The Mission of CCCAOE is to provide leadership for occupational education and economic development professionals involved in workforce development and the enhancement of California's position within a global economy.
Exploring Career Pathways

Your handout follows the order of this module and includes

- Key Slides marked
- Examples
- Resources for further exploration
Career Pathways SLOs!

When you complete this module, you will be able to:

- Describe and illustrate a “career pathway”
- Identify organizations that can be part of a career pathway partnership
- Discuss differences between articulation of courses and programs of study
- Identify at least one resource you could use to support a career pathway program
- Explain how career pathways affect your job, college, district and region
Career Pathway...

An educational plan or system that connects students to careers by aligning and articulating courses and programs throughout education with industries, jobs, and careers.
Many Career Pathways

- **Linked-Learning Pathways**
- **WIB/DOL- sequence leading to a sector**
- **Articulation Paths – including AD-T degrees**
- **CTE Pathways – Clusters of Related Programs**

We Will Be Talking About All of these Pathways
Successful Career Pathways….

- Lead the student to a high-wage/high-demand career
- Connect all levels of education with careers and jobs
- Include a support system to transition students from education into the workforce
Benefits of Career Pathways

- Connect core academics to technical and employability skills and improve student performance in all three
- Decrease dropouts as students see “real world” applications
- Make recruitment and articulation easier and more effective

What other benefits do you see...?
Career Pathways are Based on Partnerships

- Community Colleges
- Workforce & Economic Development Agencies
- K-12, ROCPs, County Office of Ed
- Employers
- Labor Groups
- Social Service Providers
- State and Federal Agencies and Programs
- Community Colleges
- Workforce & Economic Development Agencies
- K-12, ROCPs, County Office of Ed
- Employers
- Labor Groups
- Social Service Providers
- State and Federal Agencies and Programs
- Community Colleges
Pathways Organized by Industry Clusters...

1. Agriculture and Natural Resources
2. Arts, Media, and Entertainment
3. Building and Construction Trades
4. Business and Finance
5. Education, Child Development, and Family Services
6. Energy, Environment, and Utilities
7. Engineering and Architecture
8. Fashion and Interior Design
9. Health Science and Medical Technology
10. Hospitality, Tourism, and Recreation
11. Information and Communication Technologies
12. Manufacturing and Product Design
13. Marketing Sales and Service
14. Public Services
15. Transportation
...Or by Industry Sectors

1. Advanced Manufacturing
2. Advanced Transportation/Renewables
3. Agriculture, Water and Environmental Technologies
4. Energy, Construction, and Utilities
5. Global Trade and Logistics
6. Health
7. Information Communication and Technologies (ICT/Digital Media)
8. Life Sciences/Biotech
9. Retail/Hospitality/Tourism/Learn & Earn
10. Small Business
Ingredients of Successful Career Pathways

Several ingredients of successful career pathways are explored in other modules:

- Strong partnerships with business and industry
- Flexible programs that meet the diverse needs of our student population
- The college’s interest in making a significant contribution to the economic development of the community/region
- Buy in at all levels
Successful career pathways may be composed of stackable components

Colleges can stack certificates

Degrees can be articulated to produce stackable degrees on a career pathway

Working closely with industry, credentials can be stacked to support career ladder opportunities
Stackable Certificates And Degrees

- Progression of courses and short-term certificates that build toward longer certificates and/or AS-T degree
- Aligned with industry-defined career pathways and explicit job classifications
- Easily understood entry and exit points
- May start with non-credit “bridge” or “prep” program leading into credit-bearing classes
- May be linked to contextualized basic skills English, Math, and ESL where needed
Stackable Certificates Start By Chunking Curriculum

- Group coursework into smaller sets leading to a recognized credential
- Roadmaps show connections between chunks, and between education, training, and jobs
- Easy articulation of credit and clear connection of remedial, academic and occupational programs

Does anyone have a quick example of chunking to share?
LA Trade Tech’s Stackable Certificate Strategy

- General Ed
- Advanced Technical Certificate Programs
- Core Technical Certificate Programs
- Fundamentals Certificate Programs

- Liberal Arts Courses to Satisfy AA/AS Degree Requirements or for Transfer to 4-Year University
- Occupation-Specific & Management Skills and Competencies
- Occupation-Specific Skills and Competencies
- Industry-Wide Skills and Competencies Includes Applied Mathematics/Algebra
Renewable Energy Technician
Stackable Certificates & Degree

- Renewable Energy AS Degree with Emphasis in Solar PV
- Renewable Energy AS Degree with Emphasis in Solar Thermal
- Renewable Energy AS Degree with Emphasis in Energy Efficiency

General Education Requirements + Advanced Technical Courses

- Solar PV Installation and Maintenance Technician Certificate of Achievement
- Solar Thermal Installation and Maintenance Technician Certificate of Achievement
- Energy Efficiency Certificate of Achievement

Energy Systems Technology Fundamentals Certificate of Achievement
# Regional Portfolio - Stackable Matrix

**Job type: Computer User Support**

<table>
<thead>
<tr>
<th>Attain A/S degree or Certificate</th>
<th>Los Medanos</th>
<th>Santa Rosa</th>
<th>Diablo Valley</th>
<th>Las Positas</th>
<th>Ohlone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific ICT Related Foundation Curriculum/ Level 1 Helpdesk/Network Technician</td>
<td>A/S = 60 Units Certif./Achiev. (33 units) Basic Certif (16.5)**</td>
<td>Skills Certif. (16 units)</td>
<td>A/S &amp; Certificate in Computer Technical Support</td>
<td>Career Certif. (13 units)</td>
<td>A/S = 60 Units Certif./Achiev. (23 units)</td>
</tr>
<tr>
<td>A Intro to Computers</td>
<td>COMSC-40**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B Intro to Networking</td>
<td>COMSC-10**</td>
<td></td>
<td></td>
<td>CNT-52</td>
<td>CNET-154</td>
</tr>
<tr>
<td>C Computer User Support/Helpdesk</td>
<td>COMSC-37**</td>
<td>CS 84.13</td>
<td></td>
<td></td>
<td>CNET-161A &amp; B</td>
</tr>
</tbody>
</table>

**For Level 2 Support Specialist**

| | | | | | | |
| D Information Technologies | COMSC-60 | | | | |
| E PC Repair (Hardware) | COMSC-90** | CS 80.15 | COMTC-110 | CNT-51A | CNET-105 |
| F PC Repair (Software)/Exam Prep | COMSC-91 & 92** | CS 80.15 | COMTC-110 | CNT-51B | CNET-105 |
| G Computer Ethics/Communications | COMSC-123 | | CNT-43 | | SPCH-115 |
| H Technical Writing | | | | ENG-156 | |

**For Level 3 Subject Matter Expert Specialist**

| | | | | | |
| I Network Security/Microsoft Essen. Admin. | COMSC-12 | | CNT-114 | | CNET-162 |
| J Programming Logic and Design | COMSC-56 | CS 10 | | | |
| K Advanced Microcomputer Applications | COMSC-61 | | COMTC-118 | CNT-50 | CNET-160A |
| L Operating Systems | COMSC-80 | CS 80.11 | | | |
# Career Pathways at All Levels

<table>
<thead>
<tr>
<th>Middle School</th>
<th>CAREER AWARENESS</th>
<th>Introductory CTE Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>High School</td>
<td>CAREER PLANNING</td>
<td>Develop a Career Goal CTE courses and sequences</td>
</tr>
<tr>
<td>Magnet Schools and Academies</td>
<td>CAREER PLANNING AND DEVELOPMENT</td>
<td>Integrated academic and CTE</td>
</tr>
<tr>
<td>ROCPs and Adult Ed</td>
<td>CAREER DEVELOPMENT</td>
<td>CTE Training Programs</td>
</tr>
<tr>
<td>CTE Transitions</td>
<td>2+2/2+3/2+4 Articulated Programs</td>
<td></td>
</tr>
<tr>
<td>Community Colleges</td>
<td>CTE courses, programs, certificates, contract education</td>
<td></td>
</tr>
<tr>
<td>Apprenticeship Programs</td>
<td>Industry specific and approved</td>
<td></td>
</tr>
<tr>
<td>Adult Education</td>
<td>Academics and CTE courses</td>
<td></td>
</tr>
</tbody>
</table>
Career Pathway Models

CAREER PATHWAYS AND CAREER PATHWAY BRIDGES

ADULT BASIC ED
ENGLISH LANG. LEARNING
WORK READINESS

BRIDGE INSTRUCTION

OCCUPATIONAL CERTIFICATES

APPLIED ASSOCIATE DEGREE
TECHNICAL DIPLOMA

BACCALAUREATE DEGREE

UNSKILLED JOB
SEMI-SKILLED JOB
ENTRY-LEVEL SKILLED JOB
ENTRY-LEVEL TECHNICIAN
SKILLED TECHNICIAN
MANAGERS & TECHNICAL PROFESSIONALS

APPRENTICESHIP

Credit: Wisconsin Regional Industry Skills Education (RISE) Initiative

CCCAOE Leadership Academy
Workers and job seekers can enter the system at any point based on educational skill needs.
Clinical Laboratory Science Career Pathway

- **Certificate Program**
  - Salary Range $27,040-$41,600
  - 7-16 Credits
  - • Sr. Phlebotomist/Laboratory Assistant
  - • Phlebotomist/Laboratory Assistant
  - • Draw & Process Lab Specimens

- **Associate Degree**
  - Salary Range $35,360-$58,240
  - 2 Year
  - • Specialist - Clinical Laboratory Technician (CLT)/Medical Laboratory Technician (MLT)/Histotechnician (HT)
  - • CLT/MLT/HT

- **Bachelors Degree**
  - Salary Range $47,840-$66,560
  - 4 Year
  - • Specialist - Clinical Laboratory Scientist (CLS)/Medical Technologist (MT)/Histotechnologist (HTL)/Cytotechnologist (CT)
  - • CLS/MT/HTL/CT

- **Graduate Degree**
  - Salary Range $33,500-$112,000
  - 5+ Year
  - • Faculty - 4 Year Program
  - • Faculty - 2 Year Program
  - • Laboratory Administration

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**CCCAOE Leadership Academy**
CAREER PATHWAY
Water Distribution

Salaries
$76,752 - $176,746

Salaries
$61,672 - $156,858

Salaries
$60,600 - $81,282

Salaries
$40,824 - $73,403

Salaries
$36,984 - $66,580

Careers
Director of Operations
Water Distribution Superintendent

Careers
Operations Manager
Water Systems Operator III

Careers
Water Quality Specialist
Water Dist. Supervisor
Water Systems Operator II

Careers
Water Systems Operator I
Water Utility Worker I
Utility Worker II
Valve Maintenance Worker

Certification Exam
Complete WWTR 101, 102, 130, 104, 106, 134, 265

Above positions also require T2 - T4 certification

Associate's Degree required
Complete 3 additional courses from WWTR 112, 270, 280, 282, 284, 290
EHSM 100, 110, 210 / Complete general education requirements / Complete a minimum of 60 units.

Certification Exam
Complete WWTR 101, 102, 130, 104, 106, 134, 265

Plus:
1 yr D2 experience
2 yrs total

Plus:
1 yr D3 experience
4 yrs total

Plus:
2 yrs D4 experience
on a D4 or D5 system
5 yrs total

GRADE D1
certificate

GRADE D2
certificate

GRADE D3
certificate

GRADE D4
certificate

GRADE D5
certificate
Articulation

The Foundation of Career Pathways
Articulation – The Key to Career Pathways

- A systematic recognition/credit for courses and programs taken at one educational site by other sites.
- For example, a class taken in high school is recognized for credit as part of a program at a community college.

What are some of the articulated programs at your college?
How Articulation Benefits Your College

- Increased enrollment and retention
- Improved relations with feeder programs
- More effective advisory committees
- Better utilization of resources
- Eligibility for state and federal grants
- Community recognition
- Eliminate duplication of skills instruction and SLOs
Three Types of Articulation

- Course or Student
- CTE Program of Study
- Transfer
Articulating Courses and/or Students

- Course-to-Course
- Credit by Exam
- Advanced Placement
- Course Sequencing
Resources for Articulating Courses

Statewide CTE Career Pathways Program

- Led by the Academic Senate
- Articulates courses and defines pathways for students in specific areas of study
- Templates provide the basis of articulation agreements
- Existing agreements listed on website
Course Articulation Process

- Articulation is done district by district with local feeder schools
- Receiving faculty must see, review, and accept the course requirements
- Agreements must be approved by the Board of Trustees
- Courses can be evaluated for a C-ID number which makes them automatically accepted for articulation to CA universities
Articulating CTE Programs of Study

- Program of study: a planned sequence of courses in a recognized CTE industry CLUSTER
- Include both secondary and postsecondary elements, aligns with the CA CTE Model Curriculum Standards, CTE Framework (K-12), AND transfer model curriculum
- Templates exist for Admin of Justice, Agriculture, Business Admin, Early Childhood, Elementary Teacher Ed, Film/TV, Nutrition, Theater
# Industry Sector: Transportation

## Pathway: Vehicle Maintenance, Service, and Repair

### California Sample Program of Study

<table>
<thead>
<tr>
<th>Level</th>
<th>Grade</th>
<th>English Language Arts</th>
<th>Math</th>
<th>Social Studies</th>
<th>Science</th>
<th>Career Technical Education Course</th>
<th>Other Required Courses or Recommended Electives</th>
<th>Sample Occupations relating to this pathway (Including SOC Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIDDLE</td>
<td>7</td>
<td>Language Arts</td>
<td>Pre-Algebra</td>
<td>World History</td>
<td>7th Grade Science</td>
<td>Exploring Technology</td>
<td></td>
<td>Occupations requiring a high school diploma</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Language Arts</td>
<td>Algebra</td>
<td>U.S. History</td>
<td>8th Grade Science</td>
<td>Technology Core</td>
<td></td>
<td>▶ Mechanic’s Assistant</td>
</tr>
<tr>
<td>SECONDARY</td>
<td>9</td>
<td>English 9</td>
<td>Geometry</td>
<td>Physical Science</td>
<td>Introduction to Transportation</td>
<td>P.E.</td>
<td></td>
<td>▶ Lube Tech</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>English 10</td>
<td>Algebra II</td>
<td>World History</td>
<td>Biology</td>
<td>Automotive Mechanics, Combination</td>
<td>P.E.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>English 11</td>
<td>U.S. History</td>
<td>Engine Performance, Electrical Systems</td>
<td>Foreign Lang. Trigonometry/ Math Analysis</td>
<td></td>
<td></td>
<td>▶ Service Station Attendant</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Technical Writing</td>
<td>U.S. Gov/Econ</td>
<td>Brakes, Suspension, Transmissions</td>
<td>Foreign Lang. Calculus</td>
<td></td>
<td></td>
<td>▶ Automotive Master Technician</td>
</tr>
</tbody>
</table>

**Articulated dual credit courses must be taken/moved to the secondary level for articulation/dual credit purposes.**

| POSTSECONDARY | 13 | Minimum Academic Requirements for AA Degree | CTE Sequence-First Semester | CTE Sequence-Second Semester | | | | | | Industry recognized certifications, licenses, credentials or apprenticeships related to this pathway. |
|--------------|----|---------------------------------------------|-----------------------------|-------------------------------|-----|-----------------------------|-------------------------------------------------|---------------------------------------------------------------|
| | 15 | Area B-Social and Behavioral Sciences (3/4) | Automotive Electrical Systems Technology | Engine Performance | | | | | | Smog License                                          |
| | 16 | Area C-Humanities (3/4) | Preparing for Employment | | | | | | | Brake & Lamp                                          |
| | 17 | Area D-Languages and Rationality (3/4) | | Work Experience | | | | | | OEM Certifications                                   |
| | Section 3-Ethnic Studies (as required) | | | Exploring Welding & Metals | | | | | | Suggested Majors                                      |
| | | | Suspension, Steering, & Alignment | | | | | | | ▶ Transportation Management/Systems                   |
| | | | Automotive Braking Systems | | | | | | | ▶ High school/community college instructor credential |
| | | | | | | | | | | ▶ Industrial Technology                               |
| | | | | | | | | | | ▶ Business Administration for Automotive               |

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**Junior High/Middle School:**

- Required Courses
- Career Technical Education Courses
- Other Required Courses and Recommended Electives
- Dual/Concurrent Enrollment – Articulated Courses
- Suggested Majors

**High School:**

- Community College:
- College/University:
Transfer Model Curriculum (TMC)

- AA/AS-T(Transfer) degrees prepare a student for transfer AND/OR can stand on their own--students are completing a degree, not just preparing for transfer
- AB 1440 requires all community colleges to offer AA-T and/or AS-T degrees
- Graduates are guaranteed CSU admission and given priority for UC admission
- Students cannot be required to repeat lower-division classes after transfer
TMC Pathway to Transfer

- Transfer Model Curriculum (TMC)
- Local curriculum process
- CCCCOCO approval
- Similar program or major at CSU
TMC Templates for CTE

- Administration of Justice
- **Agriculture: Animal Science, Business, and Plant Science**
- Business Administration
- Child and Adolescent Development
- Computer Science
- Early Childhood Education
- Elementary Education
- Graphic Arts*
- Information Technology
- Journalism
- Kinesiology
- Nursing
- Nutrition/Food Science/Dietetics
- Public Health Science
- Radio/TV/Film and Electronic Media
- Studio Arts
- Theater

*Open for review, Spring 2016
Funding, Models, And Resources
Funding and Support for Pathways

Perkins

Private Funding Corporate and Foundation

EWD Programs, Grants, Contract Ed

CDE Adult Schools ROCPs

SB1070 Career Pathways

Sector and Region Mini-Grants

WIBs One-Stops
SB 70 - Career Pathways Projects

- **Purpose:** Increase the availability and alignment of K–12 CTE with local community colleges to improve pathways and career-technical awareness for students

- **SB 70 funding has**
  - Built 6,500+ partnerships
  - Developed or revised over 1,500 courses
  - Provided trainings or externships to over 36,000 faculty
  - Served over 1.19 million students
Support for programs which emphasize student success towards careers in high-need sectors

Priorities of SB 1070

- CTE Pathways
- Articulation and Alignment
- District-wide Linked Learning
- Measuring College & Career Readiness
- Post-secondary and Industry Partnerships
- Training and Professional Development
- Work-based Learning Support
Linked Learning

- Prepares high school students for success in college degree, certificate programs, formal employment training, apprenticeship, or military
- Connects challenging academics to technical skills, work-based learning, and student support
- Students choose a context for learning that is interesting to them
- Informs students of how to achieve their postsecondary and career goals
Model Programs: Career Partnership Academies

- Combine small learning communities, integrated academic and career-technical curriculum, and employer and postsecondary partnerships to prepare students for college and careers
- Available in 22% of California high schools
- Offer a broad range of career themes
- Academy students have
  - Higher exit exam pass rates
  - Higher graduation rates
  - Better attendance
  - Substantially higher college eligibility rates
Career Pathways Trust

- **One-time $250 million competitive grant program**
- **Recipients are tasked with creating sustained career pathways programs that connect businesses, K–12 schools, and community colleges**
- **$250 million awarded to 40 consortia of CDE and community colleges in 2014-25**
- **Another $250 million awarded in 2015-17**

Are any of you involved in a CCPT-funded consortia?
Strong Workforce Funding

- $200 million added to the EWD item in the governor’s budget beginning 2015-16
- Consistent with recommendations made by the Task Force on Workforce
- Funds will likely be distributed on a formula basis in the initial year, but may shift to a regional allocation where colleges' funding will be determined based on certain accountability measures.
- This is also discussed in Connecting with Businesses and the Workforce Module
Model Program: Concurrent Courses Initiative

- Students get college credit and *may* get high school credit for same course
- Created to demonstrate the feasibility of using dual enrollment programs to enhance college and career pathways for low-income youth
- Provides support to secondary and postsecondary partnerships in California who are developing career-focused dual enrollment programs
Model Programs: CTE Transitions

- Formerly Tech Prep (funded by Perkins), these programs require partnerships, pathways, and articulation
- Many 2+2 and similar programs were started during Tech Prep and continue under CTE Transitions funding (Perkins)
- Almost every college in the State receives CTE Transitions funding but this funding may be ending (stay tuned!)
Resources: WhoDoUWant2B.com

- Encourages teens to plan for their future
- A comprehensive, statewide marketing campaign, providing a richer, more complete self-exploration of the CTE experience
- Guide to the 15 pathways
- Wage reports
Resources:
California Career Cafe

- Provides 24/7 free resources helping students with:
  - Career development process
  - Job search
  - Practice and build workplace skills
  - Solve career related problems
More Resources

Your handout pages 14-21 contains numerous resource links including a three-page linked list of CAREER & COLLEGE EXPLORATION & PLANNING RESOURCES FROM CALCRN
Remember Our Objectives?

Now can you:

- Describe and illustrate a “career pathway”?
- Identify organizations that can be part of a career pathway partnership?
- Discuss differences between articulation of courses and programs of study?
- Identify at least one resource you could seek to fund a career pathway program?
- Explain how career pathways affect your job, college, district and region?
Navigating CTE & EWD
Career Pathways
Economic and Workforce Development Essentials
Strategic Planning
Program Development and Approval
Building Business and Industry Partnerships
Strategic Portfolio Management
Funding CTE and EWD
Managing Perkins
Enrollment Management
Laws, Regulations, and Policies Leadership