



INSTITUTO DEL PROGRESO LATINO



CITY COLLEGES of CHICAGO
Wilbur Wright

Humboldt Park Vocational Education Center
Education that Works

Manufacturing Technology Career Pathway Model

Presentation to
The Aspen Institute
Sector Board and Career Pathway Training
Des Moines, Iowa
December 9-10, 2013

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Defining Bridges

A set of connected courses and programs which enables students to combine school and work, and advance over time to better jobs and higher levels of education and training, including four-year degrees.

Dr. Davis Jenkins, UIC

*Career Pathways Primer
and Planning Guide*



Essential Components of an Effective Career Pathway

- ◆ Partnerships (Employers, CBOs, Colleges, Agencies)
- ◆ Ladders (Career, Academic, Social)
- ◆ Bridges (Literacy, Career, Technical, Degree)
- ◆ Articulations (Credit, Teaching, Resources, Employers)
- ◆ Contextualized Curriculum (Basic Skills, Technical Skills and Transferable Skills, General context, Micro-context, Macro-context)
- ◆ Project-based Assessments (Learning Vs. Knowledge)
- ◆ Internships (Job Shadowing, Peripheral Learning)
- ◆ Academic Support Services (Tutoring, Learning Techniques, Applications)
- ◆ Non-Academic Support Services (Case Management, Employment, Financial Coaching, Public Benefits, Critical Thinking, Motivation)
- ◆ Financial Aid (Resources Available to Participants)



Creating a Collaboration

Identify a sector in the industry that has the potential for growth and career advancement, after which partners should be identified and recruited to fill the various roles within the proposed collaboration. Based on the “Carreras en Salud” experience, the following steps are recommended:

- 1) Build on any existing successful partnerships.
- 2) Identify a higher education institution.
- 3) Identify an organization to prepare students for college level work and address academic barriers to job entry.
- 4) Determine non-academic barriers and identify partners to address them.
- 5) Management partners develop and sign a memorandum of understanding.
- 6) Recruit employer partners and industry associations.
- 7) Reach out to other potential active partners.

*How to Build Bridge Programs that Fit into a Career Pathway
by Dr. Ricardo A. Estrada with contributions from Tom Dubois*



The Essential Roles of Partners

- **To Support Students with Academic Needs**
 - Basic Skills (Math, English, Computers)
 - Tutoring (Pre-College and College)
 - Licensing Assistance (Test Preparation)
- **To Support Students with Social/Emotional Needs.**
 - Social Stress/ Anxiety
 - Domestic Violence
 - Drug/Alcohol Addiction
- **To Support Students with Financial Needs**
 - Temporary Transportation
 - Income Support/Public Aid
 - Homelessness
- **To Support Students in Securing Self-Sufficient Jobs**
 - Temporary Jobs
 - Internships
 - Job Shadowing

Essential Partners and their Roles

Educational Partners:

- ◆ Provide curricula that are customized to the needs of the non-traditional, low-skilled student.
- ◆ Provide educational resources and support to students such as computer labs and programs that help the students improve their basic skills at their own pace, tutoring and technical assistance, financial aid and career planning.
- ◆ Schedule classes at times convenient to the non-traditional, low-skilled students; provide assistance to adult educators to contextualized curricula based on the adult learner's basic skill levels.
- ◆ Articulate basic skill and contextualized courses with technical certificates and occupational degree programs with input from employers and industries in the field.
- ◆ Develop program advisory councils for vocational and occupational certificate and degree offerings in which CBOs and local employers are included.



Essential Partners and their Roles (Cont'd.)

Community Based Organizations:

- ◆ Provide literacy and basic skills classes with curricula that are contextualized to specific industries.
- ◆ Provide case management and counseling in areas of non-academic needs, such as family violence prevention, drug and alcohol addiction, unemployment, child care services, transportation, shelter, food assistance, and other assistance, as needed.
- ◆ Develop vocational articulation agreements with higher education institutions.
- ◆ Collaborative proposal writing, especially for those grants that other partners are not eligible to apply.
- ◆ Provide employment/job placement services to participants at any stage of the educational and professional process.
- ◆ Support the entire family rather than just the student.



Essential Partners and their Roles (Cont'd.)

Employers and Business Partners:

- ◆ Provide internship and job shadowing opportunities that will lead to employment.
- ◆ Participate in Program Advisory Councils with the higher education institutions offering the training programs relevant to their specific industries.
- ◆ Maintain communication with institutions and work with them to discuss changes in the industry needs as this relates to equipment updates, etc.
- ◆ Work with higher education institutions to ensure that the curricula offered in training programs lead to stackable credentials and certifications in the respective markets.
- ◆ Sponsor and/or participate in job fairs, open houses and other events to make their presence known to the students.
- ◆ Provide training opportunities for their existing employees through third-party tuition payment, that will enhance the skill level of their employees.



Other Partners

- ◆ Chambers of Commerce
- ◆ Commercial Clubs/Organizations
- ◆ Local Elected Officials
- ◆ Community Leaders
- ◆ Religious Organizations
- ◆ Civic Organizations
- ◆ Labor organizations
- ◆ Local Media



Manufacturing Bridge Background

- Started in 1995 as a partnership with Olive-Harvey College to meet the need of a new company to hire lots of residents in the Southeast.
- “Gap Analysis” helped design the curriculum with input and initial instructors from the company.
- Outside educational consultant, Dr. Davis Jenkins, said we had a “bridge” program – bridging into employment and further education.
- Built program as an adult “Tech Prep” model to connect students at “pre-college” levels into community college programs along a defined career path with increasing levels of employment made possible by increasing levels of learning.

Manufacturing Bridge

Purpose: Connect limited English speakers/low literacy individuals to career path employment.

- Occupational Focus: Skilled machine operator and industrial maintenance positions.
- Target Population: Latino immigrant dislocated workers.
- Educational levels: Multiple entry points, i.e. “on-ramps” onto pathway beginning, depending on education level; and multiple exit points, i.e. “off-ramps”.



Program Design Considerations

- Skills Requirements
- Language
- Stackable Credentials
- Certifications
- Career and Occupational Pathway

Credentials

All higher education institutions and other training providers, offering programs in Manufacturing Technology, should align themselves with one or both of the following credentialing organizations:

- National Institute for Metalworking Skills (NIMS)
- Manufacturing Skill Standards Council (MSSC)

City Colleges of Chicago's College to Careers (C2C) initiative focuses on ensuring relevance of career programs and connecting students to opportunities

What is this initiative?

College to Careers is a joint initiative between the City Colleges of Chicago, the City of Chicago and top industry, university and community partners from across the city to help bolster the relevance of City Colleges' occupational credentials and prepare our students to hit the ground running in further college and careers.

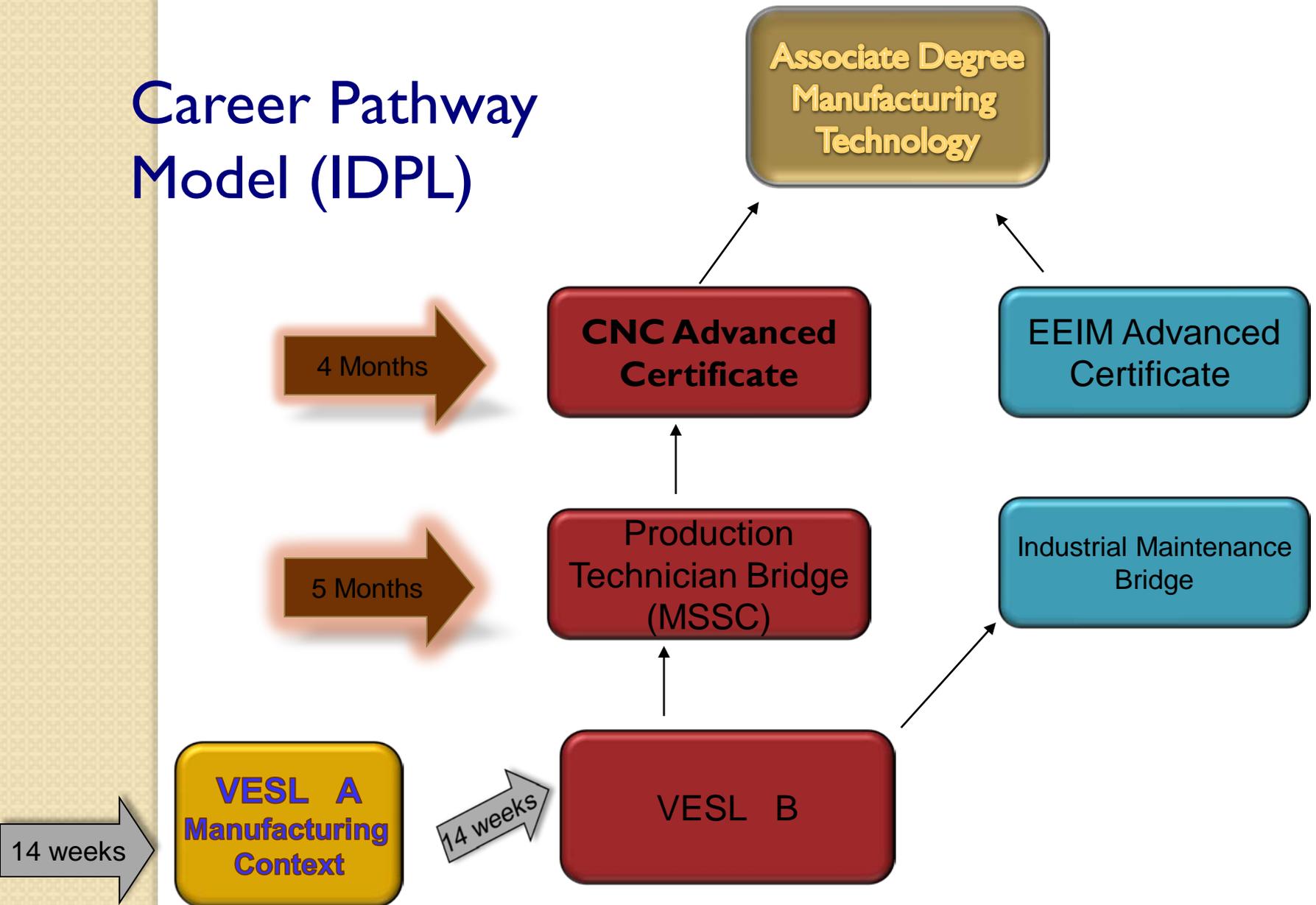
What is the goal?

The goal of the program is to help close the skills gap in Chicago and ensure student success. This means ensuring that Chicago residents are ready for jobs in high-growth industries, jobs that remain unfilled because of skills gap between training and workforce needs.

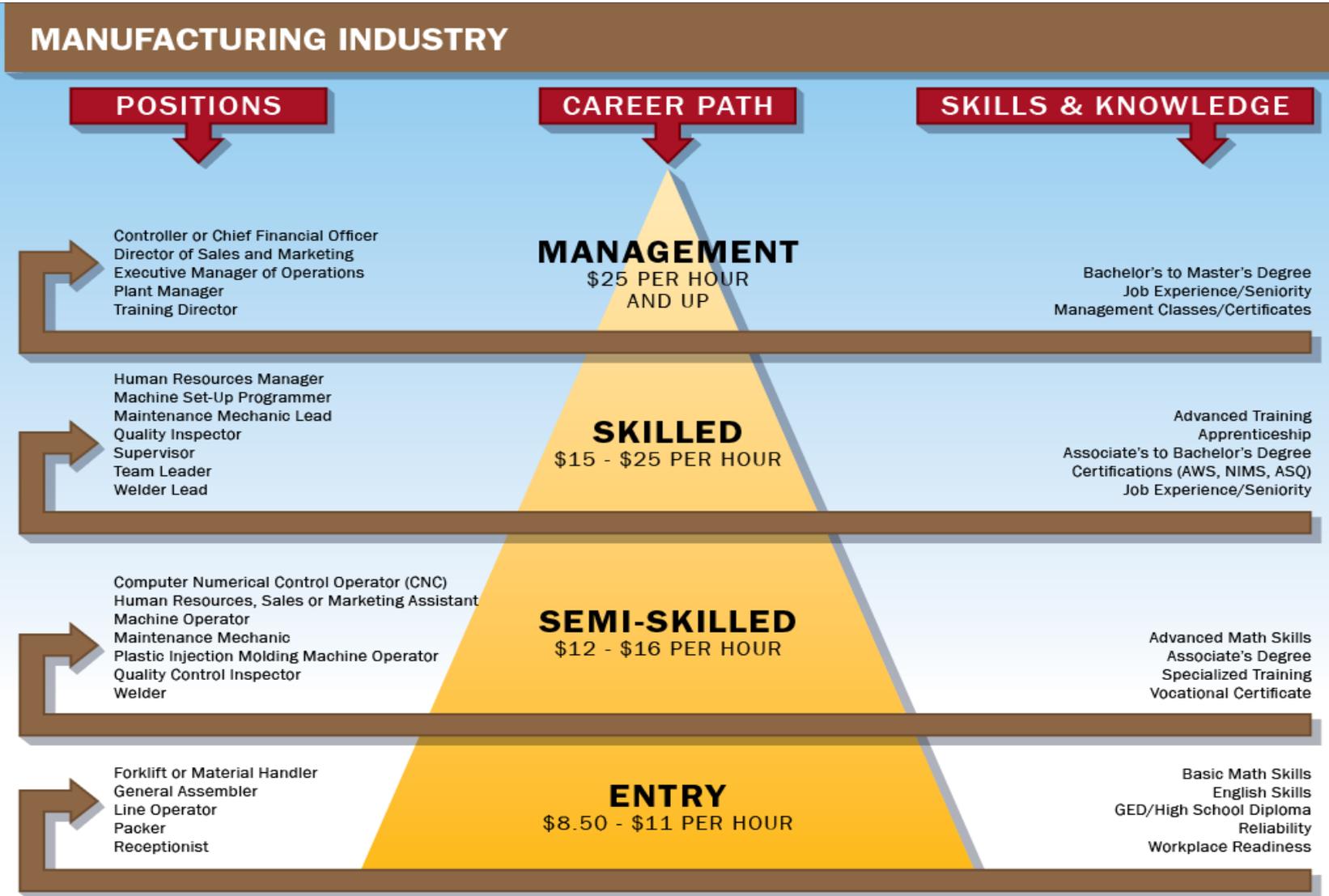
How is this accomplished?

- **Data driven** focus on six industry sectors with 80% of local job growth
- Pathways of stackable credentials of **economic value** allow for multiple entry and exit points
- **Employer involvement** in:
 - Curriculum design
 - On campus exposure (guest lectures, workshops, industry expos/job fairs)
 - Internship and job placement assistance (resume review, mock interviews, online CareerNetwork)

Career Pathway Model (IDPL)

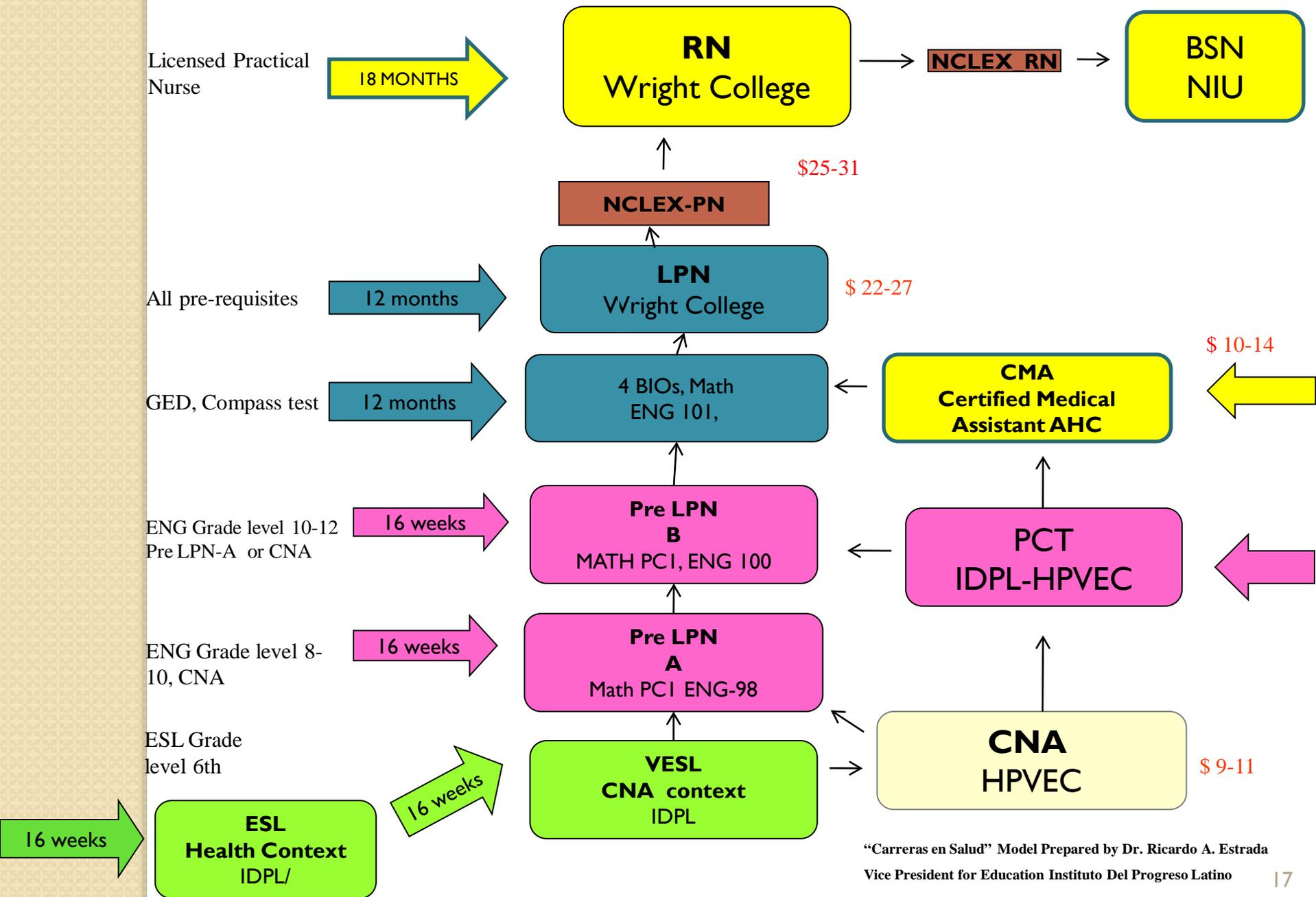


Manufacturing Industry Pyramid

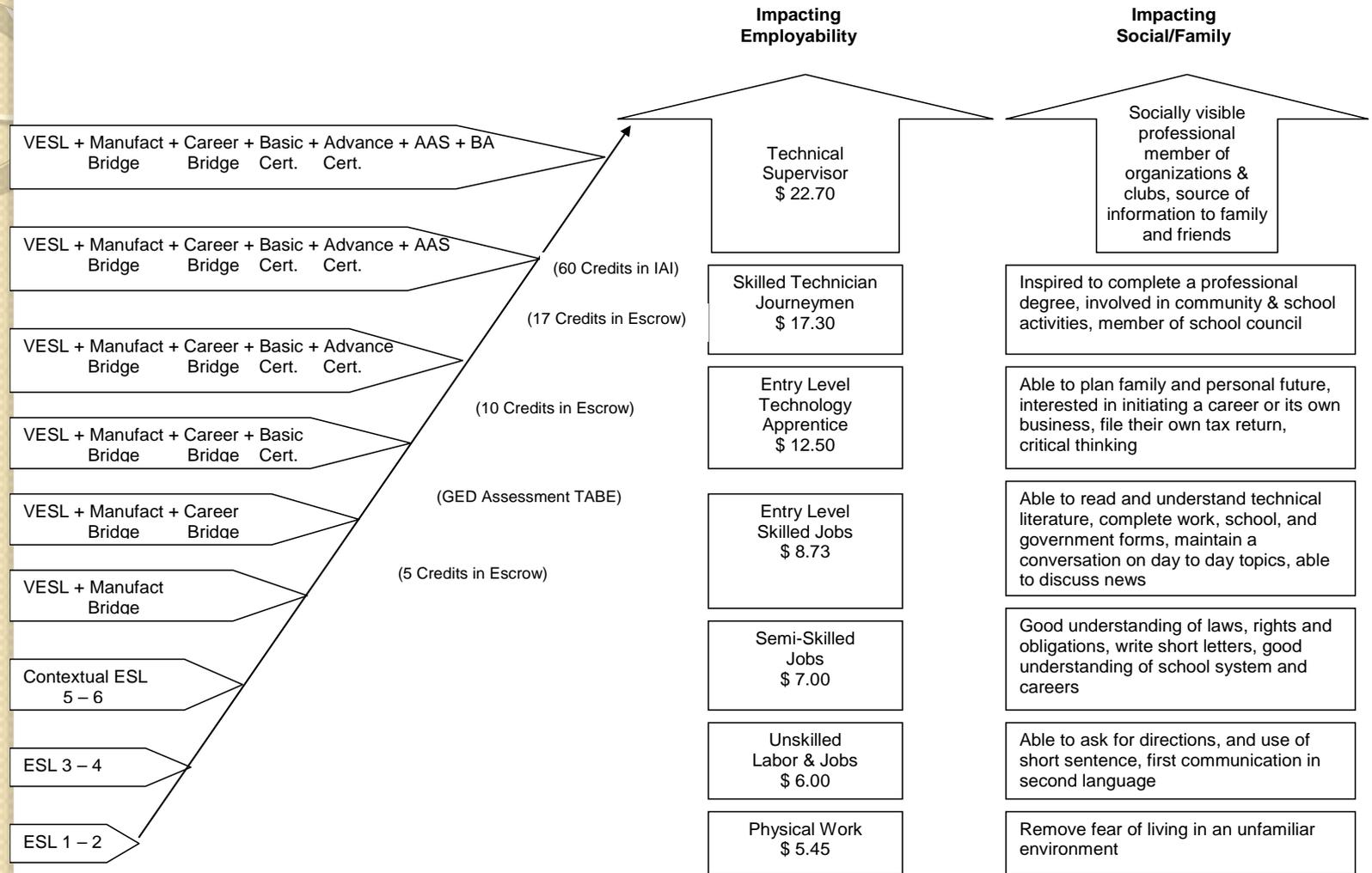


SEE REVERSE SIDE FOR CONTACT INFORMATION TO SEE IF YOU QUALIFY FOR TRAINING.

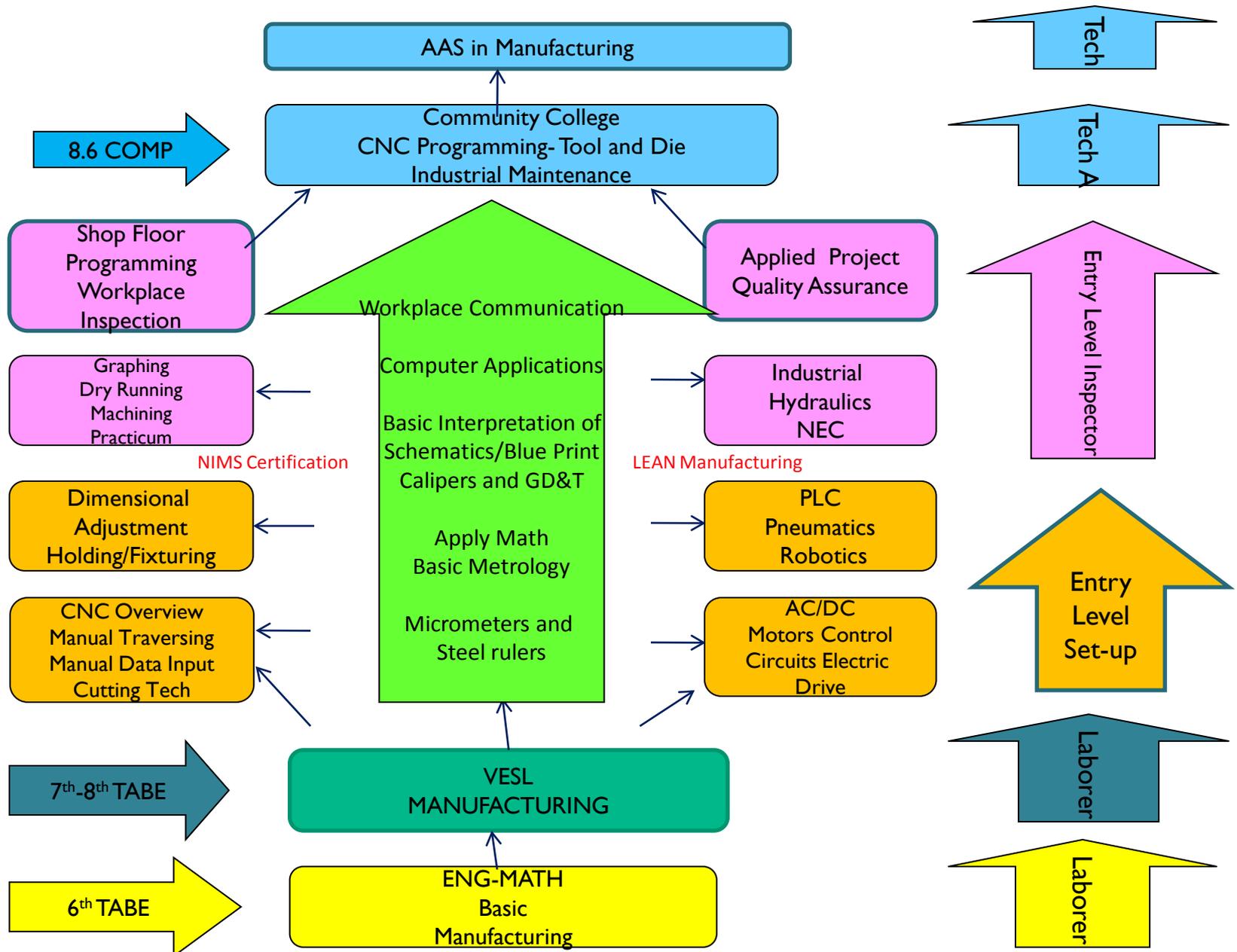
THE CARRERAS EN SALUD PATHWAY MODEL



FACILITATING ADVANCEMENT IN A CAREER PATHWAY THROUGH ARTICULATION AGREEMENTS

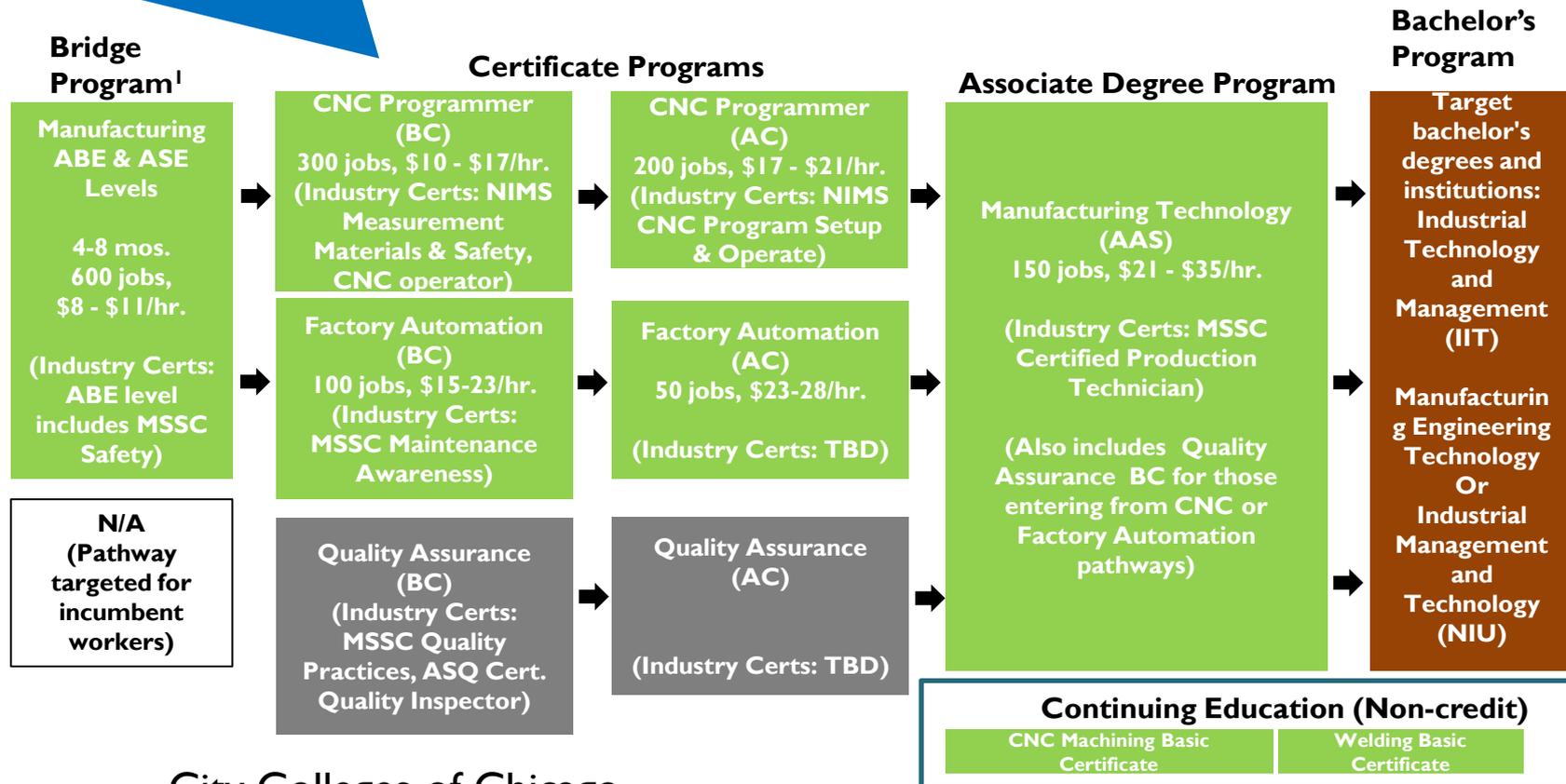


Instituto's Manufacturing Career Pathway

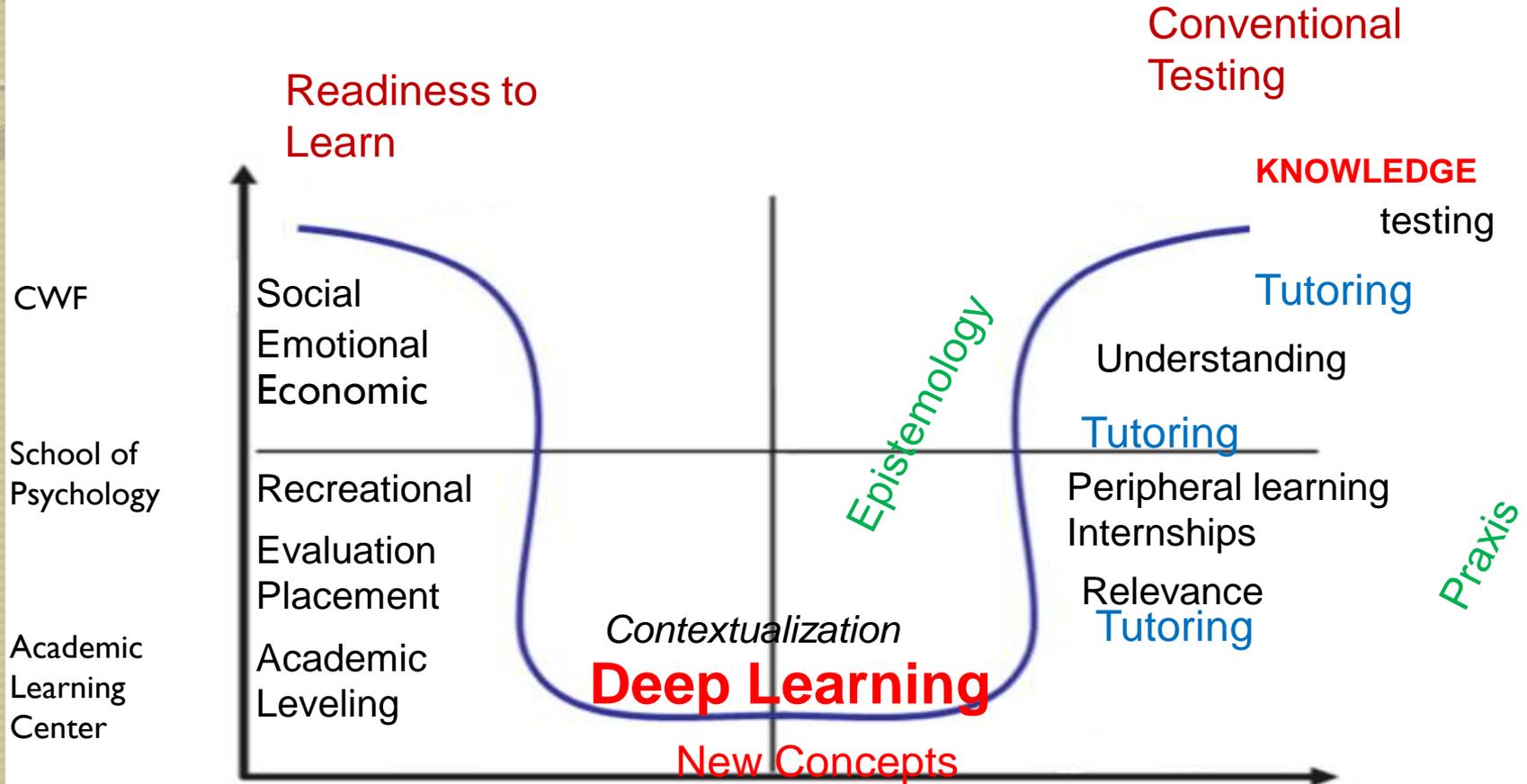


C2C Model Advanced Manufacturing: Basic certificates allow immediate entry to the workforce or stack with advanced certificates to increase wage

- Existing CNC & Factory Automation pathways are potential entry points for both those new to manufacturing and incumbent workers.
- Potential Quality Assurance pathway is targeted to incumbent workers.
- Potential for welding bridge and basic certificate programs outside of Continuing Education is currently under review.



Instituto Educational Model From Learning to Knowledge



Dr. Ricardo A Estrada
Instituto Del Progreso Latino
2008

Adult Education Curriculum Contextualizing Model

Levels	Literacy			Beginning			Intermediate			Advance		
Context & Basic Skills	ENG	MATH	PC	ENG	MATH	PC	ENG	MATH	PC	READING	WRITING	COMPREH
	GENERAL - CONTEXT			MACRO - CONTEXT			MICRO-CONTEXT			VOCATIONALIZATION		
				SH	TTS	TM	CTH	PS	TM	CTH	PS	TM
Credentials	NONE			COURSE			BASIC CERTIFICATE			ADVANCED CERTIFICATE		
Learning paradigm	PEDAGOGY			PEDAGOGY			PEDAGOGY			ANDRAGOGY		
	ANDRAGOGY			ANDRAGOGY			ANDRAGOGY					
Testing & Evaluation	STANDARD			STANDARD			STANDARD			PROJECT BASED		
	PROJECT BASED			PROJECT BASED			PROJECT BASED					

C2C @ Wright College/HPVEC

Goal: Support the successful pathways at HPVEC (Health and Manufacturing) and introduce additional Information Technology pathways

CCC's College to Careers focuses efforts on preparing students for 80% of the 2.1 million new jobs expected through 2018 in Chicago

Industry Focus	Lead College
Information Technology	Wright
Manufacturing	Richard Daley
Health Careers	Malcolm X
Transportation, Distribution and Logistics	Olive-Harvey
Hospitality and Culinary	Kennedy-King
Business	Harold Washington

Wright plays a prominent role in three of our industry focus areas. Students can move between schools (for example, Wright/Daley articulation for stackable manufacturing credentials).

Student Support TEAM

- ◆ Intake Specialist (CBO)
- ◆ Career Coach (CBO)
- ◆ Academic Advisor (College and CBO)
- ◆ College Navigator (College)
- ◆ Case Manager (CBO)
- ◆ Employment Specialist (CBO)
- ◆ Financial Coach (CBO)
- ◆ Public Benefits Coach – Income Support (CBO)
- ◆ Information Technology Coach (College and CBO)
- ◆ Pre-college Basic Skill Contextualized Tutor (CBO)
- ◆ College Tutor (College and CBO)
- ◆ College Non-traditional Tutoring (College and CBO)
- ◆ Social and Emotional Resources (Psychological Counseling - out sourced)
- ◆ Family Intervention Specialist (CBO)
- ◆ Assessment Specialist (Data, Evaluation and Research)



Funding

- Bridge program contract with the City of Chicago – Dept. of Family Support Services (DFSS) under the Workforce Investment Act (WIA)
- Individual Training Account (ITA) vouchers under WIA
- ICCB Adult Ed funding GED option and planning for beginning level of the Bridge.

Lessons

- Recruitment – Employer representatives interview students before beginning program.
- CBO/College Partnership – regular and frequent communication.
- Curricula – continue to refine and integrate across classes with instructor input.
- Instructors – quality is critical – support and train
- Counseling – support services also critical.

Challenges

- On-going funding for sustainability
- Connecting graduates to employment in a slow economy
- Transition to advanced certificate programs – timing, financial aid, etc.

Outcomes

- 88% completion rate for three groups during 2012
- Over 90% of bridge graduates became employed, and/or
- Transitioned to advanced certificate programs.
- Job placements start at an average of \$12.33 per hour.

Awards & Recognition

- ◆ NIMS Accreditation - In 2011, HPVEC's CNC program was recognized as an accredited metalworking program by the National Institute of Metalworking Skills (NIMS) and thus accredited for Level I Machining Skills. HPVEC is the first higher education institution in the City of Chicago and the third in the State of Illinois to hold this distinction.
- ◆ Chicago Manufacturing Renaissance Council recognized Wright/HPVEC and Daley Colleges as the higher education institutions providing NIMS credentials in the City of Chicago.
- ◆ Tooling U Platinum Education Award – HPVEC implemented the first manufacturing program in the CCC district to utilize a virtual learning system through Tooling U, and went on to be nationally recognized as one of the six schools designated as a Tooling U, Society of Manufacturing Engineers, Platinum Education Center (TUPEC).



NIMS National Institute for Metalworking Skills
Metalworking Skills Certification
This is to certify that:
Nancy Williams
has met the requirements for





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