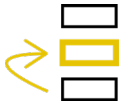
Middle-Skills Pathways in Chicago:
Information Technology Sector Analysis

Education Systems Center
NORTHERN ILLINOIS UNIVERSITY

IT Middle-Skills Pathways in Chicago Overview

- Many roles in this industry, but not all, are middle-skills.
  - Require a bachelor's degree for entry-level positions, or an overwhelming percent of employees have a bachelor's or higher.
- Middle-skills roles easily have high-priority occupation potential and those that don't have a robust career ladder through additional training. While many employees have at least a bachelor's degree, a significant number have an associate degree or less, or are in roles that shouldn't require a bachelor's degree.
- Department of Labor data lag on-the-ground changes and adjustments but are still illuminating.

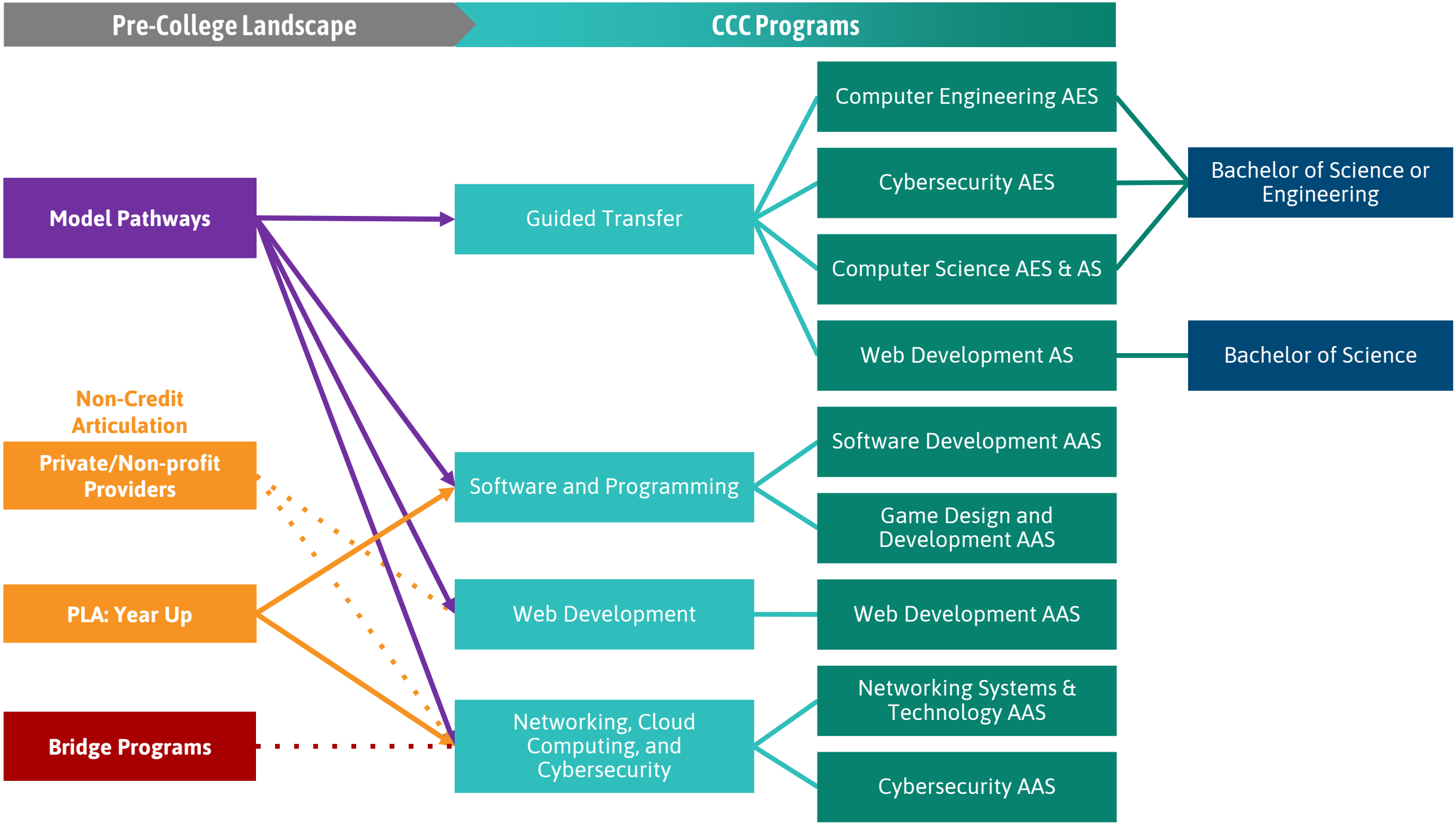
IT Priority Occupation and Promising Credential Areas

Middle Skill Credential Area	Occupations	Typical Entry Education	Chicagoland Wage $/hr	Chicagoland Projected Growth (10 yr.)	Annual Chicagoland Job Openings	Term
Web Development	Web Developer	Associate/Some College	$35.16	17%	300+	 High Priority Occupation
	Web Administrators	Bachelor's/Some College	$47.69	10%	500+	 High Priority Occupation
	Graphic Designers	Bachelor's/Some College	$28.64	7%	500+	 High Priority Occupation
Networking, Cloud Computing, and Cybersecurity	Computer User Support Specialists	Some College	$24.98	12%	1,100+	 Gateway Occupation
	Computer Network Support Specialists	Associate/Some College	$30.47	9%	400+	 High Priority Occupation
	Network and Computer Systems Administrators	Bachelor's/Some College	$41.83	6%	400+	 High Priority Occupation
	Information Security Analysts	Bachelor's/Some College	$45.56	2%	200+	 High Priority Occupation

Overview of Private Training Landscape

Based on Chicagoland CareerPathways, the private training landscape features:

- Ample for-profit and non-profit training providers, with some programs eligible for WIOA funds
- Many “bootcamp” or self-paced programs, requiring participants to have a separate source of income while gaining technical skills
- Very few programs with earn-and-learn and wrap-around supports, which will impede the desire to diversify this growing sector
- Many programs have industry-wide or company specific credentials, unclear as to placement success


Pre-College Landscape
CCC Programs
Model Pathways
Non-Credit Articulation
Private/Non-profit Providers
PLA: Year Up
Bridge Programs
Guided Transfer
Software and Programming
Web Development
Networking, Cloud Computing, and Cybersecurity
Computer Engineering AES
Cybersecurity AES
Computer Science AES & AS
Web Development AS
Software Development AAS
Game Design and Development AAS
Web Development AAS
Networking Systems & Technology AAS
Cybersecurity AAS
Bachelor of Science or Engineering
Bachelor of Science

Recommended Improvement Strategies for IT

A. Focus on non-credit articulation and competency-based models for programs preparing for (a) Web Developer; and (b) Computer User & Network Support Specialists

- Expand the Year-Up model for Prior Learning Assessment to CCC to other high quality nonprofit programs or bootcamps and link to apprenticeship programs. Encourage programs to align to ACE credit framework.
- Establish PLA based on major company (e.g. AWS, CompTIA, Salesforce) credentials and certifications (e.g. Data Analytics, UX Design) for Programming Networking, Cloud, and Cyber CCC programs.

B. Establish continued career pathway support system for individuals to progress into High Priority Occupations from Gateway Occupations:

- E.g., Web Developer to Web Administrator, Computer User Support Specialists to Network Specialists or Cyber roles
- Integrate Essential Employability Skills into AAS program or IT Coursework

C. Build out Strategic Dual Credit Pathways into the Networking/Cyber and Programming roles (necessitating Guided Transfer)

- Increase math placement flexibility for key strategic dual credit courses