERIALS / Shows or hides the Materials window.
ME	MEASURE / Creates point objects or blocks at measured intervals along the length or perimeter of an object.
MEA	MEASUREREGION / Measures the distance, radius, angle, area, and volume of selected objects or sequence of points.
MI	MIRROR / Creates a mirrored copy of selected objects.
ML	MLNE / Creates multiple parallel lines.
MLA	MLEADERALIGN / Aligns and spaces selected multileader objects.

MLC

MLEADERCOLLECT / Organizes selected multileaders that contain blocks into rows or columns, and displays the result with a single leader.

MLD

MLEADER / Creates a multileader object.

MLE

MLEADEREDIT / Adds leader lines to, or removes leader lines from, a multileader object.

MLS

MLEADERSTYLE / Creates and modifies multileader styles.

MO

PROPERTIES / Controls properties of existing objects.

MORE

MESHSMOOTHMORE / Increases the level of smoothness for mesh objects by one level.

MS

MSPACE / Switches from paper space to a model space viewport.

MSM

MARKUP / Opens the Markup Set Manager.

MT

MTEXT / Creates a multiline text object.

MV

MVIEW / Creates and controls layout viewports.

NORTH

GEOGRAPHICLOCATION / Specifies the geographic location information for a drawing file.

NSHOT

NEWSHOT / Creates a named view with motion that is played back when viewed with ShowMotion.

NVIEW

NEWVIEW / Creates a named view with no motion.

O

OFFSET / Creates concentric circles, parallel lines, and parallel curves.

OP

OPTIONS / Customizes the program settings.

ORBIT

3DORBIT / Rotates the view in 3D space, but constrained to horizontal and vertical orbit only.

OS

OSNAP / Sets running object snap modes.

P Command Shortcuts

P

PAN / Adds a parameter with grips to a dynamic block definition.

PA

PASTESPEC / Pastes objects from the Clipboard into the current drawing and controls the format of the data.

PAR

PARAMETERS / Controls the associative parameters used in the drawing.

PARAM

BPARAMETER / Adds a parameter with grips to a dynamic block definition.

PATCH

SURFPATCH /

PC

POINTCLOUD /

PCATTACH

POINTCLOUDATTACH /

PCINDEX

POINTCLOUDINDEX /

PE

PEDIT / Edits polylines and 3D polygon meshes.

PL

PLINE / Creates a 2D polyline.

PO

POINT / Creates a point object.

POFF

HIDEPALETTES / Hides currently displayed palettes (including the command line).

POL

POLYGON / Creates an equilateral closed polyline.

PON

SHOWPALETTES / Restores the display of hidden palettes.

PRE

PREVIEW / Displays the drawing as it will be plotted.

PRINT	PLOT / Plots a drawing to a plotter, printer, or file.
PS	PSPACE / Switches from a model space viewport to paper space.
PSOLID	POLYSOLID / Creates a 3D wall-like polysolid.
PTW	PUBLISHTOWEB / Creates HTML pages that include images of selected drawings.
PU	PURGE / Removes unused items, such as block definitions and layers, from the drawing.
PYR	PYRAMID / Creates a 3D solid pyramid.
Q-R Command Shortcuts	
QC	QUICKCALC / Opens the QuickCalc calculator.
QCUI	QUICKCUI / Displays the Customize User Interface Editor in a collapsed state.
QP	QUICKPROPERTIES / Displays open drawings and layouts in a drawing in preview images.
QVD	QVDRAWING / QVLAYOUTCLOSE
QVDC	QVDRAWINGCLOSE / Closes preview images of open drawings and layouts in a drawing.
QVL	QVLAYOUT / Displays preview images of model space and layouts in a drawing.
R	REDRAW / Refreshes the display in the current viewport.
RA	REDRAWALL / Refreshes the display in all viewports.
RC	RENDERCROP / Renders a specified rectangular area, called a crop window, within a viewport.
RE	REGEN / Regenerates the entire drawing from the current viewport.
REA	REGENALL / Regenerates the drawing and refreshes all viewports.
REC	RECTANG / Creates a rectangular polyline.
REG	REGION / Converts an object that encloses an area into a region object.
REN	RENAME / Changes the names assigned to items such as layers and dimension styles.
REV	REVOLVE / Creates a 3D solid or surface by sweeping a 2D object around an axis.
RO	ROTATE / Rotates objects around a base point.
RP	RENDERPRESETS / Specifies render presets, reusable rendering parameters, for rendering an image.
RPR	RPREF / Displays or hides the Advanced Render Settings palette for access to advanced rendering settings.
RR	RENDER / Creates a photorealistic or realistically shaded image of a 3D solid or surface model.
RW	RENDERWIN / Displays the Render window without starting a rendering operation.
S Command Shortcuts	
S	STRETCH / Stretches objects crossed by a selection window or polygon.
SC	SCALE / Enlarges or reduces selected objects, keeping the proportions

SCR

of the object the same after scaling.

SEC

SCRIPT / Executes a sequence of commands from a script file.

SET

SECTION / Uses the intersection of a plane and solids, surfaces, or mesh to create a region.

SHA

SETVAR / Lists or changes the values of system variables.

SL

SHADEMODE / Starts the VSCURRENT command.

SN

SLICE / Creates new 3D solids and surfaces by slicing, or dividing, existing objects.

SO

SNAP / Restricts cursor movement to specified intervals.

SP

SOLID / Creates solid-filled triangles and quadrilaterals.

SPL

SPELL / Checks spelling in a drawing.

SPLANE

SPLINE / Creates a smooth curve that passes through or near specified points.

SPLAY

SECTIONPLANE / Creates a section object that acts as a cutting plane through 3D objects.

SPLIT

SEQUENCEPALY /

SPE

MESHSPPLIT / Splits a mesh face into two faces.

SSM

SPLINEDIT / Edits a spline or spline-fit polyline.

ST

SHEETSET / Opens the Sheet Set Manager.

STA

STYLE / Creates, modifies, or specifies text styles.

SU

STANDARDS / Manages the association of standards files with drawings.

SUBTRACT / Combines selected 3D solids, surfaces, or 2D regions by subtraction.

T Command Shortcuts

T

MTEXT / Creates a multiline text object.

TA

TABLET / Calibrates, configures, and turns on and off an attached digitizing tablet.

TB

TABLE / Creates an empty table object.

TEDIT

TEXTEDIT / Edits a dimensional constraint, dimension, or text object.

TH

THICKNESS /

TI

TILEMODE /

TO

TOOLBAR / Displays, hides, and customizes toolbars.

TOL

TOLERANCE /

TOR

TORUS / Creates a donut-shaped 3D solid.

TP

TOOLPALETTES / Opens the Tool Palettes window.

TR

TRIM / Trims objects to meet the edges of other objects.

TS

TABLESTYLE / Creates, modifies, or specifies table styles.

U-Z Command Shortcuts

UC

UCSMAN / Manages defined user coordinate systems.

UN

UNITS / Controls coordinate and angle display formats and precision.

UNHIDE

UNISOLATEOBJECTS /

UNISOLATE

UNISOLATEOBJECT /

V	VIEW / Saves and restores named views, camera views, layout views, and preset views.
VGO	VIEWGO / Restores a named view.
VP	DDVPOINT / Sets the 3D viewing direction.
VPLAY	VIEWPLAY / Plays the animation associated to a named view.
VS	VSCURRENT / Sets the visual style in the current viewport.
VSM	VISUALSTYLES / Creates and modifies visual styles and applies a visual style to a viewport.
W	WBLOCK / Writes objects or a block to a new drawing file.
WE	WEDGE / Creates a 3D solid wedge.
WHEEL	NAVSWHEEL / Displays a wheel that contains a collection of view navigation tools.
X	EXPLODE / Breaks a compound object into its component objects.
XA	XATTACH / Inserts a DWG file as an external reference (xref).
XB	XBIND / Binds one or more definitions of named objects in an xref to the current drawing.
XC	XCLIP / Crops the display of a selected external reference or block reference to a specified boundary.
XL	XLINE / Creates a line of infinite length.
XR	XREF / Starts the EXTERNALREFERENCES command.
Z	ZOOM / Increases or decreases the magnification of the view in the current viewport.
ZEBRA	ANALYSISZEBRA