

# Competency-Based Education: A Flexible Approach to Learning

Designing with Equity and Careers in Mind 11/20/2020

CLP

Career  
Ladders  
Project

# Presenters

**Carlos Cortez**

President, San Diego  
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ASCCC Executive Committee,  
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**Facilitator:**

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Director, Career Ladders  
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## About CLP

Career Ladders Project promotes equity-minded community college redesign.

We collaborate with colleges and their partners to discover, develop, and disseminate effective practices.

Our policy work, research, and direct efforts with colleges lead to system change—and enable more students to attain certificates, degrees, transfers, and career advancement.



# Workshop Outcomes

1. Explore key considerations for preparing students and working with employers in the changing economy
2. Consider racial and gender disparities in program and career choice
3. Learn what colleges can and are doing to disrupt structural disparities in program and career choice as they pivot in this moment of economic flux and racial reckoning





Linda Collins, Executive Director  
Career Ladders Project

# 1

## Overview of CBE

# Growing Attention

- Career Ladders Project (2020)
- CBE at LATTC – Case Study and Discussion Guide
- California Competes (2020).
- Side by Side: Comparing Credit for Prior Learning and Competency-Based Education
- California EDGE Coalition (2019)
- **Competency-Based Education: A Strategy for Skills Upgrading in California**
- Education Trust-West (2020).
- Californian's Deserve Credit: Recognizing All Learning to Help California Achieve Educational and Racial Equity
- CBEN
- Competency Based Education Network

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# Overview of Competency-based Education

Current Model	CBE Model
Skills assessed at the course level	Skills/Competencies assessed at the program level often with key milestones
Courses operate as separate units	Competencies are mapped out throughout a student's pathway, working together as a program
Based on course completion	CBE models can be course-based or direct assessment-based
Learning mastery varies based on grading scheme (A, B, C, D, or F)	Learning mastery can vary in CBE that is course-based or it can be fixed, such as 80% mastery



# Types of Competency-based Education

Direct Assessment-based or Course-based

## Direct Assessment

- Not time bound
- Completion determined by high level of mastery
- “Credit hour equivalencies” are applied to student learning outcomes

## Course-Based

- Based on academic terms
- Completion determined by completion of courses and other program requirements
- Incorporates competencies into course and program student learning outcomes





Carlos Osvaldo Cortez, Ph.D.,  
President

San Diego Continuing Education



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**CBE in Noncredit**

# THE SAN DIEGO COMMUNITY COLLEGE DISTRICT

One of California's largest community college districts

Serves the City of San Diego and surrounding region

5 Member Elected Board of Trustees

Student Trustee (Rotating)



SAN DIEGO  
CONTINUING  
EDUCATION



# 60,000 STUDENTS ENROLL IN CREDIT COLLEGES



SAN DIEGO CITY COLLEGE



SAN DIEGO MESA COLLEGE



SAN DIEGO MIRAMAR COLLEGE

SAN DIEGO  
CONTINUING  
EDUCATION





# 40,000 STUDENTS ENROLL IN CONTINUING EDUCATION

- Educational Cultural Complex
- César Chávez Campus
- Mid-City Campus
- North City Campus
- West City Campus
- At Mesa College
- At Miramar College



SAN DIEGO  
CONTINUING  
EDUCATION



# SAN DIEGO CONTINUING EDUCATION HISTORY

- Serving students from 1914 to 2020
- Earliest population: immigrants
- Earliest classes: ESL and citizenship
- Serving communities based on need
- Career education and workforce training with pathways to employment

# SAN DIEGO CONTINUING EDUCATION

## WHAT WE DO

- Noncredit education
- Contract Education
- Fee-Based Education
- Community Education



# LEADER IN WORKFORCE DEVELOPMENT

SAN DIEGO  
CONTINUING  
EDUCATION



# SAN DIEGO CONTINUING EDUCATION

- First in state for 75 career training education certificates
- Strong workforce funding outcome data
- Unique certificates in noncredit career education programs
- Livable + high wages
- Pathways
  - Coding
  - Cybersecurity
  - Welding
  - Plumbing

# SAN DIEGO CONTINUING EDUCATION PATHWAYS

- 1) Auto
- 2) Business and Accounting
- 3) Child Development
- 4) Culinary Arts and Hospitality
- 5) Digital Media
- 6) Fashion Design
- 7) Healthcare
- 8) Information Technology
- 9) Skilled and Technical Trades



# OPPORTUNITIES: Formalize CBE and CPL

# ICOM ACADEMY

Interactive Competency-based Online Microcredentialing

SAN DIEGO  
CONTINUING  
EDUCATION



# WHAT MAKES ICOM UNIQUE?

- First accredited fully online noncredit in state
- Focus on high demand-high pay jobs
- Developed by faculty in collaboration with a learning design company
- Professional produced courses
- Standardized in structure
- Highly interactive
- Open Educational Resources
- Robust online student success ecosystem



ICOM  
ACADEMY

Interactive Competency-Based  
Online Microcredentialing

*Fast, free, flexible career education*

SAN DIEGO  
CONTINUING  
EDUCATION



# ICOM ACADEMY

- Small Business Planning
- Mobile Application Development
- Virtual Datacenter
- Linux Server Administration
- Programming with Python
- Data Management with Python
- Windows System Administration
- Cyber Threat and Response
- Cyber Security Analyst
- Automotive Quick Service Inspection Technician
- Infant Care Specialist
- Child Provider
- Infant Care Specialist
- Child Home Care
- Health Unit Coordinator
- Project Management



Fully Online





**Jesus Guerra**, Director, Transportation  
Workforce Institute & Chair, Advanced  
Transportation & Manufacturing

Los Angeles Trade Tech College



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**CBE in Pathway  
Design**

# The Catalyst for CBE at LATTC

- Started with Pathway Development in 2010-11; Pre-dates Guided Pathways
- Poor performance on Student Success Scorecard metrics prompted a sense of urgency to change
- Goal was to substantially increase student success: credential completions, transfer, and career outcomes



# Six Step Implementation Process

1

## Prepare

Alignment of goals and commitment; identification of key stakeholders and targeted industries

2

## Research

Compilation of the data providing foundation for redevelopment

3

## Design

The drafting and vetting process for the new institutional roadmap

# Six Step Implementation Process

4

## Build

Integration of the course sequences which are supported by experiential learning activities and other cocurricular enhancements (e.g., internship opportunities)

5

## Launch

New support roles and infrastructural changes facilitate implementation

6

## Evaluate

Consistent review and revision of student success and industry professional feedback

# LATTC Advanced Transportation and Manufacturing Pathway: Diesel Technology

## BUILDING BLOCKS FOR ENTRY-LEVEL, MIDDLE-SKILL OCCUPATIONS\*

### SPECIALTY COMPETENCIES

- |   |   |
|---|---|
| <b>Alternative Fuel/Hybrid Vehicles</b> <ul style="list-style-type: none"> <li>Compressed natural gas (CNG) engines</li> <li>Light duty hybrid electric vehicles</li> </ul> | <b>Environmental Compliance</b> <ul style="list-style-type: none"> <li>Environmental regulations and programs</li> <li>Vehicle and device testing</li> <li>Vehicle and device installation and servicing</li> </ul> |
|---|---|

### OCCUPATION-SPECIFIC TECHNICAL COMPETENCIES

- |  |  |   |   |
|--|--|---|---|
| <b>Occupational Safety – Unique to Position</b> <ul style="list-style-type: none"> <li>Occupational safety of specific occupation</li> </ul> | <b>Electro-Mechanical Calculations and Measurement</b> <ul style="list-style-type: none"> <li>Computation</li> <li>Measurement and estimation</li> </ul> | <b>Light Truck, Med/Heavy Vehicle, Bus, and Rail Inspection, Preventative Maintenance, Diagnosis, Repair</b> <ul style="list-style-type: none"> <li>Engines</li> <li>Electrical/electronic systems</li> <li>Drive train systems</li> <li>Suspension and steering systems</li> <li>Brake systems</li> <li>IVAC systems</li> <li>Auxiliary power systems</li> <li>Body systems and special equipment</li> </ul> | <b>Service Workflow</b> <ul style="list-style-type: none"> <li>Preparing vehicle for service</li> <li>Preparing vehicle for return to operation/customer</li> </ul> |
|--|--|---|---|

### INDUSTRY-WIDE COMPETENCIES

- |  |  |  |   |  |  |
|--|--|--|---|--|--|
| <b>Working with Tools and Technology – Also a Common Employability Competency</b> <ul style="list-style-type: none"> <li>Select, use, and maintain tools and technology to facilitate work activity <sup>CS</sup></li> </ul> | <b>Checking, Examining, and Recording</b> <ul style="list-style-type: none"> <li>Completing forms</li> <li>Maintaining logs</li> </ul> | <b>Test-Taking</b> <ul style="list-style-type: none"> <li>Able to pass required exams</li> </ul> | <b>Realistic View of Industry</b> <ul style="list-style-type: none"> <li>Understand demands and nature of work in the industry</li> </ul> | <b>Vehicle Systems</b> <ul style="list-style-type: none"> <li>Knowledge of vehicle systems, components, and parts</li> </ul> | <b>General Safety</b> <ul style="list-style-type: none"> <li>General Safety</li> <li>Personal and shop safety</li> </ul> |
|--|--|--|---|--|--|

### COMMON EMPLOYABILITY COMPETENCIES

- |  |   |  |  |  |
|--|---|--|--|--|
| <b>Personal Skills</b> <ul style="list-style-type: none"> <li>Integrity <sup>CS</sup></li> <li>Initiative <sup>MCCL, CS</sup></li> <li>Dependability and reliability <sup>CS</sup></li> <li>Adaptability <sup>MCCL, CS</sup></li> <li>Professionalism <sup>CS</sup></li> </ul> | <b>People Skills</b> <ul style="list-style-type: none"> <li>Teamwork <sup>CS</sup></li> <li>Communication <sup>CS</sup></li> <li>Respect <sup>CS</sup></li> </ul> | <b>Critical/Analytical Thinking</b> <ul style="list-style-type: none"> <li>Critical/analytical thinking <sup>MCCL, CS, CS(200900)</sup></li> </ul> | <b>Workplace Skills</b> <ul style="list-style-type: none"> <li>Planning and organizing <sup>CS</sup></li> <li>Problem solving <sup>CS</sup></li> <li>Decision making <sup>MCCL, CS</sup></li> <li>Business fundamentals <sup>CS</sup></li> <li>Service (customer) focus <sup>CS(200900)</sup></li> </ul> | <b>Information Technology</b> <ul style="list-style-type: none"> <li>Soc information technology literacy and internet and email <sup>CS(200900) below</sup></li> </ul> |
|--|---|--|--|--|

### ACADEMIC AND CAREER READINESS COMPETENCIES

- |  |  |  |  |  |  |
|--|--|--|--|--|--|
| <b>Reading</b> <ul style="list-style-type: none"> <li>Reading <sup>MCCL, CS</sup></li> </ul> | <b>Writing</b> <ul style="list-style-type: none"> <li>Writing <sup>MCCL, CS</sup></li> </ul> | <b>Connecting Reading and Writing</b> <ul style="list-style-type: none"> <li>Connecting reading to writing and thinking <sup>MCCL</sup></li> </ul> | <b>Listening and Speaking</b> <ul style="list-style-type: none"> <li>Listening and speaking <sup>MCCL</sup></li> </ul> | <b>Mathematics</b> <ul style="list-style-type: none"> <li>Mathematics <sup>MCCL, CS</sup></li> </ul> | <b>Information Technology and Information/Digital Literacy</b> <ul style="list-style-type: none"> <li>Information technology literacy <sup>MCCL, CS</sup></li> <li>Internet and email technology literacy <sup>MCCL, CS</sup></li> <li>Information literacy <sup>MCCL, CS</sup></li> <li>Digital literacy <sup>MCCL</sup></li> <li>Computer literacy for students taking online classes <sup>MCCL</sup></li> </ul> |
|--|--|--|--|--|--|

### FOUNDATIONAL COMPETENCIES FOR COLLEGE AND CAREER SUCCESS

- |  |   |  |  |
|--|---|--|--|
| <b>Self-Efficacy for College and Career Success</b> <ul style="list-style-type: none"> <li>Social and emotional intelligence <sup>MCCL</sup></li> <li>Self-regulation and time management <sup>MCCL</sup></li> <li>Interpersonal awareness and conflict resolution <sup>MCCL</sup></li> <li>Decision making <sup>MCCL, CS</sup></li> </ul> | <b>Awareness of Academic/Career Options</b> <ul style="list-style-type: none"> <li>Investigative <sup>MCCL</sup></li> <li>Self-aware and self-reflective <sup>MCCL</sup></li> </ul> | <b>Academic and Career Goal Setting and Planning</b> <ul style="list-style-type: none"> <li>Academic/career initiative <sup>MCCL</sup></li> <li>Academic/career planning <sup>MCCL</sup></li> <li>Resource acquisition and management skills <sup>MCCL</sup></li> <li>Goal management <sup>MCCL</sup></li> </ul> | <b>Navigating and Accessing College/Community Resources</b> <ul style="list-style-type: none"> <li>Awareness of resource needs <sup>MCCL</sup></li> <li>Accessing academic support resources at the college <sup>MCCL</sup></li> <li>Accessing resources in the community <sup>MCCL</sup></li> </ul> |
|--|---|--|--|

# Diesel Technology Competency Framework

## Competencies Drive Program Design and Implementation



# Competency Statements

## Information Technology and Information/Digital Literacy

- *Information technology literacy* – Understands common computer terminology<sup>CES</sup>; uses scroll bars, a mouse, keyboard, and dialog boxes to work within the computer's operating system<sup>PACTS, CES</sup>; accesses and switches between applications and files of interest<sup>CES</sup>; manages files including creating folders, saving, and moving files<sup>PACTS</sup>; adheres to standard conventions for safeguarding privacy and security<sup>CES</sup>; accesses and navigates the Student Information System<sup>PACTS</sup>
- *Internet and email* – Navigates the Internet to find information<sup>PACTS, CES</sup>; recognizes the significance of domains (e.g., com, net, edu, org, gov)<sup>PACTS</sup>; opens and configures standard browsers to retrieve desired information<sup>CES</sup>; uses search engines, hypertext references, and transfer protocols (enter URLs)<sup>PACTS</sup>; uploads/downloads files<sup>PACTS</sup>; composes, sends, and receives e-mail including attachments<sup>PACTS, CES (adapted)</sup>; understands and employs email etiquette<sup>PACTS</sup>
- *Information literacy* – Reads/interprets maps and diagrams<sup>CES</sup>; is aware of and practices ethics associated with ideas, information resources, and communication including what constitutes plagiarism and how to avoid it<sup>PACTS</sup>; organizes, analyzes and interprets information and data, electronically, in order to complete an assigned project<sup>PACTS</sup>; evaluates material found including the authenticity of the source and author (particularly on the Internet), the validity of the material, and a legitimate source from one that is biased or fake<sup>PACTS</sup>; knows how to and is able to access library resources<sup>PACTS</sup>
- *Digital literacy* – Uses a common word processing software application<sup>PACTS</sup>; uses word-processing software to cut, paste, and format text and spell-check<sup>PACTS</sup>; cuts and pastes information between documents and applications<sup>CES</sup>; attaches, creates, modifies, and saves electronic documents<sup>PACTS</sup>; accesses and uses digital devices<sup>PACTS</sup>; uses presentation software, graphics, multimedia elements, visual displays of data and other aids to depict and/or clarify complex or technical information<sup>PACTS</sup>
- *Computer literacy for students taking online classes*<sup>PACTS</sup> – Logs into course management system (CMS); submits assignments in CMS; completes a quiz in CMS; accesses course resources (files, links, pages, etc.) in CMS; navigates CMS menus; knows where resources are located within the LATTC CMS



## Pathway Orientation



## Orientation Agenda

DAY 2		Facilitator
7:30 am – 8:30 am	<b>Session 4: Considering Academic Options</b> <ul style="list-style-type: none"> <li>• Assessment review<sup>2,1</sup> (PC)</li> <li>• Fact sheets<sup>2,3,C</sup> (PC)</li> <li>• Programs of Study list<sup>1,2, 2,3</sup> (C, PC)</li> <li>• Guided choices<sup>2,1</sup> (C, PC)</li> <li>• Available education planning services<sup>1,3</sup> (PC)</li> </ul>	Chair/designee (C), Pathway Counselor (PC)
8:30 am – 8:45 am	<b>Break</b>	
8:45 am – 10:00 am	<b>Session 5: Academic Progress</b> <sup>1,3</sup> <ul style="list-style-type: none"> <li>• Expectations (PC)</li> <li>• Progress – milestones for financial aid, meeting graduation requirements, etc. (PC)</li> <li>• Probation standards (PC)</li> <li>• Maintaining registration priority (PC)</li> <li>• Academic calendar and important timelines (PC)</li> <li>• Prerequisite and co-requisite challenge process (PC)</li> </ul>	Pathway Counselor (PC)
10:00 am – 10:15 am	<b>Break</b>	
10:15 am – 11:45 am	<b>Session 6: Basic Computing, Information, and Digital Literacy</b> <sup>2,2</sup> <ul style="list-style-type: none"> <li>• Basic computing and information/digital literacy terminology (F,N)</li> <li>• Navigation and file management (F,N)</li> <li>• Outlook features and email (F,N)</li> </ul>	Faculty (F), Navigator (N)
11:45 am – 12:00 pm	<b>Review and Reflection</b> (N)	Navigator (N)

# Steps for Development of the Instructional Roadmap

1. Faculty engagement and participation
2. Industry recognized certifications guide the process
3. Competency framework shared with industry advisory committee and other industry groups for input and approval
4. Curricular enhancement/redesign



# Instructional Roadmap

What works:

- Roadmap with competency and assessment criteria that sets clear expectations for students and industry
- Built in strategies for acceleration and Credit for Prior Learning (CPL)
- Student centered program that prepares students for multiple occupations





# Instructional Roadmap

What Needs Work:

- No Standardized CBE Strategy
- EVERYTHING still revolves around the Carnegie Unit/Hour
- Most CBE efforts made to fit within existing college educational structure



# What is next in CBE at LATTC

- Stacked and Latticed Credit, Noncredit, Not-for-Credit Programs
- CBE, Asynchronous Not-for-Credit Industry Training
- Re-examining Competencies – Future of Work
- Badging Competencies
- Modularizing Curriculum – Plug and Play
- Experimenting with Flipped Learning Digital Learning (eCTE project) (accelerated with pandemic)
- Removing “time” from the equation





Cheryl Aschenbach, ASCCC,  
Curriculum

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## CCC System CBE Efforts

# CCC System CBE Efforts

- Spring 2020
- Objective: Engage in deep learning around CBE for the purpose of identifying regulatory barriers to direct assessment CBE
- Outcome: To create a package of regulatory language for statewide implementation of direct assessment CBE and identify the next steps necessary to successfully pilot direct assessment CBE programs in the CCC system
- Collaboration
  - Chancellor's Office
  - California Community Colleges Curriculum Committee (5C)
    - Includes Academic Senate (8), Chief Instructional Officers (4), Noncredit (1), CTE (1), Classified Professionals (1), and Chancellor's Office Staff
  - Foundation for CCCs – Student Success Center
  - JFF
  - Experts: CBE and Equity

# Guiding & Regulatory Frameworks

- Equity as central goal
- Support access, persistence, completion
- Intentional, transparent, meaningful competencies
- Design with student in mind – anytime, anywhere learning
- Culturally responsive pedagogy to support diverse learners
- Serve unserved populations with emphasis on historically underserved populations
- Equity-minded data collection and evaluation
- Student learning & equity to be focus of design of program
- Direct assessment CBE
- Fully or partially online for maximum flexibility for students
- Program & module quality standards to align with those of degree programs & degree-applicable credit courses
- Alternative Instructional Methodologies in Title 5
- Separate program approval process; modules approved as part of program
- Grading and transcripts to align with national models

## Direct Assessment CBE in CCCs

- “...an intentional outcomes-based and equity-minded approach to earning a college degree in which the expectations of learning are held constant, but time is variable through a flexible, self-paced, high-touch and innovative learning practice” (from [proposed Title 5 regulations](#))
- CBE is already possible within courses and programs. This effort is to now apply it to design and delivery of entire degree programs
- CBE is a change from courses comprising a degree to competencies and sub-competencies within learning modules comprising a degree
- Intent is to have another instructional option for students

# CBE & Guided Pathways Principles



Create Clear  
Curricular  
Pathways to  
Employment  
and Further  
Education



Help  
Students  
Choose and  
Enter Their  
Pathway



Help  
Students  
Stay on  
Their Path



Ensure that  
Learning Is  
Happening  
with  
Intentional  
Outcomes



# Next Steps: CCC DA CBE Collaborative

- Colleges working together to implement DA CBE as early adopters
- Goals:
  - Establish a Direct Assessment CBE implementation collaborative of early implementer colleges
  - Provide funding and implementation support to participating colleges
  - Create a blueprint (roadmap) for implementation of programs system-wide
  - Evaluate the implementation process and early student outcomes
- Objectives:
  - Establish a local structure to support the development and implementation of DA CBE
  - Coordinate local implementation efforts and corresponding state supports
  - Inform regulatory policy and system-wide change needed to support implementation
  - Support the development and dissemination of a direct assessment CBE program blueprint for system-wide implementation
  - Cultivate a peer-learning community and network of CBE champions with the tools to support, education, and lead implementation efforts system-wide
  - Evaluate implementation opportunities, challenges, and outcomes

# CCC DA CBE Collaborative - Modules

## Module I: (6 mon)

- Establish local infrastructure for innovation

## Module II: (3 mon)

- Select the program

## Module III: (9 mon)

- Design the program

## Module IV: (6-12 mon)

- Obtain regional accreditation and program approval

## Module V: (8 – 12 mon)

- Build Operational Model

## Module VI: (3 mon)

- Obtain CCCC CO Approval

## Module VII: (4 mon)

- Launch the program

## Module VIII: (1 year post-implementation)

- Continued action research and scalability








# Thank You

For all you do for students.



## Career Ladders Project