

**GRAND RAPIDS COMMUNITY COLLEGE ARTICULATION PROJECT**  
**STUDENT ACHIEVEMENT RECORDING PROCESS (SARP)**  
**INDUSTRIAL GRAPHICS WITH CAD (EG110)**  
**EG 110 – 3 CREDITS**

NAME: \_\_\_\_\_

SCHOOL DISTRICT: \_\_\_\_\_ SCHOOL: \_\_\_\_\_

TASK	DESCRIPTION	PROFICIENCY (PLEASE CHECK)		TEACHER INITIALS
		YES	NO	
<b>GROUP A: INTRODUCTION TO TECHNICAL DRAWING</b>				
Task 1.	Identify standard sheet sizes and orientation used in technical drawings	_____	_____	_____
Task 2.	Describe the major parts of a drawing: Border, title block, notes, views	_____	_____	_____
Task 3.	Use a mechanical, engineering, and metric scale	_____	_____	_____
Task 4.	Interpret scale factors on drawings	_____	_____	_____
<b>GROUP B: BLUEPRINT READING</b>		<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
Task 1.	Identify material specifications	_____	_____	_____
Task 2.	Interpret line types based on the standard alphabet of lines	_____	_____	_____
Task 3.	Calculate unknown sizes and dimensions	_____	_____	_____
Task 4.	Name the standard views	_____	_____	_____
Task 5.	Identify first angle or third angle projection	_____	_____	_____
<b>GROUP C: DEMONSTRATE SKETCHING TECHNIQUES</b>		<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
Task 1.	Create a sketch on grid paper applying proportions	_____	_____	_____
Task 2.	Create a sketch on non-grid paper applying proportions	_____	_____	_____
Task 3.	Create a 2-D sketch showing the top, front, and right side orthographic views	_____	_____	_____
Task 4.	Create 3-D isometric sketch	_____	_____	_____
<b>GROUP D: DEVELOP MULTIVIEW PROJECTION</b>		<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
Task 1.	Construct two-dimensional drawing	_____	_____	_____
Task 2.	Construct folding lines	_____	_____	_____

Task 3.	Identify line of sight	_____	_____	_____
Task 4.	Construct projection lines	_____	_____	_____
Task 5.	Identify height, depth, width	_____	_____	_____
Task 6.	Identify visible & hidden edges	_____	_____	_____
Task 7.	Create auxiliary view	_____	_____	_____

<b>GROUP E: DEVELOP SECTIONAL VIEWS</b>	<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
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Task 1.	Identify sectional views	_____	_____	_____
Task 2.	Construct sectional views	_____	_____	_____
Task 3.	Construct full section	_____	_____	_____
Task 4.	Construct half section	_____	_____	_____
Task 5.	Construct offset section	_____	_____	_____
Task 6.	Construct revolved section	_____	_____	_____
Task 7.	Select and apply crosshatching	_____	_____	_____

<b>GROUP F: DEMONSTRATE DIMENSIONING SKILLS</b>	<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
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Task 1.	Apply locational & size dimensions	_____	_____	_____
Task 2.	Apply decimal dimensioning system	_____	_____	_____
Task 3.	Apply metric dimensioning system	_____	_____	_____
Task 4.	Apply dimension converting practices	_____	_____	_____
Task 5.	Add general and locational notes	_____	_____	_____
Task 6.	Apply ordinate (arrowless) dimensions	_____	_____	_____
Task 7.	Apply radius dimension	_____	_____	_____
Task 8.	Apply leader dimension	_____	_____	_____

<b>GROUP G: DEMONSTRATE TOLERANCING SKILLS</b>	<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
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Task 1.	Apply datum dimensioning practices	_____	_____	_____
Task 2.	Apply plus/minus dimensions	_____	_____	_____
Task 3.	Apply limit dimensioning	_____	_____	_____
Task 4.	Apply clearance, interference, transitional fit tolerances	_____	_____	_____
Task 5.	Calculate tolerances and stack-up tolerances	_____	_____	_____
Task 6.	Create a dimensioning style	_____	_____	_____

<b>GROUP H: DRAW TREADS, FASTENERS</b>	<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
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Task 1.	Draw simplified thread representation	_____	_____	_____
Task 2.	Draw schematic thread representation	_____	_____	_____
Task 3.	Draw detail thread representation	_____	_____	_____
Task 4.	Apply proper specification notation	_____	_____	_____
Task 5.	Identify types of thread forms	_____	_____	_____
Task 6.	Identify thread nomenclature	_____	_____	_____
Task 7.	Identify types of fasteners	_____	_____	_____

<b>GROUP I: OPERATE CAD WORKSTATION</b>		<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
Task 1.	Startup system, log on, open CAD software	_____	_____	_____
Task 2.	Save, backup, and rename CAD files	_____	_____	_____
Task 3.	Copy files to network and/or removable storage device	_____	_____	_____
Task 4.	Move and copy files	_____	_____	_____
Task 5.	Create a working directory	_____	_____	_____

<b>GROUP J: CREATING AND EDITING ENTITIES</b>		<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
Task 1.	Create lines/absolute coordinate system	_____	_____	_____
Task 2.	Create lines/relative (incremental) coordinate system	_____	_____	_____
Task 3.	Create lines/polar coordinate system	_____	_____	_____
Task 4.	Create circles	_____	_____	_____
Task 5.	Create arcs	_____	_____	_____
Task 6.	Create fillets and chamfers	_____	_____	_____
Task 7.	Edit existing geometry	_____	_____	_____
Task 8.	Control graphics display	_____	_____	_____
Task 9.	Insert text	_____	_____	_____
Task 10.	Edit text	_____	_____	_____
Task 11.	Move and copy existing entities	_____	_____	_____
Task 12.	Rotate existing entities	_____	_____	_____
Task 13.	Mirror an object	_____	_____	_____
Task 14.	Array existing entities	_____	_____	_____
Task 15.	Trim and extend entities	_____	_____	_____
Task 16.	Break entities	_____	_____	_____
Task 17.	Create layer with given attributes	_____	_____	_____

<b>GROUP K: CREATING AND EDITING ENTITIES (Cont...)</b>		<b>YES</b>	<b>NO</b>	<b>TEACHER INITIALS</b>
Task 1.	Change properties (linetypes, color, layers, and lineweight)	_____	_____	_____
Task 2.	Obtain information using i.d., list, distance, and area tools	_____	_____	_____
Task 3.	Use object snaps	_____	_____	_____
Task 4.	Determine the area and perimeter of a part	_____	_____	_____
Task 5.	Generate a hard copy of drawing	_____	_____	_____

**INSTRUCTOR'S SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_