Middle-Skills Pathways in Chicago:
Manufacturing Sector Analysis

Education Systems Center
NORTHERN ILLINOIS UNIVERSITY

MFG Middle-Skills Pathways in Chicago Overview

- Good middle-skills roles in this space are primarily focused on CNC machining and production processes. Many are interconnected and stackable, whereby individuals can start with lower-wage roles and move up with increased job training or additional industry or college credentials.

- Some roles are lagging in the living wage or growth category but have skills that could reasonably be useful in attaining higher wage roles within the same industry. For example, welders could be assisted to enter CNC and Machining occupations.

- Apprenticeships are up and coming but still lack scale in this region.

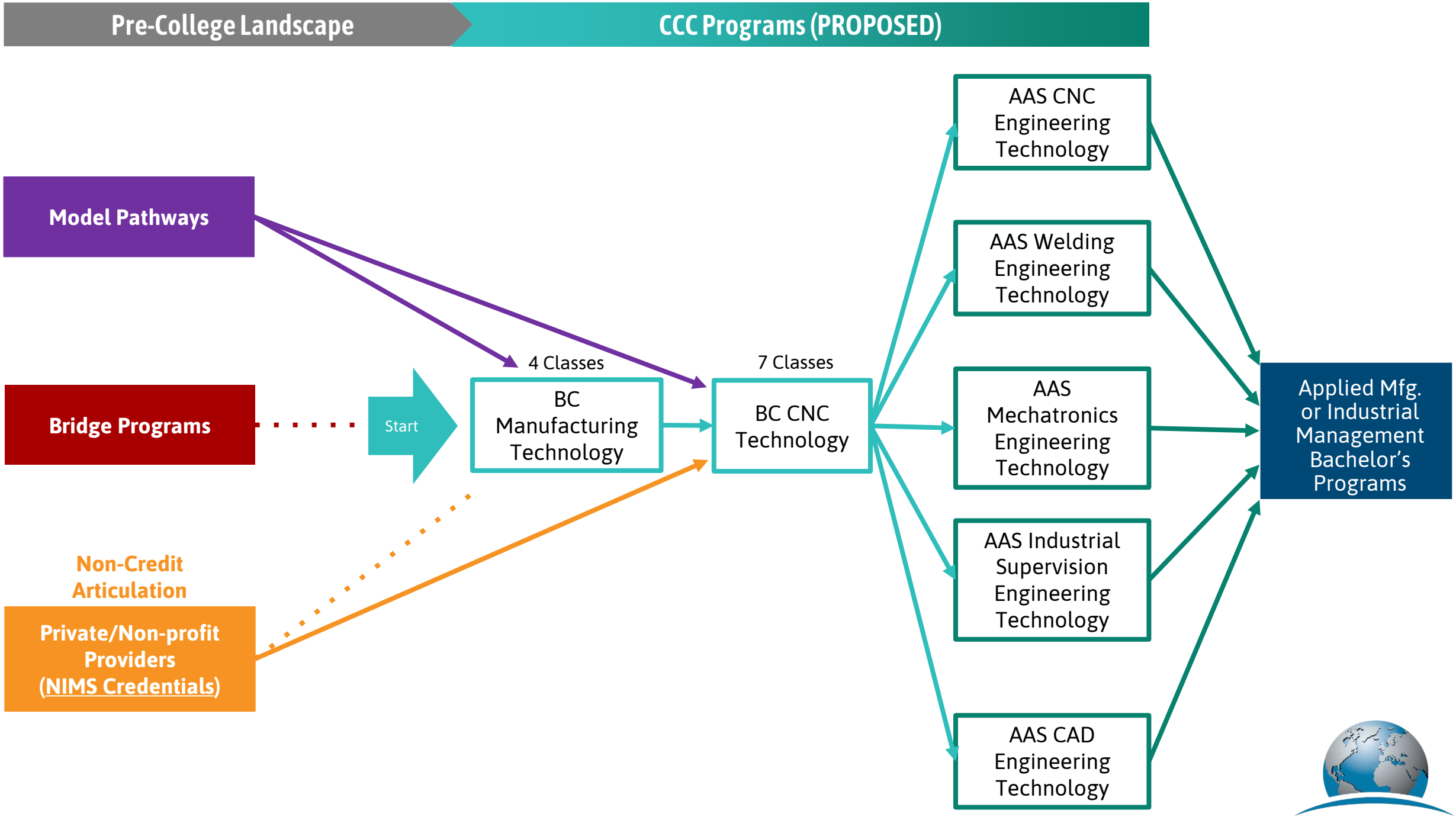
MFG Priority Occupation and Promising Credential Areas

Middle Skill Credential Area	Occupations	Typical Entry Education	Chicagoland Wage $/hr	Chicagoland Projected Growth (10 yr.)	Annual Chicagoland Job Openings	Term
Manufacturing Technology	Welders, Cutters, Welder Fitters	High School + On-the-Job Training	$20.77	5.7%	518	Gateway Occupation
	First-Line Supervisors of Mechanics, Installers, and Repairers	Postsecondary Certificate	$36.89	7%	550	High Priority Occupation
	First-Line Supervisors of Production and Operating Workers	Postsecondary Certificate	$31.23	5%	877	High Priority Occupation
Precision Machining & Production	Computer-Controlled Machine Tool Operations, Metal and Plastic	High School + On-the-Job Training	$17.79	5.2%	150	Gateway Occupation
	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	Postsecondary Certificate	$25.47	17.4%	53	High Priority Occupation
	Machinists	High School + On-the-Job Training	$20.65	5%	1,214	Gateway Occupation
	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	High School + On-the-Job Training	$17.94	5%	331	Gateway Occupation
	Tool and Die Makers	Postsecondary Certificate	$26.15	-2.6%	146	Gateway Occupation
Factory Automation	Maintenance Workers Machinery	High School + On-the-Job Training	$26.81	9.4%	199	High Priority Occupation
	Industrial Machinery Mechanics	High School + On-the-Job Training	$26.90	11.2%	421	High Priority Occupation
CAD Technology	Mechanical Drafters	Associate Degree	$28.54	5.6%	143	High Priority Occupation
	Architectural and Civil Drafters	Associate Degree	$31.86	3.3%	115	High Priority Occupation

Overview of Private Training Landscape

Based on Chicagoland CareerPathways, the private training landscape features:

- Very few providers in this space (reasonable given equipment requirements)
- WIOA providers leading to internships or pre-apprenticeship opportunities, but conversion to credit programs unclear or missing high-value industry credentials (i.e. beyond intro safety credentials) as a part of the experience


Pre-College Landscape
CCC Programs (PROPOSED)
Model Pathways
Bridge Programs
Start
4 Classes
BC Manufacturing Technology
7 Classes
BC CNC Technology
Non-Credit Articulation
Private/Non-profit Providers (NIMS Credentials)
AAS CNC Engineering Technology
AAS Welding Engineering Technology
AAS Mechatronics Engineering Technology
AAS Industrial Supervision Engineering Technology
AAS CAD Engineering Technology
Applied Mfg. or Industrial Management Bachelor's Programs

Recommended Improvement Strategies for MFG

A. Focus on alignment of CTE and Dual Credit Pathways, as well as nonprofit training providers and Bridge programs, to the new “core” Basic Certificate model at CCC + Foundational Industry Credentials
    - Crosswalk new NC3 certifications used in the new Daley College model with common AWS, MSCC and NIMS credentials

B. Ensure clear articulation from NIMS/AWS/MSSC into CCC courses and programs

C. Focus continued career pathway supports to move entry-level Machinists and Operators into Maintenance Workers and Industrial Machinery Mechanics