# Advanced Drafting/CAD Course No. 21150 Credit: 1.0

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| **Student name:** |  | **Graduation Date:** |  |

Pathways and CIP Codes: Manufacturing (48.0000) - Production Strand

Course Description: An advanced, **application level** course designed to build on and apply the skills learned in Drafting/CAD. (Prerequisite: Drafting/CAD.)

Directions:The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

**RATING SCALE:**

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.

3. Proficient Achievement:Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.

2. Limited Achievement:Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.

1. Inadequate Achievement:Student lacks knowledge, skills or professional attitude.

0. No Instruction/Training:Student has not received instruction or training in this area.

## Benchmark 1: Utilize Advance Controls and Functions

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 1.1 | Demonstrate knowledge of user coordinate system. |  |
| 1.2 | Demonstrate ability to manipulate UCS. |  |
| 1.3 | Demonstrate ability to set and use advanced dimensioning functions correctly. |  |
| 1.4 | Use the draw and modify commands to created and modify geometry. |  |
| 1.5 | Use the proper commands to change drawing settings. |  |

## Benchmark 2: Auxiliary Views/Section Views

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 2.1 | Demonstrate proficiency in creating auxiliary views. |  |
| 2.2 | Identify, draw, sketch, dimension and position appropriate auxiliary views. |  |
| 2.3 | Demonstrate proficiency in creating section views. |  |
| 2.4 | Identify, draw, and position appropriate section views. |  |
| 2.5 | Use draw commands to create geometry. |  |
| 2.6 | Explain the point views of lines. |  |
| 2.7 | Identify symbols, section lines, and materials. |  |

## Benchmark 3: Dimensional Modeling

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 3.1 | Demonstrate the ability to create drawings in 3D. |  |
| 3.2 | Construct solid models (e.g. orthographic models, isometric models). |  |
| 3.3 | Manipulate solid models. |  |
| 3.4 | Demonstrate the ability to create drawings in 3D. |  |
| 3.5 | Define the different types of lines and planes. |  |
| 3.6 | Describe and sketch in First Angle, Third Angle/Quadrant. |  |

## Benchmark 4: Dimensions, Text, and Layers

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 4.1 | Create and manage drawing layers. |  |
| 4.2 | Draw objects with different colors, line types and line weights. |  |
| 4.3 | Use text and text editing commands to create and modify text in drawing. |  |
| 4.4 | Create and edit dimensions and dimension styles. |  |

## Benchmark 5: Inquiry Commands

### Competencies

| **#** | **DESCRIPTION** | **RATING** |
| --- | --- | --- |
| 5.1 | Use the List command to find object properties. |  |
| 5.2 | Use the Distance command to find length data. |  |
| 5.3 | Use the Area and ID commands to find drawing data. |  |

I certify that the student has received training in the areas indicated.

Instructor Signature:

For more information, contact:

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