

Competency Task List – Secondary Component
Drafting and Design Technology/Technician, General CIP 15.1301
 High School Graduation Years 2022, 2023, 2024

100 Orientation

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
101	Follow safety measures in the drafting room.		
102	Demonstrate professionalism.		

200 Introduction to Drafting and Design

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
201	Identify basic board drafting tools and equipment which are used to produce drawings.		
202	RESERVED		
203	Use various types of scales (architectural, mechanical, and machining).		
204	Use the imperial and metric system of measurement to create a single view drawing.		
205	Identify components of a drawing.		
206	RESERVED		

300 Geometric Construction

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
301	Draw to scale.		
302	Draw geometric figures.		
303	Create drawings using geometric construction principles.		

400 Reserved

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
401	RESERVED		
402	RESERVED		
403	RESERVED		

500 Freehand Drawing and Sketching

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
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.		

600 Introduction to Engineering Math

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
601	Determine the scale of various drawings.		
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 a 3-D space.		
605	Solve descriptive geometry problems.		

700 Introduction to Mechanical Drawing and Design

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
701	Identify and draw necessary orthographic views.		
702	Explain the relationship of orthographic projection to a multi-view 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.		
709	Identify and draw basic welding symbols.		
710	Reverse engineer a drawing from an existing part.		

800 Dimensioning

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
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	RESERVED		
805	RESERVED		

900 Introduction to Architecture

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
901	RESERVED		
902	Construct a floor plan.		

903	Construct an elevation.		
904	Construct a typical wall section.		
905	Draw a pictorial view.		
906	RESERVED		
907	Construct an electrical plan.		
908	Apply ADA guidelines to an architectural set of floor plans.		

1000 Introduction to Civil Drafting

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
1001	Construct a site plan.		
1002	RESERVED		
1003	RESERVED		
1004	RESERVED		
1005	Identify survey and/or GPS equipment.		

1100 Introduction to Electronic Drafting

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
1101	Identify and describe various symbols.		
1102	RESERVED		

1200 Computer Assisted Drafting (CAD)

Item	Task	(X) Indicates Proficiency ¹	Secondary Course Crosswalk
1201	Utilize input and output devices such as printers, plotters.		
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.		

¹ Student Demonstrated Entry-Level Industry Proficiency as Indicated by (X)

Secondary CTE Instructor Signature _____ Date _____

Student Signature _____ Date _____