

Course Syllabus

AutoCAD Level II

Course Description

Designed to build on the skills acquired in the AutoCAD Level I class, this course introduces the student to both basic and advanced dimensioning and hatching techniques with AutoCAD. The AutoCAD topics covered in this Level II course include using the geometry calculator and selection filters; drawing and editing polylines, multilines, and splines; inserting fields and tables, dimensioning techniques; hatching, inserting blocks, assigning block attributes, using externally referenced drawings, and creating sheet sets.

Objectives

After completing this course, the student will be able to do the following:

- Draw and modify objects using the geometry calculator.
- Construct and edit polylines, multilines, and splines.
- Insert and update fields.
- Insert and edit tables.
- Fully dimension 2D geometry.
- Create and use dimension styles.
- Create and edit hatched section views and pattern fills.
- Assign, edit, and extract block attribute values.
- Incorporate externally referenced data into drawings.
- Create, modify, and archive sheet sets.

Course Length

32 hours. 16 hours lecture, demonstration, and activities. 16 hours lab.

Prerequisite

AutoCAD Level I or equivalent experience.

Academic Dishonesty

A student who submits the work of another student as her/his own or deliberately fails to properly credit words or ideas borrowed from another source is guilty of plagiarism. A student who uses notes without permission, takes an exam for another student, copies answers from another student's exam, copies drawings in any manner, or engages in any other similar conduct aimed at making false

representation with respect to a student's academic performance is guilty of cheating.

Appropriate Use of Electronic Information Resources

Users shall be responsible for messages they transmit through the Internet and shall obey the acceptable use policies of the Internet and any rules of discussion forums in which they participate. Fraudulent, harassing, or obscene messages and/or materials as defined by contemporary court decisions are not to be sent or stored.

Required Text

AutoCAD and its Applications—Basics, Chapters 7–9, 14–15, and 17–25.

Required Materials

Removable storage media, such as diskettes, Zip disks, or CD-RWs.

Course Outline

Session	Topics and Commands
1	<p>Topics: Using the geometry calculator, using point filters, creating selection filters, working with AutoCAD files, and creating polylines, multilines, splines, working with fields, inserting fields, updating fields, editing fields, inserting tables, editing tables, and table styles.</p> <p>Commands: CAL, RECOVER, AUDIT, UNDO, REDO, PLINE, PEDIT, EXPLODE, BOUNDARY, TRACE, FILL, MLINE, MLSTYLE, MLEDIT, SKETCH, SPLINE, SPLINEDIT, TABLE, TABLESTYLE.</p> <p>Assignment: Read Chapters 7 and 8, pages 308–310, and Chapters 9, 14, and 15.</p> <p>Exercises: 7-1 through 7-3, 7-5, 7-10, 8-12, 9-1 through 9-5, 14-1 through 14-10, 15-2, 15-6 through 15-10.</p> <p>Required Problems: 7-31, 7-32, 8-12, 9-1 through 9-4, 14-2 through 14-6, 14-10, 15-1 through 15-5.</p> <p>Optional Problems: 14-11, 15-6, 15-9.</p>

Session	Topics and Commands
2	<p>Topics: Introduction to AutoCAD’s basic dimensioning tools, creating and managing dimension styles, basic and intermediate dimensioning tools, adding tolerances to dimensions, and editing dimensions.</p> <p>Commands: DIMLINEAR, DIMALIGNED, DIMANGULAR, DIMBASELINE, DIMCONTINUE, QDIM, DIMCENTER, DIMDIAMETER, DIMRADIUS, QLEADER, DIMORDINATE, DIMSTYLE, DIMOVERRIDE, DIMTEDIT, DIMEDIT, PROPERTIES, TOLERANCE, QLEADER.</p> <p>Assignment: Read Chapter 17–20.</p> <p>Exercises: 17-1 through 17-18, 18-1 through 18-7, 19-1 through 19-4, 20-1 through 20-6.</p> <p>Required Problems: 17-1 through 17-3, 17-6, 17-7, 17-11, 17-16, 17-17, 18-2, 18-5, 19-6, 19-7, 20-1.</p> <p>Optional Problems: 17-9, 20-2, 20-6.</p>
3	<p>Topics: Drawing section views and graphic patterns, creating blocks, editing and inserting blocks, saving blocks as individual drawing files, inserting drawings into other drawings, redefining blocks, and managing named objects. Assigning attributes to blocks, editing attribute values and definitions, inserting blocks with attributes, and extracting attributes.</p> <p>Commands: BHATCH, HATCHEDIT, SOLID, BLOCK, INSERT, MINSERT, ADCENTER, BASE, REFEDIT, EXPLODE, WBLOCK, RENAME, PURGE, ATTDEF, ATTDISP, EATTEDIT, BATTMAN, ATTREDEF.</p> <p>Assignment: Read Chapters 21–23.</p> <p>Exercises: 21-1 through 21-5, 22-1 through 22-7, and 23-1 through 23-4.</p> <p>Required Problems: 21-6, 21-9, 21-10, 21-13, 22-3 through 22-5, 22-9, and 23-1 through 23-3.</p> <p>Optional Problems: 22-1, 22-10, 23-4, 23-6.</p>

Session	Topics and Commands
4	<p>Topics: Referencing drawings, binding xrefs and individual xref objects into drawings, creating multiview layouts using xrefs, scaling drawings in viewports, and controlling layer visibility in viewports, Sheet Set Manager, creating sheet sets, working with sheet sets, working with subsets, working with sheets, publishing sheet sets, sheet views, sheet set fields, sheet list tables, and archiving sheet sets.</p> <p>Commands: XREF, XCLIP, XBIND, REFEDIT, ZOOM, VPLAYER, SHEETSET, ARCHIVE.</p> <p>Assignment: Read Chapters 24–25.</p> <p>Exercises: 24-1, 24-2, 25-1, 25-2, 25-5, 25-7, 25-8.</p> <p>Required Problems: 24-1 through 24-3 and 25-1 through 25-3.</p> <p>Optional Problems: None.</p>
