

# Industrial Manufacturing Pathways

## CERTIFICATE OF PROFICIENCY

This certifies that

---

of

SOUTH SEATTLE COMMUNITY COLLEGE

has met the Manufacturing Advisory Group (MAG)  
competencies identified on the reverse side



*Instructor*

*Executive Dean*

*Date*

*Manufacturing Advisory Group Companies:*

Breedt  
Production  
Tooling

GM  
Nameplate

Nucor  
Steel

Pacific  
Fisherman  
Shipyard

Energy  
Industries

Machinist  
Inc

NW  
Grating

The Boeing  
Company

**COMPETENCIES FOR INDUSTRIAL MANUFACTURING PATHWAYS**

<b>A. CAREER READINESS SCREENING AND TRAINING</b>		0	1	2	3	4	<b>D. MANUFACTURING TRAINING</b>		0	1	2	3	4
<b>Getting &amp; Keeping the Job</b>							<b>Introduction to Manufacturing/Career Ladders/Apprenticeship</b>						
	Resume writing, cover letters & interviewing skills							Manufacturing career options					
	Types of communication, active listening/learning skills						<b>Manufacturing Basics Unit I</b>						
<b>Basic Computer Skills</b>								Overview into manufacturing,					
	Basic computer skills: Microsoft Word, Excel and Outlook						<b>Basic Blue Print Reading</b>						
<b>Time Management</b>								Recognize the different types of prints					
	Managing priorities and meeting deadlines							Overview reading, drawing, lettering, lines and symbols					
	Managing and balancing both home and work life						<b>Documentation</b>						
<b>Customer Service</b>								Following instructions and document protocol					
	Managing emotions, conflict, confrontation & anger							Recognition and preparation of final documentation					
	Customer service in a manufacturing setting.						<b>Introduction to Tools</b>						
<b>Team Building I</b>								Introduction to hand/shop tools, measuring tools					
	Understanding how to work in a team & problem solving							Hands on shop project with layout, cutting & riveting					
	Personal accountability and responsibility for own actions.							Intro to power tools, machining tooling & operations					
<b>Team Building II</b>							<b>Basic Electrical</b>						
	Assess situations, problem solve and make decisions							Introduction into electricity and use of a Multi-Meter					
	Consequences of letting down the team						<b>Lean Training (Lean 101)</b>						
<b>B. EMPLOYER/LOCAL BUSINESS ENGAGEMENT</b>								Principles of Lean					
<b>Employer Engagement</b>							<b>Introduction to Quality Control</b>						
	Employer expectations for entry-level employees							Definition of quality , ISO 9000 standards,					
	Internship at a local manufacturer							Different quality systems, continuous improvement					
<b>Manufacturing Company Tour</b>								Audits, Inspections, Recording Outcomes & Trends					
	Tours: firsthand view of a manufacturing work site						<b>Precision Measuring Tools</b>						
<b>C. SAFETY TRAINING</b>								Hands on projects, related to accurate measuring					
<b>OSHA 10/MSDS</b>							<b>Math for Manufacturing</b>						
	Strong emphasis on manufacturing safety: Lock-out, Tag-out, Nip Points, Correct Lifting Procedures, Ergonomics, Body Mechanics, Ladder Safety, Fall Arrest, Blood Borne Pathogens, Hazard Recognition, Hazardous Materials Labeling, and Confined Space Entry.							Learning math for OJT covering: basic arithmetic, integers, fractions, decimals, scientific notation, ratios, proportions, percentages and averages, basic trigonometry					
<b>Introduction to Material Handling &amp; Rigging</b>							<b>Fasteners</b>						
	Basic rigging techniques and proper hand signals							Overview of fasteners & installation					
	Hands on practice using slings & hardware,							Lockwire/bolt, pneumatic, removal & reinstallation					
								Torque Fundamentals					
							<b>Maintenance Awareness</b>						
0	<b>No exposure;</b> no information or practice provided during program; completed training required							Perform preventative maintenance					
1	<b>Exposure only;</b> general information provided but no practice time; close supervision needed and additional training required							Electrical, pneumatic squeeze and hydraulic system concepts					
2	<b>Limited practice;</b> has practiced job during training program; additional training is required							Perform housekeeping to maintain production schedule					
3	<b>Moderately skilled;</b> has performed job independently during training program; limited additional training is required						<b>Build Project</b>						
4	<b>Skilled;</b> can perform job independently with no additional training							Process and use of tools to build a complete product					