

**Drafting and Design Technology/Technician, General
CIP 15.1301
Task Grid**

Proficiency Level
Achieved:
(X) Indicates
Competency
Achieved to Industry
Proficiency Level

Unit/Standard Number

Secondary Competency Task List

100	ORIENTATION	
101	Demonstrate safety in the drafting room.	
102	Demonstrate professionalism.	
200	INTRODUCTION TO DRAFTING AND DESIGN	
201	Identify basic board drafting tools and equipment, which are used to produce drawings.	
202	RESERVED	
203	Demonstrate the knowledge of the basic uses of scales.	
204	Demonstrate skill in using Imperial and Metric System of measurement.	
205	Identify components of a drawing.	
206	Identify and select a letter style appropriate for technical drawings.	
300	GEOMETRIC CONSTRUCTION	
301	Draw to scale.	
302	Draw geometric figures using basic drafting principles	
303	Create drawings using geometric construction principles.	
400	RESERVED	
401	RESERVED	
402	RESERVED	
403	RESERVED	
500	FREEHAND DRAWING AND SKETCHING	
501	Identify and sketch the alphabet of lines.	
502	Sketch orthographic views.	
503	Sketch an isometric drawing.	
504	Develop a perspective drawing using freehand methods.	
505	RESERVED	
506	RESERVED	
507	Express an idea using the sketching process.	
508	Create letters and numbers in single stroke capital letters (Gothic) on a technical sketch.	

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600	INTRODUCTION TO ENGINEERING MATH	
601	Use basic math operations to demonstrate scaling techniques.	
602	Use basic applied mathematics to solve engineering problems.	
603	Construct lines using relative, absolute and polar coordinate systems.	
604	Establish the relationship among points, lines, and planes in 3-D space.	
605	Solve descriptive geometry problems.	
700	INTRODUCTION TO MECHANICAL DRAWING AND DESIGN	
701	Identify and draw necessary orthographic views.	
702	Explain the relationship of orthographic projection to multiview drawing.	
703	Identify 1st angle and 3rd angle projection.	
704	Identify and draw auxiliary views.	
705	Identify and draw section views.	
706	Identify and draw threads and fasteners.	
707	Create working drawings (assembly, detail drawings, BOM)	
708	Create a title block on a mechanical drawing.	
800	DIMENSIONING	
801	Apply measurements, notes, and symbols to a technical drawing.	
802	Apply ASME Standards for Dimensions, tolerances, and notes.	
803	Apply ISO Standards for Dimensions and notes.	
804	Specify dimensions and tolerances using symbols and notes.	
805	Reverse engineer a drawing from an existing part.	
900	INTRODUCTION TO ARCHITECTURE	
901	RESERVED	
902	Construct a floor plan.	
903	Construct an elevation.	
904	Construct a typical wall section.	
905	Draw a pictorial view.	
906	RESERVED	
1000	INTRODUCTION TO CIVIL DRAFTING	
1001	Construct a site plan.	
1002	RESERVED	

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1003	RESERVED	
1004	Read and interpret a deed.	
1005	Identify survey and/or GPS equipment.	
1100	INTRODUCTION TO ELECTRICAL AND ELECTRONIC DRAFTING	
1101	Identify and describe various symbols.	
1102	Create a schematic wiring diagram.	
1200	COMPUTER ASSISTED DRAFTING (CAD)	
1201	Utilize input and output devices such as printers, plotters, etc.	
1202	Use drawing aids and controls.	
1203	Use drawing and editing tools.	
1204	Use viewing tools.	
1205	Utilize a commercially built drafting library.	
1206	Produce a custom built drafting library.	
1207	Make a revision to an existing drawing.	
1208	Configure and use dimensions and tolerances.	
1209	Create 3-dimensional models.	
1210	RESERVED	
1211	Create parametric solid models.	
1212	Render a drawing.	
1213	Import, export and link drawings.	
1214	Manage and store files.	
1215	Use rapid prototyping.	
1216	Draw, modify and apply text justifications on a CAD system.	