

High School Graduation Years 2016, 2017 and 2018

**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		
<b>Secondary Competency Task List</b>		
<b>100</b>	<b>ORIENTATION</b>	
101	Demonstrate safety in the drafting room.	
102	Demonstrate professionalism.	
<b>200</b>	<b>INTRODUCTION TO DRAFTING AND DESIGN</b>	
201	Demonstrate the knowledge of 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 English and Metric System of measurement.	
<b>300</b>	<b>GEOMETRIC CONSTRUCTION</b>	
301	Draw to scale.	
302	Draw geometric figures using basic drafting principles	
303	Create drawings using geometric construction principles.	
<b>400</b>	<b>LETTERING</b>	
401	Identify and select a letter style appropriate for architectural drawings.	
402	Create letters and numbers in single stroke capital letters (Gothic).	
403	Draw, modify and apply text justifications on a CAD system.	
<b>500</b>	<b>FREEHAND DRAWING AND SKETCHING</b>	
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	Explain the importance of freehand sketching.	
506	Create a neat freehand notes and dimensions on a technical sketch.	
507	Express an idea using the sketching process.	
<b>600</b>	<b>INTRODUCTION TO ENGINEERING MATH</b>	

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601	Use basic math operations to demonstrate scaling techniques.	
602	Use basic applied mathematics to solve engineering problems.	
603	Construct lines on a CAD system 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.	
<b>700</b>	<b>INTRODUCTION TO MECHANICAL DRAWING AND DESIGN</b>	
701	Identify and draw necessary orthographic views.	
702	Explain the relationship of orthographic projection to multiview drawing.	
703	Demonstrate knowledge of 3rd angle projection.	
704	Identify and draw auxiliary views.	
705	Identify and draw section views.	
706	Identify and draw threads and fasteners.	
707	Identify and produce a BOM (parts list) for an assembly.	
708	Create a title block on a mechanical drawing.	
<b>800</b>	<b>DIMENSIONING</b>	
801	Apply measurements, notes, and symbols to a technical drawing.	
802	Apply ANSI Standards for Dimensions, tolerances, and notes.	
803	Apply ISO Standards for Dimensions and notes.	
804	Specify dimensions tolerances using symbols and notes.	
<b>900</b>	<b>INTRODUCTION TO ARCHITECTURE</b>	
901	Read and interpret blueprints.	
902	Construct a floor plan.	
903	Construct an elevation.	
904	Construct a typical wall section.	
905	Draw a pictorial view.	
906	Prepare architectural drawing to include foundation, framing, concrete, roofing, utility and etc.	
<b>1000</b>	<b>INTRODUCTION TO CIVIL DRAFTING</b>	
1001	Construct a site plan.	
1002	RESERVED	

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1003	RESERVED	
1004	Read and interpret a deed.	
1005	Demonstrate knowledge of how to use survey and/or GPS equipment.	
<b>1100</b>	<b>INTRODUCTION TO ELECTRICAL AND ELECTRONIC DRAFTING</b>	
1101	Identify and describe various symbols.	
1102	Create a schematic wiring diagram.	
<b>1200</b>	<b>COMPUTER ASSISTED DRAFTING (CAD)</b>	
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 drawings and models.	
1210	Create surface models.	
1211	Create parametric solid models.	
1212	Demonstrate rendering.	
1213	Demonstrate importing, exporting, and linking of drawings.	
1214	Understand management and storage of files.	
1215	Demonstrate knowledge of rapid prototyping.	