Course Outline

Technical Design 200 – (TEC D 200)

Introduction to Computer Aided Drafting

Week 1

Day 1

General Introduction to TEC-D 200:
Class Roster verification, Syllabus, Course Outline, Verification of Student Folders on campus server, Windows Interface, AutoCAD Interface.

Introduction to AutoCAD:
General Overview of AutoCAD: Basic Commands (***Quick Reference Sheet***)
Introduction to Prototype Drawing Templates: ***Architectural, Decimal, & Metric***
Introduction to Sheet Border / Title block: ***Name, Drawing, Scale***
Introduction to ***File Saving*** **(SAVEAS)**
Basic Introduction to ***Printing / Plotting***
*Problems/Graphic Assignments: ***1-1***
****Dimension:*** ***Linear, Aligned***

Day 2

Chapter 1 – Getting Started with AutoCAD:
Basic Drawing Techniques: ***Line, PLine, & Circle,***
Coordinate Systems: ***Cartesian/Rectangular, Absolute, Polar***
Object Snap Modes: ***Endpoint, Midpoint, Center, Node, Quadrant, Intersection, Extension, Insertion, Perpendicular, Tangent, & Parallel.***
Polar and Object Tracking
*Reading Assignment: ***Chapter 1***
*Problems/Graphic Assignments: ***1-2, 1-3 & 1-4***
****Dimension:*** ***Center Marks, Radius, Diameter, Angular***

Week 2

Day 1

Chapter 3 – AutoCAD Display and Basic Selection Operations:
Drawing View Magnification: ***Zoom – all, center, dynamic, extents, previous, scale, window, & object.***
Moving Display: ***Pan***
Wheel Mouse (real-time display): ***Pan & Zoom In/Out/All***
Object Selections: ***Crossing, Window, Fence, All***
*Reading Assignment: ***Chapter 3***
*Problems/Graphic Assignments: ***1-5, 1-6 & 1-7***

Day 2

Chapter 4 – Modifying Your Drawings:
Basic Modification Commands: ***Move, Copy, Scale, Rotate, Offset, Fillet, Chamfer, Trim, Extend, & Break.***
Advanced Modification Commands: ***Array, Mirror, Stretch, Pedit, Explode, Lengthen, Join, Undo, & Redo.***
*Reading Assignment: ***Chapter 4***
*Problems/Graphic Assignments: ***4-1, 4-3, 4-4, 4-6, 4-8***
****Extra Credit:*** ***4-5, 4-10, 4-11, 4-13 & 4-14***

Week3

Day 1

Chapter 2 – Drawing Setup and Organization:
Drawing Setup: ***Drawing Units, Grids, and Limits***
Layer Properties: ***Names, Color, Line types, Line weights, Match Properties***
Advanced Layer Tools: ***Isolating, Filtering, & States***
*Reading Assignment: ***Chapter 2***
*Problems/Graphic Assignments: ***TBA***

Day 2

Chapter 2 – Drawing Setup and Organization:
Drawing Setup: ***Drawing Units, Grids, and Limits***
Layer Properties: ***Names, Color, Line types, Line weights, Match Properties***
Advanced Layer Tools: ***Isolating, Filtering, & States***
*Reading Assignment: ***Chapter 2***
*Problems/Graphic Assignments: ***TBA***

Week 4

Day 1

Chapter 5 – Performing Geometric Constructions:
Constructing Geometric Shapes: ***Arc, Donut, Ellipse, Mline, Divide, Point, Polygon (inscribed/circumscribed), Ray, Rectangle, Spline, Xline, Angles, Circle (Tan Tan Radius), Boundary, Cloud, Wipeout***
*Reading Assignment: ***Chapter 5***
*Problems/Graphic Assignments: ***5-1, 5-2, 5-3 & 5-10***
Extra Credit:** **5-4, 5-6, 5-7, 5-9

Day 2

Chapter 6 – Working with Text, Fields, & Tables:
Creating Text in a Drawing: ***Mtext & Dtext***
Text Styles: ***Create, Modify, & Edit***
*Reading Assignment: ***Chapter 2***
*Problems/Graphic Assignments: ***5-11, 5-12, 5-13, 5-14***

Week 5

Day 1

Lab / Mid-Term Review:
Lab Time: ***This is an opportunity for students to catch up on any assignments that need to be completed.***
Mid-Term Review: ***Mid-Term Exam Review***

Day 2

Mid –Term Exam:
Mid-Term Exam: Approximately 2.5 hours to complete.

For Students who complete Exam early:
*Reading Assignment: ***Chapter 7***
*Lab Time: ***This is an opportunity for students to catch up on any assignments that need to be completed***.

Week 6

Day 1

Chapter 7 – Object Grips and Changing the Properties of Objects:
Object Grips: ***How they are used.***
Properties Palette: ***Modifying Objects***
*Reading Assignment: ***Chapter 7***
Problems/Graphic Assignments: ***Tutorial or TBA***

Day 2

Chapter 8 – Shape Description / Multiview Projection:
Shape Description: ***Linetypes, Fillets, Rounds, Chamfers, & Runouts.***
Multi-view Projection: ***Front, Side, Top, Bottom, Back/Rear.***
*Reading Assignment: ***Chapter 8***
*Problems/Graphic Assignments: ***8-3, 8-6, 8-9, 8-12, 8-15, 8-18, 8-21 & 8-22***

3D-Solids:** **Boundary, Extrude, Isometric Views, Rotate3d, Union, Subtract, Slice, Mview (properties/hidden), Hide, DISPSILH, FACETRES

Week 7

Day 1

Chapter 8 – Shape Description / Multiview Projection: (Continued)
Shape Description: ***Linetypes, Fillets, Rounds, Chamfers, & Runouts.***
Multi-view Projection: ***Front, Side, Top, Bottom, Back/Rear.***
*Reading Assignment: ***Chapter 8***
*Problems/Graphic Assignments: ***8-24, 8-25, 8-27, 8-28, 8-29, 8-31, 8-32 & 8-34***

Extra Credit:** **3D-isometric: (3 to 5) items from ch.8

Day 2

Chapter 9 – Creating Section Views: (Continued)
Section Views: ***Full, Half, Assembly, Aligned, Offset, Broken, Revolved, Removed, & Isometric Sections.***
Hatch and Gradient: ***Applying Hatch & Gradient Patterns to Drawings***
*Reading Assignment: ***Chapter 9***
*Problems/Graphic Assignments: **9-1, *9-2***

Extra Credit:** **Paint/Modify Car – Convert to PDF

Week 8

Day 1

Chapter 9 – Creating Section Views: (Continued)
Section Views: ***Full, Half, Assembly, Aligned, Offset, Broken, Revolved, Removed, & Isometric Sections.***
Hatch and Gradient: ***Applying Hatch & Gradient Patterns to Drawings***
*Reading Assignment: ***Chapter 9***

Extra Credit:** **Download JPG and Trace/Paint image – Convert to PDF

Day 2

Chapter 10 – Adding Dimensions to your drawings:
Auxiliary Views: ***Xlines used to project line of site.***
*Reading Assignment: ***Chapter 10***
*Problems/Graphic Assignments: ***9-6 & 9-10 (Draw & Fully Dimension)***

Week 9

Day 1

Holiday

Day 2

Chapter 11 – Managing Dimension Styles:
Basic Dimensioning: ***Linear, Aligned, Diameter, Radius, Angular***
Dimension Styles: ***Using Dimension Styles Manager***
*Reading Assignment: ***Chapter 11***
*Problems/Graphic Assignments: ***Extra Credit***

Week 10

Day 1

Lab / Final Review:
Lab Time: ***This is an opportunity for students to catch up on any assignments that need to be completed.***
Final Exam Review: ***Final Exam Review***

Day 2

Final Exam:
Final Exam: Approximately 2.5 hours to complete.

Portfolio Due:
Final Portfolio Due at Beginning of Class.