

FLORIDA

Adult Education Career Pathways

TOOLKIT



Developed by
CORD for the Florida
Department of Education



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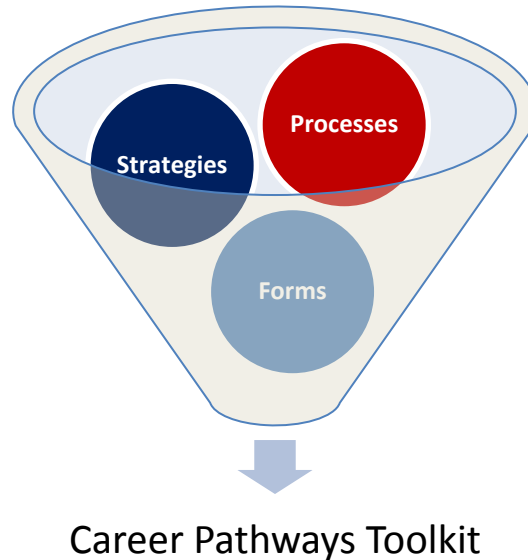
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Contents

I. Introduction and Organization.....	1
II. Essentials of Career Pathways and Adult Education Career Pathways	7
III. Partnership Development.....	37
IV. Model Frameworks.....	51
V. Funding for Adult Education Career Pathways.....	81
VI. Effective Advisory Committees.....	107
VII. College and Career Readiness	163
VIII. Forms and Resources.....	213
IX. Entire Toolkit.....	217
X. Bibliography	219
XI. Index.....	223

I. Introduction and Organization

Welcome to the *Florida Adult Education Career Pathways Toolkit*. The purpose of the toolkit is to help educators and other stakeholders understand their roles in developing and delivering Adult Education Career Pathways (AECp) programs. The toolkit is divided into sections so that you can go directly to the section or sections that pertain to your specific needs.



The following table lists and describes the sections.

Florida Career Pathways Toolkit	
Section	Description
I. Introduction and Organization	Start here for an explanation of how the toolkit is organized and a description of each section.
II. Essentials of Career Pathways	An explanation of how Adult Education Career Pathways (AECp) fits into the broader picture of Career Pathways and represents a systemic change rather than a program enhancement
III. Partnership Development	A broad look at the stakeholders involved and possible models for connecting stakeholders
IV. Model Frameworks	A look at curriculum development and the design of AECp programs including bridge programs
V. Funding for Adult Education Career Pathways	The essentials of funding an AECp system

Florida Career Pathways Toolkit	
Section	Description
VI. Effective Advisory Committees	A closer look at how business advisory committees should be structured and maintained
VII. College and Career Readiness	Focuses on the broad-based knowledge and skills needed and the common core standards
VIII. Forms and Resources	(Online version only) A clickable list of forms and worksheets. Go here to download the items as individual files
IX. Entire Toolkit	A downloadable, printable version of entire toolkit
X. Bibliography	Resources used in developing the toolkit
XI. Index	Indicates page locations of the toolkit sections and matches each section to the corresponding Florida AECF Eight Areas of Focus and OVAE 10 Components

Each section be crosswalked with the components in OVAE's Ten Component Framework for Career Pathways and Florida AECF Model (eight key areas of focus) and have a table at the beginning of the section designating which components (OVAE and Florida) that are being highlighted in that section.

FLORIDA Table: The Florida AECF components will be designated by this table:

FL#1: Program Design-Programs are designed to transition or “bridge” adults between basic and college-level skills, especially math, reading, and writing courses. Programs provide clear pathways for participants, regardless of their skill level at the point of entry, to advance as quickly as possible to postsecondary programs and ultimately to family-sustaining employment or advancement in their careers. Programs provide visual diagrams or “road maps” that show multiple entry and exit points and depict vertical and lateral movement within an occupation or career cluster.

FL#2: Curriculum and Instruction-Programs ensure that curriculum covers the full range of basic and work-readiness skills needed for entry into and success in postsecondary education and training and the workplace, and use a range of resources and instructional techniques that optimize both educational gains and career and college readiness. Curriculum and coursework are aligned and articulated with academic and career advancement. Instruction

Florida Eight Areas of Focus	
✓	FL#1-Program Design
✓	FL#2-Curriculum and Instruction
✓	FL#3-Professional Development
✓	FL#4-Student Support
✓	FL#5-Assessment
✓	FL#6-Partnerships
✓	FL#7-Marketing
✓	FL#8-Accountability

provides basic skills contextualized for a specific occupation or cluster of occupations within an industry or field.

FL#3: Professional Development-Teachers, counselors, and administrators need ongoing professional development to develop the skills and knowledge necessary to plan and implement an AECP system.

FL#4: Student Support-Programs provide services such as tutoring, career counseling, career exploration and planning (using Florida CHOICES or its equivalent), and access to case management, child care, transportation, financial aid, and job placement.

FL#5: Assessment-Programs use a variety of assessment tools (in addition to standardized tests used in adult education) to measure postsecondary readiness such as college placement tests, SAT, and/or ACT tests.

FL#6: Partnerships-AECP is part of a larger system and should be developed in partnership with other local educational institutions and stakeholders. Community and business partnership arrangements provide support services (e.g., childcare, transportation, case management), job shadowing, and internships. Partnerships must include the school district, college/technical center serving the region, workforce representatives, and other area education providers as determined locally.

FL#7: Marketing-Awareness of AECP is increased through targeted marketing of linkages between adult education, postsecondary, and the workforce. Strategies will inform adult learners of unique program offerings and disseminate best practices for adult education providers.

FL#8: Accountability-Programs analyze student outcomes to set baseline data and goals for increasing the number and percentage of adult students who enter postsecondary education and earn degrees, certificates, and/or industry credentials. Programs document, evaluate, and improve student and program outcomes on a continuing basis.

OVAE Graphic: OVAE’s Ten Component Framework for Career Pathways will be designated by this graphic:

- | OVAE 10 Component Framework | |
|--|--|
| 1. LEGISLATION AND POLICIES: Federal, state, and local legislation or administrative policies promote POS development and implementation. | ▶ OVAE#1-Legislation and Policies |
| 2. PARTNERSHIPS: Ongoing relationships among education, business, and other community stakeholders are central to POS design, implementation, and maintenance. | ▶ OVAE#2-Partnerships |
| 3. PROFESSIONAL DEVELOPMENT: Sustained, intensive, and focused opportunities for administrators, teachers, and faculty foster POS design, implementation, and maintenance. | ▶ OVAE#3-Professional Development |
| 4. ACCOUNTABILITY AND EVALUATION SYSTEMS: Systems and strategies to gather quantitative and qualitative data on both POS components and student outcomes are crucial for ongoing efforts to develop and implement POS. | ▶ OVAE#4-Accountability and Evaluation Systems |
| 5. COLLEGE AND CAREER READINESS STANDARDS: Content standards that define what students are expected to know and be able to do to enter and advance in college and/or their careers comprise the foundation of a POS. | ▶ OVAE#5-College and Career Readiness Standards |
| | ▶ OVAE#6-Course Sequences |
| | ▶ OVAE#7-Credit Transfer Agreements |
| | ▶ OVAE#8-Guidance Counseling and Academic Advisement |
| | ▶ OVAE#9-Teaching and Learning Strategies |
| | ▶ OVAE#10-Technical Skills Assessments |
6. COURSE SEQUENCES: Non-duplicative sequences of secondary and postsecondary courses within a POS ensure that students transition to postsecondary education without duplicating classes or requiring remedial coursework.
 7. CREDIT TRANSFER AGREEMENTS: Credit transfer agreements provide opportunities for secondary students to be awarded transcribed postsecondary credit, supported with formal agreements among secondary and postsecondary education systems.
 8. GUIDANCE COUNSELING AND ACADEMIC ADVISEMENT: Guidance counseling and academic advisement help students to make informed decisions about which POS to pursue.
 9. TEACHING AND LEARNING STRATEGIES: Innovative and creative instructional approaches enable teachers to integrate academic and technical instruction and students to apply academic and technical learning in their POS coursework.
 10. TECHNICAL SKILLS ASSESSMENTS: National, state, and/or local assessments provide ongoing information on the extent to which students are attaining the necessary knowledge and skills for entry into and advancement in postsecondary education and careers in their chosen POS.

Florida Toolkit Sections	Florida AECP Eight Areas of Focus	OVAE 10 Components
Introduction and Organization		
Essentials of Career Pathways and Adult Education Career Pathways	FL#1-Program Design	OVAE#6-Course Sequences OVAE#1-Legislation and Policies
Partnership Development	FL#6-Partnerships	OVAE#2-Partnerships
Model Frameworks	FL#1-Program Design FL#2-Curriculum and Instruction	OVAE#6-Course Sequences OVAE#7-Credit Transfer Agreements
Funding for Adult Education Career Pathways		OVAE#1-Legislation and Policies
Effective Advisory Committees	FL#6-Partnerships	OVAE#2-Partnerships
College and Career Readiness	FL#2-Curriculum and Instruction	OVAE#5-College and Career Readiness Standards
Student Services (pending 2012)	FL#4-Student Support	OVAE#8-Guidance Counseling and Academic Advisement
Forms and Resources		
Pending-Forthcoming		
Professional Development - Phase 3 - 2013	FL#3-Professional Development	OVAE#3-Professional Development
Assessment - Phase 3 - 2013	FL#5-Assessment	OVAE#10-Technical Skills Assessments
Accountability	FL#8-Accountability	OVAE#4-Accountability and Evaluation Systems
Teaching and Learning	FL#2-Curriculum and Instruction	OVAE#9-Teaching and Learning Strategies
Marketing - Phase 4 - 2014	FL#7-Marketing	

The authors suggest that all readers, regardless of area of specialization, continue with section II, “Essentials of Career Pathways.” From there, you may want to move on to section III, “Partnership Development,” and eventually to any topic that interests you. Please note that in the online version each resource is separately linked so that it can be downloaded and printed.

Good luck in your endeavors in the Career Pathways arena.

II. Essentials of Career Pathways and Adult Education Career Pathways

Definitions

A Career Pathway is

a coherent, articulated sequence of rigorous academic and career/technical courses, commencing in the ninth grade and leading to an associate degree, baccalaureate degree and beyond, an industry-recognized certificate, and/or licensure. The Career Pathway is developed, implemented, and maintained in partnership among secondary and postsecondary education, business, and employers. Career Pathways are available to all students, including adult learners, and lead to rewarding careers. (Hull et al., *Career Pathways: Education with a Purpose*, CORD, 2005)

An Adult Career Pathway is similar but focuses more on the special needs and circumstances of adults, especially those who were not initially successful in public education. Whereas the target population of Career Pathways is high school students, the target populations of Adult Career Pathways include demographics such as high school dropouts, holders of GEDs (but no further credential), high school graduates with no college, foreign-born residents, ex-offenders, re-entering workers, and employed persons who seek to upgrade their skills. (For more on Adult Career Pathways, see Hinckley et al., *Adult Career Pathways: Providing a Second Chance in Public Education*, CORD, 2011.)

Florida Eight Areas of Focus	
✓	FL#1-Program Design
	FL#2-Curriculum and Instruction
	FL#3-Professional Development
	FL#4-Student Support
	FL#5-Assessment
	FL#6-Partnerships
	FL#7-Marketing
	FL#8-Accountability

OVAE 10 Component Framework	
▶	OVAE#1-Legislation and Policies
	OVAE#2-Partnerships
	OVAE#3-Professional Development
	OVAE#4-Accountability and Evaluation Systems
	OVAE#5-College and Career Readiness Standards
▶	OVAE#6-Course Sequences
	OVAE#7-Credit Transfer Agreements
	OVAE#8-Guidance Counseling and Academic Advisement
	OVAE#9-Teaching and Learning Strategies
	OVAE#10-Technical Skills Assessments

Career Pathways in Florida's Strategic Plan

The state of Florida is committed to Career Pathways as part of its strategic plan:

Even as we work every day in Florida to foster economic growth and create new jobs, we must have a broad, forward-thinking vision for strengthening our state's workforce in the decades to come. For Florida's workforce system that vision is outlined in the new, 2010-2015 strategic plan for workforce development, *Creating the Strategy for Today's Needs and Tomorrow's Talent*. Workforce Florida, supported by the Agency for Workforce Innovation and Florida's 24 Regional Workforce Boards, collaborated with leaders in business, education and economic development, among others, to develop the bold, five-year plan. (Workforce Florida, Inc.)

The vision that forms the basis of the strategic plan is that "Florida will develop a globally competitive workforce." Florida's Career Pathways movement—and specifically the Adult Education Career Pathways (AECP) movement—is part of that vision.

Florida's 17 Career Clusters and Associated Career Pathways

Career Clusters are groupings of occupations/career specialties used as an organizing tool for curriculum design and instruction. Occupations/career specialties are grouped into the Career Clusters because they require the same knowledge and skills for career success. The knowledge and skills represented by Career Clusters prepare learners for a full range of occupations/career specialties, focusing on the holistic, polished blend of technical, academic and employability knowledge and skills. (www.careertech.org)

Florida has adopted the Career Clusters/Career Pathways model as an organizational tool that can help educators prepare the state's citizens for jobs in the U.S. economy. In addition to the 16 nationally recognized career clusters, Florida has implemented a Career Cluster focus on energy (for a total of 17 clusters). National development teams identified knowledge and skill statements for each of the national 16 Career Clusters, as well as 79 Career Pathways that lead, through education and training, into employment sectors. This system is fully crosswalked with occupational descriptions and tools developed by the U.S. Department of Labor.

The Career Clusters/Pathways model offers a framework that is suitable both for middle and high school students and for adults. To ensure effective implementation of Career Clusters, Florida has adopted a state policy that supports Career Clusters and has integrated them into the state plan.

CAREER CLUSTERS provide a system approach rather than a program enhancement approach.

The 17 Career Clusters and corresponding Career Pathways that Florida has adopted are shown in the following table.

Cluster	Pathways
AGRICULTURE, FOOD AND NATURAL RESOURCES <i>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</i>	Food Products and Processing Systems • Plant Systems • Animal Systems • Power, Structural and Technical Systems • Natural Resources Systems • Environmental Service Systems • Agribusiness Systems
ARCHITECTURE AND CONSTRUCTION <i>Careers in designing, planning, managing, building and maintaining the built environment.</i>	Design/Pre-Construction • Construction • Maintenance/Operations
ARTS, A/V TECHNOLOGY AND COMMUNICATIONS <i>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</i>	Audio and Video Technology and Film • Printing Technology • Visual Arts • Performing Arts • Journalism and Broadcasting • Telecommunications
BUSINESS MANAGEMENT AND ADMINISTRATION <i>Careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.</i>	General Management • Business Information Management • Human Resources Management • Operations Management • Administrative Support
EDUCATION AND TRAINING <i>Planning, managing and providing education and training services, and related learning support services.</i>	Administration and Administrative Support • Professional Support Services • Teaching/Training
FINANCE <i>Planning, services for financial and investment planning, banking, insurance, and business financial management.</i>	Securities and Investments • Business Finance • Accounting • Insurance • Banking Services
GOVERNMENT AND PUBLIC ADMINISTRATION <i>Planning and performing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.</i>	Governance • National Security • Foreign Service • Planning • Revenue and Taxation • Regulation • Public Management and Administration

Cluster	Pathways
HEALTH SCIENCES <i>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</i>	Therapeutic Services • Diagnostic Services • Health Informatics • Support Services • Biotechnology • Research and Development
HOSPITALITY AND TOURISM <i>Hospitality and Tourism encompasses the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.</i>	Restaurants and Food/Beverage Services • Lodging • Travel and Tourism • Recreation, Amusements and Attractions
HUMAN SERVICES <i>Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.</i>	Early Childhood Development and Services • Counseling and Mental Health Services • Family and Community Services • Personal Care Services • Consumer Services
INFORMATION TECHNOLOGY <i>Building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.</i>	Network Systems • Information Support and Services • Web and Digital Communications • Programming and Software Development
LAW, PUBLIC SAFETY, CORRECTIONS AND SECURITY <i>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</i>	Correction Services • Emergency and Fire Management Services • Security and Protective Services • Law Enforcement Services • Legal Services

Cluster	Pathways
MANUFACTURING <i>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</i>	Production • Manufacturing Production Process Development • Maintenance, Installation and Repair • Quality Assurance • Logistics and Inventory Control • Health, Safety and Environmental Assurance
MARKETING <i>Planning, managing, and performing marketing activities to reach organizational objectives.</i>	Marketing Management • Professional Sales • Merchandising • Marketing Communications • Marketing Research
SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS <i>Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</i>	Engineering and Technology • Science and Math
TRANSPORTATION, DISTRIBUTION AND LOGISTICS <i>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</i>	Transportation Operations • Logistics Planning and Management Services • Warehousing and Distribution Center Operations • Facility and Mobile Equipment Maintenance • Transportation Systems/Infrastructure • Planning, Management and Regulation • Health, Safety and Environmental Management • Sales and Service
ENERGY <i>Design, generation, distribution, and service of energy sources including alternative energies.</i>	Pathways pending


Florida's *State Plan for the Carl D. Perkins Career and Technical Education Act of 2006* states the following:

To enhance opportunities for students to contribute to their own self-sufficiency, Florida has implemented a career ladder approach to career and technical education programs with the development of *occupational completion points* (OCP) at both the secondary and postsecondary program levels. An OCP is a group of competencies/skills needed to obtain proficiency in a specific occupation as identified by Florida's Agency for Workforce Innovation and/or business and industry. OCPs provide opportunities for students to acquire entry-level employment competencies at less than full program completion.

This enables a student to enter and exit a program without penalty or repetition of competencies. OCPs provide clearly defined career paths for students and facilitate articulation between secondary and postsecondary institutions. . . . The postsecondary career and technical education credentials offered in Florida range from certificates (Postsecondary Adult Vocational Certificate programs) to degrees (A.A.S. and A.S. degree programs). Program offerings are aligned with industry needs through a statewide process that identifies targeted occupations meeting high skill, high wage, or high demand criteria.

CTE VIDEO—*CTE is leading positive change in secondary, postsecondary and adult education, with innovative programs that are making a difference nationwide. CTE: Making the Difference is a high-energy 3-minute video highlighting the many ways CTE is working for America. See <http://player.vimeo.com/video/16317438?title=0&byline=0&portrait=0&autoplay=1>*

Each pathway can be represented in a course sequence. Shown below is a sample course sequence (frequently called “program of study” [POS] at the secondary level) that a traditional student would follow in transitioning from secondary to postsecondary.

Career Cluster: Health Science			Secondary CTE Program: Practical Nursing				
Career Cluster Pathway: Therapeutic Services			Eligible Recipient: Florida Department of Education SAMPLE				
	16 CORE CURRICULUM CREDITS				8 ADDITIONAL CREDITS		
	ENGLISH	MATH	SCIENCE	SOCIAL STUDIES	OTHER REQUIRED COURSES	CAREER AND TECHNICAL EDUCATION COURSES	
	4 credits	4 credits	3 credits, 2 with lab	3 credits	FINE ARTS (1 cdt) PHYSICAL EDUCATION (1 cdt)	Major Area of Interest: HEAL Practical Nursing	
						RECOMMENDED ELECTIVES (Aligned with State University System Admissions)	
	Career Cluster of interest identified by students enrolled in mandatory middle school career education course that includes interest inventory through Choices and ePersonal Education Planner through FACTS.org.						
HIGH SCHOOL	9	English I	Algebra I	Biology	American History	Practical Nursing 1	
	10	English II	Geometry	Chemistry	World History	Practical Nursing 2	
	11	English III	Algebra II	Physics or other Science Course	American Government/Economics	Practical Nursing 3*	
	12	English IV	Pre-Calculus/ Calculus/ Statistics	Anatomy and Physiology or other Science Course	Psychology	Practical Nursing 4	
Dual enrollment courses may be used to satisfy high school graduation or Bright Futures Gold Seal Vocational Scholars course requirements - see the Articulation Coordinating Committee's Dual Enrollment Equivalency List and the Bright Futures Comprehensive Course Table.							
Secondary career and technical education programs may lead to industry recognized certificates, occupational opportunities or postsecondary education options. Based on the Career Cluster of interest and identified career and technical education program, the following postsecondary options are available.							
POSTSECONDARY	TECHNICAL CENTER PROGRAM(S)			COMMUNITY COLLEGE PROGRAM(S)		UNIVERSITY PROGRAM(S)	
	Patient Care Technician*			Nursing (Associate Degree)*		Nursing (B.S. & M.S. Degrees)*	
	Practical Nursing*					Nursing Science	
CAREER	SAMPLE CAREER SPECIALTIES (TOL signifies occupation identified on the Agency for Workforce Innovation's Targeted Occupation Listing)						
	Nurse Assistant		Registered Nurse (TOL)		Registered Nurse (TOL)		
	Practical Nurse		Geriatric Nurse		Nurse Instructor		
	Charge Nurse in Long Term Care		Allied Health Instructor		Nurse Manager		
*Possible Industry Certifications (Students):							
Secondary: Basic Health Care Worker - NOCTI Certified Nursing Assistant							
Postsecondary: Basic Health Care Worker - NOCTI Certified Nursing Assistant Pt. Care Assistant Licensed or Registered Nurse							

Multiple resources are available at both the state and federal levels. The Florida Department of Education’s Division of Career and Adult Education publishes the curriculum frameworks aligned to the Career Clusters recognized by the U.S. Department of Education (http://www.fldoe.org/workforce/dwdframe/heal_cluster_frame11.asp). The Career Cluster framework pages also contain links to Community College AS/AAS and Career Cluster Curriculum frameworks. To determine which cluster a particular program is assigned to, see the list of **Secondary/PSAV CTE** programs at

http://www.fldoe.org/workforce/dwdframe/rtf/2011-12_secondary_program_list.rtf

or **AS/AAS/CCC** programs at

http://www.fldoe.org/workforce/dwdframe/rtf/2011-12_CC_program_list.rtf.

In addition, the Federal Department of Education (OVAE) has published “Career and Technical Programs of Study: A Design Framework”—a resource that “identifies a system of 10 components that, taken together, support the development and implementation of effective programs of study.” For more, see http://cte.ed.gov/file/POS_Framework_Unpacking_1-20-10.pdf.

A particular region may not offer all 17 Career Clusters and corresponding pathways. Pathway development is contingent on the labor market in each region. Career pathways development should be connected to economic development and workforce development, and educators should have a clear understanding of the support role they play in supplying skilled workers for the region.

ALL COURSE SEQUENCES
should have multiple entrances (including for the adult learner) and multiple exits.

At the outset, each region should assess levels of understanding of Career Pathways and education’s role in economic development. **Resource 2.1** will help you make that assessment.

Level of Understanding: Education and Economic Development Resource 2.1										
What is the <u>level of understanding</u> of education’s role in Economic Development in your region?	Low←-----→High									
	1	2	3	4	5	6	7	8	9	10
Adult Education Administration										
AE Staff										
GED Staff										
ESOL Staff										
CTE Faculty										
Counselors & Advisors										

Adult Career Pathways (Adult Education Career Pathways [AECP])

Florida's Career Pathways system initially focused on the transition of high school students to postsecondary education and/or training. More recently the focus has broadened to include the many career-limited *adults* in Florida's communities who, as in all communities, do not have the education and/or training necessary to earn a "living wage." (For statistics on "living wages" for localities across the country, visit the "Living Wage Calculator" at <http://www.livingwage.geog.psu.edu>.)

Florida's career-limited adults need a second chance in public education that enables them to enter and exit the Career Pathways system as their circumstances dictate. The solution is Adult Career Pathways, which are referred to in Florida (and henceforth in this document) as **Adult Education Career Pathways** (AECP). The need varies from region to region, and the partners in each region must work together to define the role of AECP in the broader communitywide Career Pathways system.

We can profile adults needing a second chance into the following groups (with overlaps between the groups):

1. High school dropouts
2. High school completers who did not pursue further education and training
3. College noncompleters
4. Returning veterans who entered military service after high school
5. Immigrants
6. Criminal offenders who have completed their terms of incarceration
7. Adults who need to retool (to change careers, reenter the workforce, or advance in their present careers)

Adult Education programs primarily work within the following groups:

- High school dropouts
 - Are 16 years or older and have legally left the secondary school system.
 - Do not have a high school diploma or its equivalent.
 - Want to learn to speak, read, and write the English language.

- Have earned a high school diploma, or its equivalent, but require remediation to obtain employment or pursue postsecondary education.”
- Immigrants
- Criminal offenders (who have completed terms of incarceration)

Without some well-designed intervention, the bleak future faced by the millions who lack any postsecondary education is unlikely to change in the foreseeable future. Adult Education is changing to meet the challenges in our economy.

National Vision of AECP

An AECP program works within the Career Pathways umbrella and offers multiple entrance and exit points for adults. An AECP program consists of the guidance, remediation, curricula, and other support elements required to enable career-limited adults to enter the workforce and progress in rewarding careers. It is a systemic framework that connects adult education programs, work, and postsecondary education. Each step in an AECP program is designed to prepare the student for the next level of work and education.

Typical AECP program components include the following:

- A “prep stage” designed to prepare participants for job entry and college study
- Industry-focused curriculum
- A multistep career ladder
- Partnerships with community and government agencies
- Part-time employment (usually beginning after completion of the prep stage)
- Personal and academic support services

ADULT EDUCATION *is at a crossroads and finds itself changing to meet the new demands of a global economy.*

AECP programs are designed to *expedite transitions*—from unemployment to employment, from underemployment to better employment, or (as in the case of displaced workers) from one industry to another. (Hinckley et al., *Adult Career Pathways: Providing a Second Chance in Public Education*, CORD, 2011)

The following graphic describes some of the key aspects of AECF programs.

Systemic Framework	<ul style="list-style-type: none">•AECF is a systemic framework that consists of a connected series of education programs, with integrated support services and work experience, that enables adults to combine work and learning. AE programs are designed to improve retention and completions within AE program and to expedite transitions from AE to post education or workforce.
Connections to Economic Development	<ul style="list-style-type: none">•AECF is an economic development <i>process</i>—the synergy created when best practices and resources are aligned to target an employment sector that is critical to a regional labor market.
Connections to Business	<ul style="list-style-type: none">•Business (the customer) drives the process by identifying targeted sectors, skills, and competencies and reviewing curriculum.
Clear Goal: Work-Readiness	<ul style="list-style-type: none">•AECF programs empower adult education students to enter postsecondary education and earn degrees, certificates, and/or industry credential.
Stackable Credentials	<ul style="list-style-type: none">•All training counts (<i>college credit</i>). AECF programs provide academic credentials and increased educational opportunities .
Partnerships	<ul style="list-style-type: none">•AECF programs involve collaborative efforts among stakeholders and the joining of educational missions (<i>workforce, academic, remediation, student affairs and categorical programs</i>) to eliminate <i>silos</i>.
Bridge Programs	<ul style="list-style-type: none">•AECF Programs support adult ed student seeking to enter postsecondary education programs.
Contextualized Teaching & Learning	<ul style="list-style-type: none">•AECF programs use contextualized, integrated academics that optimize learning gains and career and college readiness.

The following graphic describes the “new basics” toward which adult education is evolving via AECF programs.

ITEM	OLD	NEW BASICS
CUSTOMER	Student is primary customer.	Students and employers are the customers.
GOAL OF CURRICULA	Life skills are the primary goal.	Work readiness skills and preparation for postsecondary education are the primary goals.
CONTENT FOCUS	Applying literacy, numeracy, and English language learning to everyday life tasks	Literacy and numeracy and English language learning as well as thinking and reasoning skills such as problem solving, team work, and following instructions
HOW WORK READINESS IS TAUGHT	Might include some employment-related tasks like filling out a job application	Teaches basic skills in a work context and stresses good work habits such as punctuality, diligence, communication, and appropriate dress and behavior
PROGRAM FOCUS	Driven by students’ personal goals, need, and interests	Driven by students’ employment goals, the skill needs of family-sustaining jobs, and the entry requirements for postsecondary education and training
END GOAL	Most of our Adult Education students stop out before achieving their goals and do not enter postsecondary adult ed programs.	Most students achieve a high level of basic and workforce readiness skills and are prepared to enter postsecondary education and training and family-sustaining jobs.

Adapted from *Guide to Adult Education for Work: Transforming Adult Education to Grow a Skilled Workforce*, National Center on Education and the Economy, 2009

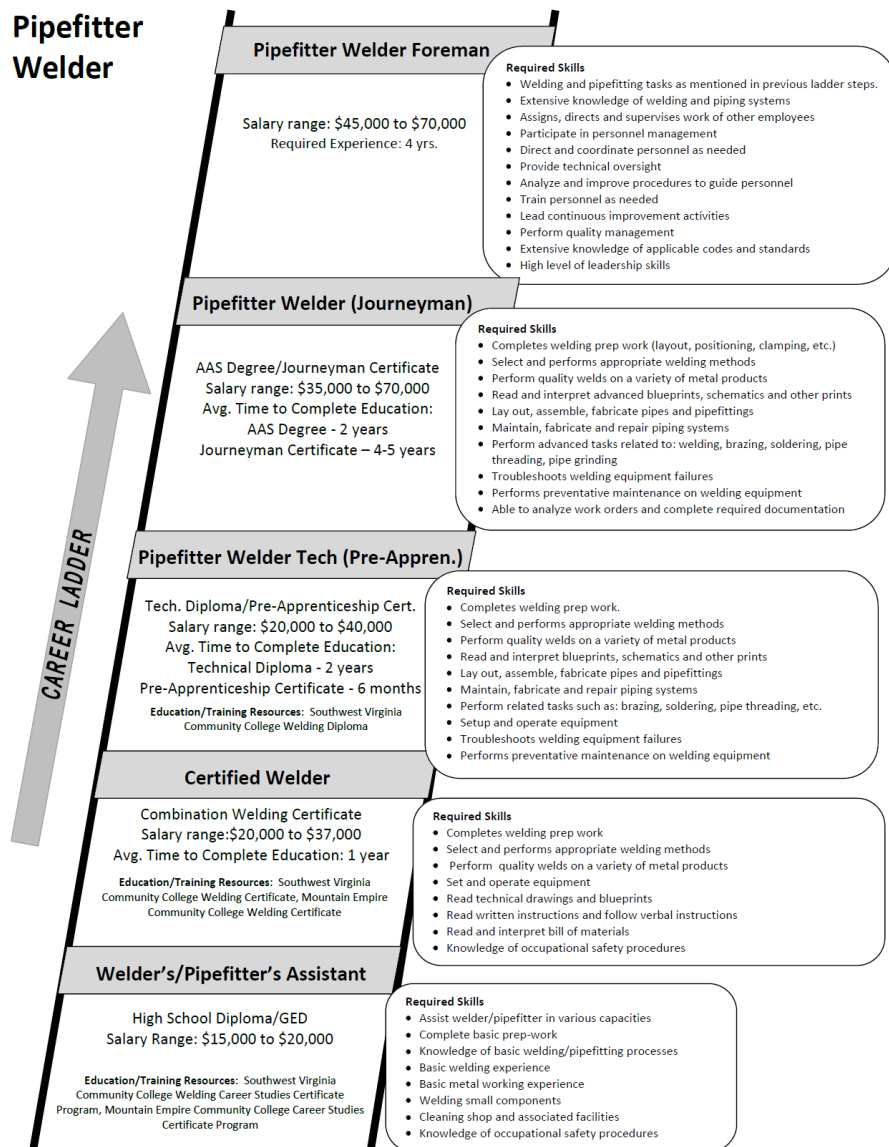
Career Ladders (Maps)

Every AECF program can be represented visually by a ladder or map that illustrates the steps to further education and employment. (In the literature, the terms *ladder* and *map* are used interchangeably. We will use the term *ladder*.) The key components of pathway ladders commonly include the following:

- Potential jobs in the pathway industry
- The progression of education and training within the pathway
- Salary information
- Service providers

- Partnerships
- Support services
- Linkages between pathway components

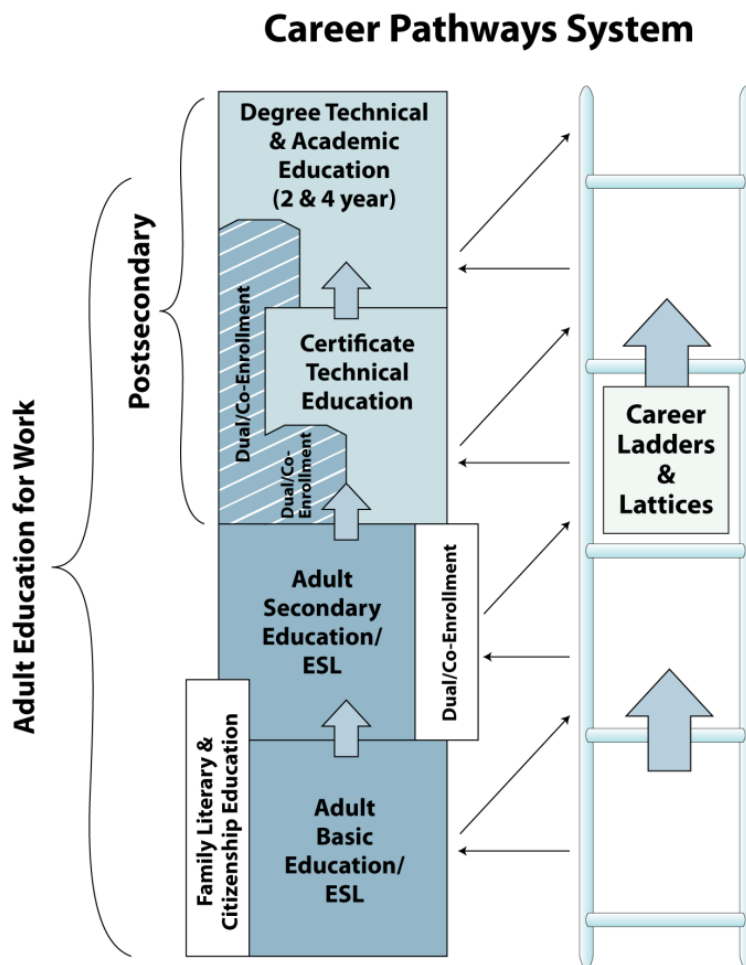
Following is a sample career ladder for a pipefitter welder in southwest Virginia for the coal mining industry.



Pathway ladders are developed as information is collected on the pathways they represent (e.g., labor market data, related postsecondary courses). Each regional partnership must decide what industry sector(s) and related occupations are imperative for the region and develop the

corresponding career ladders. The ladders should be updated regularly to reflect changes in partners or course requirements or other relevant changes.

In an AECP program, the academic ladder should be aligned with the career ladder of the targeted industry, as in the following illustration.



Adapted from *Guide to Adult Education for Work: Transforming Adult Education to Grow a Skilled Workforce*, National Center on Education and the Economy, 2009

Florida's AECP Initiative

Driving Forces for Florida's Adult Education Career Pathways Initiative

The vision to realign Florida's Adult Education system through a Career Pathways framework is largely the result of dramatic changes impacting both the state and the nation, namely, economic considerations. As adult education professionals we are continually struck by the barriers adults face in the attainment of both education and employment. The structure of

today's workforce requires, at the least, basic academic, employability, and career and technical skills. However, as the workforce shifts towards a knowledge-based economy, the requirements of the nation's workforce advance. Within this system, much of the nation's potential workforce is left behind, lacking sufficient employability and academic skills and facing situational, institutional, and dispositional barriers to educational goal attainment. "In the globally competitive economy of the 21st century, state economies in large part will thrive or decline based on how well they cultivate and retain 'knowledge workers': individuals who possess postsecondary educational credentials (though not necessarily a bachelor degree), technical aptitudes, the ability to learn rapidly, and an entrepreneurial approach to employment."¹ In Florida, Adult Education Career Pathways recognize that the development of human capital is a collaborative effort between Adult Education and Career and Technical Education.

The 2009–2010 reporting year revealed that Florida registered more than 372,000 individuals into ABE/GED, Adult High School, and English for Speakers of Other Languages programs. It is estimated that more than 1.5 million additional adult Floridians lack a high school diploma and that more than 30,000 Floridians lack the literacy skills necessary to perform even the most basic functions. Such individuals are largely unable to retain employment beyond the entry level and many are unable to secure a job at all. By rededicating its programs to focus upon career exploration and contextual learning with emphasis upon career preparation through postsecondary education, Florida's Adult Education programs will be repositioned as a starting point to a better life for millions, not an end point where further education is not expected.

Currently, approximately 30% of Florida's adult education graduates transition into postsecondary programs. Florida seeks to significantly increase this number since more than 70% of jobs created between 2006 and 2020 will require more than a secondary education diploma. Associate degrees, professional certificates, and baccalaureate degrees are the gateway to economic independence for millions. Therefore, Florida's Adult Education Career Pathways strategic plan seeks to support individuals securing *middle skill* jobs where salaries range between \$33,000 and \$55,000. For many individuals, the use of career ladders will be necessary, whereas for other students, the opportunity to earn an associate to baccalaureate degree is a realistic possibility. Essentially, the initiative will not only provide a systemic framework that will support millions of individuals, but will also help Florida achieve its goal of attracting and retaining new businesses and growing existing businesses for a more diversified and strengthened economy. On a final note, Florida's initiative is recognized as a national

¹ Mazzeo, Christopher, Brandon Roberts, Christopher Spence & Julie Strawn (2006). *Working Together: Aligning State Systems and Policies for Individual and Regional Prosperity*. New York: Workforce Strategy Center. Retrieved on 03/12/12 from http://www.workforcestrategy.org/publications/WSC_workingtogether_12.1.06_3.pdf.

model and is undergoing development simultaneously as Florida is playing a key role in architecting a national Adult Education Career Pathways model.

In Florida, AECP is a systemic framework that connects adult education programs, work, and postsecondary education. Each step in an AECP is designed to prepare the student for the next level of education and work. Each step measures skills and improves career and earning opportunities. The AECP includes both noncredit and college credit programs tied to high-growth industries, fields, or occupations that provide family-sustaining wages.

Florida's Adult Education System is responsive to the economic and educational needs of its adult learners. In order to foster economic growth for the state and provide its adult population with basic literacy, numeracy, and language skills, the Adult Education System has adopted the following strategic vision:

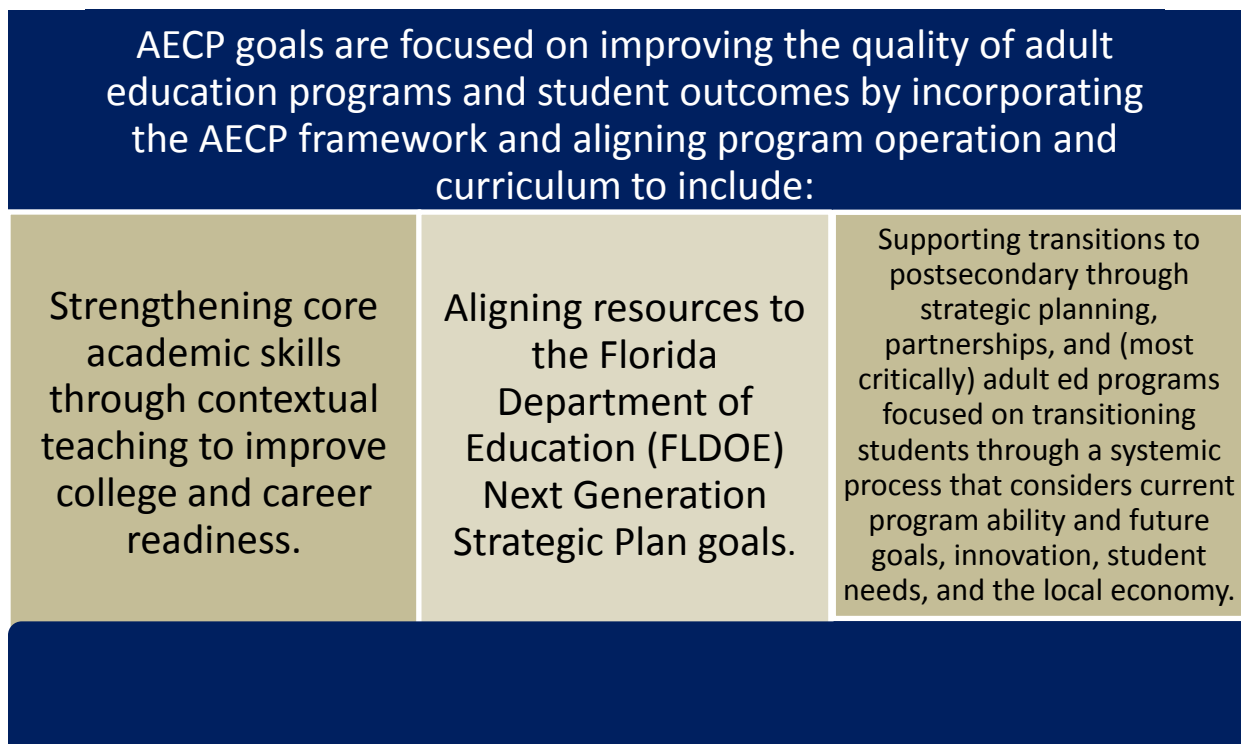
The strategic vision of Florida's Adult Education System is to prepare its adult learners for success in postsecondary education and assist them in developing the skills necessary to succeed in 21st century careers.

In alignment with the Florida Department of Education's (FLDOE) Next Generation Strategic Plan, Florida's Adult Education Career Pathways Initiative is focused upon improving the quality of Florida's Adult Education programs by incorporating a Career Pathways framework based upon the nationally recognized 16 career cluster model. Improvement of adult education program outcomes is also based upon the use of contextual learning to improve college and career readiness and the alignment of resources to strategic goals.

The goal of Florida's AECP Initiative is to improve the quality of Florida's adult education programs by incorporating a Career Pathways framework based on the 16 career cluster model. AECP is part of a larger system and should be developed through the partnering of local education institutions and stakeholders. Partnerships should include employers, school districts, local colleges and technical centers, and other area education providers as determined locally. Community and business partnership arrangements provide support services (childcare, transportation, case management), job shadowing, and internships.

Outcomes associated with AECP include higher rates of persistence and completion and smoother transitions from each educational level to the next and from education to employment. Improvement of adult education outcomes also results from the use of contextual teaching and the alignment of resources to strategic goals.

The specific measurable goals for Florida's AECp initiative are:



To **increase the # and % of AE students who enter PS ED** and earn a degree, certificate, and/or industry credential.

By AY 2015-16, at least **50%** of all AE students who earn an adult HS diploma or GED will successfully transition, by the end of the following academic year, into PS ED.

Beginning with the 2010-11 baseline cohort, the % of adult HS diploma and GED recipients earning a PS degree, certificate, or industry certification within 3 years, will **increase at least 5 %** per year.

Best practices for Adult Career Pathways suggest the following as key features of a comprehensive, fully implemented AECP system:

- Basic skills instruction contextualized for a specific occupation or cluster of occupations within an industry or field
- Support services, such as counseling, academic advising, tutoring, career counseling, financial aid, and job placement

- Curriculum and coursework that are broken into steps that are aligned with and articulate to academic and career advancement
- Visual diagram or “road map” that shows multiple entry and exit points and depicts vertical and lateral movement within an occupation or career cluster
- Transition or “bridge” programs designed to help adults improve their basic skills and prepare for postsecondary-level courses, especially math, reading, and writing courses
- Community and business partnership arrangements that provide support services (e.g., childcare, transportation, and case management), job shadowing, and internships

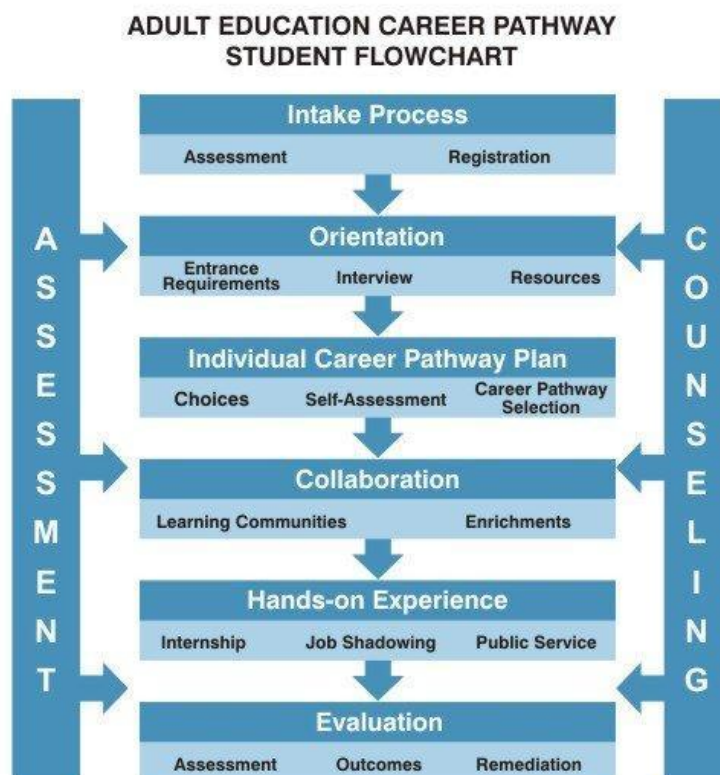
Florida’s AECP Five-Year Strategic Plan—Areas of Focus

Adapting from Career Pathways and Adult Career Pathways best practices and models, Florida’s initiative and strategic planning process focused on eight strategic areas of focus. These areas of focus represent key Adult Education program elements and are together are critical for achieving improved student outcomes.

Program Design	Programs are designed to transition or “bridge” adults between basic and college-level skills, especially math, reading, and writing courses. Programs provide clear pathways for participants, regardless of their skill level at the point of entry, to advance as quickly as possible to postsecondary programs and ultimately to family-sustaining employment or advancement in their careers. Programs provide visual diagrams or “road maps” that show multiple entry and exit points and depict vertical and lateral movement within an occupation or career cluster.
Curriculum and Instruction	Programs ensure that curriculum covers the full range of basic and work-readiness skills needed for entry into and success in postsecondary education and training and the workplace, and use a range of resources and instructional techniques that optimize both educational gains and career and college readiness. Curriculum and coursework are aligned and articulated with academic and career advancement. Instruction provides basic skills contextualized for a specific occupation or cluster of occupations within an industry or field.
Professional Development	Teachers, counselors, and administrators need ongoing professional development to develop the skills and knowledge necessary to plan and implement an AECP system.
Student Support	Programs provide services such as tutoring, career counseling, career exploration and planning (using Florida CHOICES or its equivalent), and access to case management, child care, transportation, financial aid, and job placement.

Assessment	Programs use a variety of assessment tools (in addition to standardized tests used in adult education) to measure postsecondary readiness such as college placement tests, SAT, and/or ACT tests.
Partnerships	AECP is part of a larger system and should be developed in partnership with other local educational institutions and stakeholders. Community and business partnership arrangements provide support services (e.g., childcare, transportation, case management), job shadowing, and internships. Partnerships must include the school district, college/technical center serving the region, workforce representatives, and other area education providers as determined locally.
Marketing	Awareness of AECP is increased through targeted marketing of linkages between adult education, postsecondary, and the workforce. Strategies will inform adult learners of unique program offerings and disseminate best practices for adult education providers.
Accountability	Programs analyze student outcomes to set baseline data and goals for increasing the number and percentage of adult students who enter postsecondary education and earn degrees, certificates, and/or industry credentials. Programs document, evaluate, and improve student and program outcomes on a continuing basis.

This flowchart illustrates how the adult learner might flow through the AECP system.



What to Do First

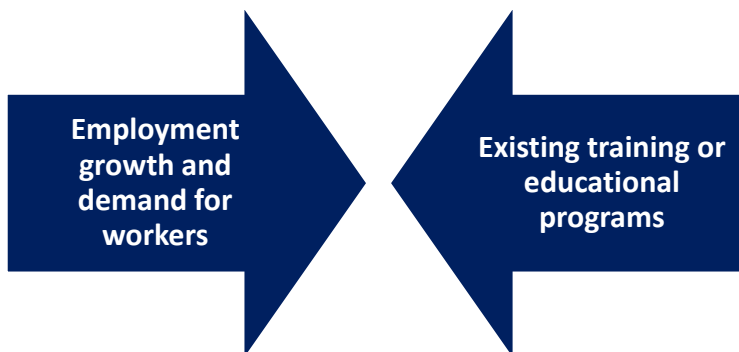
At the outset, each region should assess levels of understanding of Career Pathways and education's role in economic development. **Resource 2.2** will help you make that assessment.

Level of Understanding: Adult Ed Career Pathways System Resource 2.2										
What is the <u>level of understanding</u> of your Adult Ed Career Pathways System in your region?	Low ← ----- → High									
	1	2	3	4	5	6	7	8	9	10
Adult Education Administration										
AE Staff										
GED Staff										
ESOL Staff										
CTE Faculty										
Counselors & Advisors										
Adult students										

The following worksheet (**Resource 2.3**) will help the reader obtain a “pulse” of the adult education system in the community and whether the adult education system is moving toward the “new basics.”

Adult Education: Moving Toward the “New Basics” Resource 2.3										
Has your AE moved toward the “New Basics”? Please rate each component below:	Disagree ← ----- → Agree									
	1	2	3	4	5	6	7	8	9	10
Students and employers are the customers.										
The curriculum includes work-readiness skills, and preparation for postsecondary education is the primary goals										
The content focus includes literacy, numeracy, and English language skills as well as thinking and reasoning skills (<i>problem solving, team work and following instructions</i>).										
Basic skills are taught in a work context that stresses good work habits.										
Program goals are driven by the learner's employment goals, the skill requirements for a family-sustaining job, and the entry requirements of postsecondary education and training.										
Most students achieve a high level of basic and workforce readiness skills and are prepared to enter postsecondary education and training and family-sustaining jobs.										

One of the first steps in building an AECP program is to identify an employment sector and a suitable target population. This should be done in partnership with business and industry. (See sections III, “Partnership Development,” and VI, “Effective Advisory Committees.”) When selecting a sector to focus on, consider two main factors:



While you may identify several potential sectors, consider the one that presents the most opportunities for growth and development of career pathways. What are the possible entry points for the adult learner? After scanning the postsecondary programs available, you will be able to make a decision as to which programs could best serve AE and ESOL adult learners.

Use the following chart (**Resource 2.4**) to begin the process of identifying an industry sector.

Employment Sector Growth Resource 2.4		
	Possible Growth <i>Low-Med-High</i>	List Possible Occupations
<u>Agriculture, Food & Natural Resources</u> <i>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</i>		
Food Products and Processing Systems		
Plant Systems		
Animal Systems		
Power, Structural & Technical Systems		
Natural Resources Systems		
Environmental Service Systems		
Agribusiness Systems		
<u>Architecture & Construction</u> <i>Careers in designing, planning, managing, building and maintaining the built environment.</i>		
Design/Pre-Construction		
Construction		
Maintenance/Operations		

Employment Sector Growth

Resource 2.4

	Possible Growth <i>Low-Med-High</i>	List Possible Occupations
<u>Arts, A/V Technology & Communications</u>		
<i>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</i>		
Audio and Video Technology and Film		
Printing Technology		
Visual Arts		
Performing Arts		
Journalism and Broadcasting		
Telecommunications		
<u>Business Management & Administration</u>		
<i>Careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.</i>		
General Management		
Business Information Management		
Human Resources Management		
Operations Management		
Administrative Support		
<u>Education & Training</u>		
<i>Planning, managing and providing education and training services, and related learning support services.</i>		
Administration and Administrative Support		
Professional Support Services		
Teaching/Training		
<u>Finance</u>		
<i>Planning, services for financial and investment planning, banking, insurance, and business financial management.</i>		
Securities & Investments		
Business Finance		
Accounting		
Insurance		
Banking Services		
<u>Government & Public Administration</u>		
<i>Planning and performing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.</i>		
Governance		
National Security		
Foreign Service		
Planning		
Revenue and Taxation		
Regulation		
Public Management and Administration		
<u>Health Sciences</u>		
<i>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</i>		
Therapeutic Services		
Diagnostic Services		

Employment Sector Growth

Resource 2.4

	Possible Growth <i>Low-Med-High</i>	List Possible Occupations
Health Informatics		
Support Services		
Biotechnology Research and Development		
<u>Hospitality & Tourism</u>		
<i>Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.</i>		
Restaurants and Food/Beverage Services		
Lodging		
Travel & Tourism		
Recreation, Amusements & Attractions		
<u>Human Services</u>		
<i>Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.</i>		
Early Childhood Development & Services		
Counseling & Mental Health Services		
Family & Community Services		
Personal Care Services		
Consumer Services		
<u>Information Technology</u>		
<i>Building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.</i>		
Network Systems		
Information Support and Services		
Web and Digital Communications		
Programming and Software Development		
<u>Law, Public Safety, Corrections & Security</u>		
<i>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</i>		
Correction Services		
Emergency and Fire Management Services		
Security & Protective Services		
Law Enforcement Services		
Legal Services		
<u>Manufacturing</u>		
<i>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</i>		
Production		
Manufacturing Production Process Development		
Maintenance, Installation & Repair		
Quality Assurance		
Logistics & Inventory Control		
Health, Safety and Environmental Assurance		

Employment Sector Growth

Resource 2.4

	Possible Growth <i>Low-Med-High</i>	List Possible Occupations
<u>Marketing</u> <i>Planning, managing, and performing marketing activities to reach organizational objectives.</i>		
Marketing Management		
Professional Sales		
Merchandising		
Marketing Communications		
Marketing Research		
<u>Science, Technology, Engineering & Mathematics</u> <i>Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</i>		
Engineering and Technology		
Science and Math		
<u>Transportation, Distribution & Logistics</u> <i>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</i>		
Transportation Operations		
Logistics Planning and Management Services		
Warehousing and Distribution Center Operations		
Facility and Mobile Equipment Maintenance		
Transportation Systems/Infrastructure		
Planning, Management and Regulation		
Health, Safety and Environmental Management		
Sales and Service		
Energy* <i>Pathways Pending</i>		

Once an industry sector has been targeted and occupations identified by industry, programs available to AE and ESOL learners should be identified. What postsecondary programs are available? Are those programs candidates (with possible modifications or “bridge” programs) for entry into the pathway for the targeted audience (AE and ESOL adults)? The following table (**Resource 2.5**) will serve as a beginning inventory tool.

Career Pathways: Possible Candidates for Entry of AE Learner			
Resource 2.5			
	√ Postsecondary Program Available	Candidate for Entry of AE and/or ESOL Learner?	
		AE	ESOL
<u>Agriculture, Food & Natural Resources</u>			
<i>The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.</i>			
Food Products and Processing Systems			
Plant Systems			
Animal Systems			
Power, Structural & Technical Systems			
Natural Resources Systems			
Environmental Service Systems			
Agribusiness Systems			
<u>Architecture & Construction</u>			
<i>Careers in designing, planning, managing, building and maintaining the built environment.</i>			
Design/Pre-Construction			
Construction			
Maintenance/Operations			
<u>Arts, A/V Technology & Communications</u>			
<i>Designing, producing, exhibiting, performing, writing, and publishing multimedia content including visual and performing arts and design, journalism, and entertainment services.</i>			
Audio and Video Technology and Film			
Printing Technology			
Visual Arts			
Performing Arts			
Journalism and Broadcasting			
Telecommunications			
<u>Business Management & Administration</u>			
<i>Careers in planning, organizing, directing and evaluating business functions essential to efficient and productive business operations.</i>			
General Management			
Business Information Management			
Human Resources Management			
Operations Management			
Administrative Support			
<u>Education & Training</u>			
<i>Planning, managing and providing education and training services, and related learning support services.</i>			
Administration and Administrative Support			
Professional Support Services			
Teaching/Training			
<u>Finance</u>			
<i>Planning, services for financial and investment planning, banking, insurance, and business financial management.</i>			
Securities & Investments			
Business Finance			
Accounting			
Insurance			
Banking Services			

Career Pathways: Possible Candidates for Entry of AE Learner

Resource 2.5

	√ Postsecondary Program Available	Candidate for Entry of AE and/or ESOL Learner?	
		AE	ESOL
<u>Government & Public Administration</u>			
<i>Planning and performing government functions at the local, state and federal levels, including governance, national security, foreign service, planning, revenue and taxation, and regulations.</i>			
Governance			
National Security			
Foreign Service			
Planning			
Revenue and Taxation			
Regulation			
Public Management and Administration			
<u>Health Sciences</u>			
<i>Planning, managing, and providing therapeutic services, diagnostic services, health informatics, support services, and biotechnology research and development.</i>			
Therapeutic Services			
Diagnostic Services			
Health Informatics			
Support Services			
Biotechnology Research and Development			
<u>Hospitality & Tourism</u>			
<i>Hospitality & Tourism encompasses the management, marketing and operations of restaurants and other food services, lodging, attractions, recreation events and travel related services.</i>			
Restaurants and Food/Beverage Services			
Lodging			
Travel & Tourism			
Recreation, Amusements & Attractions			
<u>Human Services</u>			
<i>Preparing individuals for employment in career pathways that relate to families and human needs such as counseling and mental health services, family and community services, personal care, and consumer services.</i>			
Early Childhood Development & Services			
Counseling & Mental Health Services			
Family & Community Services			
Personal Care Services			
Consumer Services			
<u>Information Technology</u>			
<i>Building linkages in IT occupations for entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia and systems integration services.</i>			
Network Systems			
Information Support and Services			
Web and Digital Communications			
Programming and Software Development			

Career Pathways: Possible Candidates for Entry of AE Learner			
Resource 2.5			
	√ Postsecondary Program Available	Candidate for Entry of AE and/or ESOL Learner?	
		AE	ESOL
<u>Law, Public Safety, Corrections & Security</u>			
<i>Planning, managing, and providing legal, public safety, protective services and homeland security, including professional and technical support services.</i>			
Correction Services			
Emergency and Fire Management Services			
Security & Protective Services			
Law Enforcement Services			
Legal Services			
<u>Manufacturing</u>			
<i>Planning, managing and performing the processing of materials into intermediate or final products and related professional and technical support activities such as production planning and control, maintenance and manufacturing/process engineering.</i>			
Production			
Manufacturing Production Process Development			
Maintenance, Installation & Repair			
Quality Assurance			
Logistics & Inventory Control			
Health, Safety and Environmental Assurance			
<u>Marketing</u>			
<i>Planning, managing, and performing marketing activities to reach organizational objectives.</i>			
Marketing Management			
Professional Sales			
Merchandising			
Marketing Communications			
Marketing Research			
<u>Science, Technology, Engineering & Mathematics</u>			
<i>Planning, managing, and providing scientific research and professional and technical services (e.g., physical science, social science, engineering) including laboratory and testing services, and research and development services.</i>			
Engineering and Technology			
Science and Math			
<u>Transportation, Distribution & Logistics</u>			
<i>Planning, management, and movement of people, materials, and goods by road, pipeline, air, rail and water and related professional and technical support services such as transportation infrastructure planning and management, logistics services, mobile equipment and facility maintenance.</i>			
Transportation Operations			
Logistics Planning and Management Services			
Warehousing and Distribution Center Operations			
Facility and Mobile Equipment Maintenance			
Transportation Systems/Infrastructure			
Planning, Management and Regulation			
Health, Safety and Environmental Management			
Sales and Service			
Energy* Pathways Pending			

This section has provided an introduction to Career Pathways in general and AECP specifically. AECP systems can be complex, encompassing many components. Use the following worksheet (**Resource 2.6**) to take a snapshot of Career Pathways in your region.

Florida Adult Education Career Pathways Checklist

Resource 2.6

Use this checklist to get a snapshot of what career pathways implementation in your region. It will likely take more than one person to answer all the questions.

Suggestion: Review the checklist as an activity at a partnership advisory committee or steering committee meeting. After reviewing, create an action plan to address any areas that need improving.

Choosing Pathways

Yes No

- ☐ ☐ Has an inventory/survey of the economic development and labor market needs of the community been conducted?
- ☐ ☐ Does the pathway provide employment opportunities for high-wage and/or high-demand careers?
- ☐ ☐ Have programs already in place been identified?
- ☐ ☐ Have the multiple entrance and exit points for each career pathway been identified?

The What – Curriculum

Yes No

- ☐ ☐ Has the curriculum been built upon standards (academic, technical skills, employability, national, state and/or industry credentials) in a chosen career pathway?
- ☐ ☐ Are there other school/college districts in the state that are implementing the same pathway? (If so, consider researching the standards together – avoiding duplication of work.)
- ☐ ☐ Have local businesses reviewed/revised the standards for local conditions?
- ☐ ☐ Are there overlaps or gaps when comparing standards to existing courses?
- ☐ ☐ Will outside assistance be needed in researching the standards and doing comparisons?
- ☐ ☐ Have Bridge programs been identified and/or developed for adult students?

The How – Teaching and Learning

Yes No

- ☐ ☐ Is teaching done contextually (in the context of how information is used in the real world)?
- ☐ ☐ Have Adult Ed Instructors been provided training so that courses are being applied to the world of work?
- ☐ ☐ Are employers providing work-based learning experiences in the classroom and in the workplace for students and teachers?
- ☐ ☐ Are there opportunities for horizontal teaming (*workforce, academic, remediation, student affairs and categorical programs*) for educators in a particular pathway?

Focusing Students

Yes No

- ☐ ☐ Do adult learners develop a career and education plan using Florida CHOICES (*or its equivalent*) during the intake process, class time, or other time that fits local needs.
- ☐ ☐ Are there student services/programs such as tutoring, career counseling, career exploration & planning (*using Florida CHOICES or its equivalent*), flexible schedules, and access to case mgt, child care, transportation, financial aid, & job placement

___ ___ Do counselors or career advisors have intensive professional development that includes connections with business/industry and current labor market and economic development data?

The Partnership

Yes No

___ ___ Does the partnership have a shared vision and decision-making process?
___ ___ Are all stakeholders represented (secondary & postsecondary educators; business & industry; economic development groups; community-based organizations; faith-based organizations, etc)?
___ ___ Are there written agreements (charter or bylaws) that outline the basic elements of the partnership?

Business/Industry Role

Yes No

___ ___ Have existing partnerships between education and business/industry been reviewed and improved to fit into a career pathways system?
___ ___ Has duplication of effort been reduced by merging overlapping existing advisory committees or developing a cross-representation structure?
___ ___ Are national or state standards available for the chosen pathway(s)? Are industry standards available from an industry credentialing organization?
___ ___ Have local employers reviewed and revised the national/state standards to fit the local situation?
___ ___ Will businesses provide work-based learning experiences? Mentoring? Job-shadowing?
___ ___ Are there opportunities for businesses to provide funding, equipment, or other resources?

The Community At-Large

Yes No

___ ___ Is there a community awareness campaign or plan to inform the community of the changes needed in educational systems and the career pathways solution?
___ ___ Has the community been informed about the changes in the educational institution?
___ ___ Have adult learners been informed of the opportunities available through career pathways?
___ ___ Have existing avenues for disseminating career pathways information been identified?

Professional Development

Yes No

___ ___ Is targeted professional development provided for faculty, administrators, and counselors to improve teaching/learning and integration of technical and academic instruction?
___ ___ Are there workshops or in-service programs already scheduled that could absorb and expand to disseminate information about career pathways?
___ ___ Have opportunities for additional professional development been identified for faculty, counselors, and administrators?

Evaluation

Yes No

___ ___ Does the partnership draw upon education data (secondary & postsecondary), labor market trends, economic and community data for planning purposes?
___ ___ Have the types of data currently being collected been identified?
___ ___ Have additional types of needed data been identified with a plan for collection?
___ ___ Is there a plan to recognize success?
___ ___ Is the data being used for planning and decision-making?

Adult Career Pathways Only

Yes No

___ ___ Have all the components in an adult career pathways (ACP) system (Personal Needs; Academic Skills; Career Focus; Employability Skills; Career & Technical Skills; Job Entry Skills; and Advanced Skills) been defined?

___	___	Have current services been aligned with the components of the new ACP system?
___	___	Are stackable certificates available in each career pathway?
___	___	Have potential providers and partners been identified?
___	___	Has a proposed cost strategy for implementation been identified?
___	___	Has each community business sector been engaged at the CEO level to determine short-term and long-range workforce needs?
___	___	Within each career pathway, have logical points been identified for student/worker reward or reinforcement?
___	___	Has industry in each career pathway agreed to a part-time to full-time work transition plan?
___	___	Has industry in each career pathway agreed to provide for lifelong learning opportunities for their employees?
___	___	Has a gap analysis been conducted to determine the student support services necessary to enhance student success?
___	___	Has a plan been developed to add student support services that are lacking (<i>i.e., child care, transportation, tuition assistance, rent assistance, book fees, basic living costs</i>)?
___	___	Have all stakeholders in the community been engaged in the planning (<i>i.e., the Workforce Investment Board, government, social services, and faith-based organizations</i>)?

After completing this section, you may want to review the resources listed below so that you have a better understanding of the depth and breadth of the system. It is suggested that you then continue to section III, “Partnership Development.”

Resources

- Florida TechNet—Resources and links for adult educators. <http://www.floridatechnet.org>
- *National Career Pathways Network*—NCPN is a membership organization for educators and employers involved in the advancement of Career Pathways. www.ncpn.org
- *Adult Career Pathways: Providing a Second Chance in Education* website—Resources provided by the Adult Career Pathways Network. www.adultcareerpathways.org
- Florida’s Career Pathways Network. <http://www.ftpn.org>
- Literacy Information and Communication System. <http://lincs.ed.gov/pd/careerpathways>
- Florida's Adult and Family Literacy Resource Center. <http://www.floridaliteracy.org>
- Workforce Florida—Florida’s statewide, business-led workforce policy board. Charged with overseeing the state’s workforce system, Workforce Florida develops strategies to help Floridians enter and advance in the workforce while supporting economic development priorities and strengthening the state’s business climate.
<http://www.workforceflorida.com>
- Adult and Community Educators of Florida. <http://www.aceofflorida.org>
- *Thriving in Challenging Times: Connecting Education to Economic Development Through Career Pathways*. <http://www.cord.org/thriving-in-challenging-times/>

III. Partnership Development

Adult Education Career Pathways (AECp) requires a systematic, communitywide approach in which key leaders come together with a shared purpose. It is part of the larger Career Pathways system and should be developed in partnership with local institutions and stakeholders.

As you develop your AECp partnership, you will need to connect to the larger Career Pathways system (pre-K through 16+ and beyond), which encompasses the following groups of leaders:

Educators (pre-K through 16+)

Business/Industry/Labor

Community and Faith-based Organizations

High-level Policymakers

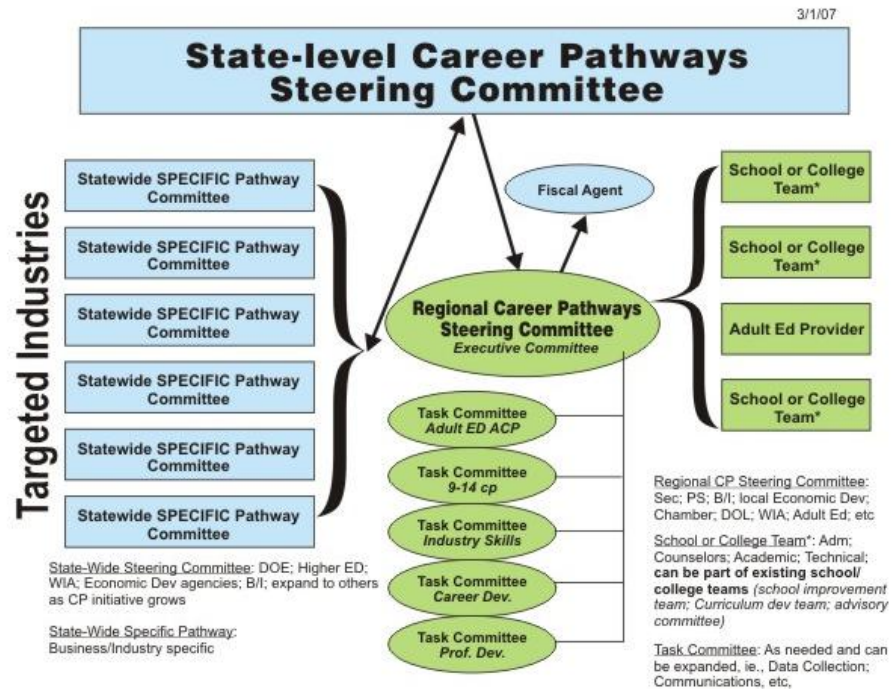
The relationships between Career Pathways and AECp will vary from region to region, depending on the work that has already been done in the larger scheme of Career Pathways. Shown below is a state-level Career Pathways system in which the regional steering committee includes an AECp task committee.

Florida Eight Areas of Focus

	FL#1-Program Design
	FL#2-Curriculum and Instruction
	FL#3-Professional Development
	FL#4-Student Support
	FL#5-Assessment
✓	FL#6-Partnerships
	FL#7-Marketing
	FL#8-Accountability

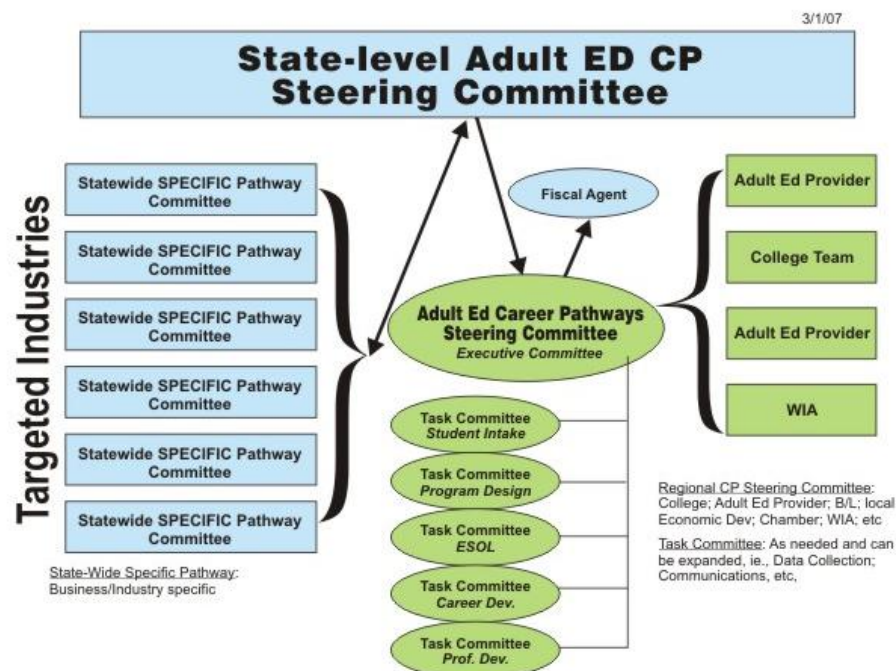
OVAE 10 Component Framework

	OVAE#1-Legislation and Policies
▶	OVAE#2-Partnerships
	OVAE#3-Professional Development
	OVAE#4-Accountability and Evaluation Systems
	OVAE#5-College and Career Readiness Standards
	OVAE#6-Course Sequences
	OVAE#7-Credit Transfer Agreements
	OVAE#8-Guidance Counseling and Academic Advisement
	OVAE#9-Teaching and Learning Strategies
	OVAE#10-Technical Skills Assessments



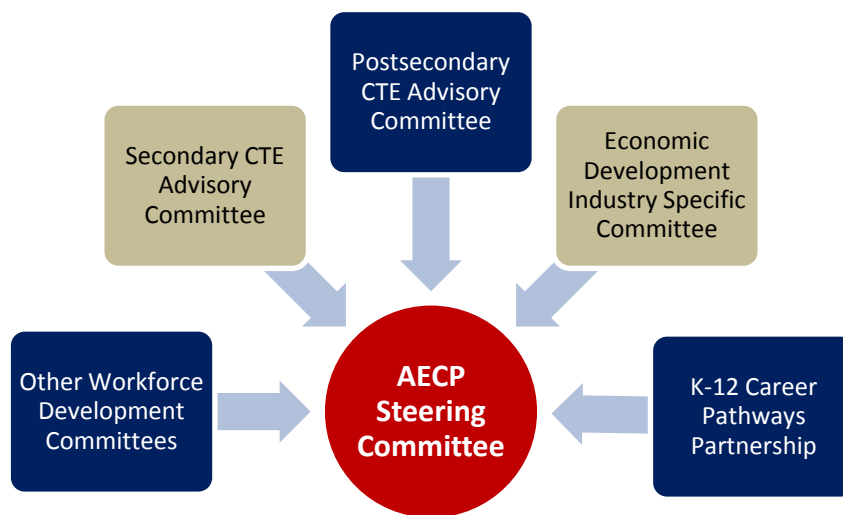
Career Pathways system with AECP as a subcomponent

Perhaps AECP implementation might be more effective in your region if the AECP steering committee is a stand-alone committee that links to the larger Career Pathways system (as in the following figure). Each region must decide what will work best for it.



AECP steering committee as a stand-alone committee

Connections to Existing Partnerships: If career and technical education program advisory committees already exist in your area, consider inviting them to join the partnership. (Some type of connection should be made.) At the very least, cross-representation for existing secondary and/or postsecondary program advisory committees should be explored.



As you can see, there is no “one size fits all” when it comes to how your AECP system fits into the larger system of workforce development. It may depend on what has already been developed in your region, who the economic drivers in the community are, or what structures are already in place. Use the table below (**Resource 3.1**) to determine what workforce development committees are already in place and how the AECP system will connect to those entities.

Connections to Existing Committees				
Resource 3.1				
Committee or Entity	Representative on our Career Pathway Committee		Career Pathway Representative on their Committee	
	Y/N or N/A	Name of Representative	Y/N or N/A	Name of Representative

Connections to Existing Committees Resource 3.1				
Committee or Entity	Representative on our Career Pathway Committee		Career Pathway Representative on their Committee	
	Y/N or N/A	Name of Representative	Y/N or N/A	Name of Representative

Regardless of how AECP fits into your regional structure, employers should drive the system. In addition to helping to identify the skill requirements of high-demand jobs, employers can provide input on curriculum, internship opportunities for students, onsite training, and/or release time for employees. They can also participate in training delivery and provide instructors for technical training. At the same time, employers are not the only partners in the system. Providing a full range of support services for low-skill and career-limited adults requires a communitywide effort. Listed below are the partners who should be at the table to ensure a comprehensive system approach:

Adult Education Team

- ESL, ABE, ASE, AHS
- AE programs at CC & Secondary ABE

K-12 School Districts

- Dropout prevention
- Resource Training
- Secondary ABE

State or Community College

- Career services; Adult Basic Ed; Occupational Programs; Developmental Ed; Continuing Ed; Workforce Development; Customized Training; Financial Aid

Employers

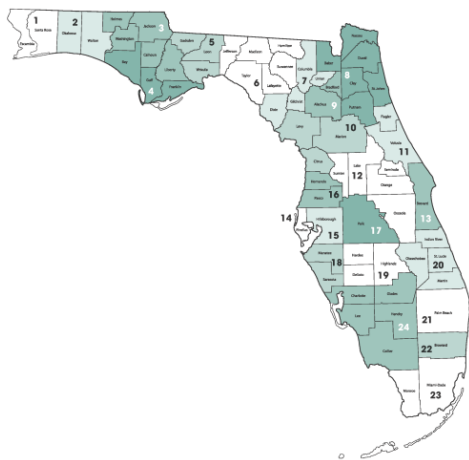
- Employers
- Chambers of Commerce
- Economic Development Corporations
- Labor Associations

Community-Based Organizations

- Social Service Agencies
- Faith-based Organizations

Workforce Entities

- P-12 Councils
- Workforce Boards
- One-Stop Centers



It is imperative that your AECP connect with the regional workforce board (www.workforceflorida.com).

Use the table below (**Resource 3.2**) to begin the identification of agencies and entities that should be included in the partnership and possible representatives from those groups.

Partners to Include		
Resource 3.2		
Agency or Entity	Name of Representative(s)	Contact Information
Adult Education: AE programs at CC; Secondary AE; Individual AE providers		
State or Community Colleges (and Universities): Career services; Adult Ed; Occupational Programs; Developmental Ed; Continuing Ed; Workforce Development; Customized Training; Financial Aid		
Employers: Employers; Chamber of Commerce; Economic Development Corporations; Labor Associations		
Community-Based Organizations: Social Service Agencies; Faith-based Organizations; Other Volunteer Agencies		
Workforce Entities: P-12 Councils; Workforce Boards; One-Stop Centers		

Return-on-Investment

Being able to make a strong case for the value of the partnership and return-on-investment (ROI) will attract and sustain the involvement of partners. “What’s in it for me?” is the first question that must be addressed to ensure involvement and sustainability.

Use the following discussion questions with potential stakeholders at the beginning of the partnership formation:

DISCUSSION QUESTIONS

1. What key factors are required to sustain a partnership effort over time?

2. What are some of the benefits of cross-agency and industry efforts?

The discussion questions above can lead to a more in-depth discussion on the return on investment for each partner. Use the table below (**Resource 3.3**) to begin the discussion of “what’s in it for me.”

Return-on-Investment	
Resource 3.3	
Directions: Have each partner group list potential return on investment in working in a partnership.	
Partner Groups	Return Investment
Adult Education: AE programs at CC; Secondary AE; Individual AE providers	
State or Community Colleges (and Universities): Career services; Adult Ed; Occupational Programs; Developmental Ed; Continuing Ed; Workforce Development; Customized Training; Financial Aid	
Employers: Employers; Chamber of Commerce; Economic Development Corporations; Labor Associations	
Community-Based Organizations: Social Service Agencies; Faith-based Organizations; Other Volunteer Agencies	
Workforce Entities: P-12 Councils; Workforce Boards; One-Stop Centers	

Roles and Responsibilities

Roles and corresponding responsibilities for each stakeholder in the partnership should be outlined. Listed below are potential roles for each broad group of stakeholders.

Adult Education	<ul style="list-style-type: none">•program design; curriculum development; bridge programs; techniques for teaching lower-skill adults; basic literacy, math, and computer skills; ESL; assessment tools
State or Community Colleges	<ul style="list-style-type: none">•linkages between credit and non-credit; chunking and modularizing of programs; articulation agreements to promote portability; support services; financial aid
Employers	<ul style="list-style-type: none">•identification of in-demand and emerging occupations; identification of skill sets (<i>essential, workplace, foundational, employability</i>); curriculum development; internships and project-based learning; mentors; employment; career ladder information; funding (tuition reimbursement)
Community-based Organizations	<ul style="list-style-type: none">•referrals and recruitment; support services; marketing; case management; financial assistance (e.g., food stamps, dependent care, transportation)
Workforce Entities	<ul style="list-style-type: none">•labor market information; economic and workforce trend analysis; identification of target industries; resource development and allocation; employer engagement; skills assessments; job search assistance; job placement services; policy development

The roles and responsibilities described above are generic and may not fit your particular circumstances. Use the following table (**Resource 3.4**) to begin drafting roles and responsibilities for your stakeholder groups.

Identification of Roles and Responsibilities of Stakeholder Groups

Resource 3.4

Adult Education: AE programs at CC; Secondary ABE; Individual ABE providers

State or Community Colleges (and Universities): Career services; Adult Basic Ed; Occupational Programs; Developmental Ed; Continuing Ed; Workforce Development; Customized Training; Financial Aid

Employers: Employers; Chambers of Commerce; Economic Development Corporations; Labor Associations

Community-Based Organizations: Social Service Agencies; Faith-based Organizations; Other Volunteer Agencies

Workforce Entities: P-12 Councils; Workforce Boards; One-Stop Centers

Now that you have broad roles for stakeholder groups, you can begin to get more specific roles for the partners based on their agencies' and organizations' missions. Use the table below (**Resource 3.5**) to begin listing specific roles and responsibilities for each partner.

Specific Agency Roles and Responsibilities Resource 3.5	
Agency or Entity	Specific Role
Adult Education: AE programs at CC; Secondary AE; Individual AE providers	
State or Community Colleges (and Universities): Career services; Adult Ed; Occupational Programs; Developmental Ed; Continuing Ed; Workforce Development; Customized Training; Financial Aid	
Employers: Employers; Chambers of Commerce; Economic Development Corporations; Labor Associations	
Community-Based Organizations: Social Service Agencies; Faith-based Organizations; Other Volunteer Agencies	
Workforce Entities: P-12 Councils; Workforce Boards; One-Stop Centers	

To set the right culture, show the following video before discussing roles and responsibilities: *The Power of TeamWork* inspired by the Blue Angels (<http://www.powerofteamworkmovie.com/>)

Ground Rules

The partnership should establish meeting ground rules such as the following:

- Encourage everyone to participate equally.
- Share ideas freely.
- Provide constructive suggestions rather than negative criticisms.
- Stay on track and on time.
- Be concise.

When ground rules are not understood and followed, mistakes happen. The table below shows mistakes that are common to partnerships in general and to AECP partnerships in particular.

Lessons Learned	
Common Mistakes in Partnerships	Common Mistakes from ADULT EDUCATION in Partnerships
Not having a convener or organizer	Not identifying the talent pool that you bring to the table
Not convening employers first—Industry must drive the process	Not being simple and straightforward—Employers want to know, in concrete terms, how AECP can benefit their businesses, their employees, and the economy.
Not stating the ROI—Stakeholders must understand how results from partnership programs can benefit businesses, individuals, and the economy.	Overuse of the term “literacy”—Employers and other stakeholders do not understand the potential of adult education.
Making the partnership itself the goal—There must be specific goals, objectives, and timelines.	Selling what you are already doing—AECP should not attempt to sell pre-existing programs, but should be sensitive to employers’ needs.
Not targeting an industry sector(s)	Not bringing the data—Partnership messages must be compelling and grounded in data. If most AE students don’t transition to postsecondary education, that data needs to be brought to the table for discussion. Businesses will respond to clear data even when it shows things are not working.
Not doing a gap analysis (crosswalk programs with industry needs)	
Not using data—Messages must be compelling and grounded in data. Businesses will respond to clear data.	
Not letting ALL speak—Encourage champions because peer-to-peer (especially with employers) communication is very important.	

Early in the partnership formation, ground rules should be established to try to avoid these common mistakes. Use the form below to brainstorm ground rules.

Ground Rules Resource 3.6

Where to Start

If there are no existing partnerships or the ones that exist are not applicable, you may be feeling overwhelmed on where to start. Possible beginning points are the community college president, the regional workforce investment board, and/or the local or regional economic development office. Let them know that adult education wants to make systemic changes based on what industry needs and that industry should lead the process. Any of these entities can reach out to business and industry to help identify the sector that has the most pressing needs.

This section gave you an overview of the partners to include and some tools to help you in identifying those partners and their roles and responsibilities. In section VI, “Effective Advisory Committees,” we will take a closer look at how business advisory committees are structured and maintained.

Internet Resources

- Social Service Agencies: The *Literacy Resource Center's Social Services Directory* is available online (<http://www.floridaliteracy.org/listFSSD.asp>). The site provides information about a variety of consumer and social services offered in Florida (primarily provides information about state and regional agencies and organizations).
- Employers: The Florida Department of Education lists state business partners that have promised to initiate, develop, foster, and execute collaborative education/business partnerships that will substantively address Florida's current and future workforce needs. http://www.fldoe.org/workforce/industry_partners.asp

IV. Model Frameworks

Career Ladders and Laddering Curriculum

The AECP concept is founded on an approach to curriculum and career preparation in which the student (who may also be an employee) progresses through a series of steps, like rungs on a ladder. Hence the terms *career ladder* and *ladder curriculum*.

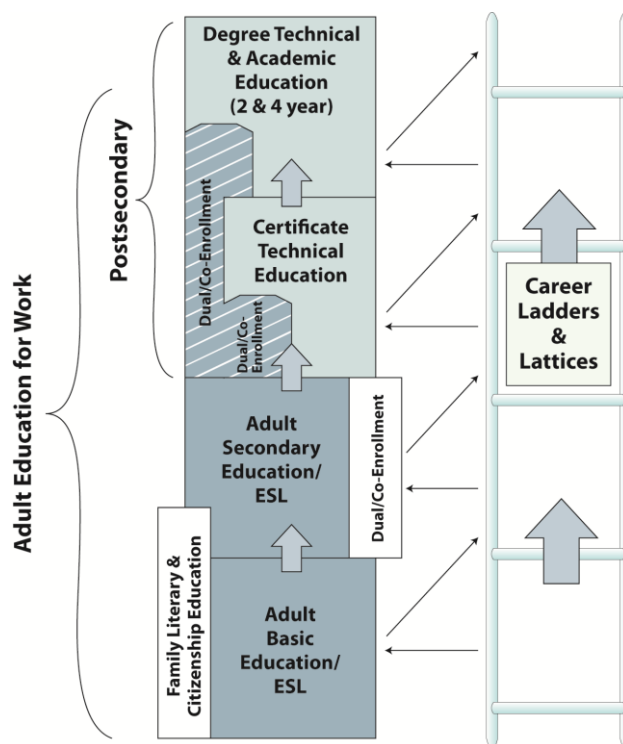
As illustrated on the following page (and in section II, “Essentials of Career Pathways”), each academic ladder should be aligned with the corresponding career ladder in industry.

A career ladder is a series of steps or occupational levels within a given company or occupation. Employees work their way up career ladders by increasing their knowledge and skills and contributing to the success of the companies for which they work. In most cases, each rung requires a higher level of knowledge and skills than the one(s) below it and rewards the employee with higher pay and/or other benefits. Whether, and how fast, a person advances along a career ladder is determined by his or her ability to meet *standards*, specific requirements as to what the person must know and be able to do before moving up. Some standards are developed locally by individual companies. Others are developed by government agencies, professional associations, or advisory boards that oversee entire industries.

In an AECP, cooperating employers—some of whom might normally be competitors—develop a common career ladder that is applied consistently among the AECP students who work for those employers. (Hinckley et al., *Adult Career Pathways: Providing a Second Chance in Public Education*, CORD, 2011)

Florida Eight Areas of Focus	
✓	FL#1-Program Design
	FL#2-Curriculum and Instruction
	FL#3-Professional Development
	FL#4-Student Support
	FL#5-Assessment
	FL#6-Partnerships
	FL#7-Marketing
	FL#8-Accountability

OVAE 10 Component Framework	
▶	OVAE#1-Legislation and Policies
	OVAE#2-Partnerships
	OVAE#3-Professional Development
	OVAE#4-Accountability and Evaluation Systems
	OVAE#5-College and Career Readiness Standards
▶	OVAE#6-Course Sequences
	OVAE#7-Credit Transfer Agreements
	OVAE#8-Guidance Counseling and Academic Advisement
	OVAE#9-Teaching and Learning Strategies
	OVAE#10-Technical Skills Assessments



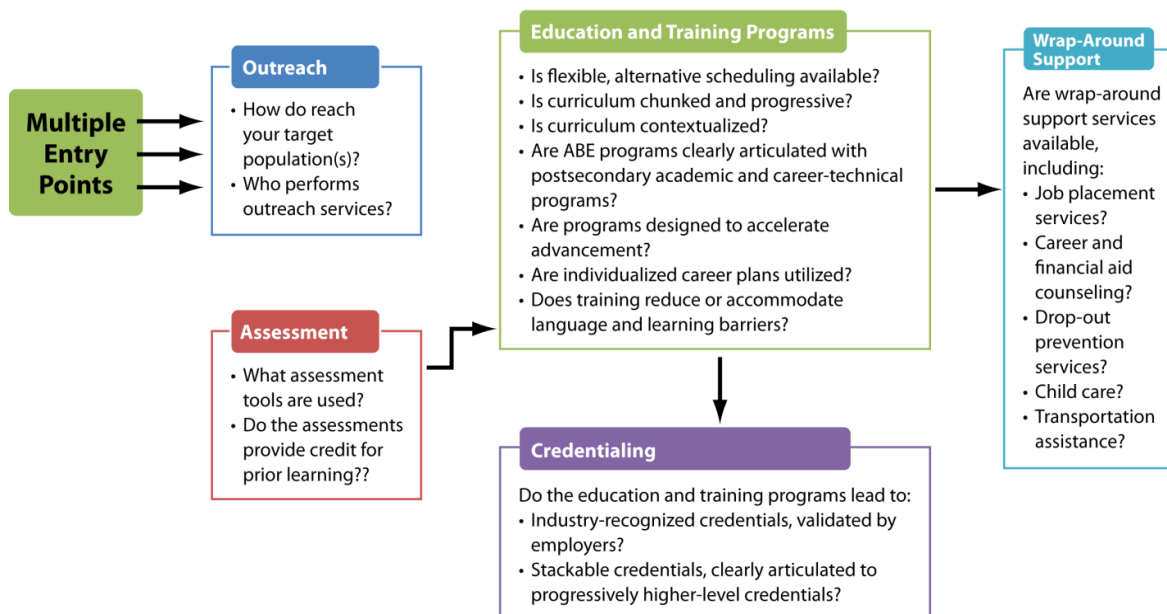
Adapted from *Guide to Adult Education for Work: Transforming Adult Education to Grow a Skilled Workforce*, National Center on Education and the Economy, 2009

Just as a career ladder denotes a series of job-performance levels, each corresponding to certain knowledge and skills within a given occupational area, a ladder curriculum consists of a series of educational levels that students are expected to attain as they move through their programs. When the programs are career-focused, as is the case with AECP, the knowledge and skills to be mastered through the ladder curriculum should be determined jointly by educators and employers. Employers are uniquely qualified to say what employees in their fields should know and be able to do. By definition, every AECP curriculum advisory committee should include representatives of the employers for whom the AECP students will work. (Hinckley et al., *Adult Career Pathways*)

There is no standard template for creating a ladder curriculum. Because of its flexibility, the ladder curriculum model can be customized for different settings. In some cases, it might not take the form of a ladder—in which students progress in a strictly linear fashion—but rather a lattice or web, allowing for lateral movement as well. Not all students are able to work through their educational programs sequentially without stopping. Some make lateral moves, exiting their programs to take care of personal needs, work full time, or acquire additional knowledge and skills appropriate to their current levels before progressing to the next levels.

Program Design

Program design involves considerations such as outreach, assessment, and credentialing. The following flowchart, developed by Social Policy Research Associates on behalf of the U.S. Department of Labor, Employment, and Training Administration (August 2011), provides questions that should be asked during the program design process.



Every AECP should consist of three design components: (1) The main focus is on transitioning or **bridging** adults from basic to college-level skills, especially math, reading, and writing courses. (2) Every program should provide **clear pathways** for participants, regardless of their skill level at the point of entry. (3) Every program should provide a visual diagram or **road map** that shows multiple entry and exit points and depicts vertical and lateral movement within each occupation or career cluster.

The following figure shows these three components.



Curriculum Frameworks

As with Career Pathways in general, the structural design for the curriculum framework of the AECP should include the following three levels:

- **Foundational level**—Contextual academics, career experiences, and basic work skills
- **Technical core level**—Technical skills within a cluster and work-based learning opportunities
- **Technical specialty level**—Advanced technical skills, advanced academics, and worksite experiences

The structure of an AECP will always differ from that of a conventional grade-9–14 Career Pathway. Whereas grade-9–14 Career Pathways give students three or more years of high school to explore careers and acquire soft skills and basic technical skills, the adult learner in an AECP program must usually cover the same territory in far less time. Another key difference has to do with focus. Grade-9–14 Career Pathways are intentionally broad so that students’ options remain open, especially while they are still in high school. Even at the conclusion of grade 14 (the associate degree), the student is prepared not so much for a specific job as for a range of jobs within a cluster. With AECP, on the other hand, the student begins very early to focus on a specific job, even a specific employer.

Credentials

The US Department of Labor's *Credential Resource Guide* defines the term *credential* as “a verification of qualification or competence issued to an individual by a third party with the relevant authority or jurisdiction to issue such credentials (such as an accredited educational institution, an industry-recognized association, or an occupational association or professional society)” (<http://wdr.doleta.gov/directives/attach/TEGL15-10a2.pdf>). The guide provides the following definitions for different types of credentials.

Certificate	<ul style="list-style-type: none">•A formal award certifying the satisfactory completion of a postsecondary education program
Degree	<ul style="list-style-type: none">•An award conferred by a college, university, or other postsecondary education institution as official recognition for the successful completion of a program of study
Certification/ Personnel Certification	<ul style="list-style-type: none">•Indicates that the individual has acquired the necessary knowledge, skills, and sometimes personal attributes (based on a formal study) to perform a specific occupation or skill. Personnel certifications are granted by third party, non-governmental agencies and are intended to set professional standards for qualifications.
Apprenticeship Certificate	<ul style="list-style-type: none">•An award certifying the completion of an apprenticeship program. Issued by the U.S. Dept of Labor or a State Apprenticeship Agency. The system offers two types of credentials: 1) certificate of completion of an apprenticeship program, and 2) interim credentials.
License/ Occupational License	<ul style="list-style-type: none">•Granted by Federal, state, or local gov agencies; mandatory in relevant jurisdiction; intended to set professional standards and ensure safety and quality of work; required in addition to other credentials; defined by laws and regulations; time-limited. Violation of the terms of the license can result in legal action.

Characteristics of Credentials

Industry-Recognized: Industry-recognized credentials are either developed or endorsed by a nationally recognized industry association or organization and are sought or accepted by companies within the industry sector for purposes of hiring or recruitment.

Stackable: A credential that is part of a sequence of credentials that can be accumulated over time to build up an individual's qualifications is considered stackable. Typically, stackable credentials help individuals move up a career ladder or along a career pathway to different and potentially higher-paying jobs.

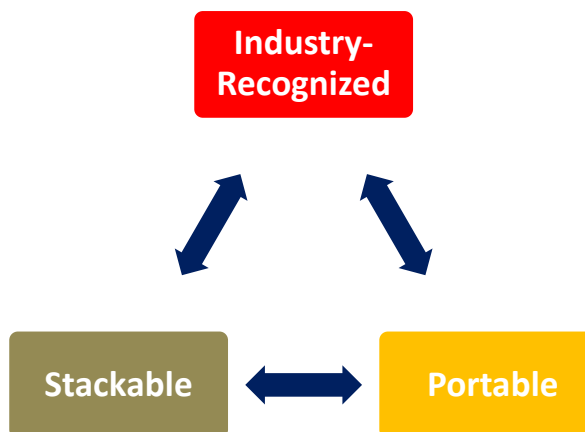
Portable: Credentials that are recognized and accepted as verifying the qualifications of an individual in other settings—either in other geographic areas, at other educational institutions, or by other industries or employing companies are considered portable.

You can find Florida's Comprehensive Industry Certification List at

<http://www.fldoe.org/workforce/fcpea/pdf/1112icfl.pdf>

and the FLDOE funding list at

<http://wdr.doleta.gov/directives/attach/TEGL15-10a2.pdf>.



Chunking

You will sometimes hear the phrase “chunking the curriculum.” Chunking involves breaking up a degree program into “chunks” of classes. Completion of each chunk earns in a competency-based certificate recognized by employers.

Use the following form (**Resource 4.1**) to weight the relevant benefits of and barriers to chunking.

“Chunking” Discussion Form Resource 4.1	
Benefits of Chunking	Barriers to Chunking

Basics of Curriculum Development

There are basic rules in developing curriculum (and corresponding instruction) for AECp programs.

Curriculum and instruction should:

Cover full range of **basic and work readiness skills**.

Use a range of resources and **instructional techniques**.

Align and articulate with **academic and career advancement**.

Provide basic skills **contextualized for a specific occupation** or cluster of occupations within an industry or field.

Include **noncredit and college credit** programs tied to high-growth industries, fields, or occupations that provide family-sustaining wages.

To begin identifying possible opportunities for improvement, use the following survey (**Resource 4.2**) to inventory current curriculum practices.

Curriculum Practices Inventory

Resource 4.2

<i>The current curriculum...</i>	Disagree ←-----→ Agree									
	1	2	3	4	5	6	7	8	9	10
Covers a full range of basic and work readiness skills.										
Makes work a central context for the curriculum.										
Uses a range of resources and instructional techniques.										
Aligns and articulates with academic and career advancement.										
Provides basic skills contextualized for a specific occupation or cluster of occupations within an industry or field.										
Includes noncredit and college credit programs tied to high-growth industries, fields, or occupations that provide family-sustaining wages.										
Transitions or “bridges” adults from basic to college-level skills, especially math, reading, and writing courses.										
Provides clear pathways for participants, regardless of their skill level at the point of entry, to advance ASAP to PS programs.										
Provides visual diagrams or “road maps” that show multiple entry and exit points and depict vertical and lateral movement within an occupation or career cluster.										
Has portable credentials that are recognized and accepted as verifying the qualifications of an individual in other settings.										
Has stackable credentials that are part of a sequence of credentials that can be accumulated over time to build up an individual’s qualifications.										
Has industry-recognized credentials.										
Has been built with a foundation level (<i>contextual academics, career experiences, and basic work skills</i>).										
Has a technical core level (<i>technical skills within a cluster and work-based learning opportunities</i>).										
Has a technical specialty level (<i>advanced technical skills, advanced academics, and worksite experiences</i>).										

Your partnership will begin by identifying industry sector(s) and corresponding occupations for implementation and curriculum development. The credentials associated with these occupations are at the “heart” of that curriculum because they determine the “exit points” where adult learners will enter the workforce. Use the following credential checklist (**Resource 4.3**) to inventory the types of credentials associated with the occupations you are considering for implementation.

Credential Checklist

Resource 4.3

List Occupations for which the partnership is considering an AECP implementation:	Check all that apply for any credentials associated with occupation:							
	Industry Recognized	Stackable	Portable	Certificate	AAS Degree	Apprenticeship	License	Other

Many times in a partnership, there are many different training providers that provide the associated credentials within an occupation. Use the following crosswalk resource to identify the types and titles of the credentials and which training providers issue them.

Credential and Training Provider Crosswalk

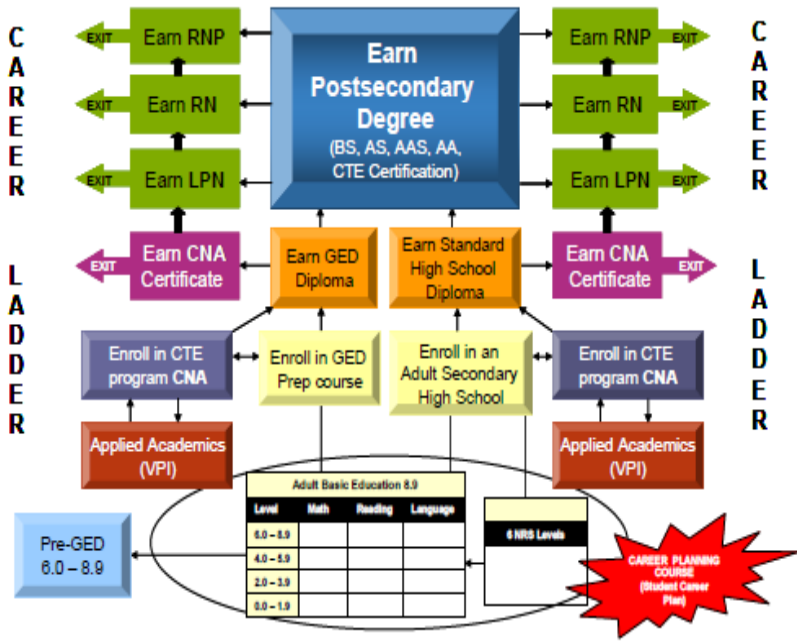
Resource 4.4

Occupation:	
Type of Credential & Title of Credential <i>List the type of credential (e.g. Certificate, Degree, Certification, License, or Apprenticeship)</i>	Training Provider <i>List all training providers that provide this certificate.</i>
Occupation:	
Type of Credential & Title of Credential <i>List the type of credential (e.g. Certificate, Degree, Certification, License, or Apprenticeship)</i>	Training Provider <i>List all training providers that provide this certificate.</i>
Occupation:	
Type of Credential & Title of Credential <i>List the type of credential (e.g. Certificate, Degree, Certification, License, or Apprenticeship)</i>	Training Provider <i>List all training providers that provide this certificate.</i>

AE and ESOL Learners Entering the Course Sequence

Many times the course sequence for a given occupation has already been developed. In an AEC system, the partnerships are responsible for ensuring that targeted adult populations can access and enter those course sequences. Below are illustrations from the FLDOE of how an adult student might flow through the system.

Example of an Adult Education Career Pathway



Credit Transfer Agreements

Articulation in Florida is governed by a set of dynamic and constantly evolving, student-focused policies and practices that facilitate transition between and among education sectors. Section 1007.01, Florida Statutes, describes the intent of the Legislature to:

facilitate articulation and seamless integration of the K-20 education system by building, and sustaining, and strengthening relationships among K-20 public organizations, between public and private organizations, and between the education system as a whole and Florida's communities. The purpose of building, sustaining, and strengthening these relationships is to provide for the efficient and effective progression and transfer of students within the education system and to allow students to proceed toward their educational objectives as rapidly as their circumstances permit.

Area of Focus
Alignment between the exit requirements of one education system and the admissions requirements of another education system into which students typically transfer
Identification of common courses , the level of courses, institutional participation in a statewide course numbering system, and the transferability of credits among such institutions
Identification of courses the meet general education or common degree program prerequisite requirements at public postsecondary educational institutions
Dual enrollment course equivalencies
Articulation agreements

For more information, please reference the Florida Statewide Articulation Manual, October 2011 (<https://www.fldoe.org/articulation/pdf/statewide-postsecondary-articulation-manual.pdf>).

SECONDARY COURSE CODE DIRECTORY

The Course Code Directory (CCD) is a comprehensive information resource consisting of a narrative section that provides general and in-depth information on applicable laws and State Board of Education rules, explanations of requirements and policies pertaining to multiple topics, and details on the K-12 course numbering system. All programs and courses funded through the Florida Education Finance Program (FEFP) and courses or programs for which students may earn credit toward high school graduation are included in this document. The Course Code Directory may be found at <http://www.fldoe.org/articulation/CCD/>.

SECONDARY-TO-POSTSECONDARY TRANSITION

There are two basic acceleration mechanisms in the State of Florida for accelerating transition between secondary and postsecondary: dual enrollment and credit-by-examination. Dual enrollment is defined as “the enrollment of an eligible secondary student or home education student in a postsecondary course creditable toward a career and technical certificate or an associate or baccalaureate degree” (Section 1007.271, Florida Statutes). Credit-by-examination is defined as “the program through which secondary and postsecondary students generate postsecondary credit based on the receipt of a specified minimum score on nationally standardized general or subject-area examinations.” This includes advanced placement (AP) exams and International Baccalaureate (IB) examinations.

COMMON PLACEMENT TESTING

The State Board of Education develops and implements a common placement testing program to assess the basic computation and communication skills of students who intend to enter degree programs at any institution in the State University System or Florida College System.

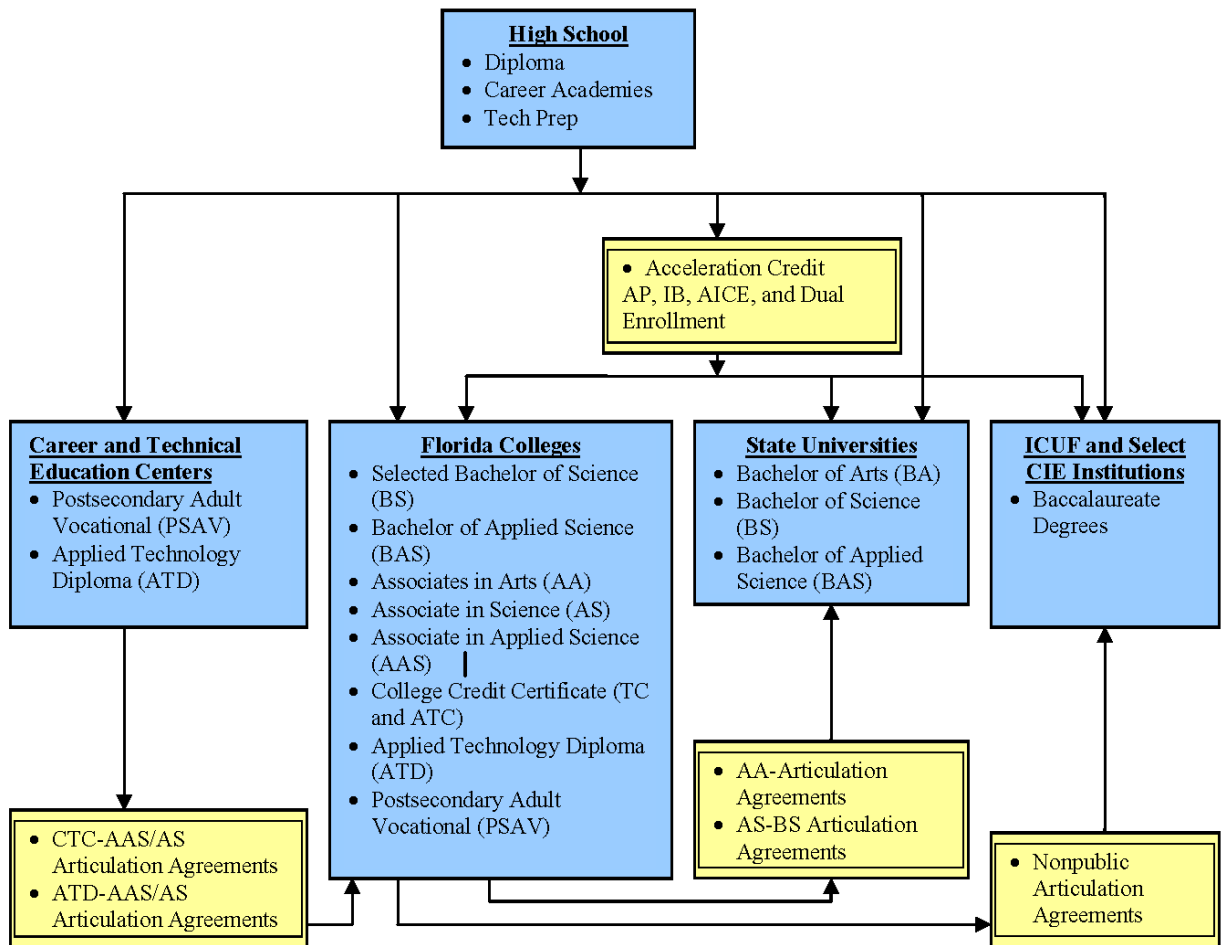
Students whose test results are below established cut-scores will be required to enroll in college-prep coursework. Cut-scores are as follows:

TEST	Standard Score
College Placement Test	
Reading Comprehension	83
Sentence Skills	83
Elementary Algebra	72
SAT-1, The College Board	
Verbal	440
Mathematics	440
Enhanced ACT, American College Testing Program	
Reading	18
English	17
Mathematics	19

Postsecondary Education Readiness Test (P.E.R.T): A new college placement test designed to assess Florida's Postsecondary Readiness Competencies (PRC) (reading, writing, and mathematics) is available. The P.E.R.T is designed to be a true assessment of what students need to know before enrolling in ENC 1101 or MAT 2033. The P.E.R.T is divided into three sub-tests of reading, writing, and mathematics. A diagnostic portion to identify deficiencies tied to developmental education competencies is also being developed.

Postsecondary Adult Vocation Certificate (PSAV) to Associate Degree Articulation: Emphasis is placed on career education and the articulation of programs between all sectors of education to maximize students' ability to progress from high school career education programs to postsecondary adult programs to associate degrees. There are currently over 250 local and regional articulation agreements in place allowing student with school district career education certificates to receive credit in associate degree programs. For a list of statewide PSAV to AAS/AS articulation agreements approved by the State, see http://www.fldoe.org/workforce/dwdframe/artic_frame_psav2aas.asp.

Articulation Flow Chart: The following articulation flow chart displays the standard pathways to degrees.



Source: Florida Statewide Articulation Manual
(<http://www.fldoe.org/articulation/pdf/statewide-postsecondary-articulation-manual.pdf>)

You may wish to use the checklist below to examine each course for credit transfer possibility.

Credit Transfer Checklist Resource 4.5					
Key:					
Alignment between the exit requirements of one education system and the admissions requirements of another education system into which students typically transfer					
Identification of common courses , the level of courses, institutional participation in a statewide course numbering system, and the transferability of credits among such institutions.					
Identification of courses the meet general education or common degree program prerequisite requirements at public postsecondary educational institutions					
Dual enrollment course equivalencies					
Articulation agreements					
Course	Alignment?	Common Course Identification	Meets General Education requirement?	Dual Enrollment Candidate?	Articulated?

Bridge Programs

Most AE learners need a “prep stage” or bridge to transition to postsecondary education or training. Bridge programs ease the transition to postsecondary education by integrating basic skills instruction (or English language instruction) with occupational skills training, and they are suitable for adults who have reading and mathematics skills at or below the tenth-grade level. Well-crafted adult education and ESOL bridge programs can reduce or even eliminate the need for developmental education because they are closely aligned with the requirements of postsecondary education. Bridge programs can be developed for students at all levels, although students at the lowest skill levels may need to take several types of bridge programs (including “pre-bridges”) before they are ready for postsecondary education.

The essential features of a bridge program are:
Modular curriculum
Connects points on a career ladder
Industry certification articulates with academic degrees
Curriculum is contextualized
Learning assessments are project-based
Specific criteria to enter and exit
Articulates to other bridges and to postsecondary education
Academic support is incorporated into lesson plans
Offers career counseling
Offers non-academic support services as part of the regular schedule

Adapted from How to Build Bridge Program That Fits into a Career Pathways: A step-by-step guide based on the Carreras en Salud Program in Chicago

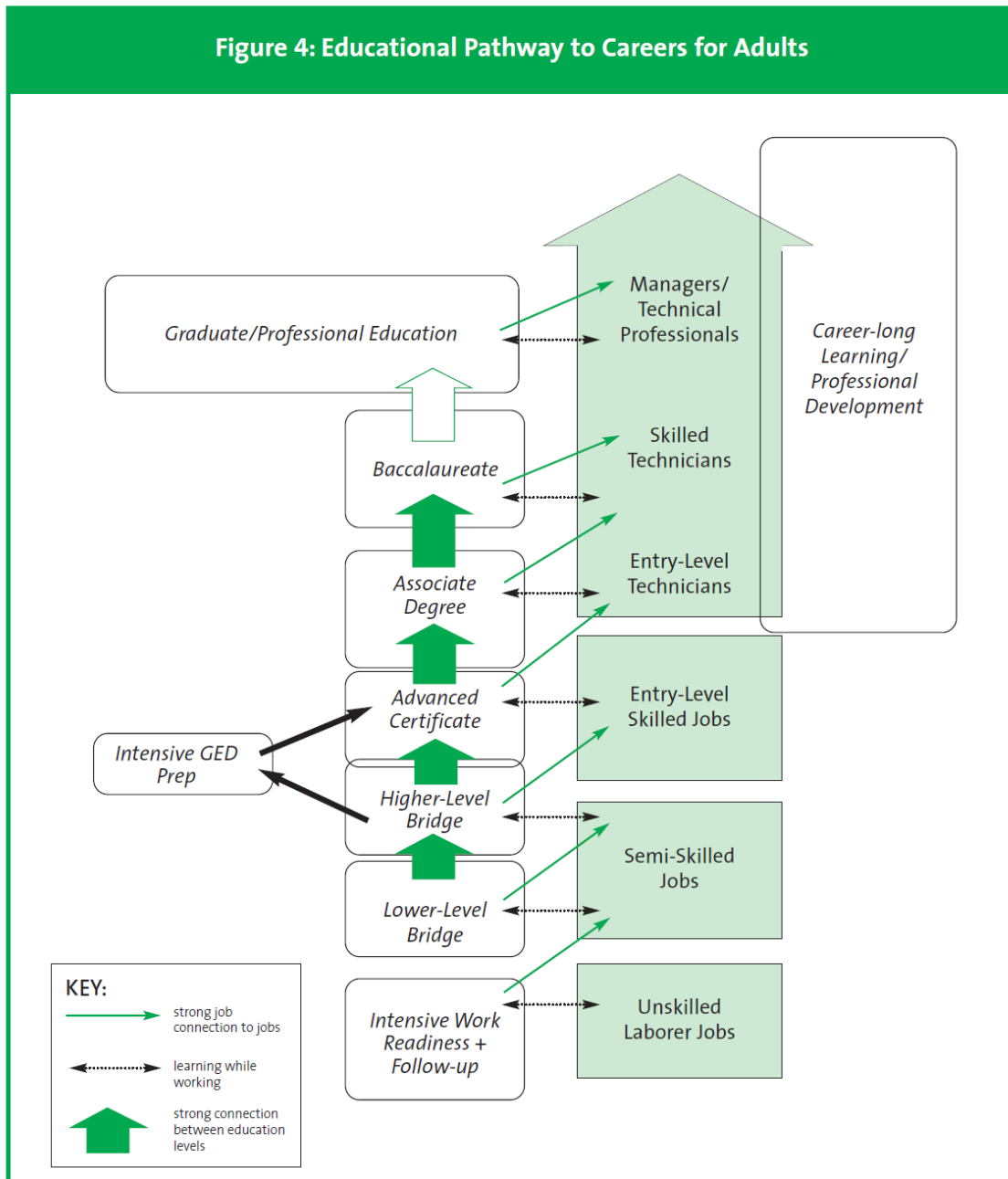
National Snapshot

Here is a national snapshot of the bridge programs represented in the 2010 BridgeConnect survey, a national survey designed to help determine the depth and breadth of bridge programs throughout the country.

- The survey showed that bridge program participants generally have low educational skills when they enter the programs. In fact, 57 percent of the adults served by survey respondents possess educational skills below the tenth-grade level, with 19 percent below the sixth-grade level.
- Bridge programs are structured to meet the needs of adult participants. They offer instruction at times and places convenient to working adults, offer a “learning-by-doing” format and allow students to work at their own pace.
- Most programs are cohort-based, allowing students to progress through their classes together. The average class size is between ten and 19 students; the average program length is 20 weeks.
- By definition, bridge programs have an industry focus. Seventy-five percent of the programs surveyed target allied health. Other occupations or industries served include administrative/office technologies, the construction trades, energy, information technology and manufacturing. (Workforce Strategy Center, *Building a Higher Skilled Workforce: Results and Implications from the BridgeConnect National Survey*, Nov 2010, http://www.workforcestrategy.org/images/pdfs/publications/bridge_connect_report_2010-11.pdf)

Bridge training can be built on existing educational programs that serve low-skilled adults, but these programs should be reconfigured to ensure a connection both to job advancement and to further education. Most bridge programs cannot be purchased “off the shelf” like training curricula or instructional software. Developing a bridge program is a process of adapting existing programs and services or adding new ones to enable the target population to advance to higher levels of education and employment. The particular form and content of a bridge program will depend on both the needs of the individuals to be served and the requirements of the education programs and jobs at the next level.

Figure 4: Educational Pathway to Careers for Adults



Source: *Bridges to Careers for Low-Skilled Adults: A Program Development Guide*, Women Employed with Chicago Jobs Council and UIC Great Cities Institute, 2005

Designing a Bridge Program Involves These Steps
Identify target population and assess their learning and career goals and barriers to success.
Identify jobs and further education and training programs that would provide opportunities for advancement for the target population and map out the requirements of entry and success in those jobs and educational programs.
Conduct a gap analysis to determine how well existing programs or services prepare members of the target population to enter and succeed in the targeted job and education programs and highlight where individuals are “falling through the cracks.”
Redesign existing program components and create new ones to address gaps and create “bridges” to better jobs and higher-level education and training.

Adapted from *Bridges to Careers for Low-Skilled Adults*

Use the following table (**Resource 4.6**) to identify strategies and timelines for each of the bridge program design steps:

Bridge Program Design Steps: Strategies and Timelines Resource 4.6			
Identify target population to be served and assess their learning and career goals and barriers to success.			
Strategies or Activities	Timeline	Person/Group Assigned	Notes
Identify jobs and further education and training programs that would provide opportunities for advancement for the target population and map out the requirements of entry and success in those jobs and educational programs.			
Strategies or Activities	Timeline	Person/Group Assigned	Notes
Conduct a gap analysis to determine how well existing programs or services prepare members of the target population to enter and succeed in the targeted job and education programs and highlight where individuals are “falling through the cracks.”			
Strategies or Activities	Timeline	Person/Group Assigned	Notes

Bridge Program Design Steps: Strategies and Timelines

Resource 4.6

Redesign existing program components and create new ones to address gaps and create “bridges” to better jobs and higher-level education and training.

Strategies or Activities	Timeline	Person/Group Assigned	Notes

Create a program flowchart to carefully review the elements that are in place and determine remaining gaps.

Strategies or Activities	Timeline	Person/Group Assigned	Notes

Is the bridge curriculum in modules?	Yes	No	Notes
Does the bridge connect points on a career ladder?	Yes	No	Which?

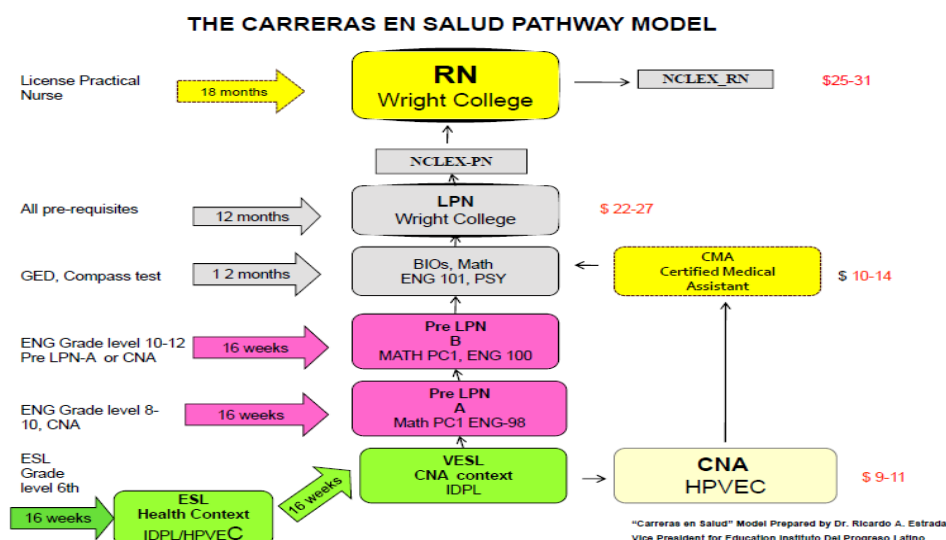
Industry certification articulates with academic degrees
Curriculum is contextualized
Learning assessments are project-based
Specific criteria to enter and exit
Articulates to other bridges and to post-secondary education
Academic support is incorporated into lesson plans
Offers career counseling
Offers non-academic support services as part of the regular schedule

Flowchart Examples (with Bridges)

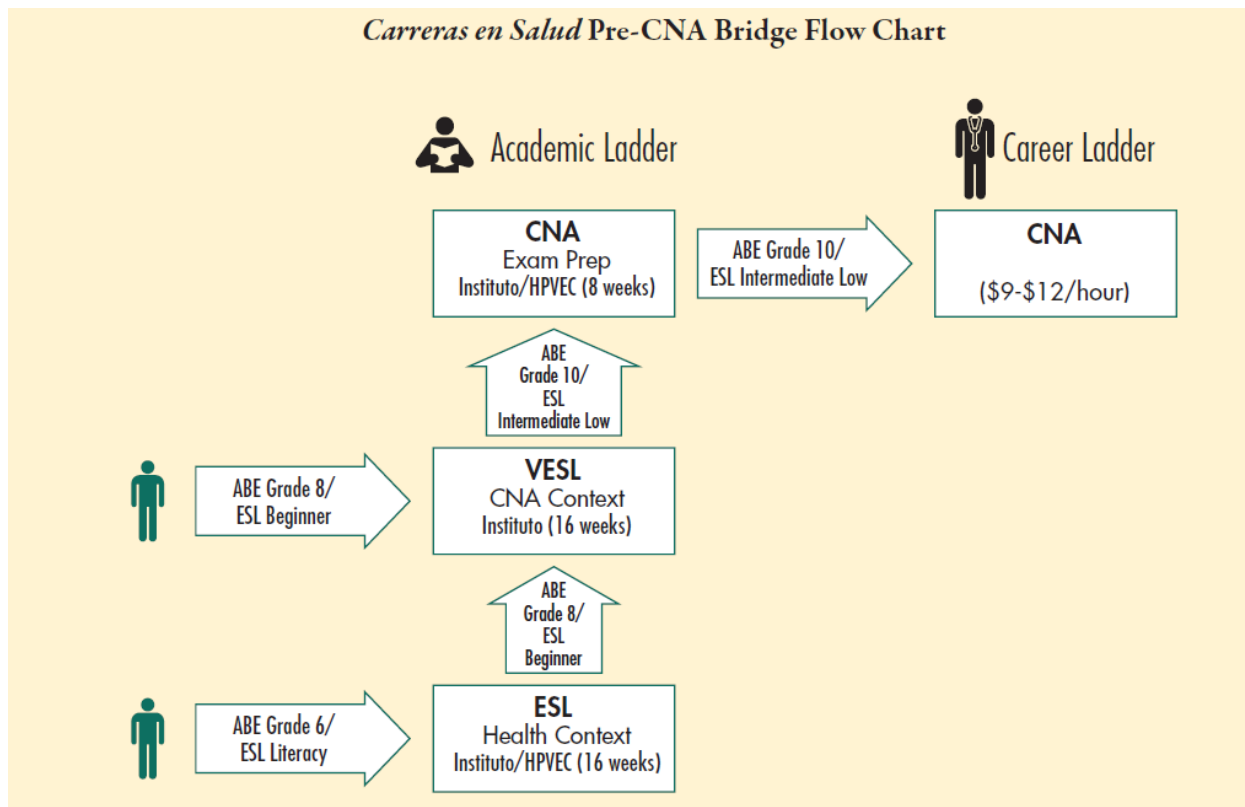
Several flowchart examples with bridge programs for the adult learner are provided so that you can learn from promising practices from across the nation.

Examples 1A, 1B and 1C

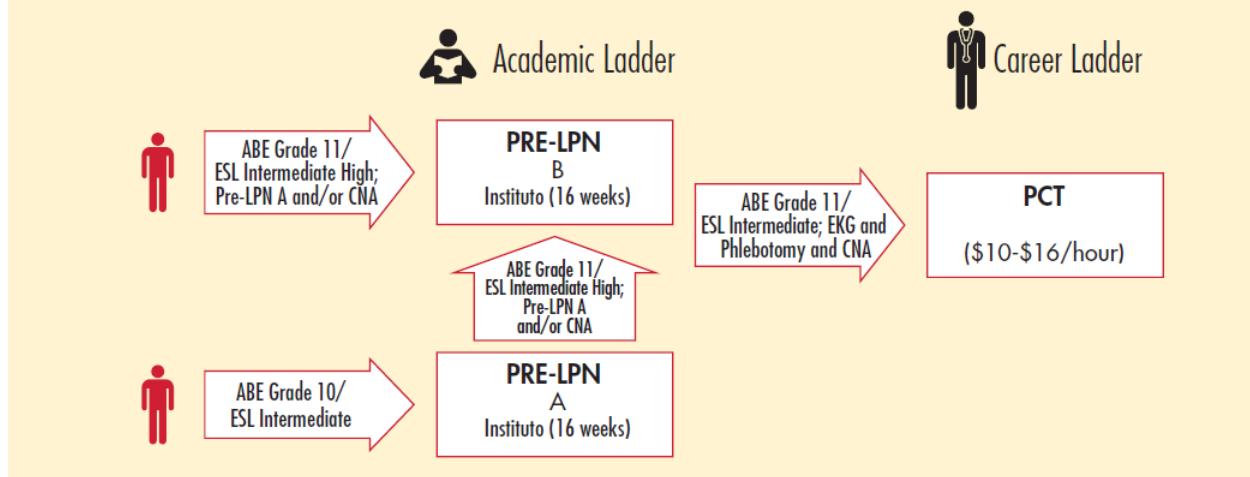
Taken from *How to Build Bridge Program that Fit into a Career Pathways:*
A step-by-step guide based on the Carreras en Salud Program in Chicago.



Carreras en Salud Pre-CNA Bridge Flow Chart

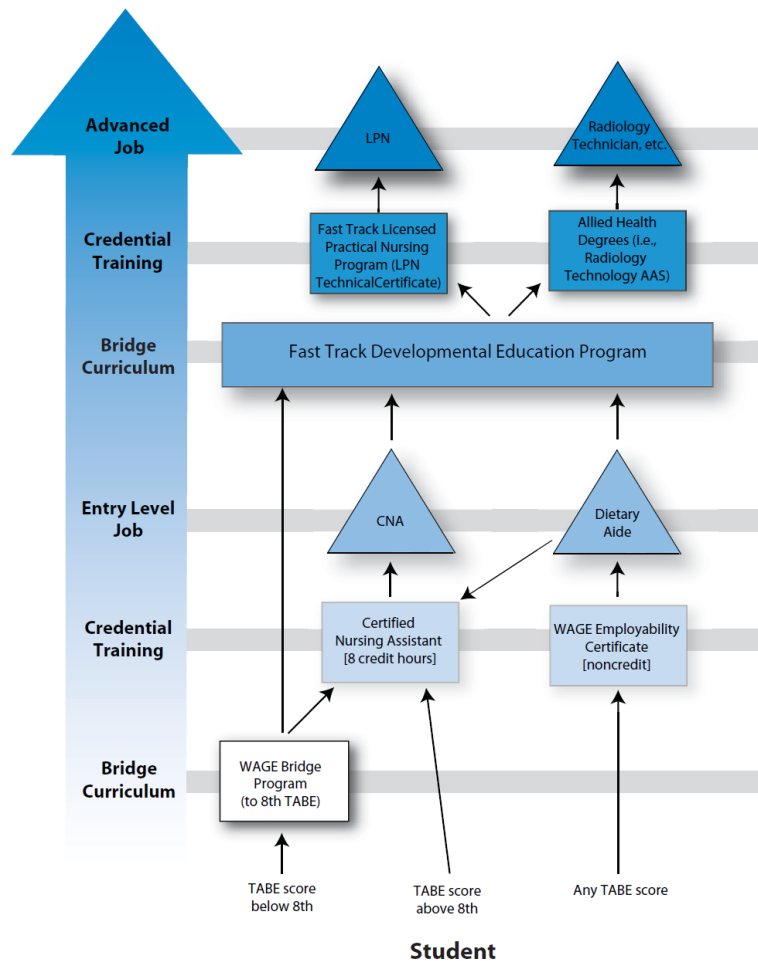


Carreras en Salud Pre-LPN Bridge Flow Chart



Example 2

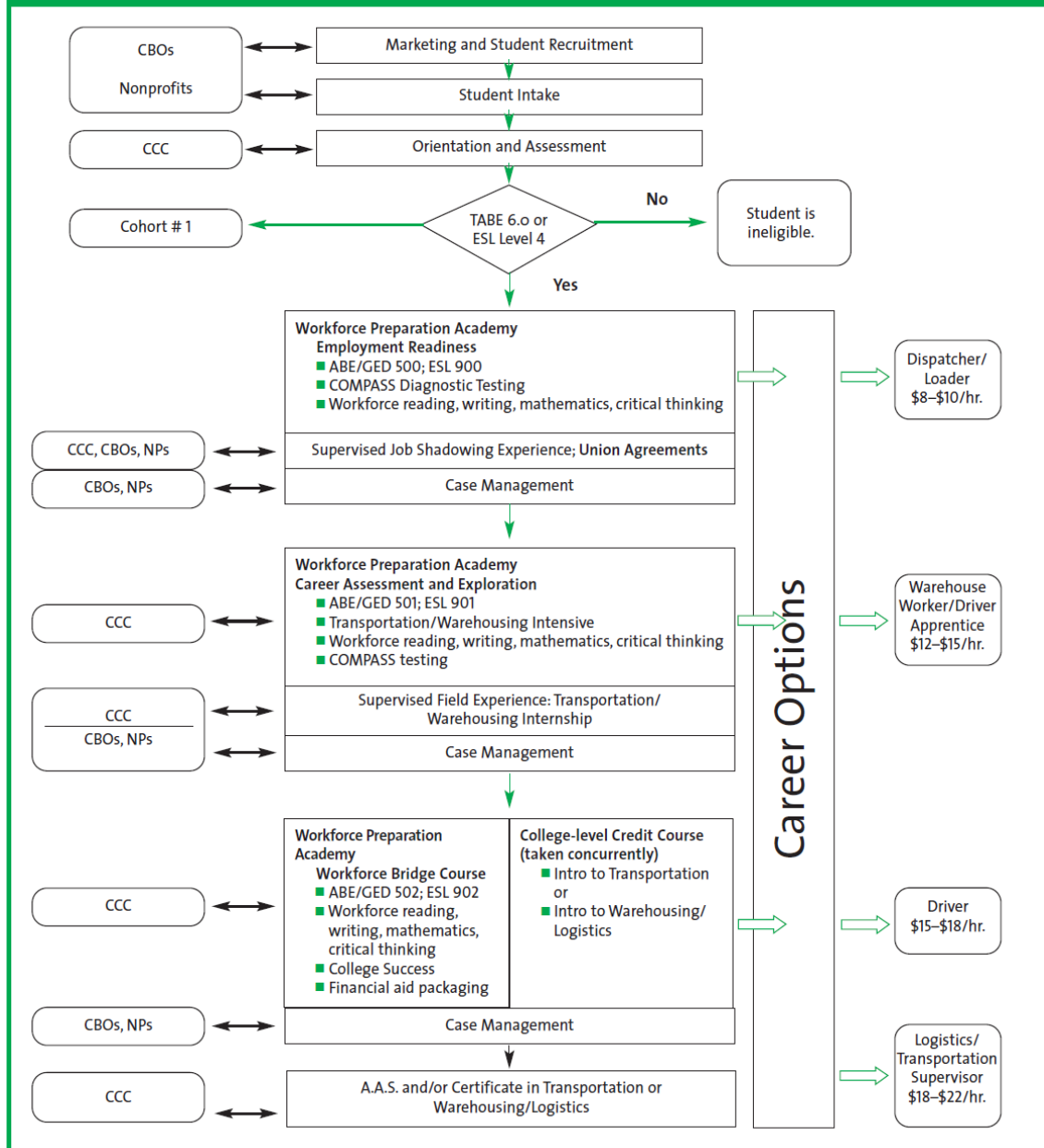
Taken from the Arkansas Career Pathways Initiative



Example 3

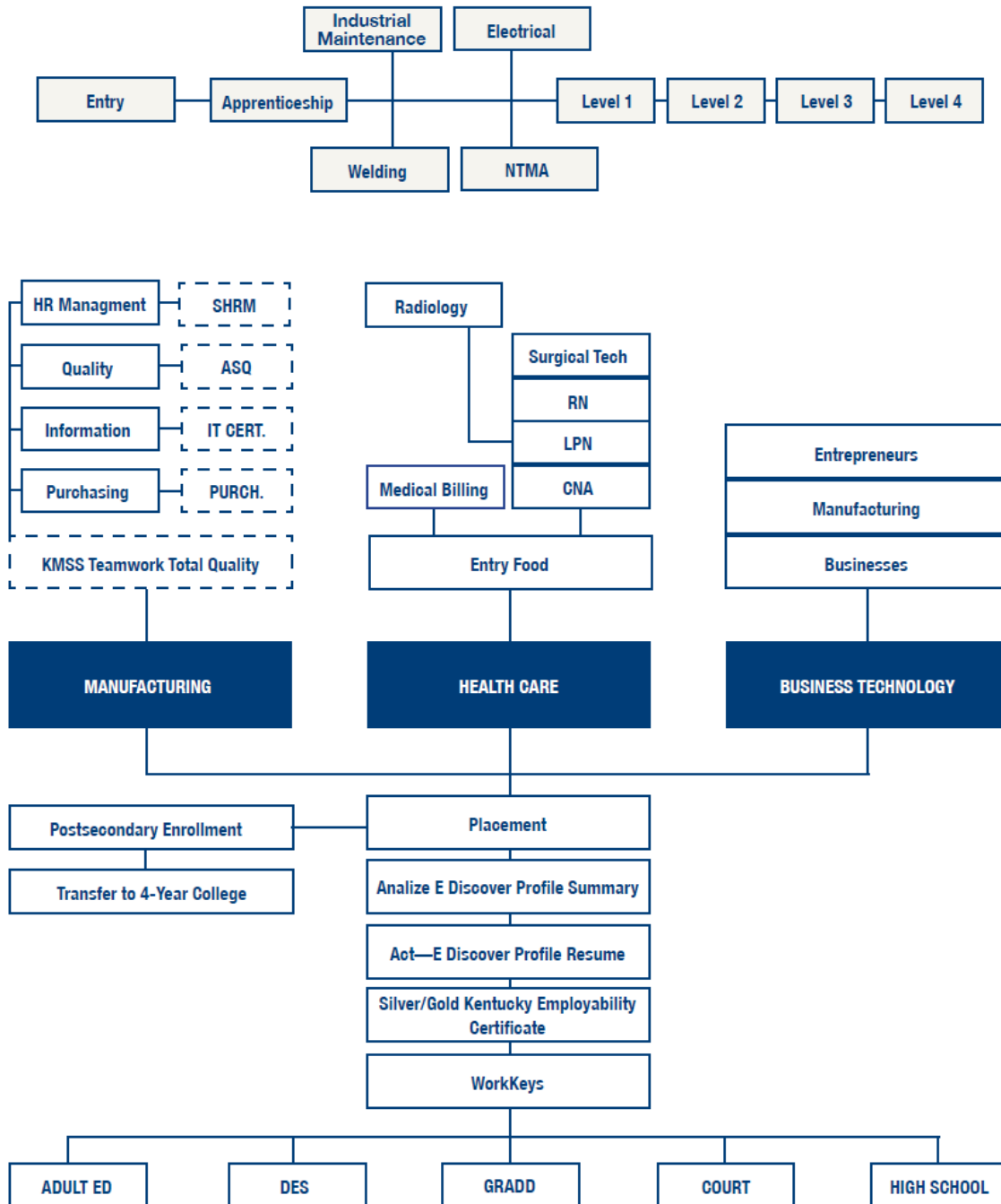
Taken from *Bridges to Careers for Low-skills Adults: A Program Development Guide*,
Women Employed with Chicago Jobs Council and UIC Great Cities Institute

**Figure 6: City Colleges of Chicago Workforce Bridge Program
Transportation, Warehousing, and Logistics**



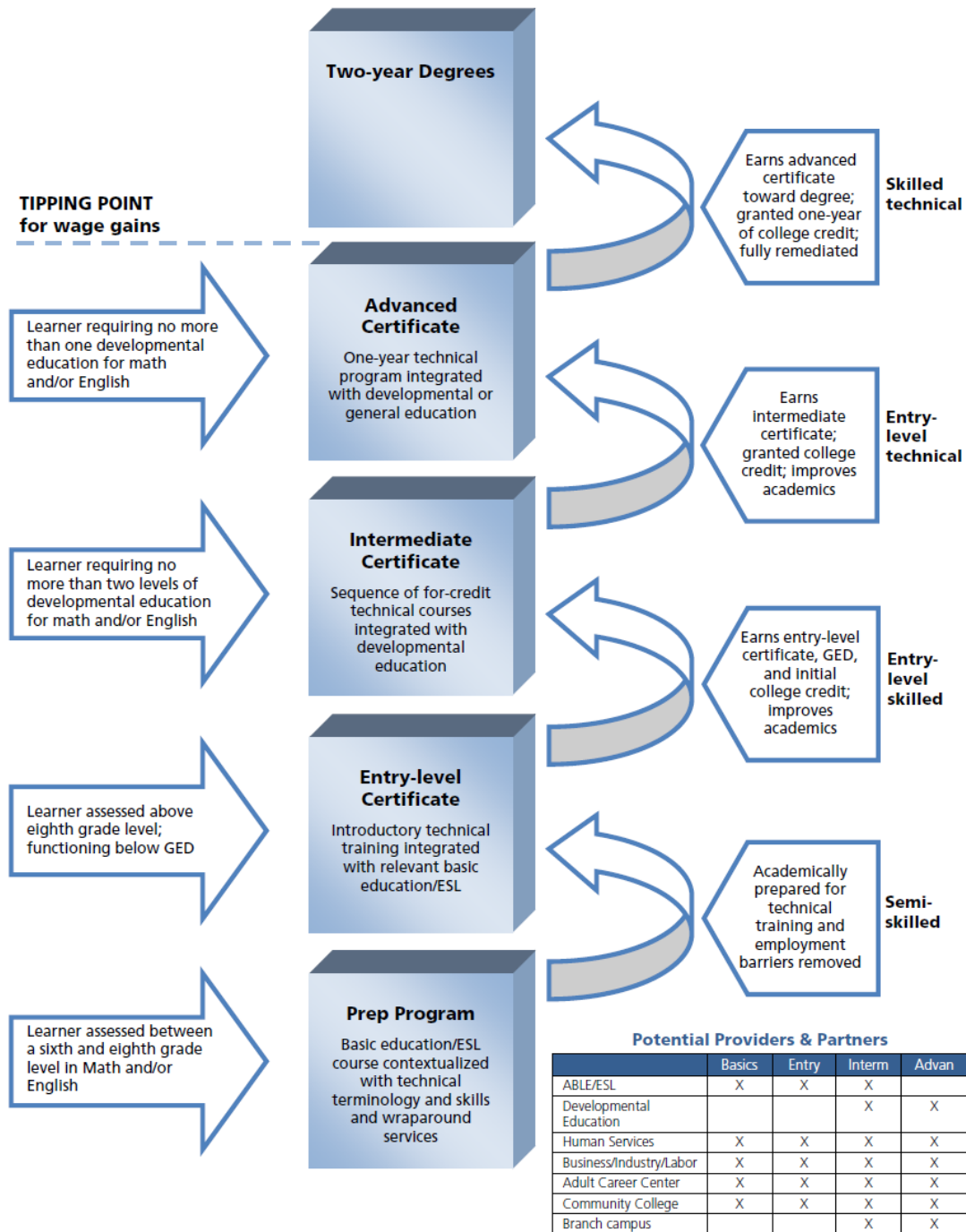
Example 4: Owensboro Community and Technical College

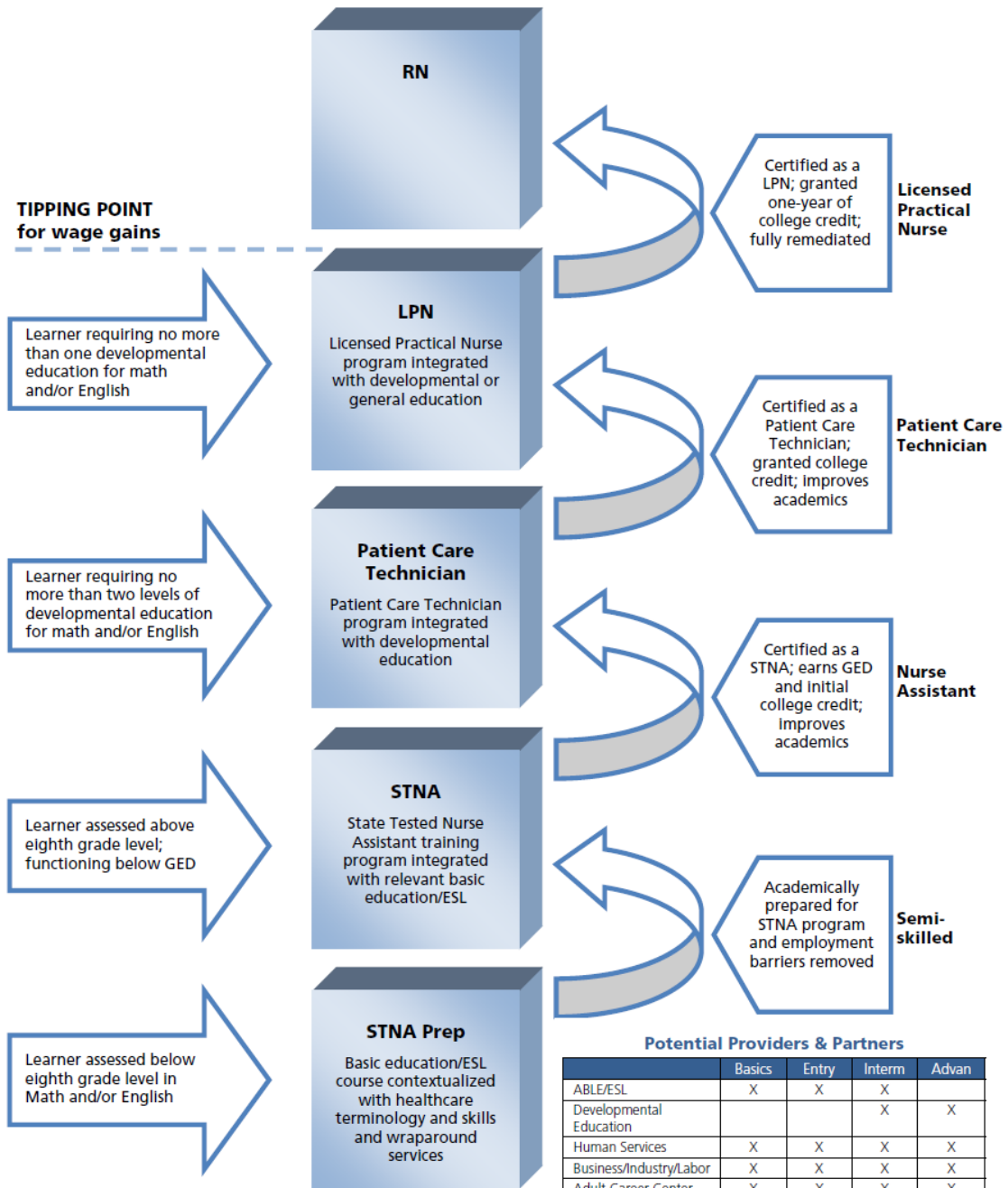
Taken from *Achieving Ambitious Goals: Case Studies of Scaling-Up Programs for Advancing Low-Skilled Adults*, May 2011



Examples 5A and 5B: Ohio Stackable Certificates

Taken from *Ohio Stackable Certificates: Models for Success*, February 2008

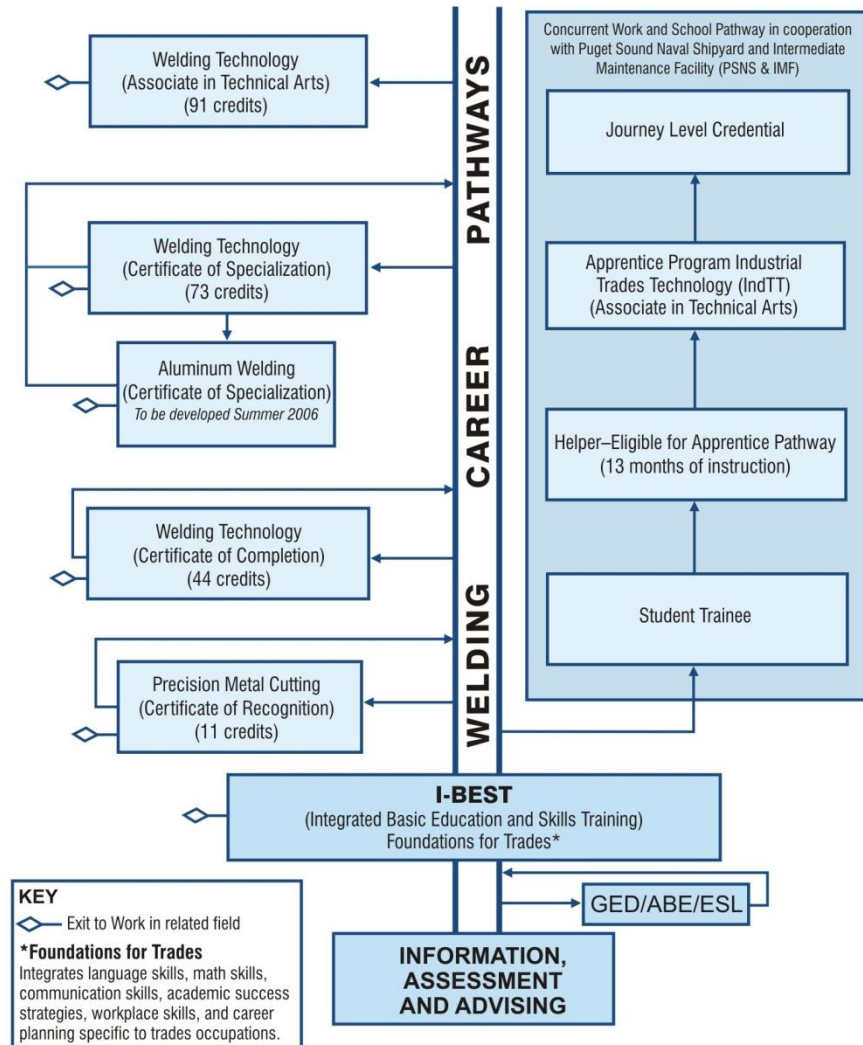




Adapted from the Pre-STNA and Plus program, Cuyahoga Community College and the Healthcare Career Pathways program, Pickaway-Ross Career & Technology Center

Example 6: Olympic Washington

Taken from *Ohio Stackable Certificates: Models for Success*, February 2008



College-level welding program is enhanced with basic skills instruction through:

Foundations for Trades

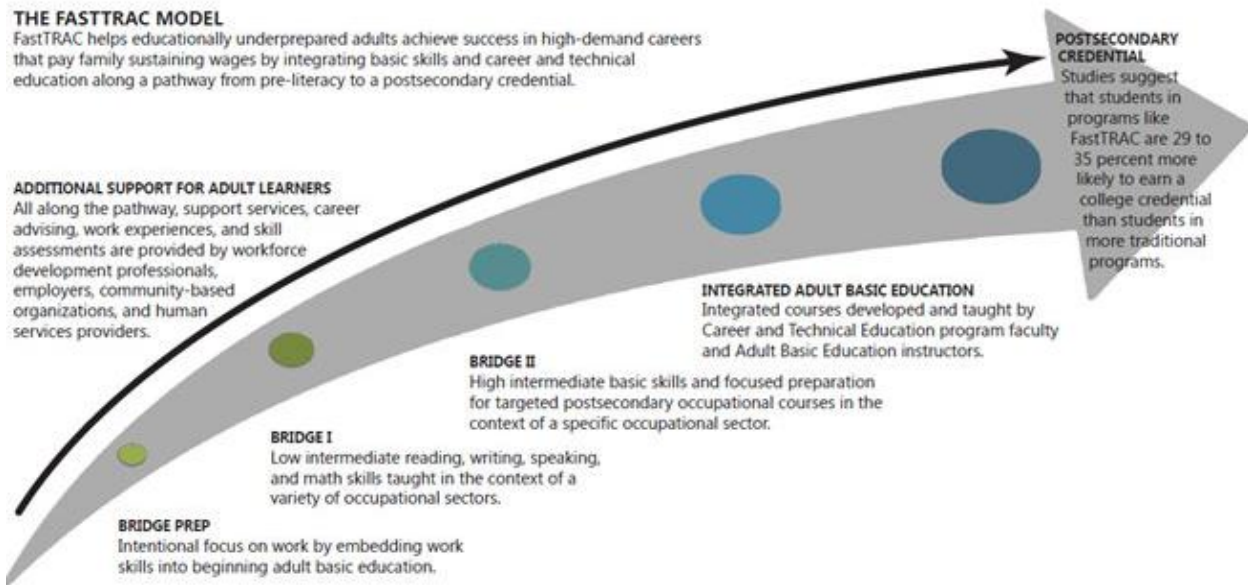
- 10 credits, counts only as elective
- 10 hours a week, 10 weeks
- Co-taught 50% of time (Adult basic education instructor teaches 100% of class; professional-technical instructor attends 50% of classes)
- Work and college readiness, including study habits, job expectations, etc.
- Removal of barriers to job and school, teaching students crisis management, helping find housing
- Introduction to basic welding concepts, including reading blueprints
- Lab observation of welding tools

Precision Metal Cutting Certificate of Recognition

- 11 credits, counts toward degree
- Two courses: Blueprint Reading (classroom) and Welding (laboratory)
- Technical Curriculum taught by professional-technical instructor
- Adult basic instructor teaches college success strategies, including note-taking and study habits; reviews welding vocabulary; emphasizes on-the-job safety by reviewing how to read dials and gauges properly; blueprint reading; and available for academic tutoring before and/or after class

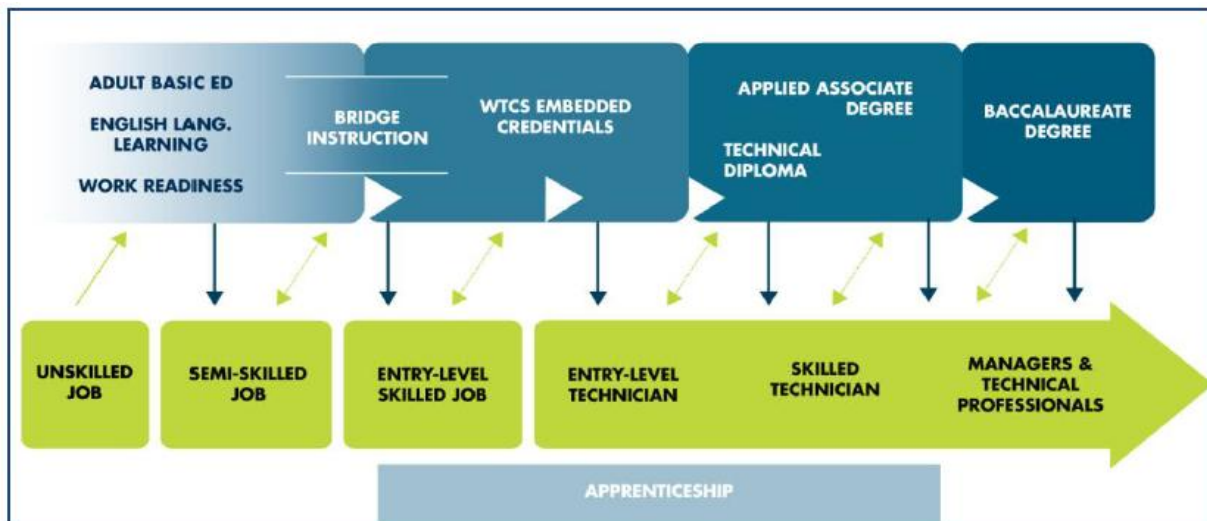
Example 7: Minnesota FastTrac

Taken from *Strengthening the Skills of Our Current Workforce: Recommendations for Increasing Credential Attainment Among Adults in Minnesota, 2011*



Example 8: Wisconsin Rise Model

Taken from *Beyond Basic Skills: State Strategies to Connect Low-Skills Students to an Employer-Valued Postsecondary Education*



Resources

- *Florida's Bridges to Practice* project served as a call to action to adult literacy programs to initiate reform so that adults with learning disabilities will experience greater success in meeting their educational and life goals. This project is no longer funded, but numerous resources available on this website: <http://www.floridatechnet.org/bridges/>
- Certifications:
 - Florida Department of Education Industry Certification Funding List
<http://www.fldoe.org/workforce/fcpea/pdf/1112icfl.pdf>
 - Florida Workforce Comprehensive Industry Certifications
<http://www.fldoe.org/workforce/fcpea/pdf/1112icfl.pdf>
- *Adult Career Pathways News*—An online collection of instructional resources from the *Designing Instruction for Career Pathways* project. The collection consists of a broad variety of teaching resources—ranging from course outlines to lesson plans and activities—appropriate for AE, ASE, and ELL programs. www.acp-sc.org
- Florida Adult and Technical Distance Education Consortium. <http://www.fatdec.com>
- Illinois Online Bridge Directory—The Directory presents information about current bridge instruction offered by Illinois' community colleges and adult education providers. Bridge programs listed in this online Directory are based on Illinois' Bridge Definition.
http://occrl.illinois.edu/projects/shifting_gears/bridge_directory
- *Florida's Comprehensive Industry Certification List*.
<http://www.fldoe.org/workforce/fcpea/pdf/1112icfl.pdf>
- *FLDOE Certification Funding List*. <http://wdr.doleta.gov/directives/attach/TEGL15-10a2.pdf>
- *Credential Resource Guide* : The US Department of Labor has developed the “*Credential Resource Guide*” (<http://wdr.doleta.gov/directives/attach/TEGL15-10a2.pdf>)
- <http://www.floridareadytowork.com/>

You are now at the end of section IV, which provided examples of model frameworks. Return to the table of contents (or main menu) for other choices.

V. Funding for Adult Education Career Pathways

Introduction

Globalization continues to bring systemic changes to the traditional economic and social core of Florida and America. Technology and the offshoring of manufacturing to other countries are requiring a redefinition of jobs and the skills needed in the American workplace. The demand for educational services is higher than ever. The need for an *educated* workforce, rather than merely a *trained* workforce, has never been more important to the future of Florida. And never has there been a greater need for a sustainable revenue model for Career Pathways.

These and other changes have impacted and will continue to impact the revenue levels, types, and sources for educational programs including Career Pathways. Obtaining sustainable revenue will require a more business-oriented approach than in the past. Each decision to be made will be subject to close scrutiny by a variety of entities. Leaders will be required to develop strategic and tactical business plans that include sustainable, multiyear revenue plans.

Florida Eight Areas of Focus	
✓	FL#1-Program Design
	FL#2-Curriculum and Instruction
	FL#3-Professional Development
	FL#4-Student Support
	FL#5-Assessment
	FL#6-Partnerships
	FL#7-Marketing
	FL#8-Accountability

OVAE 10 Component Framework	
▶	OVAE#1-Legislation and Policies
	OVAE#2-Partnerships
	OVAE#3-Professional Development
	OVAE#4-Accountability and Evaluation Systems
	OVAE#5-College and Career Readiness Standards
	OVAE#6-Course Sequences
	OVAE#7-Credit Transfer Agreements
	OVAE#8-Guidance Counseling and Academic Advisement
	OVAE#9-Teaching and Learning Strategies
	OVAE#10-Technical Skills Assessments

Why Create a Funding Plan?

A sustainable revenue plan requires not only the start-up and initial year of operation, but a realistic view of funding over a period of years. Public-private projects require revenues from three sources—*public*, *private*, and *profit*—the three “P”s. The initial funding comes from *public* sources, which provide for the basic start-up level required to operate the program. The next “P”—*private* funding—includes the funds that should be used to ensure excellence and uniqueness. This level of funding enables the project to address future needs and changes while meeting current expenses. The final “P” is for *profit*. For any organization, program, or project

to sustain itself over time, there must be more revenue than expense. All government and non-profit organizations must operate in a “profit” mode even though their revenue is not generated by for-profit activities and their goal is not financial gain.

Framework for Career Pathway Funding Plan

While the Career Pathways funding plan will have an overall workforce, economic, and quality-of-life-to message, it should also have a set of clear measures of return on investment (ROI) for the stakeholders.

Return on Investment for the EDUCATION SYSTEM

- Increase number of students earning credentials and degrees
- Enhance student engagement
- Reduce drop-outs
- Reduce remedial course enrollment
- Increase number of students going on to college

Return on Investment for POLICYMAKERS

- Increase impact of funded programs
- Improve outcomes based on growth of society
- Drive economic and quality-of-life success

Return on Investment for EMPLOYERS

- Access to qualified workers
- Increase productivity
- Reduce recruitment costs and turnover
- Shorten new employee orientation times and reduce expenditures
- Ability to promote from pool of loyal employees
- Access to skill upgrading for incumbent workers

Return on Investment for the COMMUNITY

- Alignment of economic development vision and workforce advancement
- Enhance labor pool to retain and attract employers
- Increase income levels in the community
- Reduce poverty, crime, and support costs

Philosophy of Career Pathways Funding Collaboration

Building successful Career Pathways funding requires developing collaborative partnerships that leverage the expertise, capabilities, capacity, and resources of a community. The partners play a role in creating and/or sustaining implementation of the project. All partners can add value to the project and may provide different types of resources including the following:

- Staffing
- Revenue
- Grant funds
- Facilities
- Equipment and tools
- Supplies
- In-kind services
- Technology
- Transportation
- Curricula or training materials
- Learning resources
- Career services

Funding will come from a variety of partners and sources. Internal sources of revenue should be included.

Importance of a Career Pathway Funding Plan

A systemic and strategic shift in the social and economic development of the nation and world demands that funding and sustaining instructional programs be done differently than in the past. The word *sustainability* was not used by educators until recently.

Obtaining start-up and operational funding will require a more evidence-based approach to financing programs than in the past. Evidence of leadership and business planning must be provided by those who seek the trust of stakeholders and the funds necessary to implement and sustain Career Pathways. Today's funding entities, both public and private, are requiring a high level of detail and verification of data to ensure that the program is needed and has a real opportunity to be successful without the constant need to refund existing operations.

Accomplishing the objectives of the sustainable revenue plan will require the leadership and stakeholders to remain focused on the key components required for success. In addition to reviewing the budget as a control document for resource allocations, Career Pathways leadership will need to be equally focused on the balance sheet and the ongoing revenue streams. The traditional allocation of funding will evolve into a continuous and ever-changing stream of revenue-generation events.

The Career Pathway ROI Worksheet (**Resource 5.1**) is intended to assist the CP Project Manager in identifying significant stakeholders and defining and documenting potential measures of return on investment and potential resources that can be components in the development and implementation of Career Pathways.

Resource 5.1. Career Pathway ROI Worksheet

Stakeholder	ROI Measures	POTENTIAL RESOURCES (start-up or sustainability)

Career Pathway Funding Team

A lead organization and contact must be established to drive the funding planning process and be responsible for the accounting and evaluation of fiscal success of the project. It is recommended that a Career Pathway Funding Executive Committee be established to develop the plan and supervise, guide, direct, and motivate the partnering organizations. Co-chaired by the CP Project Manager and college president, the Funding Executive Committee meets as often as necessary (on average monthly) to evaluate progress and determine the action required to maintain the sustainability, continuity, and momentum of the CP project. The Committee often includes internal and external leadership.

Internal Leadership

- College President
- CP Project Manager
- Academic Officer
- Finance and Accounting
- Grants Officer
- Workforce Development Officer
- Institutional Advancement Officer
- Faculty Subject Matter Expert
- Adult Education Leader

External Leaders

- Workforce Investment Board Leader
- Industry Leader(s)
- Community-Based Organization Leader

Constructing a Plan for Career Pathway Success and Sustainability

Each Career Pathway program should be an outcome of a comprehensive and inclusive planning process. Internal audiences, as well as a variety of external audiences, should have had significant involvement in the analysis and decision making related to the need for and benefits of the new program prior to implementation. In addition to obtaining valuable input, this type

of process will serve as a way to gain support and ownership for the new programs early in the development process and identify sources for sustainable resources.

A strategic and sustainable business/revenue plan should be developed for the CP that documents the needs, revenue, and expenses over time for the proposed programs. The plan should provide a clear path to funding for the different stages of program development, operation, and sustainability. It should clearly define the funding sources and levels of responsibility assigned to each. The days of “if you build it they will fund” are long gone.

Career Pathway Funding Plan Objectives

The start-up budget and subsequent sustainable revenue plan provide a roadmap for the development, implementation, and sustainability of the Career Pathway. The objectives of the plan include the following:

- Define a successful Career Pathway and the resources required to sustain it at a level of excellence
- Provide a means to measure and evaluate financial performance throughout the life of the project
- Provide for the long-term security and viability of Career Pathways through proper management of resources
- Identify start-up and sustainable revenue sources for a successful Career Pathways
- Identify and quantify the expense items required to begin a Career Pathways program
- Identify and quantify the expense items required to sustain a Career Pathways program
- Utilize all available relationships and methods to raise and sustain community and industry partner and private contributor investment

Career Pathways Funding Focus Areas

Colleges often identify three general focus areas in their pursuit of Career Pathways funding from government, community organizations, education, and/or the private sector (corporate, foundation, philanthropic).

Career Pathway Development—For employers, a better trained workforce leads to lower costs, higher employee retention, greater productivity, and better economic competitiveness. The ability to launch new programs to respond promptly to evolving needs is dependent upon the ability to draw upon a source for immediate funding.

Available funding is essential in empowering the college to proactively develop new career pathways to certificate and degree credentials that align with emerging business and industry needs. Start-up funds are also required to create innovative incumbent workforce training programs to secure meaningful employee productivity improvements for our region's business and industry. Additionally, the College must have the capacity to respond quickly to the state's needs by investing in new initiatives, curriculum development, instructor professional development, equipment, and community outreach. In some instances, contributions to the fund may be used to leverage significant matching grants. This fund will provide the necessary resources for the college to respond to the rapidly changing needs of industry, individuals, and the community for years to come.

Instructional and Technology Excellence—For Career Pathways to provide a highly qualified workforce for business and industry, students and instructors must have access to the latest equipment and technology. Keeping pace with the accelerating advancement in technology is an increasingly costly consideration for the college. Through effective hands-on instruction with industry-standard equipment and technology, students are transported to the work environment and presented with realistic “real world” problems and situations. Students are challenged to incorporate practical applied skills, critical thinking skills, and problem solving skills to ultimately “understand” and solve the problems and situations they will face in the workplace. Funding will allow Career Pathways to continue to deliver high-quality training and instruction by providing resources for the purchase of technology, equipment, and program design to support student learning.

Career Pathways Student Support and Success—The fund will enable the Career Pathways project to support the development of the region's business and industry communities by producing graduates trained to meet the workforce requirements necessary for continued economic growth. Career Pathway Scholarships will increase access to higher education; enhance recruitment and retention of students, particularly those who are economically disadvantaged; provide resources to lead to completion of degrees, certificates, career academies, and career skills programs; and offer assistance to students who do not qualify for federal and state funding sources. Funding would support student needs for tuition, fees, books, equipment, childcare, and transportation. Efforts will focus on supporting:

- Champions: Provide funding to students graduating from the region's high schools to support enrollment, promote the value of higher education, and build awareness of Career Pathway opportunities.

- Campus Scholars: Support students who have completed a minimum of 24 credit hours of instruction who are enrolled in a transfer-oriented program seeking to further their higher education at a partnering college or other institution.

Resource 5.2 is designed to help the CP Funding Executive Committee review Career Pathways impact, development and funding considerations, and clarify a response and roles.

Resource 5.2. Worksheet: Career Pathways Framework for Creating a Funding Plan

Consideration	Response and Role
Community and Workforce Outlook	
What are the top three community or workforce challenges your service region will face over the next five years?	
Current Measures of Program Success	
What are the top three measures that you use to evaluate your program's success in impacting your community?	
Operational Challenges	
What are the top three operational challenges that your program faces?	
Staffing Roles and Allocation of Time	
What are the top three staffing or allocation-of-time challenges you face?	
What are the top three challenges you face in your role?	
Business and Industry Partnering Opportunities	
What do you view as the top three opportunities to expand your partnering with business and industry?	
What do you view as the top three benefits of Career Pathways to industry?	
Education Partnering	
What do you view as the top three opportunities to expand your partnering with secondary or postsecondary education?	

Consideration	Response and Role
What do you view as the top three challenges to expanding partnering with secondary or postsecondary education?	
Community-based Organizations	
What do you view as the top three opportunities to expand your partnering with community-based organizations?	
What do you view as the top three challenges to expanding partnering with community-based organizations?	
Marketing and Branding Efforts	
What are the top three challenges you face in marketing or branding of your CP program?	
Desired Future Program Outcomes	
What do you view as the top three changes and desired outcomes that will impact the future success of your CP program?	
Sufficient Support to Start Up the Project	
What level of resources is required to staff the project?	
What level of resources is required to purchase equipment required?	
What level of resources is required to market the project?	
What level of resources is required to support development of curricula or materials?	
Sufficient support and resources to Sustain the Project	
What level of staffing, supplies, equipment, and marketing resources is required to maintain an appropriate level of academic and career services?	

Consideration	Response and Role
What level of resources is required to support student access and support services?	
What level of resources is required from tuition, fees, grants, and contracts to support the project?	
What level of resources is required to ensure the ability to overcome future challenges?	
Current Funding Model and Future Sources	
What are the top three ways that you should consider enhancing the current CP funding model to secure future resources?	
What do you view as the top challenges in securing the resources?	

Career Pathways Support Tool Worksheets

To support the development of a Career Pathways Funding Plan, four support worksheets have been created:

- Sustainable Revenue Budget Worksheets (Resource 5.3)—A tool to assist the college in defining resource requirements and sources and methods of funding.
- Monthly Revenue Statement (Resource 5.4)—A tool to assist the college in monitoring and evaluating fiscal performance and progress related to budgetary considerations.
- Sustainable Revenue Plan (Resource 5.5)—A tool to assist the college in creating a multiyear plan to recognize revenue sources and operation expenses.
- Example: Physical Therapy Assistant Equipment List (Resource 5.6)—A tool to assist the college as it considers the cost of establishing start-up of a Career Pathway.

**Resource 5.3: ADULT EDUCATION CAREER PATHWAY
SUSTAINABLE REVENUE BUDGET WORKSHEETS**

Line	CATEGORY	FY 11 - 12	FY 12 - 13	FY 13 - 14	FY 14 - 15	FY 15 - 16	TOTAL
1	REVENUE						
2	Fees						
3	1 Supply Fee						
4	2 Lab Fee						
5	SUB TOTAL						
6							
7	Fines						
8	1 Late Fees						
9	2 Parking Fees						
10	SUB TOTAL						
11							
12	Sale of Goods						
13	1 Books						
14	2 Other Items						
15	SUB TOTAL						
16							
17	Tuition						
18	1 Tuition						
19	2 Tuition - Excess						
20	SUB TOTAL						
21							
22	Grants						
23	1 Foundation						
24	2 State Grants						
25	3 Federal Grants						
26	SUB TOTAL						
27							
28	State Tax						
29	1 General Fund						
30	2 Earmarked Funding						
31	SUB TOTAL						
32							
33	City Tax						
34	1 General Fund						
35	2 Earmarked Funding						
36	SUB TOTAL						
37							
38	County Tax						
39	1 General Fund						
40	2 Earmarked Funding						
41	SUB TOTAL						
42							
43	Federal Tax						
44	1 General Fund						
45	2 Earmarked Funding						
46	SUB TOTAL						
47							
48	Operational Savings						
49	1 Tuition						
50	2 Tuition - Excess						
51							
52							
53	Operational Redirect						
54	1 Tuition						

**Resource 5.3: ADULT EDUCATION CAREER PATHWAY
SUSTAINABLE REVENUE BUDGET WORKSHEETS**

Line	CATEGORY	FY 11 - 12	FY 12 - 13	FY 13 - 14	FY 14 - 15	FY 15 - 16	TOTAL
55	2 Tuition - Excess						
56	SUB TOTAL						
57							
58	Fee for Training						
59	1 Corporate						
60	2 Community						
61	SUB TOTAL						
62							
63	Fee for Services						
64	1 Consulting & Advising						
65	2 Other Services						
66	SUB TOTAL						
67							
68	Partnerships						
69	1 Shared Facilities						
70	2 Shared Staffing						
71	3 Shared Equipment						
72	4 Shared Operations						
73	SUB TOTAL						
74							
75	Private Donations						
76	1 Annual Campaign						
77	2 Targeted Campaign						
78	3 Capital Campaign						
79	4 Major Gifts Campaign						
80	5 Planned Giving						
81	6 Special Events						
82	7 Inkind Equipment						
83	8 Inkind Supplies						
84	9 Inkind Staffing						
85	SUB TOTAL						
86							
87	Loans and Bonds						
88	1 Collateral Loans						
89	2 Bonds						
90	SUB TOTAL						
91							
92	REVENUE TOTAL						
93							
94							
95	EXPENSES						
96							
97	PROGRAM						
98	1 Printing						
99	2 PD-Printing						
100	3 Duplicating						
101	4 PD-Duplicating						
102							
103	5 Prof. Services - Guest/Honor						
104	6 PD-Honorarium						
105							
106	7 Prof Services - Auditors						
107	8 Prof Services - Legal Fees						

**Resource 5.3: ADULT EDUCATION CAREER PATHWAY
SUSTAINABLE REVENUE BUDGET WORKSHEETS**

Line	CATEGORY	FY 11 - 12	FY 12 - 13	FY 13 - 14	FY 14 - 15	FY 15 - 16	TOTAL
108							
109	9 Prof Services - Consultants						
110							
111	10 PD-Consultant						
112							
113	11 Prof Services - Technical Support						
114	12 Prof Services - Commercial						
115							
116	13 Sub Contracts < 25,000						
117	14 Sub Contracts > 25,000						
118							
119	15 PD-Guest Meals & Refreshments						
120	16 Employee Meals & Refreshments						
121	17 PD-Empl Meals & Refreshments						
122							
123	18 Student Meals						
124							
125	19 Freight-Out						
126	20 Postage						
127	21 Other Parcel Service						
128							
129	22 Advertising - Print						
130	23 Advertising - Radio						
131	24 Advertising - Television						
132	25 Advertising - Internet						
133	26 Supplies/Materials-Instruction						
134	27 Supplies/Materials Non Instruc						
135	28 PD- Supplies/Materials						
136	29 Supplies/Materials- Other						
137							
138	30 Rental/Lease- Equipment						
139	31 Rental/Lease-Rooms/Meetings						
140	32 Long Term Lease						
141	33 Property Insurance						
142	34 Liability Insurance						
143							
144	35 Dues/Memberships						
145	36 PD-Dues/Memberships						
146	37 Subscriptions						
147	38 PD-Subscriptions						
148	39 Electronic Database Subscription						
149							
150	40 Promotional Items						
151							
152	41 Sales & Use Tax						
153	42 Bad Debt Expense - Student						
154	43 Bad Debt Expense-Non-Student						
155	44 Bad Debt Expense - new method						
156							
157	45 Equipment < \$5,000						
158	46 Non-Capital Software < \$100,000						
159							
160	47 Travel - In State						
161	48 PD-In-State Travel						

**Resource 5.3: ADULT EDUCATION CAREER PATHWAY
SUSTAINABLE REVENUE BUDGET WORKSHEETS**

Line	CATEGORY	FY 11 - 12	FY 12 - 13	FY 13 - 14	FY 14 - 15	FY 15 - 16	TOTAL
162	49 PD-In-State Registration Fees						
163	50 Travel - Out of State						
164	51 PD-Out of State Travel						
165	52 PD-Out of State Registration Fees						
166	53 Travel - Non Employee						
167	54 PD-Non Employee Travel						
168							
169	55 Telephone - Local						
170	56 Telephone - Long Distance						
171	57 Cell Phone/Pagers						
172	58 Network Lines						
173	SUB TOTAL						
174							
175							
176	Funded Depreciation						
177	1 Facilities Equipment						
178	2 Facilities						
179	SUB TOTAL						
180							
181	Funded Obsolescence						
182	1 Instructional Equipment						
183	2 Information Technology						
184	SUB TOTAL						
185							
186	Grant Administration						
187	1 Grants-Indirect Cost						
188	2 Grants-Administrative Cost						
189	SUB TOTAL						
190							
191	Loans and Bonds						
192	1 Collateral Loans						
193	2 Bonds						
194	SUB TOTAL						
195							
196							
197	Personnel						
198	Salaries and Benefits						
199	Salaries & Wages-Reg Full Time						
200	1 Administration						
201	2 Counseling						
202	3 Sales						
203	4 Development						
204	5 Teaching						
205	4 Consulting						
206	5 Project Management						
207	6 Clerical						
208	7 Other						
209							
210	Salary & Wages - Reg Part Time						
211	1 Administration						
212	2 Counseling						
213	3 Sales						
214	4 Development						
215	5 Teaching						

**Resource 5.3: ADULT EDUCATION CAREER PATHWAY
SUSTAINABLE REVENUE BUDGET WORKSHEETS**

Line		CATEGORY	FY 11 - 12	FY 12 - 13	FY 13 - 14	FY 14 - 15	FY 15 - 16	TOTAL
216	6	Consulting						
217	7	Project Management						
218	8	Clerical						
219	9	Other						
220	1	Accrual Adjustments						
221	2	Salary & Wages -Temp - Staff						
222	3	Salary & Wages -Temp - Faculty						
223		SUB TOTAL						
224								
225		Benefit Benefits						
226	1	Benefits - Full-Time						
227	2	Benefits - Part-Time						
228		SUB TOTAL						
229								
230		Utilities						
231	1	Utilities - Electricity						
232	2	Utilities - Gas						
233	3	Utilities - Garbage						
234	4	Utilities - Water						
235	5	Utilities - Sewer						
236	6	Utilities - Other						
237		SUB TOTAL						
238								
239		Depreciation & Obsolescence						
240	1	Repair						
241	2	Renovation						
242	3	Facility Depreciation						
243	4	Equipment Obsolescence						
244		SUB TOTAL						
245								
246								
247		EXPENSES TOTAL						
248								
		REVENUE AND EXPENSES DIFFERENCE						

Resource 5.4: ADULT EDUCATION CAREER PATHWAY MONTHLY REVENUE STATEMENT

MONTH ENDING:					
	REVENUE SOURCE	FY 11-12 Budget	Actual	Budget Diff.	% of Budget
	Grants				
	State Tax				
	Federal Tax				
	City Tax				
	County Tax				
	Loans				
	Bonds				
	Tuition				
	Program Fines				
	Program Fees				
	Sale of Goods				
	Operational Savings				
	Operational Redirect				
	Fees for Training				
	Fees for Services				
	Partnerships				
	Private Donations				
	TOTAL				
	EXPENSES	FY 11-12 Budget	Actual	Budget Diff.	% of Budget
	AECP Plan Development				
	Instructional Design				
	Curriculum Development				
	AECP Lead Staff				
	Student Support Service				
	Support Staffing				
	Professional Development				
	Marketing & Public Relations				
	Information Technology				
	Instructional Equipment				
	Supplies				
	Facilities				
	Utilities				
	Travel				
	Repair				
	Remodeling				
	Depreciation				
	Obsolescence				
	Total				
	Balance				

**Resource 5.5: ADULT EDUCATION CAREER PATHWAY
SUSTAINABLE REVENUE PLAN**

LINE	Source	Grants			State Tax			Federal Tax			City Tax			Local Option Levy	General
		Private Foundations	State	Federal	General	Earmarks	General	Earmarks	General	Earmarks	General	Earmarks	General		
1	AECP Plan Development														
2	Instructional Design														
3	Curriculum Development														
4	AECP Lead Staff														
5	Student Support Service														
6	Support Staffing														
7	Professional Development														
8	Marketing & Public Relations														
9	Information Technology														
10	Instructional Equipment														
11	Supplies														
12	Facilities														
13	Utilities														
14	Travel														
15	Repair														
16	Remodeling														
17	Depreciation														
18	Obsolescence														
19	TOTAL														

[illegible]

[illegible]

**Resource 5.5: ADULT EDUCATION CAREER PATHWAY
SUSTAINABLE REVENUE PLAN**

4 of 4

Source		
LINE	CATEGORY	TOTAL
1	AECPP Plan Development	
2	Instructional Design	
3	Curriculum Development	
4	AECPP Lead Staff	
5	Student Support Service	
6	Support Staffing	
7	Professional Development	
8	Marketing & Public Relations	
9	Information Technology	
10	Instructional Equipment	
11	Supplies	
12	Facilities	
13	Utilities	
14	Travel	
15	Repair	
16	Remodeling	
17	Depreciation	
18	Obsolescence	
19	TOTAL	

**Resource 5.6: ADULT EDUCATION CAREER PATHWAY
PHYSICAL THERAPY ASSISTANT EQUIPMENT LIST**

Line:	Description:	QTY:	Quote:	Total:	Comments
1	Office Equipment				
2	phone	1	\$100	\$100	
3	printer/fax/copier	1	\$800	\$800	
4	computer/modem/router	1	\$3,000	\$3,000	
5	various business software	1	\$2,000	\$2,000	
6	office furniture	1	\$5,000	\$5,000	
7	broadband internet access	1	\$200	\$200	
8	marketing material	1	\$1,000	\$1,000	
9	Sub-Total			\$12,100	
10					
11	Clinical Equipment				
12	Hotpack Machine-SS-2 with 8 standard HP included	1	\$940	\$940	
13	2 cervical, 1 oversized packs	1	\$100	\$100	
14	6'x8' foot mat table	1	\$650	\$650	
15	Traction Package	1	\$6,329	\$6,329	
16	Cybex upright bike	1	\$3,000	\$3,000	
17	Cybex leg press	1	\$5,100	\$5,100	
18	Cybex leg ext	1	\$3,700	\$3,700	
19	Cybex leg curl	1	\$3,700	\$3,700	
20	Seated Row	1	\$3,595	\$3,595	
21	FT360	1	\$4,300	\$4,300	
22	Rebounder	1	\$500	\$500	
23	Cybex Pro Treadmill	1	\$7,000	\$7,000	
24	Joint models (knee/shoulder/hip)	1	\$200	\$200	
25	Cryocuff with attachments	1	\$350	\$350	
26	Seated Massage Chair	1	\$499	\$499	
27	goniometers	1	\$800	\$800	
28	tape measurer	1	\$12	\$12	
29	stools	1	\$500	\$500	
30	stationary bike	1	\$400	\$400	
31	thera-tubing/thera-band	1	\$300	\$300	
32	hand weight set	1	\$200	\$200	
33	physioball	1	\$200	\$200	
34	freezer/ice packs	1	\$178	\$178	
35	e-stim machine	1	\$1,200	\$1,200	
36	parallel bars or railing	1	\$498	\$498	
37	medicine balls	1	\$200	\$200	
38	wand/stick	1	\$100	\$100	
39	exercise prescription software program or exercise flashcards for copy	1	\$1,000	\$1,000	
40	stackable steps	1	\$489	\$489	
41	Ambulation Aids	1	\$1,400	\$1,400	
42	Curb & Ramp Training Stairs	1	\$1,100	\$1,100	
43	Iontophoresis	3	\$3,200	\$9,600	
44	Hydrocollatoral Units	3	\$6,900	\$20,700	
45	Col-pac Units	2	\$4,900	\$9,800	
46	1/3 Mz-Ultrasound Units	6	\$12,000	\$72,000	

**Resource 5.6: ADULT EDUCATION CAREER PATHWAY
PHYSICAL THERAPY ASSISTANT EQUIPMENT LIST**

47	Multi-Modal Electrical Simulation Units	4	\$11,000	\$44,000	
48	Combination ES/Us	3	\$10,000	\$30,000	
49	Pression Vasopneumatic Pump w/WE & LE sleeves	2	\$3,100	\$6,200	
50	Emg Biofeedback Retainers	2	\$2,600	\$5,200	
51	Traction Table Units	2	\$12,500	\$25,000	
52	High-Low Tilt Table	1	\$2,500	\$2,500	
53	Interferential e-Stim	1	\$1,500	\$1,500	
54	Hand/foot whirlpool	1	\$2,000	\$2,000	
55	Hi-Lo Treatment Tables	4	\$9,600	\$38,400	
56	Hi-Lo Treatment Mat Tables	2	\$8,400	\$16,800	
57	Elgin Pulley System	1	\$1,400	\$1,400	
58	Multimedia Gait Analysis Camera System	1	\$8,000	\$8,000	
59	Cart w/assortment of hand and cuff weights	1	\$1,400	\$1,400	
60	Skeletons and stands	2	\$2,100	\$4,200	
61	Adjustable Wheelchairs	3	\$2,400	\$7,200	
62	MicroFet2 Manual Muscle Tester	1	\$1,200	\$1,200	
63	Monarch UBE	1	\$1,500	\$1,500	
64	Diathermy Unit	1	\$22,000	\$22,000	
65	Interferential e-Stim Unit	1	\$1,800	\$1,800	
66	Folding Parallel Bars	1	\$1,200	\$1,200	
67	Pulse Oximeter	1	\$1,300	\$1,300	
68	Treadmill	1	\$4,200	\$4,200	
69	Anodyne	1	\$3,000	\$3,000	
70	Sub-Total			\$344,600	
71					
72	Facility Equipment				
73	Washer	1	\$875	\$875	
74	Dryer	1	\$575	\$575	
75	Bedroom Bed & Mattress	1	\$1,000	\$1,000	
76	Chest of Drawers	1	\$550	\$550	
77	Night Stand	1	\$250	\$250	
78	Kitchen table & Chairs	1	\$1,000	\$1,000	
79	Cabinet-Closet	1	\$1,000	\$1,000	
80	Refrigerator	1	\$1,000	\$1,000	
81	Stove	1	\$1,000	\$1,000	
82	Microwave	1	\$300	\$300	
83	Sink	1	\$350	\$350	
84	Mirror	1	\$100	\$100	
85	Therapy equipment for rehabilitation	1	\$4,000	\$4,000	
86	Sub-Total			\$12,000	
87					
88	TOTAL			\$368,700	

Start-Up Budget Overview

The start-up budget may be the largest influx of revenue for the program for some time to come. Careful consideration should be given to each purchase to make sure each dollar provides the highest quality and longest shelf life for each item and/or service. The challenge is to develop a high-quality short-term start-up budget without becoming short-sighted. The focus

must remain on obtaining the greatest value and quality for each dollar and positioning for the future. It should never be about spending the budget.

Funding the start-up can be one of the most difficult challenges. It is imperative that students experience learning using industry-standard equipment, and that can be costly. An additional challenge is to avoid investing in technology that is obsolescent or soon will be. With the rate of technological innovation impacting every occupation, what used to be considered a long-term capital expense is becoming a supply budget that must be constantly refreshed or replaced.

The AECP program cannot count solely on historically reliable internal resources such as earmarks from tax funds. The AECP program must consider external sources and develop a strong case for funding; in-kind equipment, technology, and supplies; and staffing support. With the economic pressures placed on business and industries, private sources of funding for industry-specific programs should not be the sole source of start-up funds. Start-up resources are likely to be the result of commitment from the AECP program and multiple stakeholders in the community. Categories of budgeting considerations for the start-up phase include the following:

- Staffing and administrative support
- Community needs assessment
- Career Pathway development
- Student support funding
- Curriculum development
- Recruitment, marketing, and public relations
- Facilities, technology, tools, and equipment

The Career Pathways start-up budget must be based on a strategic view of where the occupational area is going to be in the next three to five years. With some technology becoming obsolete before it reaches the marketplace, depreciation and obsolescence should be included in the initial start-up budget. If they are not part of the start-up and all subsequent revenue plans, the Career Pathways will become non-competitive in the educational marketplace and useless to business and industry.

Funding for Sustainable Career Pathway Operations

Educational leaders are under increasing pressure to address declining educational, social, and economic conditions in their communities. The focus is often on finding and implementing new solutions to old problems and not on sustaining existing programs. The “what is next” mindset

of always looking for resources to keep up with the new and different workforce needs must be shared with a view of sustaining a level of excellence in all programs.

The sustainable revenue plan and budget should be developed at the greatest degree of inclusion and detail possible. Every effort should be made to identify and accurately project revenue streams from all sources and by all available methods. Below is a list of possible funding streams that should be considered in the development of the plan. The items include the following:

- Tuition (credit)
- Enrollment non-credit
- Student facility fees
- Student program fees
- Grants
- Taxes
- Operational savings
- Operational redirect
- Fees for training
- Fees for services
- Partnership sponsors
- Private donations
- Loans
- Fines
- Sale of goods
- Bonds

Due diligence and research should replace estimating whenever possible when determining the cost (expense) in implementation of the Career Pathways. Examples for expense include the following items:

- Career Pathway plan development
- Instructional design
- Curriculum development

- Career Pathway lead staff
- Student support service
- Support staffing
- Professional development
- Marketing and public relations
- Information technology
- Instructional equipment
- Supplies
- Facilities
- Utilities
- Travel
- Repair
- Remodeling
- Depreciation
- Obsolescence

Sustaining a program after the newness and excitement have passed is where true leadership is required. It is easy to get caught up in the excitement of newness only to find that newness has an ever-decreasing shelf life with traditional funding sources. Each new Career Pathway comes with new hope for the students and the community. With enough excitement and pressure, traditional funding entities could be persuaded to provide initial funding for the program without a plan for sustaining the program over time at a level of excellence.

Without a sustainable revenue source, the start-up budget will soon become the start-downward budget. Revenue streams that do not sustain excellence are ensuring that the project will have a slow and painful existence, if not death.

The sustainable revenue plan and budget worksheets should remain living documents throughout the life of the Career Pathway. They should be regularly reviewed and updated as events and changes take place to either document.

You are now at the end of section V, which provided guidelines and tools for developing a sustainable funding plan. Return to the table of contents (or main menu) for other choices.

VI. Effective Advisory Committees

The full engagement of employers is essential to the success of Career Pathways programs. In most cases, the engagement of employers takes the form of service on advisory committees—groups of employers and employees who advise educators on the design, development, implementation, evaluation, maintenance, and revision of Career Pathway programs. Most secondary and postsecondary career and technical education programs have business and industry advisory committees. You may be able to connect with these groups. Please refer to section III, “Partnership Development,” for a list of the partners needed and how those partners might become involved. Regardless of how your advisory committee is structured, business and industry leaders will be the key to success for your AECP system.

THE ADVISORY COMMITTEE *is basically a tool for educators to “talk to their customers.”*

Florida Eight Areas of Focus	
	FL#1-Program Design
	FL#2-Curriculum and Instruction
	FL#3-Professional Development
	FL#4-Student Support
	FL#5-Assessment
✓	FL#6-Partnerships
	FL#7-Marketing
	FL#8-Accountability

OVAE 10 Component Framework	
	OVAE#1-Legislation and Policies
►	OVAE#2-Partnerships
	OVAE#3-Professional Development
	OVAE#4-Accountability and Evaluation Systems
	OVAE#5-College and Career Readiness Standards
	OVAE#6-Course Sequences
	OVAE#7-Credit Transfer Agreements
	OVAE#8-Guidance Counseling and Academic Advisement
	OVAE#9-Teaching and Learning Strategies
	OVAE#10-Technical Skills Assessments

The advisory committee will benefit your program by advising in the following areas:

Design

- Which pathway; exit points and entrance points on the academic ladder

Development and Implementation

- Curriculum development; skills needed in the workplace including essential skills

Maintenance

- Supplies, professional development; workbased learning opportunities, career development

Evaluation

- Graduates, program effectiveness

Revision

- Stackable credentials, modification of existing curriculum; emerging occupations

The table below (**Resource 6.1**) lists areas of expertise that a business advisory committee might provide, along with examples and a space for your partnership to list other ideas.

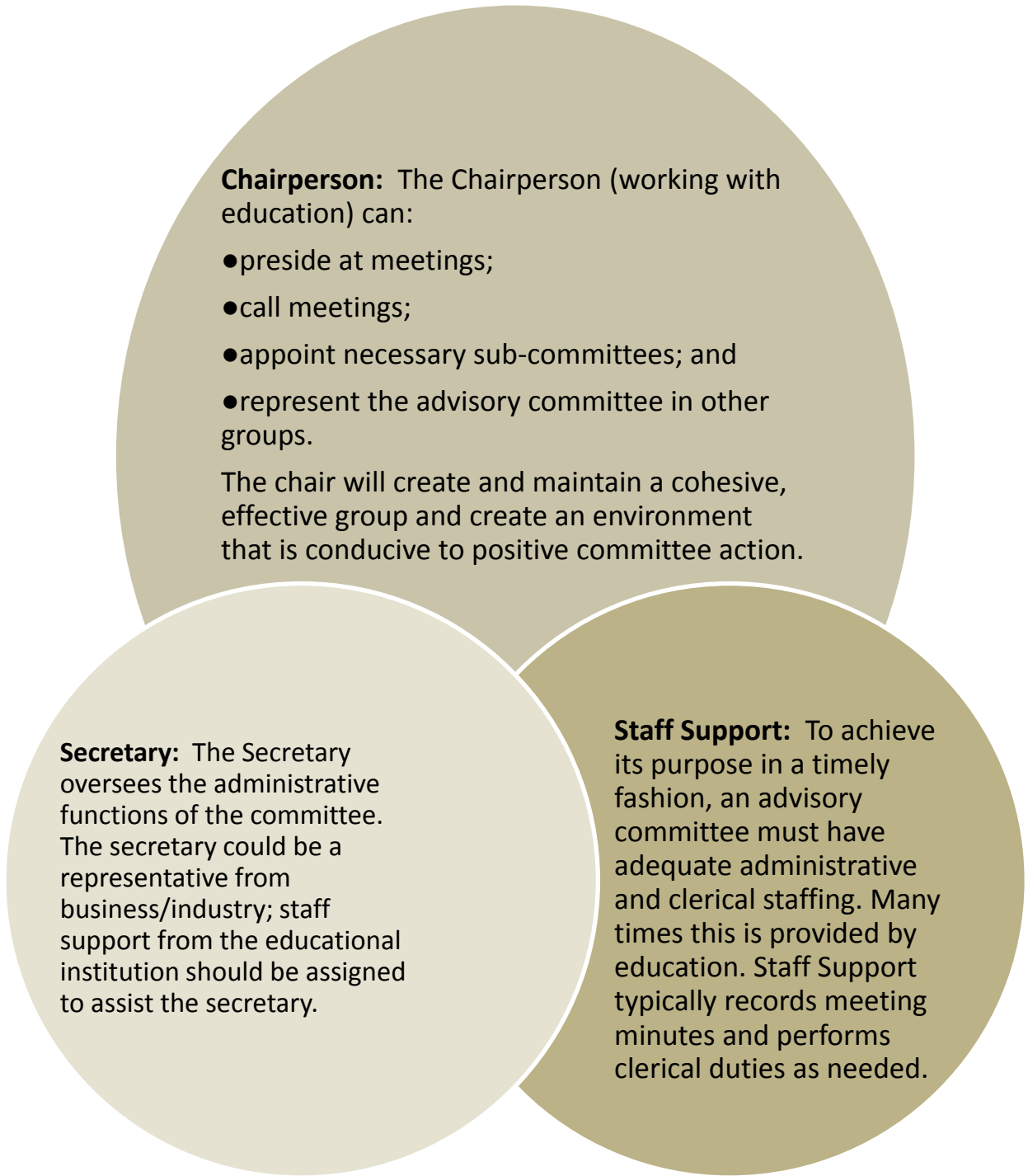
Ideas on How the Advisory Committee May Benefit Your Program by Advising in the Following Areas

Resource 6.1

Area of Expertise	Examples	Ideas for your program or career pathway
Design	Which pathway; exit points and entrance points on the academic ladder	
Development and Implementation	Curriculum development; skills needed in the workplace including essential skills	
Evaluation	Graduates, program effectiveness	
Maintenance	Supplies, professional development; workbased learning opportunities, career development	
Revision	Stackable credentials, modification of existing curriculum; emerging occupations	

Officers

Officers, working closely with educators, can save time for faculty and administrators, and it is strongly recommended that you establish officers early in the formation of your committee.



Chairperson: The Chairperson (working with education) can:

- preside at meetings;
- call meetings;
- appoint necessary sub-committees; and
- represent the advisory committee in other groups.

The chair will create and maintain a cohesive, effective group and create an environment that is conducive to positive committee action.

Secretary: The Secretary oversees the administrative functions of the committee. The secretary could be a representative from business/industry; staff support from the educational institution should be assigned to assist the secretary.

Staff Support: To achieve its purpose in a timely fashion, an advisory committee must have adequate administrative and clerical staffing. Many times this is provided by education. Staff Support typically records meeting minutes and performs clerical duties as needed.

Each partnership and/or business advisory committee will need to decide its own structure. Use the following table (**Resource 6.2**) for discussion of the structure of your committee.

Structure of the Advisory Committee Resource 6.2 Complete the table with identification of structure items and names (if applicable):				
Size of Committee:		NOTE: ADVISORY COMMITTEES should consist primarily of employers.		
Committee Officers:	Purpose	✓ Yes- this will be part of our structure	Name:	✓ No-this will not be part of our structure
<i>Chairperson</i>	Presides at meetings; calls meetings; appoints subcommittees;			
<i>Co-Chairperson</i>	Assists the Chair			
<i>Secretary</i>	Oversees administration functions of the committee			
<i>Staff Support</i>	Clerical staffing			
<i>Other:</i> _____				

You might choose to appoint or elect officers. If so, your committee will need to list roles and responsibilities for those officers (**Resource 6.3**).

Roles and Responsibilities for Officers

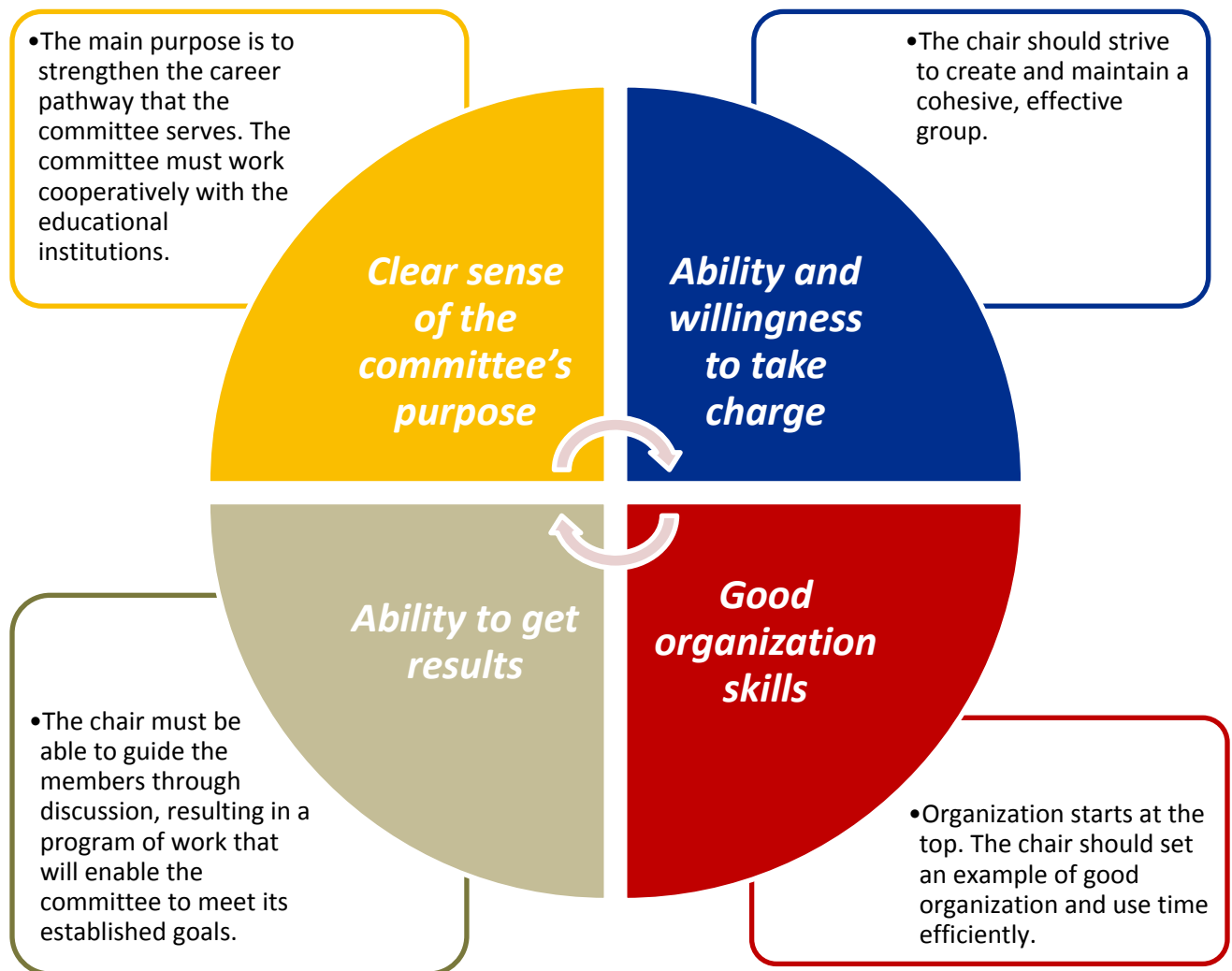
Resource 6.3

Chairperson	Secretary	Support Staff
1.	1.	1.
2.	2.	2.
3.	3.	3.
4.	4.	4.
5.	5.	5.
6.	6.	6.
7.	7.	7.
8.	8.	8.
9.	9.	9.
10.	10.	10.

Selection of Chairperson

The chairperson should be from business/industry. The two main roles of the chair are to set meeting agendas and conduct meetings.

Elements of a Successful Chair



Using the form below (**Resource 6.4**), rate candidates for chairperson.

Potential Chairperson Rating Resource 6.4												
Candidate's Name	Attribute	Weak←-----→Strong										
		1	2	3	4	5	6	7	8	9	10	
1.	<i>A clear sense of the committee's purpose</i>											
	<i>Ability and willingness to take charge</i>											
	<i>Ability to get results</i>											
	<i>Good organization skills</i>											
2.	<i>A clear sense of the committee's purpose</i>											
	<i>Ability and willingness to take charge</i>											
	<i>Ability to get results</i>											
	<i>Good organization skills</i>											
3.	<i>A clear sense of the committee's purpose</i>											
	<i>Ability and willingness to take charge</i>											
	<i>Ability to get results</i>											
	<i>Good organization skills</i>											

Selection of Business Members

Advisory Committees should consist primarily of employers who are well positioned to stay informed about changes in their industries. Will they be hiring the completers of your program (i.e., are they your customers)? Are they knowledgeable about the skill requirements? Do they want to help your institution or partnership? The answers to these questions will help you determine which businesspersons should be approached to be part of your committee. Use the following table (**Resource 6.5**) to help you in choosing business members.

Choosing Business Members Resource 6.5				
Rate the potential member in each category from 1 to 10. 1 ← ----- → 10 Strongly Disagree -- Disagree -- Neutral -- Agree -- Strongly Agree				
Name	Hiring or will be hiring completers?	Know worker requirements 3-5 years out	Value the institution(s) and student body	Willingness to help

Other Members

Even though the majority of committee members should be from business and industry, the program will benefit from the involvement of educators as non-voting, consulting members. The following educational representatives should be present to receive advice and answer questions:

- Adult educators
- Secondary and postsecondary technical instructors
- Administrators
- Counselors
- General education (academic) faculty

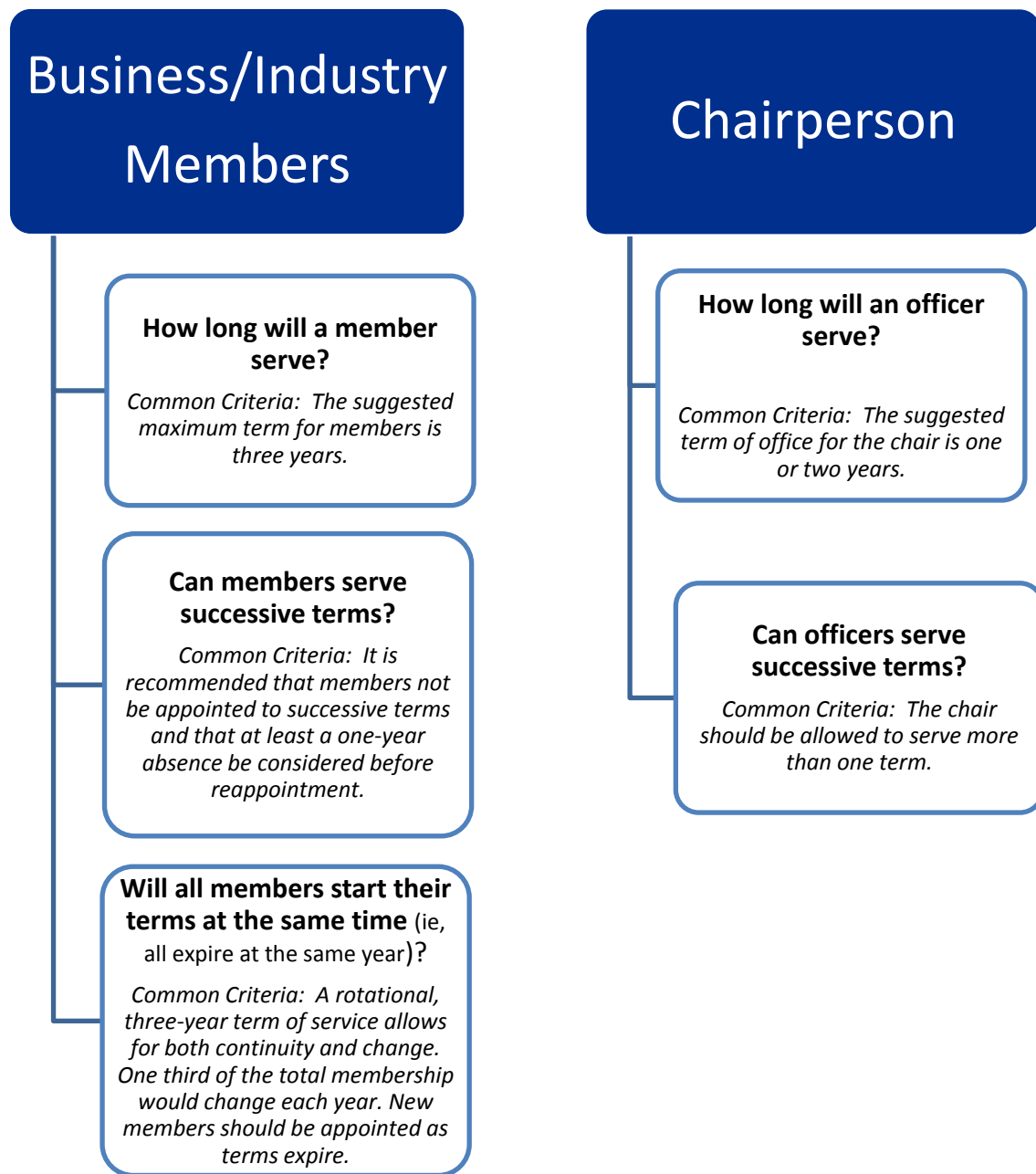
Former students should be on your advisory committee *only* if they are actively working in the industry.

Use the following form (**Resource 6.6**) to inventory nonvoting or consulting members by job classification.

Nonvoting/Consulting Members						
Resource 6.6						
Name:	Secondary or Postsecondary S or P	√ Counseling or Career Advisor	√ Academic or General Ed	√ CTE	√ Administration	√ Other

Terms of Office

Each advisory committee should establish its own criteria and guidelines for member recruitment, selection, appointment, and replacement. Committee membership should be reviewed and updated yearly to ensure broad-based representation of the industry and to ensure that the work of the committee continues. The following figure provides sample criteria for establishing terms of office.



Terms of Office

Resource 6.7

Complete the following form for the terms of office criteria for the advisory committee.

Business Members

Term Limit:

Successive Terms Allowed:

Start of Term

Officers

Term Limit:

Successive Terms Allowed

Start of Term

Requests to and Confirmation and Orientation of New Members

A formal letter requesting committee membership should be sent only after an informal face-to-face meeting or phone conversation discussing the potential member's contribution and role on the advisory committee.

Following are sample letters requesting membership (**Resource 6.8**) and releasing/replacing a member (**Resource 6.9**).

Sample Letter Requesting Membership Resource 6.8

Dear _____:

As the Chair of the (Name of Pathway/Industry Sector), I recognize the importance of a qualified labor pool to meet the needs of the region's (Name of Pathway/Industry Sector) industry. We are seeking counsel and advice from (Name of Pathway/Industry Sector) industry leaders to identify ways for business/industry and education to work more effectively together.

To that end, we request that you join us as a member of the (Name of Pathway/Industry Sector) advisory committee. As a member of the [advisory committee name] you will have a direct impact on the [name of career pathway] and the skills needed in the workforce. Our committee usually meets at least twice per year, and you will be notified by [name technology or software that you will be using]. I have enclosed last year's annual report for your reference, a copy of this year's work plan and the advisory committee member handbook. In addition, I have also enclosed information on the career pathway and the institutions involved.

Your experience and expertise will help us provide the skills needed and contribute to the economic health of our region. I will call you this week to answer any questions that you might have and hope to have your consideration on this matter.

Sincerely,

Committee Chair, Advisory Committee

Sample Letter of Releasing/Replacing a Member

Resource 6.9

Dear _____:

On behalf of [*advisory committee name*], I would like to take this opportunity to express my sincere appreciation to you for your participation in our advisory committee activities during the past year. Your contributions were invaluable, and resulted in numerous program and curriculum improvements. [*List several examples.*]

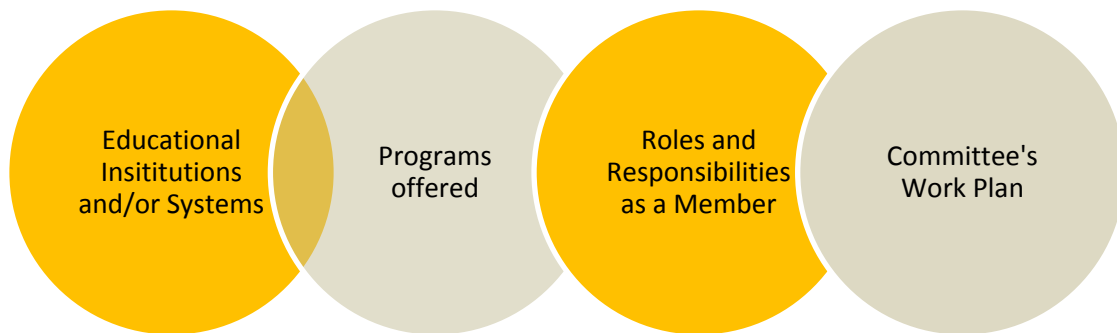
The students and faculty who benefited directly from these improvements also wish to express their thanks to you, and encourage your continued support and service.

At this time, I am in the process of organizing the committee for the coming year. I encourage you to remain by nominating an advisory committee member to take your place and to continue to share with us your thoughts and expertise.

Sincerely,

Chairperson, Advisory Committee

The committee's success will depend to a large extent on how well members understand their roles at the first meeting they attend. All members should be regularly provided with information relative to the committee's purpose, function, structure, and goals as expressed in the committee's work plan. New business members need to understand the following:



List items to be included in orientation of new members:

Resource 6.10

- 1.
- 2.
- 3.
- 4.
- 5..

Formalizing Structure

Each advisory committee should develop and approve guidelines for operating procedures, or bylaws. Collectively, bylaws constitute a formal, written description of how the committee operates. **Resource 6.11A** provides sample bylaws. **Resource 6.11B** will help you collect notes on the structure of the committee.

Constitution/Bylaws SAMPLE Resource 6.11A

(adapted from A Guide to the Operation of Career and Technical Education Advisory Committees, published by Education Services, Colorado Community College System, July 2008)

(Career Pathway)

ARTICLE I—NAME AND PURPOSE

This Committee shall be known as the (Career Pathway) Advisory Committee.

The Advisory Committee shall provide leadership in and promote the development of the (Career Pathway) as it relates to and meets the needs of the industry, the students, the community, and the public. The Committee shall advise educators in and the administration on matters related to the program area.

ARTICLE II—MEMBERSHIP

Number of Members

A simple majority of the members will be representative of business and industry.

In addition, representatives could include representatives from the educational community and other stakeholders.

Appointments and Terms

Each appointment of a program advisory committee member shall be for three years, except when the appointment is to fill an unexpired term. At least two-thirds of the members shall be retained each year with one-third of the membership being appointed each year. An outgoing member may be reappointed by a majority vote of membership present. An individual will automatically lose membership on the Committee if he/she fails to attend three successive meetings without presentation, in advance, to the chairperson of the committee, a valid reason for his/her absence.

Advisory Committee members may submit names of potential members for the committee.

The appointments are made by the governing board. The term of a new Committee member shall begin on September 1st.

Ex Officio Members

Ex Officio members shall be:

1. Appropriate administrators
2. Appropriate program coordinators or supervisors
3. Faculty in the program area

BYLAWS

SECTION A—OFFICERS AND THEIR DUTIES

The officers shall be: a chairperson, a vice-chairperson and a secretary.

The officers shall be elected annually by a majority vote of the Committee members at the last meeting during the school year and shall be from business/industry. Officers may be re-elected to the same office. The chairperson shall be elected from among those members who have served at least one year.

The chairperson's duties shall:

- be a representative from business or industry, elected by the committee members
- be sensitive to the views of the members
- be able to listen critically
- be reasonable
- exercise good judgment and fairness
- be able to work closely with the teacher
- spend more time than other members on the affairs of the committee
- be well informed
- to preside at the meetings of the Committee
- to serve as a chairperson of the Program Advisory Committee
- to appoint special committees as the need arise, which may include persons other than committee members
- to meet with the faculty or program director/administrator to prepare an agenda prior to a forthcoming meeting
- arrange for special presentations
- prepare reports
- Recommended responsibilities include:
 - establish meeting dates and calling meetings to order
 - plan the meeting agenda
 - encourage a relaxed atmosphere conducive to productive discussion
 - plan committee activities and providing sufficient background information when needed
 - maintain personal contacts with members and school personnel
 - approve all announcements, notices, and other information sent to committee members
 - preside over all meetings, leading discussions, and bring closure on key points of discussion

The co-chairperson shall be elected from among those members who have served at least one year. The vice-chairperson's duties shall:

- serve as the next chairperson following a set time as vice chairperson
- work closely with the chairperson on all tasks
- serve as the leader for many of the committee's activities
- perform specific tasks assigned by the chairperson

The secretary shall act as the communication liaison between the educational institution and the community. The secretary shall maintain a close working relationship with members of the committee, and also assist the chairperson in setting the tone of the committee activities.

The responsibilities of the secretary/recorder are:

- keep records of the attendance of members at meetings
- keep a record of discussion and recommendations
- maintain a permanent record file of Advisory Committee activities
- distribute minutes of Committee meetings and copies of other Committee documents to committee members, educators, and others who may be concerned. He/she shall have the assistance of the college's staff and the use of the college facilities in performing these functions.
- send copies of minutes and reminders to the chief administrative officer
- arrange for meeting space
- notify members and guests of meeting time/location
- prepare and mail information to committee members and others associated with the program
- prepare and forward necessary correspondence
- provide statistical information about the program and prepare progress reports
- accompany the committee chairperson to visit educational personnel and explain committee actions.

SECTION B—MEETINGS

At least two regular meetings of the Committee shall be held during the school year. Written or electronic notice of each regular meeting will be sent to members. Special meetings of the Committee may be called by the chairperson as needed throughout the year. The time of advance notice shall be appropriate in terms of the reason for the urgency of the meeting.

SECTION C—RECOMMENDATIONS AND REPORTS

Any formal resolutions or recommendations from the Committee shall be in written form. They shall include the number of Committee members present and voting, and the number favoring the resolution or recommendation. All resolutions and recommendations shall be presented to the program coordinator or division chairperson, who shall then present them to the administration, who shall present them to the governing board if necessary.

SECTION D—EVALUATING COMMITTEE EFFECTIVENESS

The Program Advisory Committee will evaluate effectiveness at the final meeting of each school year. Goals and objectives will be formulated at the first regular meeting of the school year, utilizing implications from the spring evaluation.

SECTION E—BYLAWS CHANGES

These bylaws may be amended or added to by two-thirds vote of active members at any regular or special meeting if at least ten days written notice has been given.

Formalizing Structure Notes

Resource 6.11B

Item	Notes for Developing Bylaws
Name of the committee	
Purpose	
Membership guidelines	
Officers	Corresponding duties
Meeting guidelines	
Subcommittee	Details or assignments
Parliamentary authority or operating procedures	
Amendment procedures	

Communication

Communication with members will occur in both:

- Formal settings and
- Informal settings.

Use the following form (**Resource 6.12**) to determine how you might best communicate with members.

List How You Might Communicate With Members:

Resource 6.12

Informally

- 1.
- 2.
- 3.
- 4.

Formally

- 1.
- 2.
- 3.
- 4.

Advisory committees should strive to streamline meetings. Business members will balk and drop out if they perceive that you are wasting their time. Providing materials for review in advance can ensure that meeting time is reserved for important discussions and decision-making. Tours and lectures should not be scheduled during regular meetings. Use the following form (**Resource 6.13**) to list ideas on how you might streamline meetings.

List Ideas for Streamlining Meetings

Resource 6.13

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Meetings

Meeting discussions should focus on the agenda, and every attempt should be made to involve each member. Time should be allowed for discussion of the strengths and weaknesses of the program. The committee chair should be able to draw on the expertise of every committee member and not let any individual dominate the discussion.

The committee should establish meeting ground rules such as the following:

- Encourage everyone to participate equally.
- Share ideas freely.
- Provide constructive suggestions rather than negative criticisms.
- Stay on track and on time.
- Be concise.

Use the following form (**Resource 6.14**) to begin developing ground rules for your meetings.

Ground Rules	<ul style="list-style-type: none">• Ground Rules for Meetings• Resource 6.14
Ground Rule #1	
Ground Rule #2	
Ground Rule #3	
Ground Rule #4	
Ground Rule #5	

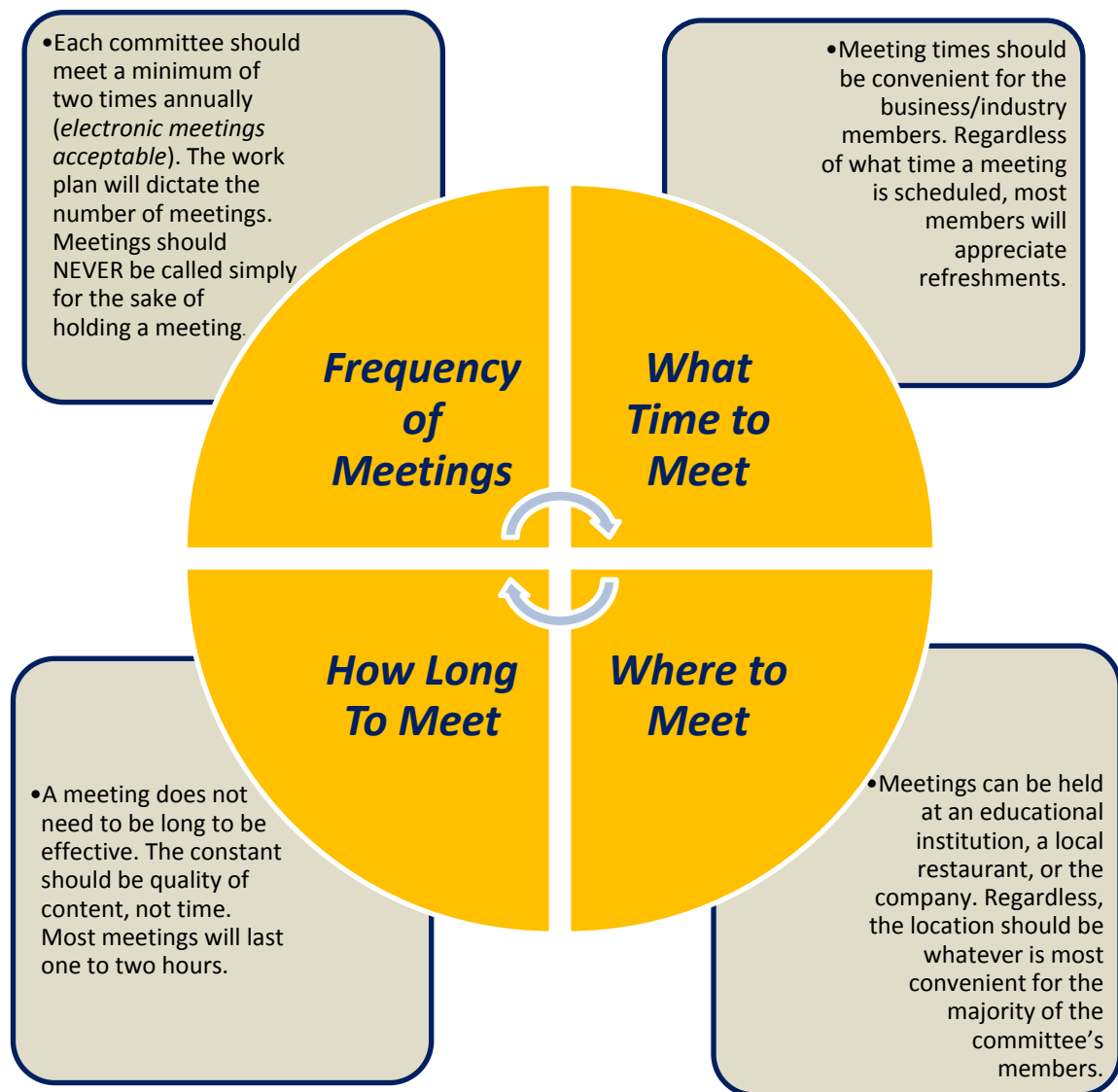
Effective Meetings

Well-organized meetings add to the committee's effectiveness. Busy committee members are more likely to remain involved when their time is used well. The following checklist (**Resource 6.15**) should be used for every meeting.

Effective Meeting Checklist Resource 6.15		
Meeting Held on:		
Criteria	✓ Met Criteria	Notes
Meeting was scheduled well in advance.		
Time and location were good for business/industry partners.		
Meeting started and ended on time.		
Meeting had a stated purpose.		
Agenda was distributed prior to the meeting.		
All agenda items were completed in an organized way.		
Date for the next meeting was set prior to adjourning.		
Meeting allowed for full and open discussion of issues, including controversial ones.		

Structure of Meetings

Committee meetings should involve an orderly, predictable process with respect to frequency, times, locations, and length, as shown in the following figure.



Organized meetings are one of the keys to a successful advisory committee. Establishing a meeting schedule at the beginning of the academic year will allow committee members to plan their calendars accordingly. Use the following form (**Resource 6.16**) to plan the schedule of meetings for the year.

Schedule of Meetings Resource 6.16			
Meeting Number #	Date	Time Parameters	Location of Meeting
1			
2			
3			
4			

The following graphic shows the steps that should be taken in communicating with members about meetings, before and after.



The following resources will help you in communicating with your members.

Resource 6.17 is a sample “save the date” notice.

Resource 6.18 is a sample invitation letter.

Resource 6.19 is a sample thank you letter to participants.

Resource 6.20 is a sample thank you letter to nonparticipants

Resource 6.17
Save the Date Sample

XYZ Career Pathway Advisory Committee

Please Save the Date:

October 1, 2012

Our next meeting will be October 1, 2012 at Acme Steel from 7am to 9 am (light breakfast will be served). More information forthcoming.

Resource 6.18
Sample—Invitation Letter

Dear (Salutation):

The (Name of Advisory Committee) will be meeting on (Date/Time) at the (Location). We believe that you will find the meeting productive, and the results interesting and actionable.

The meeting is being held at:

(location name)

(Street address)

XXX Building, Room XXX

Enclosed please find an agenda and a map to the (location name) with both driving and parking directions. Should you have any questions, please do not hesitate to call me or (optional contact) at (phone number). I look forward to seeing you on (date).

Resource 6.19

Sample Thank-You Letter to Meeting Participant

Dear (Salutation):

I would like to personally thank you for attending the (Name of Committee) held last week at (location name). As a leader in the industry, your participation and insights are invaluable in helping education work to better understand and address the workforce development needs of (Pathway or Industry Sector) organizations in the region.

Enclosed are the meeting minutes and we will keep you apprised of our progress as we develop our responses to the workforce development needs the committee has identified, and encourage your continued participation in these efforts. The (Name of Advisory Committee) is committed to a long-term, strategic partnership with the (Name of Pathway or Industry Sector) to meet your employee development needs. We thank you for having committed your valuable time to provide us with your counsel and advice.

Resource 6.20

Sample Letter to Meeting Nonparticipant

Dear (Salutation):

I would like to update you on the progress (Name of Committee) most recent workforce development efforts. A meeting was held on (Date). The insights provided by participants at the meeting are invaluable in helping us develop effective responses to the workforce development needs identified.

Enclosed are the meeting minutes, and we will keep you apprised of our progress as we develop our responses to the workforce development needs the committee has identified, and encourage your continued participation in these efforts. The (Name of Advisory Committee) is committed to a long-term, strategic partnership with the (Name of Pathway or Industry Sector) to meet your employee development needs. We hope to see you at our next meeting so that you can provide us with your counsel and advice.

Use the following checklist (**Resource 6.21**) to help you track meeting correspondence.

Checklist for Advisory Committee Meeting Resource 6.21					
	Deadline	Person Responsible	√	Method or Technology	Notes
Meeting date, time and location scheduled					
“Mark the Date” notice sent out					
Agenda developed					
Sent letter to expected participant list to confirm attendance, distribute agenda, and provide directions to meeting					
Reminder notice sent					
Room set up and technology ordered					
Refreshments ordered					
Review set-up checklist to ensure all items are taken care of					
Conduct phone follow up to invitation in order to maximize attendance					
Electronic recording of meeting for distribution to non-attending members					
Send thank-you/follow-up letters to participants and non-participants					
Meeting notes sent out					
Press release – Optional					

Meeting Agenda

Agenda topics will be dictated by the program of work, but sample agenda topics could include:

- Academic preparation of the adult learner
- Labor market trends
- Impacts of federal and state legislation
- Emerging fields and potential new courses and programs
- Curriculum development (academic, technical, and essential skills)
- Instructional development
- Facilities requirements
- Recruitment of students
- Marketing of programs and completers
- Work performance of graduates
- Program review processes and outcomes
- Equipment
- Staff development for instructors

The following table (**Resource 6.22**) provides a sample agenda and agenda items.

Agenda Items and Sample Resource 6.22	
Typical Agenda items	Sample Agenda
<ul style="list-style-type: none"> • Roll call • Introduction of guests • Approval of previous minutes • Summarization of unfinished business • Subcommittee reports • New business and reports of special interest • Miscellaneous discussion • Review of next meeting date and location • Adjournment 	Call to Order Roll Call Introductions of Guests Review and Approval of Previous Minutes Unfinished business Continued discussion of curriculum changes Equipment Subcommittee Report: <i>Need Changes In The Lab</i> WBL Subcommittee Report: Update on <i>Manual for Internships</i> AECP Bridge Subcommittee Report: <i>Building a Bridge Program for Adult Education Learners</i> . New business: Review of Textbooks Miscellaneous discussion and/or Other Items Plans for next meeting Adjournment

Meeting Minutes: It's a Process

All advisory committee and subcommittee meetings must have written minutes. Minutes are the official record of the committee's activities. They help members understand the group's progress, concerns, decisions, and actions. Copies of all agendas and past meeting minutes should be on record with the secretary and department head and/or on the advisory committee's or educational institution's website.



Minutes Sample

MINUTES – Date of Meeting:

Members present—(List)

Members absent—(List)

Other present—(List)

Call to order—Committee Chair Keith Johnson called the meeting to order at 7 am and expressed appreciation for attendance and participation. Johnson stressed the importance of the committee’s continuing support and assistance on developing career ladders with industry recognized credentials. Dr. Jane Doe, College President, greeted the committee. She stressed the college’s work in the addition of more certifications.

Minutes—Minutes of the last meeting were approved as submitted.

Unfinished business—No unfinished business was brought before the committee.

New business—Chair Johnson asked the committee to make suggestions concerning “What are entry-level certifications needed by industry?” Ben Martinez indicated that a computer background would be helpful for employees. Eva Johnson further emphasized the need for computer training. She indicated that a job applicant with computer knowledge has an advantage. It was the consensus of the committee that expanded computer training should be added to the program as soon as possible. The chair was asked to appoint a subcommittee to investigate several kinds of computers and software for possible purchase. It was agreed that the subcommittee would report to the committee at the next meeting.

Adjournment—The meeting was adjourned at 8:15 am..

_____, Secretary

Template for Minutes Resource 6.23	
Date of Meeting:	
Members present:	
Members absent:	
Others present:	
Call to order:	
Previous Minutes Approved:	
<i>Motion by:</i>	
<i>Second by:</i>	
Unfinished business:	
New business:	
Adjournment:	
	Secretary

Other Communication Strategies

Advisory committees should create communication channels that help to maintain close employer-educator relationships that go beyond those established through formal meetings. The ability of the committee to make decisions *during* meetings will depend to a large extent on how well the members communicate *between* meetings.

Communication Strategies			
Strategy	Description	Characteristics	Uses
<i>Impact documents</i>	One-page snapshots that keep the committee updated on current events.	Informal; compact, typically one page, shared through email or posted on website	Internal press releases; updates on new activities, processes, and/or results
<i>Periodic highlights</i>	One-page summaries of major activities and accomplishments during a specific time period. The person who writes the highlights should be careful in distinguishing between confirmed results and anticipated or projected results.	Typically one-page; covers a time period (month or semester)	Summary of major activities or accomplishment
<i>Annual report</i> (Resource 6.24 is a sample).	Does not need to be lengthy. Information from the periodic highlights can be used as the basis for the annual report. Be sure to include general student outcome data (<i>how many students are in the bridge program, how many completed, etc.</i>).	Concise information on significant program and committee accomplishments	Disseminate to members and the community
<i>Newsletters</i>	Impact documents such as periodic highlights and annual reports can be distributed in the form of newsletters. Assembly and layout of the newsletters could be assigned as student projects.		

One important piece of correspondence is the yearly report for the committee and its corresponding career pathway. The following table (**Resource 6.24A**) may help you in outlining that report.

Sample Annual Report Resource 6.24A			
Name of Advisory Committee:			
Committee Chair:	Vice-Chair:	Secretary:	Other:
Meetings			
Meeting	Meeting Date	Purpose	
1.			
2.			
3.			
4.			
5.			
Current Bridge Programs involved in the Pathway			
ABE			
ESOL			
Industry-Recognized Credentials Available			
Student Stats			
Program headcount			
Number of nontraditional students			
Percent of nontraditional students			
Number of females/number of males			
Percent of females/percent of males			
Number of completers			
Number and Percentage of GED program completers than transferred to postsecondary program			
Number receiving industry recognized credential			
# of certificates			
# of attaining AAS degrees			
Placement rates for program graduates within 9-12 months of completion			
Number and percentage of Adult Education students that received entry-level certification in field			

Labor Market Information		
Estimated need for workers in the industry:	Next 18 months	Next 3 years
Entry-Level Workers		
Technician level Workers		
Supervisory		
Comments or Trends in Labor Market:		
Curriculum		
List Industry-recognized credentials that match the career ladder:	Bridge Programs	Postsecondary
List curriculum changes made this year:		
List accomplishments from this past year:		
List Goals for next year:		
Signature of the committee chair:		

Resource 6.24b is a sample press release.

Sample Press Release

Resource 6.24B

For Immediate Release

Date

(Name of Institution/s) Invites Area (Industry Sector) Organizations and Businesses to Advisory Committee meeting To Discuss Their Workforce Development Needs

The (Name of Advisory Committee) had its annual meeting and sought input from local industry leaders regarding the region's workforce development needs. The advisory committee meeting included leaders from (Name of Pathway or Industry Sector) businesses including

(List Organizations and Companies That Participated in the meeting)

Items discussed included such issues as the current economic status of the region, current and future business challenges, specific industry workforce needs, projected changes in the local economy and the workforce, resources available to improve workers' skills and development, and ways in which education and local industry can develop meaningful partnerships to effectively address the challenges they see ahead. Studies across the country consistently find that the lack of a skilled workforce is a major challenge in virtually every industry.

END

Use the following table (**Resource 6.25**) to help brainstorm how you will use different strategies for communication.

Communication Strategies Resource 6.25		
Item	How we will use	Targeted Audience
Impact documents		
Periodic highlights		
Annual report		
Newsletters		
Impact documents		
Periodic highlights		
Press Releases (Resource 6.24B is a sample.)		

Using technology for communication—Most people use meetings as the primary way to communicate because a face-to-face meeting is comfortable for them, but that method may not use the committee’s time most wisely. Listed below are categories and descriptions of connective technologies that you might use in communicating with your advisory committee.

Using Technology For Communication		
Technology	Description	Examples
1. Blogs	A blog is an on-line journal that you share with other people. People can post entries and others can read, write, or edit this journal. You can develop a blog for your existing website or there are several sites that offer free blog hosting.	www.blogger.com www.livejournal.com www.wordpress.com www.twitter.com www.edmodo.com www.grouptweet.com
2. Collaborating & file sharing	Allows you to create and share your work online. Applications include documents, spreadsheets and presentations. You can upload from and save to your desktop, edit anytime and from anywhere, and choose who can access your documents.	www.google.com www.dropio.com
3. Groups and listservs/email	The Internet provides a fast and efficient medium for communication between committee members and for committee management. Groups allow groups of people have discussions about common interests. Groups can discuss, upload, and share files.	www.groups.google.com www.groups.yahoo.com www.gmail.com www.hotmail.com
4. Meeting schedulers and invitations	A meeting schedule is an online productivity tool that allows you to arrange and schedule meetings (and other events). Usually the tool sends out invitations to participants proposing times; summarizes their responses; updates you on the results; sends confirmations and reminders prior to meetings.	www.doodle.com www.evite.com www.meetingwizard.com
5. Online surveys, polls, and registrations	You can create and publish customized surveys in a short amount of time. You send out invitations to the survey via email and the participants can go online to take the survey. Services allow you to collect, sort, and analyze the responds. This would be an excellent tool to survey your business partners on hiring trends, skills need, or just about anything related to information that you need from them.	www.surveygizmo.com www.surveymonkey.com www.google.com (Google Docs and Forms)
6. Podcasting	Podcast is a buzzword to describe downloading audio or video files from the Internet to a portable device (iPod or MP3 player). You might wish to video a meeting or a workshop so that others who could not attend can see it in a podcast form.	www.mypodcast.com
7. RSS news feeds	RSS stands for Really Simple Syndication. It’s an easy way for you to keep up with news and information that’s important to you, and helps you avoid the conventional methods of browsing or searching for information on websites.	www.feedforall.com www.google.com/reader www.digg.com
8. Social networks	A social network site is an online community of people who have a common interest. Your advisory committee could build a profile (who, what, where, why) and then share files, have a discussion, and even have subgroups (subcommittees).	www.facebook.com www.Linkedin.com www.twitter.com www.ning.com

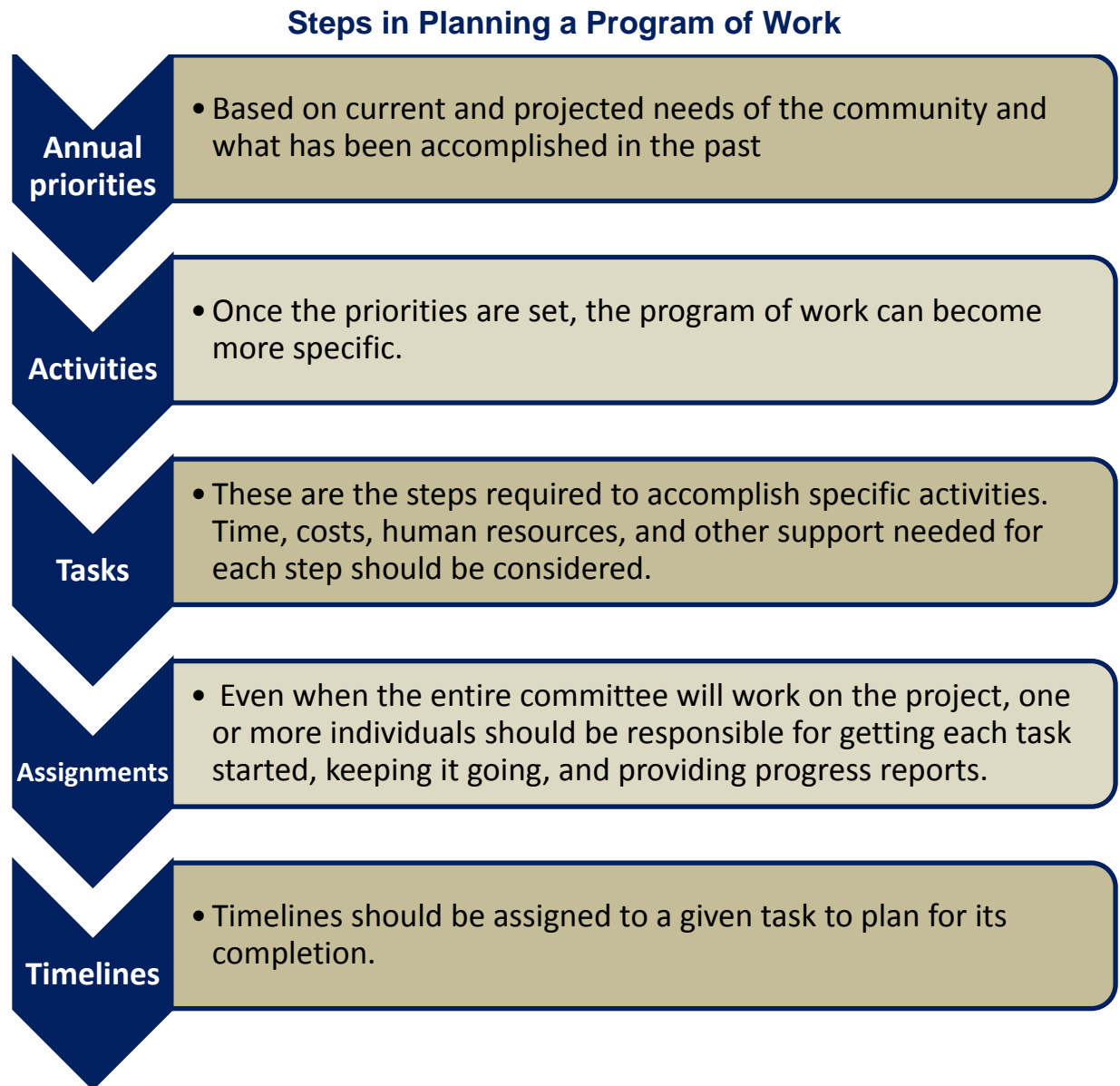
Using Technology For Communication		
Technology	Description	Examples
9. Teleconference	Teleconference is a telephone between participants in two or more locations. Teleconferences are similar to telephone calls, but they can expand discussion to more than two people. This works well for small subcommittee meetings.	www.instantconference.com
10. Text messaging	Texting is the common term for sending a brief text message over cell phones. This would be a great way to remind someone of a meeting on the day of the meeting.	Individual cell phone plans
11. Video sharing/ video blogging	Allows you to post and download videos.	www.youtube.com
12. Web conferencing or videoconferencing and VOIP	Web conferencing tools allow you to meet online rather than in a conference room. A webinar is a neologism to describe a specific type of web conference. It is typically one-way, from the speaker to the audience with limited audience interaction, such as in a webcast. A webinar can be collaborative and include polling and question-and-answer sessions to allow full participation between the audience and the presenter. VOIP technology allows you to make telephone calls over the Internet (converts voice signals into data streams that are sent over the Internet and converted back to audio by the recipient's computer).	www.icom.com www.webex.com www.skype.com www.gotomeeting.com
13. Web site	If the program has a link on the institution's website, the committee should be able to make good use of it. Ideally, it would provide at least two links: Public access link—This link would lead the viewer to information that is of interest to the public, such as general information on the program and the activities of the committee. "Committee members only" link—This link would provide a connection point for committee and subcommittee members. This is the equivalent of the "back office" area reserved (by password protection) exclusively for authorized personnel.	www.google.com (Google Sites) www.yola.com *Check with your institution
14. Wikis	A wiki is basically a website that allows everyone who registers to add and change content. The most common wiki application is Wikipedia, an online encyclopedia. Wikis are easy to use as all you need is a computer, a web browser, and an Internet connection—no software, no website skills—to begin having very interactive communications with many people simultaneously.	www.wikispaces.com www.wikipedia.com www.wikspot.org

Use the following table (**Resource 6.26**) to brainstorm how your committee could use the latest technology to help with communication.

How Our Advisory Committee Could Use Technology Resource 6.26			
Technology	✓Will we use this?	Examples of how we would use this	Which service will we use?
Blogs			
Collaborating and file sharing			
Groups and listservs/email			
Meeting schedulers			
Online surveys a registrations			
Podcasting			
RSS news feeds			
Social networks			
Teleconference			
Text messaging			
Video sharing/bloggging			
Web/Video conferencing			
Web site			
Wikis			

Planning a Program of Work

The committee should develop a plan of work to accomplish its goals. The following graphic illustrates the steps in planning a program of work.



Program of Work Categories and Examples

The committee should decide its own program of work, but the following table lists common categories and examples.

Curriculum Review and Revision	<ul style="list-style-type: none">• Modifying existing programs• Building bridge programs• Identifying new or emerging fields
Staff Development	<ul style="list-style-type: none">• Providing in-service activities for instructors• Opening industry-based training to instructors• Supporting instructors' memberships or participation in trade associations
Career Development and Work-Based Learning	<ul style="list-style-type: none">• Occupation-related field trips• Job shadowing• Clinical Internship (paid or unpaid)• Simulation• Laboratory Method• Paid /Unpaid Work Experience
Marketing and Advocacy	<ul style="list-style-type: none">• Interpreting the career pathway and bridge programs to the community• Serving as an advocate of the career pathway• Seeking legislative support for AECF
Recruitment, Mentoring, and Placement	<ul style="list-style-type: none">• Recruitment• Student outcomes• Placement• Mentoring
Resources	<ul style="list-style-type: none">• Advising on new technology• Advising on facilities or physical layout• Sharing libraries of visual aids, books, and magazines

Use the following form (**Resource 6.27**) to list program of work objectives for the areas shown.

Program of Work Year: _____ Objectives Resource 6.27			
Category	Objectives	√ Subcommittee Needed?	Subcommittee Chair:
Curriculum Review and Revision	1. 2. 3. 4.		
Staff Development	1. 2. 3. 4.		
Career Development and Work- Based Learning	1. 2. 3. 4.		
Marketing & Advocacy	1. 2. 3. 4.		
Recruitment, Mentoring, & Placement	1. 2. 3. 4.		
Resources	1. 2. 3. 4.		

It is common to assign subcommittees to program-of-work categories or objectives. Use the following table (**Resource 6.28**) to list subcommittee objectives and strategies.

Subcommittee Objectives and Strategies Resource 6.28		
Subcommittee: <input type="checkbox"/> Curriculum Review/Revision <input type="checkbox"/> Staff Development <input type="checkbox"/> Career Development & WBL <input type="checkbox"/> Marketing & Advocacy <input type="checkbox"/> Recruitment, Mentoring, & Placement <input type="checkbox"/> Resources <input type="checkbox"/> Other		
Objective 1:		
Strategies:	1.	Timeline: Team Leader:
	2.	Timeline: Team Leader:
	3.	Timeline: Team Leader:
	4.	Timeline: Team Leader:
Objective 2:		
Strategies:	1.	Timeline: Team Leader:
	2.	Timeline: Team Leader:
	3.	Timeline: Team Leader:
	4.	Timeline: Team Leader:
Objective 3:		
Strategies:	1.	Timeline: Team Leader:
	2.	Timeline: Team Leader:
	3.	Timeline: Team Leader:
	4.	Timeline: Team Leader:

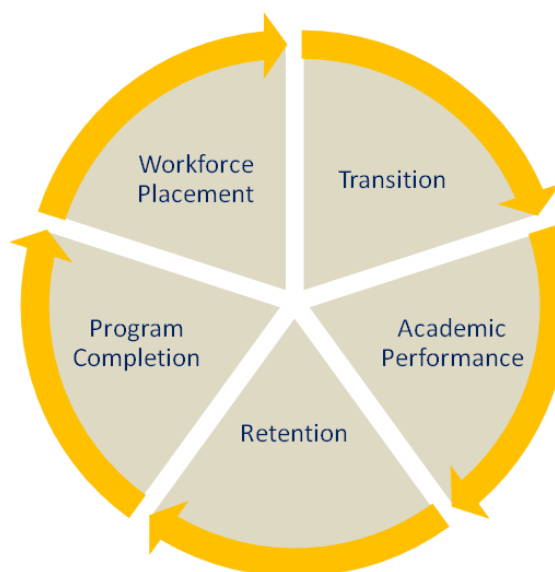
Evaluation

Evaluation is a key component for continuous improvement. You may wish to evaluate not only the program that the committee is serving but the performance of the committee itself.



Career Pathways review—The ultimate measure of the effectiveness of the pathway is its ability to place highly qualified completers into the workforce. Evaluation data that should be examined includes the following:

- Transitions from AE to postsecondary
- Student academic performance
- Retention rates
- Program completion rates
- Workforce placement rates



Advisory committee performance—The effectiveness of the committee is determined mainly by determining whether the objectives set out in the program of work have been met.

An evaluation can help the committee determine:

- Whether the program is accomplishing its goals.
- The extent to which the program of work has strengthened the career pathway.
- What recommendations should be, or have been, acted upon, and what the implications of those recommendations are.
- The future direction and program of work for the committee.

Use the following survey (**Resource 6.29**) to assess your program of work.

Program of Work Assessment Resource 6.29						
NA = Not applicable -2 = Strongly Disagree -1 = Disagree 0 = Neutral 1 = Agree 2 = Strongly Agree		Disagree			Agree	
	N A	-2	-1	0	1	2
Priorities and objectives were clearly established.						
Activities of the committee help to meet the established priorities or objectives.						
The scope for the program of work was realistic.						
Planning tasks for each activity were clearly defined.						
Individual responsibilities were clearly described.						
Timelines for each planning task were clearly established.						
Outcomes have resulted from the program of work.						

In addition to assessing the program of work, advisory committees should make sure the management of their committees is not a barrier to success. The two key components of any successful advisory committee are **effective people** and **effective processes**.



Factors to assess could include:

- meeting frequency
- meeting attendance
- meeting times
- meeting location
- each member's length of service
- the diversity of the committee
- committee guidelines or bylaws
- meeting agendas
- communication with member
- public recognition of members
- recommendations made

The following self-evaluation tool (**Resource 6.30**) may be used to rate each element of the committee's performance.

Self-Evaluation Tool Resource 6.30				
Element	Rating	Meets	Exceeds <i>Exceeds</i> includes elements from the <i>Meets</i> .	Excellent <i>Excellent</i> includes elements from <i>Meets</i> and <i>Exceeds</i> .
Membership	<input type="checkbox"/> Meets <input type="checkbox"/> Exceeds <input type="checkbox"/> Excellent	Membership consists of at least 51% industry professionals.	Membership represents active leaders in community and contributes to the economic development of the community. Membership represents both genders and the ethnic diversity of the community.	Membership consists of key influencers while provides for strong leadership, networking and continuous recruitment of quality new members that hire completers.
Meetings & Agenda	<input type="checkbox"/> Meets <input type="checkbox"/> Exceeds <input type="checkbox"/> Excellent	Agenda is created with input from members and is sent prior to meetings. Meetings are held two times per year.	Meetings are held more than twice a year. Agenda is collaborative effort between industry and community and reflects goals and purpose of the AECp program.	Meetings are held four or more times per year and include a discussion of the industry standards and trends.
Minutes	<input type="checkbox"/> Meets <input type="checkbox"/> Exceeds <input type="checkbox"/> Excellent	Minutes reflect meeting discussion as recorded and are submitted to AECp office	Minutes summarize the meeting accurately and are done by an assigned member or elected committee secretary.	Minutes are sent to members within two weeks following meeting and are approved at next meeting as a part of the agenda.
Committee Chair	<input type="checkbox"/> Meets <input type="checkbox"/> Exceeds <input type="checkbox"/> Excellent	Chair presides over meeting.	Chair presides over meeting and assists educators with regular communication between members.	Chair represents the committee at local/state or national meetings. Chair is an advocate for program.
Participation Level	<input type="checkbox"/> Meets <input type="checkbox"/> Exceeds <input type="checkbox"/> Excellent	Members serve as guest speakers, providing field trip sites, or job shadows for programs.	Members and educators regularly correspond.	Members provide information & experiences to prepare students for careers & partner with educators to improve skills and academic performance.
Curriculum Decision Making and Industry Trends	<input type="checkbox"/> Meets <input type="checkbox"/> Exceeds <input type="checkbox"/> Excellent	Committee reviews curriculum and gives general feedback.	Committee reviews materials, equipment and textbooks before purchase and advocates recommends changes as needed to keep up with the industry.	Committee members work collaboratively with educators to improve or develop curriculum when needed as industry trends change.

Reviving Stagnant Advisory Committees

Much of this section has focused on the development of new committees, but many of you may have existing committees that are not operating at peak performance. The following graphic shows some of the reasons that may be happening.

Help—No one comes to meetings!

Time Commitment	Value:	Response:
<ul style="list-style-type: none">•Many times it is just a time commitment, but if one digs deeper into the “time issue” you can usually find an underlying theme....<i>“it’s not worth my time.”</i>	<ul style="list-style-type: none">•There must be value for a business person to take time (<i>time is money</i>) out of his/her busy day to spend it with education.	<ul style="list-style-type: none">•Education must be willing to <i>“listen to the customer”</i> and <i>“respond to the customer.”</i>

Use the following discussion questions (**Resource 6.31**) for frank discussion on why the committee may not be operating optimally.

Lack of Participation Questions Resource 6.31
1. Does the industry have all the qualified workers (with no deficiencies) that it needs?
2. Is the chair from business and he/she respected among by peers?
3. Is education listening and responding to business needs or being dominant at meetings?
4. Is the physical layout of the meetings such that business has the floor and education is listening and responding when needed?
5. Are meetings held at time convenient to business?
6. Are meetings locations convenient to business?
7. When business makes a request or recommendation, is there a timely response from education?

Perhaps you have the right players at the table but no one seems to know what to do.
Resource 6.32 lists questions to bring to the table for earnest conversation.

Stagnant Advisory Committee Questions Resource 6.32			
Qualified Workers Questions	Entry Level	Technical	Supervisory
18 Months: Do you have enough qualified workers (<i>entry-level; technical level; supervisory level</i>) in the next 18-months?			
3-Years: Do you have enough qualified workers (<i>entry-level; technical level; supervisory level</i>) in the next three-years?			
Top 3 Skills: List the top 3 skills for workers (<i>entry level; technical level; supervisory level</i>).			% of responses
Entry Level			
1.			
2.			
3.			
Technical Level			
1.			
2.			
3.			
Supervisory Level			
1.			
2.			
3.			

Member Appreciation

Rewards and recognition are especially important to advisory committees because members are not paid for their efforts. *One of the best rewards is to ask for advice and respond to it.* The following graphic suggests ways to say thank you.

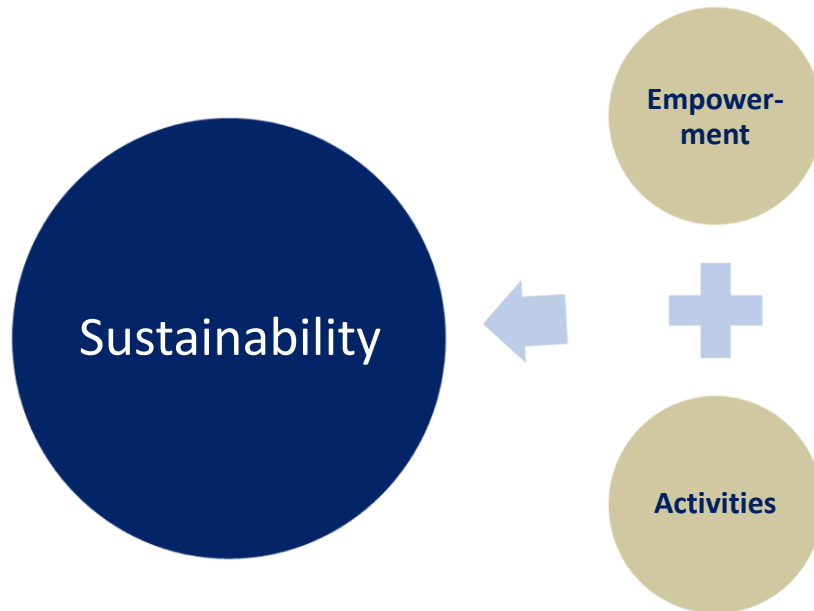


Use the following member appreciation checklist (**Resource 6.33**) to brainstorm how your committee will show appreciation.

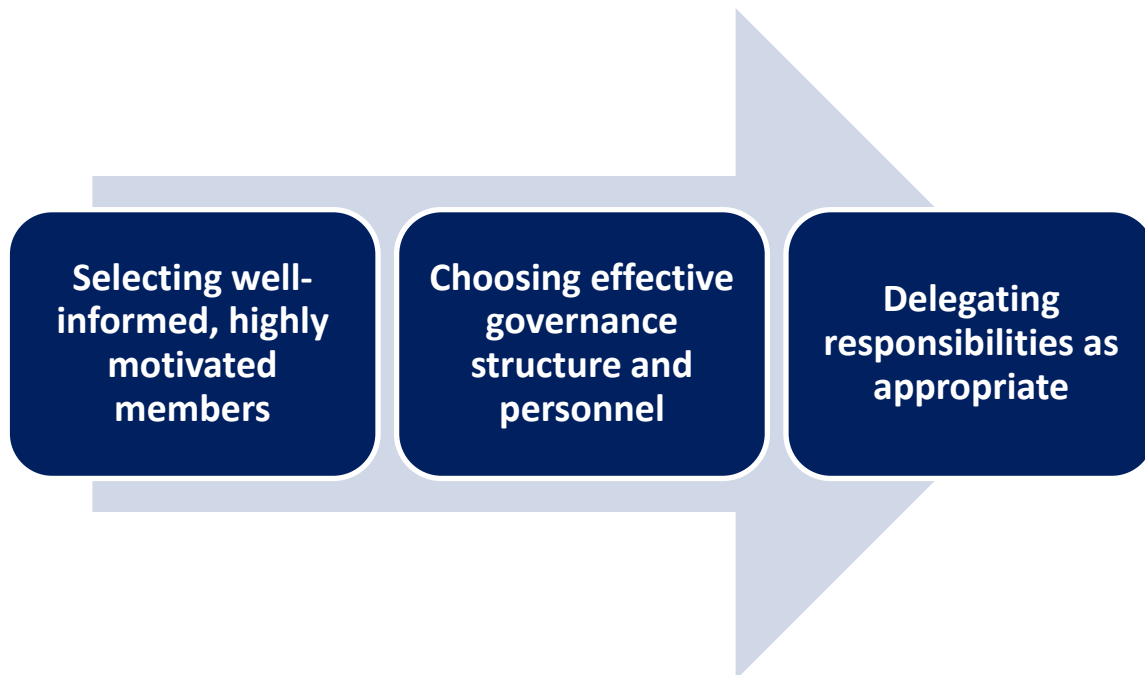
Member Appreciation Checklist Resource 6.33	
Strategy	Notes:
Certificate of appreciation	
Display names on bulletin board or plaque	
Letter of appreciation to a employer	
Invitation to education events.	
Highlight accomplishments in press releases	
Invite members to visit programs	
Include names in program literature	

Sustainability

Establishing an advisory committee is only the first step. To be effective, the committee must become and remain active, and that involves setting and reaching goals and objectives.



The biggest sustainability factor for any committee is empowerment. You empower your committee by carrying out the following tasks:



Recommendations and Feedback

The end product of all advisory committee activities is a set of recommendations for continuous improvement of the program. Many advisory committees write a formal recommendation letter that is signed by the committee chair on behalf of the entire committee. Feedback on the recommendations is the most important motivational tool for advisory committees. Members want to do the “right thing” and are encouraged when they see tangible results from their recommendations.



This section focused on the role of business advisory committees. The process of developing and implementing a successful AECP system must be driven by business. How you structure and maintain that relationship is one of the main keys to success.

VII. College and Career Readiness

The Need for 21st-Century Skills

The skills needed in the United States go beyond reading, mathematics, and science. All Americans, not just an elite few, need 21st-century skills that will increase their marketability, employability, and readiness for citizenship. Educators must take a holistic view of 21st-century teaching and learning that combines a discrete focus on 21st-century student outcomes (a blending of specific skills, content knowledge, and expertise) with innovative support systems to help students master the multi-dimensional abilities required of them in the 21st century.

The key elements of 21st-century learning are represented in the graphic and descriptions beginning on the following page. The graphic shows both 21st-century skills student outcomes (represented by the arches of the rainbow) and 21st-century skills support systems (represented by the pools at the bottom).

Florida Eight Areas of Focus	
	FL#1-Program Design
✓	FL#2-Curriculum and Instruction
	FL#3-Professional Development
	FL#4-Student Support
	FL#5-Assessment
	FL#6-Partnerships
	FL#7-Marketing
	FL#8-Accountability

OVAE 10 Component Framework	
	OVAE#1-Legislation and Policies
	OVAE#2-Partnerships
	OVAE#3-Professional Development
	OVAE#4-Accountability and Evaluation Systems
►	OVAE#5-College and Career Readiness Standards
	OVAE#6-Course Sequences
	OVAE#7-Credit Transfer Agreements
	OVAE#8-Guidance Counseling and Academic Advisement
	OVAE#9-Teaching and Learning Strategies
	OVAE#10-Technical Skills Assessments

21st Century Student Outcomes and Support Systems



Source: www.p21.org

The elements described below (represented by the rainbow above) are the skills, knowledge, and expertise students should master to succeed in work and life in the 21st century:

Core Subjects

- English, reading or language arts, world languages, arts, mathematics, economics, science, geography, history, government, and civics

21st-Century Themes: Promote an understanding of academic content at much higher levels by weaving themes into core subjects

- Global Awareness
- Financial, Economic, Business, and Entrepreneurial Literacy
- Civic Literacy
- Health Literacy
- Environmental Literacy

Learning and Innovation Skills: Prepare students for increasingly complex life and work environments

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Communication and Collaboration

Information, Media, and Technology Skills: Exhibit a range of functional and critical thinking skills in a rapidly changing technological world

- Information Literacy
- Media Literacy
- ICT Literacy

Life and Career Skills: Ability to navigate complex life and work environments with adequate life and career skills

- Flexibility and Adaptability
- Initiative and Self-Direction
- Social and Cross-Cultural Skills
- Productivity and Accountability
- Leadership and Responsibility

Using the form below, rate how well Adult Education currently addresses the need for 21st-century skills.

Are We Addressing the Need for 21st-Century Skills?											
Resource 7.1											
Skills	Weak ← ----- → Strong										
	1	2	3	4	5	6	7	8	9	10	
CORE SUBJECTS											
English											
Reading											
Language Arts											
World Languages											
Arts											
Mathematics											
Economics											
Science											
Geography											
History											
Government											
Civics											
INTERDISCIPLINARY THEMES											
Global Awareness											
Financial, Economic, Business and Entrepreneurial Literacy											
Civic Literacy											
Health Literacy											
Environmental Literacy											
LEARNING and INNOVATION SKILLS											
Creativity and Innovation											
Critical Thinking and Problem Solving											
Communication and Collaboration											
INFORMATION, MEDIA AND TECHNOLOGY SKILLS											
Information Literacy											
Media Literacy											
ICT (Information, Communications and Technology) Literacy											
LIFE AND CAREER SKILLS											
Flexibility and Adaptability											
Initiative and Self-Direction											
Social and Cross-Cultural Skills											
Productivity and Accountability											
Leadership and Responsibility											

Why Is College and Career Readiness a Pressing Issue?

Americans are facing increasing competition for meaningful employment from candidates around the world as more people in more countries are becoming more highly educated. At the same time, employers' expectations for the levels of education and training needed for entry-level jobs have increased. Today's workers need to be better educated and prepared as the U.S. continues to move toward a knowledge/information-based economic model in our global economy.

The goal of adult education today should be to equip as many students as possible with the core knowledge, tools, strategies, and skills necessary for college and career success. Adult education is not an end-goal in itself, but rather a bridge to bright future.

In the past, there have been too many distinctions between college-bound and career-oriented studies. There should be pathways of equal status, where high-level academics and high-quality career/technical (CTE) studies are blended. Secondary and postsecondary institutions across the country are trying to create more choices and flexibility in their course offerings through a career pathways system in which each pathway has a rigorous academic foundation and authentic learning is drawn from a career field of particular interest to the student.

Embedded in these career pathway course sequences or programs of study (POS) should be a set of rigorous expectations designed to prepare students for college and careers.

What Is College and Career Readiness (CCR)?

We will set a clear goal: Every student should graduate from high school ready for college and a career, regardless of their income, race, ethnic or language background, or disability status.

President Barack Obama

A Blueprint for Reform: Reauthorization of the Elementary and Secondary Education Act (March 2010)

College and career readiness (CCR) is the foundation for success in the after-school years. This foundation consists of broad-based knowledge and skills that all can put to good use regardless of their educational or career objectives. Loosely put, CCR means ensuring that all learners are prepared for college-level courses upon matriculation, and/or for jobs that earn family-sustaining wages. The skills should include whatever skills are required to succeed in credit-bearing courses at the postsecondary (especially community college) level, since all learners should be prepared for postsecondary education or training whether they pursue degrees or workforce training.

Does being *college*-ready require the same skills and knowledge as being *career*-ready? A majority of Fortune 1000 executives believe this to be the case. Two-thirds of executives (64 percent) agree that the skills and knowledge that students need to be ready for college are the same as the skills and knowledge needed to be ready for careers (*MetLife Survey of the American Teacher: Preparing Students for College and Careers*, 2011).

Colleges and employers may ask applicants to demonstrate a range of abilities: mastery of specific content such as math, science, or English; higher-order cross-disciplinary skills (such as critical thinking, problem solving, or effective communication); or performance skills such as self-motivation or collaboration.

Range of Abilities

Specific Content

- Math, Science, English

Higher-order Cross-disciplinary Skills

- Critical Thinking, Problem Solving, Effective Communication

Performance Skills

- Self-motivation, Collaboration

David Conley describes The Four Dimensions of College and Career Readiness as

- Key Cognitive Strategies:
 - Problem formulation, research, interpretation, communication, precision, and accuracy
- Key Content Knowledge:
 - Key foundational content and “big ideas” from core subjects
- Academic Behaviors:
 - Self-management skills: time management, study skills, goal setting, self-awareness, and persistence
- Contextual Skills and Awareness:
 - Admissions requirements, college types and missions, affording college, college culture, and relations with professors

DISCUSSION QUESTIONS

What does college and career readiness mean at my institution?

What changes have we made at our institution to ensure that all learners are college and career ready?

There are differences of opinion about the importance of certain skills and knowledge for college and career readiness among educators, parents, students, and industry. The following table was taken from the *Metlife Survey of the American Teacher*, where the question was asked, “How important do you think each of the following is for a student to be ready for college and a career?”

Importance of Skills and Knowledge for College and Career Readiness

	Teachers	Parents	Students	Fortune 1000 Executives
Base	n=1000	n=580	n=2002	n=301
Problem solving skills				
Absolutely essential/Very important (NET)	98%	93%	92%	99%
Absolutely essential	64%	60%	55%	73%
Critical thinking skills				
Absolutely essential/Very important (NET)	97%	91%	93%	99%
Absolutely essential	64%	61%	56%	71%
Ability to write clearly and persuasively				
Absolutely essential/Very important (NET)	96%	90%	88%	97%
Absolutely essential	53%	57%	50%	59%
Ability to work independently				
Absolutely essential/Very important (NET)	95%	93%	92%	90%
Absolutely essential	55%	59%	55%	40%
Ability to work in teams				
Absolutely essential/Very important (NET)	86%	85%	83%	94%
Absolutely essential	42%	42%	41%	59%
Knowledge of other nations and cultures and international issues				
Absolutely essential/Very important (NET)	63%	63%	49%	65%
Absolutely essential	19%	24%	15%	18%
Knowledge and ability in higher-level science such as chemistry and physics				
Absolutely essential/Very important (NET)	50%	71%	64%	31%
Absolutely essential	11%	29%	24%	4%
Knowledge and ability in higher-level mathematics, such as trigonometry or calculus				
Absolutely essential/Very important (NET)	46%	69%	66%	40%
Absolutely essential	11%	31%	27%	8%

Q720/Q1015/Q755/Q1300: How important do you think each of the following is for a student to be ready for college and a career? Base: Teachers (n=1000), Parents (n=580), Students (n=2002), Fortune 1000 Executives (n=301)

Using the form below, survey your teachers/instructors on the importance of the skill sets for college and career readiness.

Importance of Skills and Knowledge for College and Career Readiness			
Resource 7.2			
	Not important	Very important	Absolutely essential
Problem solving skills			
Critical thinking skills			
Ability to write clearly and persuasively			
Ability to work independently			
Ability to work in teams			
Knowledge of other nations and cultures and international issues			
Knowledge and ability in higher-level science such as chemistry and physics			
Knowledge and ability in higher-level mathematics, such as trigonometry or calculus			

State Standards Are Not Uniform

Standards-based education reform began with the publication *A Nation at Risk* in 1983.

Standards-based education calls for clear, measureable standards for all students. In standards-based education, each student is measured against a concrete standard rather than measuring how well the student performs compared to peers. The early focus was elementary and middle schools. Defining goals for high school has proved more challenging. Most students see the goal as college, but many policymakers at the state and district levels have been content with a more basic set of standards that leaves too many students short of college-ready. Educators have varied dramatically in how they see or prioritize the goals. Some educators do a superb job of preparing students for postsecondary opportunities. Others are focused inordinately on preparing students for tests, while others prefer not to be bothered by system-wide standards or goals and focus instead on their favorite topics and units (*Making College and Career Readiness the Mission for High Schools: A Guide for State Policymakers*, Achieve and the Education Trust, November 2008).

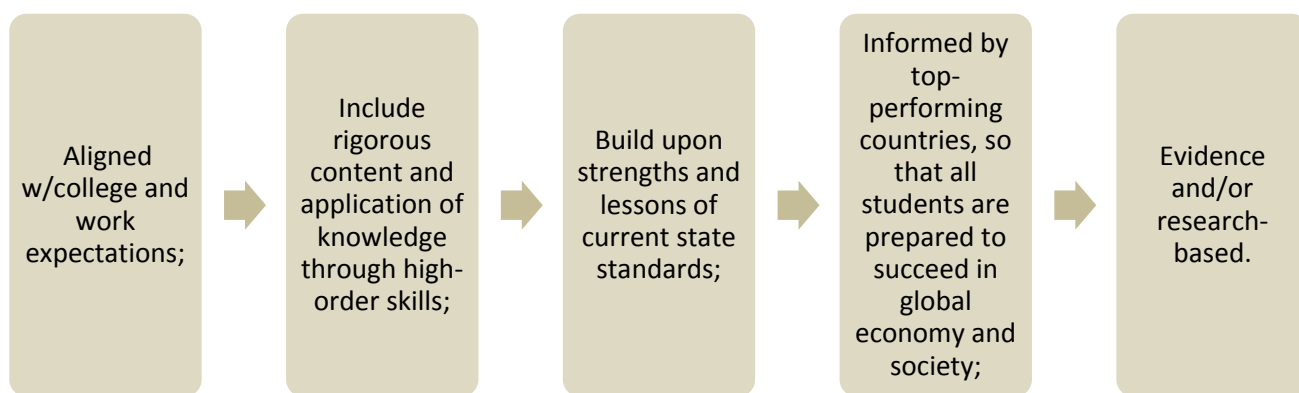
Each state has its own process for developing, adopting, and implementing standards. As a result, what students are expected to learn can vary widely from state to state.

Common Core State Standards Initiative

Mission Statement

The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy.

In the spring of 2009, the Common Core State Standards Initiative was launched under the auspices of the National Governors Association (NGA) and the Council of Chief State School Officers (CCSSO) to develop a common core of state K–12 English language arts and mathematics standards. To develop these standards, CCSSO and the NGA Center worked with representatives from participating states, a wide range of educators, content experts, researchers, national organizations, and community groups. The final standards reflect the invaluable feedback from the general public, teachers, parents, business leaders, states, and content area experts and are informed by the standards of other high-performing nations. The college- and career-readiness standards have been incorporated into the K–12 standards. The criteria used to develop the college- and career-readiness standards, as well as these K–12 standards, are:



To access the state card for your state:

www.all4ed.org/publication_material/commonstandardsstatecards

Please note that the Common Core State Standards are not national standards. The federal government was NOT involved in the development of the standards. This has been a state-led

and driven initiative from the beginning. States will voluntarily adopt the standards based on their timelines and contexts.

The Common Core State Standards provide a consistent, clear understanding of what students are expected to learn, so teachers and parents know what they need to do to help them. The standards are designed to be robust and relevant to the real world, reflecting the knowledge and skills that our young people need for success in college and careers. With American students fully prepared for the future, our communities will be best positioned to compete successfully in the global economy (<http://www.corestandards.org/>).

These standards define the knowledge and skills students should acquire during their K-12 education careers so that they will graduate high school able to succeed in entry-level, credit-bearing academic college courses and in workforce training programs. The standards:



Assignment: You might wish to view the video on the Unveiling of the Standards at <http://www.corestandards.org/presentations>.

College and Career Readiness Anchor Standards

The College and Career Readiness (CCR) Anchor Standards define what students should understand and be able to do by the end of each grade. The CCR and grade-specific standards in the Common Core are necessary complements. The CCR Anchor Standards provide broad standards while grade-specific standards in the Common Core provide specificity. Jointly they define the skills and understandings that all students must demonstrate.

Common Core Standards in Florida

FLORIDA'S TRANSITIONAL COURSES

As a result of Senate Bill 1908, courses have been implemented in the high schools that incorporate the same competencies that the colleges have imbedded in their developmental education (also known as college prep) courses to prepare students for entry-level credit bearing postsecondary courses. These courses are targeted for 12th-graders whose placement scores are below the established cut score indicating that they are not “college-ready.” The Florida Department of Education approved course numbers and descriptions for mathematics and English transitional courses. There was limited offering during the 2009–2010 school year and enrollment increased slightly during the 2010–2011 school year. The one-half credit elective transitional courses are:

- Mathematics for College Success
- Reading for College Success
- Writing for College Success

Successful completion of these courses while in high school will exempt students from further placement testing/postsecondary remediation if they enroll in a community college within two years of completion. Successful completion requires a grade of “C” or better in the course and a passing score on the Florida College Basic Skills Exit Test.

TODAY, the Florida State Board of Education, in a unanimous and unified vote, approved the adoption of the Common Core State Standards for English/Language Arts and Mathematics. This approval marks a vital next step on Florida’s long-standing and successful education reform journey by strengthening our curriculum standards for these critical subjects and laying the groundwork for the comparison of our state’s academic progress with our nation and the world.

State Board of Education
Chairman T. Willard Fair
(http://www.floridastandards.org/Standards/Common_Core_Standards.aspx)

Additional one-credit mathematics and English courses were developed to align with entry-level college credit bearing courses. The two additional courses are:

- Mathematics for College Readiness
- English IV: Florida College Prep

In May 2011, the Florida legislature passed House Bill 1255, which codified a requirement for all students who test as not prepared for college-level work on the FCAT in the 10th-grade, must take the appropriate college readiness courses. This language thus requires all Florida high schools to offer the five transitional courses for math and English (http://www.sreb.org/page/1517/college_and_career_readiness_in_florida.html).

Partnership for the Assessment of Readiness for College and Careers (PARCC)

Florida is one of 26 states that make up the Partnership for the Assessment of Readiness for College and Careers (PARCC). The primary goal of PARCC is to implement a common assessment that is aligned with the Common Core State Standards. PERT is a college-readiness test designed to help determine where a student should be placed when he enters college. It provides placement and diagnostic capabilities in math, reading, and writing and is aligned with the Florida Common Core College and Career Readiness Standards.

The PERT is the first of its kind to be customized and aligned with the Florida Postsecondary Readiness Competencies (PRC) developed by Florida faculty. The PRCs consist of a subset of the Common Core College and Career Readiness Standards, American Diploma Project Benchmarks, and Florida Basic Skills for exit from developmental education. The assessment is available to high school and college students and will be the primary placement assessment used by the Florida College System. This test will also allow high school staff to place students into the proper transitional courses in the senior year, possibly preventing students from taking developmental education courses in college.

The next step is to develop diagnostic tests aligned with statewide developmental education competencies established by Florida faculty to identify specific areas of weakness in reading, writing, and mathematics that will enable faculty to customize instruction. In the final phase of the project, developmental education courses will be restructured based on the developmental education competencies and each college will offer the same developmental education course sequences. This redesign will result in the guarantee of course transfer for students who transfer within the developmental education course sequence.

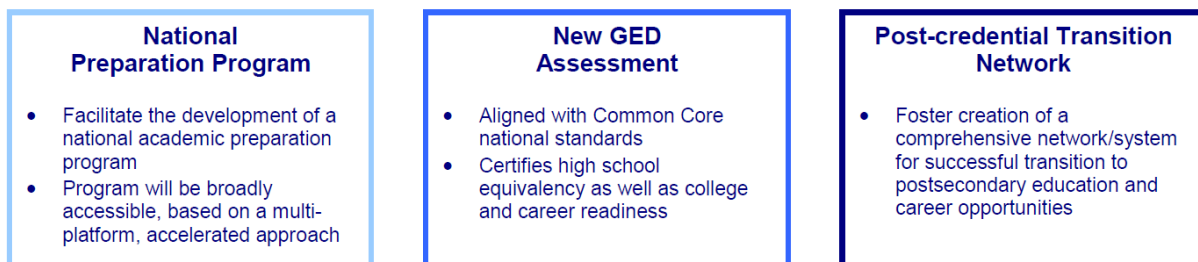
Promoting College and Career-Ready Standards in Adult Basic Education

The Promoting College and Career-Ready Standards project will assist ABE programs in preparing students for success in higher education and training programs. It will also assist efforts to raise awareness and understanding of the critical skills and knowledge that colleges, universities, and employers expect from incoming students and employees. To reach these goals, the project will:

- Validate a set of college- and career-readiness (CCR) standards in English language arts/literacy and mathematics.
- Align the selected CCR standards with the National Report System's Educational Functioning Levels (NRS EFLs) and outcome measures, to determine the extent to which the CCSS work with the ABE accountability system.
- Assess and update the Adult Education Content Standards Warehouse (AECSW) website (20-13-2014) (Source: U.S. Department of Education, Office of Adult and Vocational education. For more information, visit <http://www2.ed.gov/rschstat/eval/sectech/factsheet/promoting-college-career.html>.)

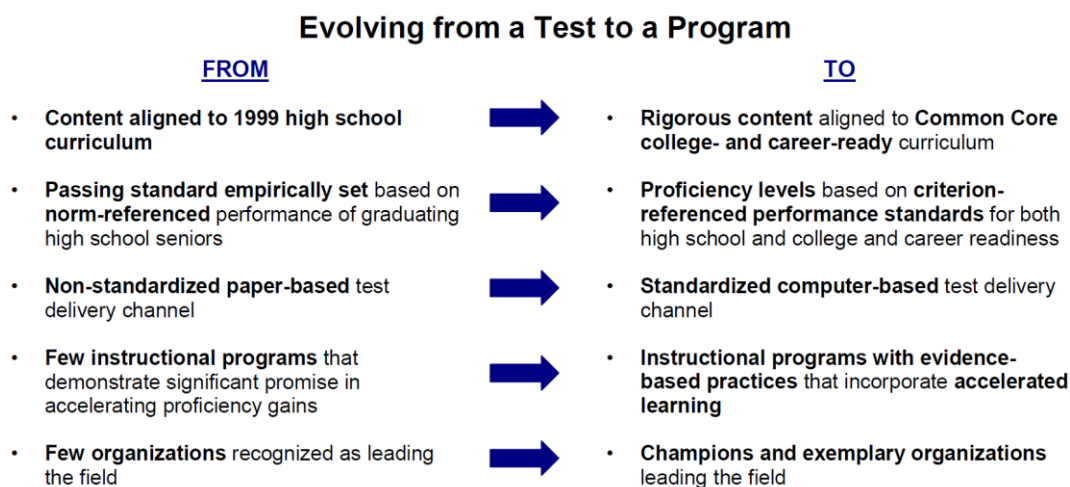
GED 21st Century Initiative

Three Key Components of the Initiative

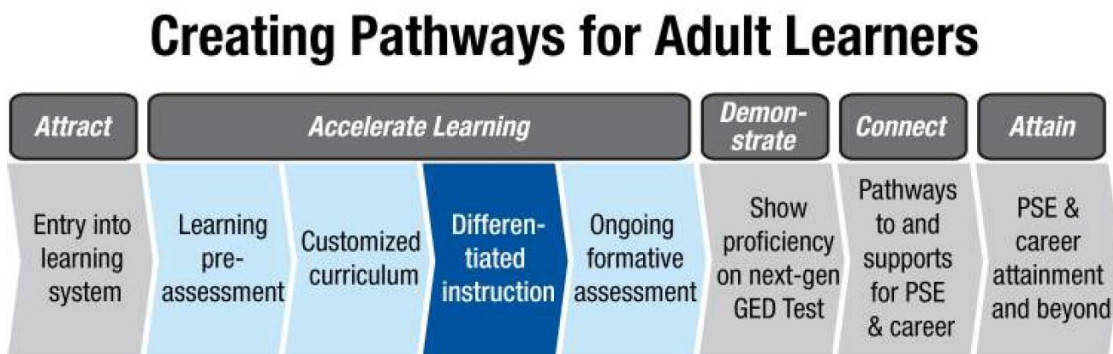


The GED 21st Century Initiative will transform the GED® test into a comprehensive program that will prepare more adult learners for postsecondary education, training, and careers. The centerpiece of the Initiative is the new assessment system. The next-generation assessment is currently being developed and aligned with career- and college-ready content standards such as the Common Core State Standards. The new test will continue to be a measure of high school equivalency and its passing standard will continue to be informed by the performance of graduating high school seniors. In addition, however, the test will include enhanced score reporting which will provide test-takers with information on the strengths and development

needs they have in each of four content areas: Literacy (reading and writing), Mathematics, Science, and Social Studies. The new test will also include an advanced performance level that will provide information to candidates, instructors, schools, and employers about a test-taker's readiness to succeed in careers and/or postsecondary studies. The new test will primarily be delivered on computer, as the content standards being measured require item types which cannot be administered in the traditional paper and pencil format. The new assessment system will also include additional assessments, the Readiness Test (the new version of the Official Practice Test) to be released in 2013, and a series of diagnostic tests, to be released in 2015. (Source: http://lincs.ed.gov/lincs/discussions/assessment/11gedinitiative_transcript)



To prepare for the unveiling of the new GED Assessment System educators should read the GED Assessment Guide for Educators at <http://www.gedtestingservice.com/educators/assessment-guide-for-educators>.



A GED® test graduate must remain competitive with students who complete their high school credentials in a traditional manner. Evidence suggests that test-takers who demonstrate fluency with the skills measured in the new assessment will be better prepared for what they plan to do with their lives. A graduate will no longer hold just a high school equivalency credential, but a roadmap for life's success. It's a stepping-stone toward a college classroom or a better career and a family sustaining wage.

Common Career Technical Core (CCTC) Initiative

The Common Career Technical Core (CCTC) initiative is a state-led effort to ensure rigorous, high-quality career technical education (CTE) programs through a set of common standards built from industry-validated Career Cluster™ Knowledge and Skills statements that will include:

- Standards for Career Ready Practice;
- Career Cluster™ Anchor Standards, applicable to each of the 16 Career Clusters™; and
- Career Pathway Anchor Standards, linked to specific Career Pathways and industry benchmarked when possible.

WHO IS LEADING THE CCTC INITIATIVE?

The initiative is being coordinated by the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), which represents the state and territory heads of secondary, postsecondary, and adult CTE across the nation. The state members of NASDCTEc are leading the development of the CCTC. Business and industry and members of the Career Readiness Partner Council (CRPC)—an organization of leading education and workforce organizations—will provide guidance and feedback during the development of the CCTC.

WHY DO WE NEED THE CCTC?

The goal of the CCTC is to better define career readiness for all students. Nearly 14 million students are enrolled in CTE—encompassing every state, with programs in nearly 1,300 public high schools and 1,700 two-year-colleges. A set of common standards will help to ensure that all students receive a high-quality, rigorous education in every state, and every program across the nation. Building a connection among states through common CTE standards will better support students in preparing for high-skill, high-wage, and high-demand occupations in the broad spectrum of existing and emerging career areas.

WHAT IS THE PROCESS AND TIMEFRAME FOR THE DEVELOPMENT OF THE CCTC?

Subject matter experts from across the country in all sixteen career clusters, along with a writing team, began laying the foundation for the CCTC by revising the National Career Clusters™ Knowledge and Skill statements—a comprehensive collection of industry-validated expectations of what students should know and be able to do after completing instruction in career program areas. These statements reflect the expectations of postsecondary education and business and industry for entering into careers, and are used to guide curriculum development, assessment, and program planning. The National Career Clusters™ Knowledge and Skills statements will be used as the foundation for the development of the CCTC. The CCTC development will begin in the winter of 2012. The standards are expected to be released in June 2012.

Preparing Your Institution for CCR

Today the teaching of a specific discipline (math, language arts) is often considered the exclusive responsibility of a specific teacher/instructor (i.e., math teacher). However, the complex role of many disciplines in education makes it clear that they cannot be left entirely to a specific class or department. For example, learners should read and write frequently in all disciplines, mathematics knowledge is needed in all disciplines, science teaches and reinforces logical thinking, and social studies promotes greater awareness of civic responsibility.

Preparing Your institution or department for CCR

- How will your institution/department prepare for CCR standards?
- Is a committee or team needed for oversight of each discipline?
- Will there be a need for a cross-disciplinary team to ensure that the cross-cutting knowledge and skills that underlie and connect the disciplines are represented in all subjects?

Teams: Your institution/department may find it advantageous to develop discipline and/or cross-disciplinary teams to implement the common core standards. There is no one-size-fits-all when forming teams. It will depend on the course offerings in your school (both academic and CTE courses) and how much work is needed to implement the standards. You may want to form teams in English/language arts, mathematics, science, social studies, history, and CTE courses. If your department is large, you may want to have subgroups.

Team Template A

CCR Teams	
Resource 7.3	
Team 1: _____ Members	
Team 2: _____ Members	
Team 3: _____ Members	
Team 4: _____ Members	
Team 5: _____ Members	
Team 6: _____ Members	

Team Template B

You may want to organize your teams in the same manner as the standards are organized. The core standards are divided into these sections:

- English Language Arts 9–10
- English Language Arts 11–12
- Literacy in Science 9–10
- Literacy in Science 11–12
- Literacy in History/Social Studies 9–10
- Literacy in History/Social Studies 11–12
- Literacy in Technical Subjects 9–10
- Literacy in Technical Subjects 11–12
- HS Mathematics: Number and Quantity
- HS Mathematics: Algebra
- HS Mathematics: Functions
- HS Mathematics: Modeling
- HS Mathematics: Geometry
- HS Mathematics: Statistics and Probability

CCR Teams Resource 7.4

English Language Arts 9–10	
English Language Arts 11–12	
Literacy in Science 9–10	
Literacy in Science 11–12	
Literacy in History/Social Studies 9–10	
Literacy in History/Social Studies 11–12	
Literacy in Technical Subjects 9–10	
Literacy in Technical Subjects 11–12	

CCR Teams Resource 7.4

HS Mathematics: Number and Quantity	
HS Mathematics: Algebra	
HS Mathematics: Functions	
HS Mathematics: Modeling	
HS Mathematics: Geometry	
HS Mathematics: Statistics and Probability	

Discussion: The CCRs consist of a multi-level framework that focuses not only on subject matter, but also on the way it is organized and presented in the classroom.

- Will this framework have any implication on how our classes are scheduled and/or classroom is structured?
- What changes might we consider?

Crosswalk Standards

Your team will need to “crosswalk” the CCR and common core standards (also known as content mapping) with existing curricula. Crosswalking is basically comparing the content of what is exists now with the new standards.

Crosswalking Goals

Identify items that require minor adaptations for adult learners

Identify significant gaps that need to be addressed or added

Identify skills that can be eliminated

Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects

The following is a portrait of students who are college and career ready in reading, writing, speaking, listening, and language:

They demonstrate independence: Students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are able independently to discern a speaker's key points, request clarification, and ask relevant questions. They build on others' ideas, articulate their own ideas, and confirm they have been understood. Without prompting, they demonstrate command of standard English and acquire and use a wide-ranging vocabulary. More broadly, they become self-directed learners, effectively seeking out and using resources, including teachers, peers, and print and digital reference materials.

They build strong content knowledge: Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.

They respond to the varying demands of audience, task, purpose, and discipline: Students adapt their communication in relation to audience, task, purpose, and discipline. They set and adjust purpose for reading, writing, speaking, listening, and language use as warranted by the task. They appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in science).

They comprehend as well as critique: Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author or speaker is saying, but they also question an author's or speaker's assumptions and premises and assess the veracity of claims and the soundness of reasoning.

They value evidence: Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing

and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.

They use technology and digital media strategically and capably: Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and media and can select and use those best suited to their communication goals.

They come to understand other perspectives and cultures: Students appreciate that the twenty-first-century classroom and workplace are settings in which people representing widely divergent cultures and diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different than their own.

Portrait of Our English Language Arts Students											
Resource 7.5											
Course: _____											
Item	Weak←-----→Strong										
	1	2	3	4	5	6	7	8	9	10	
Our students demonstrate independence.											
Our students build strong content knowledge.											
Our students respond to the varying demands of audience, task, purpose, and discipline.											
Our students comprehend as well as critique.											
Our students value evidence.											
Our students use technology and digital media strategically and capably.											
Our students come to understand other perspectives and cultures.											

College and Career Readiness Anchor Standards for Reading

Grade-specific standards define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students should be able to demonstrate.

Key Ideas and Details

- 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- 2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- 3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

- 4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- 5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- 6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

- 7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
- 8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- 9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

- 10. Read and comprehend complex literary and informational texts independently and proficiently

READING: LITERATURE » GRADE 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Reading Standards for Literature 9-10 at <http://www.corestandards.org/the-standards/english-language-arts-standards/reading-literature-6-12/grade-9-10/>.

READING: LITERATURE » GRADE 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Reading Standards for Literature 11-12 at <http://www.corestandards.org/the-standards/english-language-arts-standards/reading-literature-6-12/grade-11-12/#rl-11-12-1>.

READING: INFORMATIONAL TEXT » GRADE 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Reading: Informational Text Grade 9-10 at <http://www.corestandards.org/the-standards/english-language-arts-standards/reading-literature-6-12/grade-9-10/>.

READING: INFORMATIONAL TEXT » GRADE 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Reading: Informational Text Grade 11–12 at <http://www.corestandards.org/the-standards/english-language-arts-standards/reading-informational-text-6-12/grade-11-12/>.

College and Career Readiness Anchor Standards for Writing

The grades 9–12 standards define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes

- 1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence
- 2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
- 3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

- 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- 5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- 6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

- 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- 8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
- 9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

- 10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

WRITING » GRADE 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Writing » Grade 9–10 at

<http://www.corestandards.org/the-standards/english-language-arts-standards/writing-6-12/grade-9-10/>.

WRITING » GRADE 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Writing » Grade 11–12 at

<http://www.corestandards.org/the-standards/english-language-arts-standards/writing-6-12/grade-11-12/>.

SPEAKING AND LISTENING » GRADE 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Speaking and Listening » Grade 9–10 at

<http://www.corestandards.org/the-standards/english-language-arts-standards/speaking-and-listening-6-12/grade-9-10/>.

SPEAKING AND LISTENING » GRADE 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Speaking and Listening » Grade 11–12 at

<http://www.corestandards.org/the-standards/english-language-arts-standards/speaking-and-listening-6-12/grade-11-12/>.

LANGUAGE » GRADE 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Language » Grade 9–10 at

<http://www.corestandards.org/the-standards/english-language-arts-standards/language/grade-9-10/>.

LANGUAGE » GRADE 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the Language » Grade 11–12 at

<http://www.corestandards.org/the-standards/english-language-arts-standards/language/grade-11-12/>.

Reading and Writing in History/Social Studies

The following is a portrait of students who are college and career ready in reading, writing, speaking, listening, and language:

They demonstrate independence: Students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are able independently to discern a speaker’s key points, request clarification, and ask relevant questions. They build on others’ ideas, articulate their own ideas, and confirm that they have been understood. Without prompting, they demonstrate command of standard English and acquire and use a wide-ranging vocabulary. More broadly, they become self-directed learners, effectively seeking out and using resources to assist them, including teachers, peers, and print and digital reference materials.

They build strong content knowledge: Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.

They respond to the varying demands of audience, task, purpose, and discipline: Students adapt their communication in relation to audience, task, purpose, and discipline. They set and adjust purpose for reading, writing, speaking, listening, and language use as warranted by the task. They appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in science).

They comprehend as well as critique: Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author

or speaker is saying, but they also question an author's or speaker's assumptions and premises and assess the veracity of claims and the soundness of reasoning.

They value evidence: Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others' use of evidence.

They use technology and digital media strategically and capably: Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and media and can select and use those best suited to their communication goals.

They come to understand other perspectives and cultures: Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different than their own.

Portrait of Our History/Social Studies Students											
Resource 7.6											
Course: _____											
Item	Weak ← ----- → Strong										
	1	2	3	4	5	6	7	8	9	10	
Our students demonstrate independence.											
Our students build strong content knowledge.											
Our students respond to the varying demands of audience, task, purpose, and discipline.											
Our students comprehend as well as critique.											
Our students value evidence.											
Our students use technology and digital media strategically and capably.											
Our students come to understand other perspectives and cultures.											

College and Career Readiness Anchor Standards for Reading

The grade-specific standards define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

- 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- 2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- 3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

- 4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- 5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- 6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

- 7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
- 8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- 9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

- 10. Read and comprehend complex literary and informational texts independently and proficiently.

LITERACY IN HISTORY/SOCIAL STUDIES » GRADES 9-10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the English Language Arts Standards » History/Social Studies » Grades 9–10 at <http://www.corestandards.org/the-standards/english-language-arts-standards/history-social-studies/grades-9-10/>.

LITERACY IN HISTORY/SOCIAL STUDIES » GRADES 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the English Language Arts Standards » History/Social Studies » Grades 11–12 at <http://www.corestandards.org/the-standards/english-language-arts-standards/history-social-studies/grades-11-12/>.

Writing in Science and Technical Subjects

The grades 9–12 standards define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes

- 1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- 2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
- 3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

- 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- 5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- 6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

- 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- 8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
- 9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

- 10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

WRITING IN HISTORY/SOCIAL STUDIES SUBJECTS » GRADES 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the standards for Writing in History/Social Studies Subjects » Grades 9–10 at <http://www.corestandards.org/the-standards/english-language-arts-standards/writing-hst/grades-9-10/>.

WRITING IN HISTORY/SOCIAL STUDIES SUBJECTS » GRADES 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the standards for Writing in History/Social Studies » Grades 11–12 at <http://www.corestandards.org/the-standards/english-language-arts-standards/writing-hst/grades-11-12/>.

Reading and Writing in Science and Technical Subjects

The following is a portrait of students who are college and career ready in reading, writing, speaking, listening, and language:

They demonstrate independence: Students can, without significant scaffolding, comprehend and evaluate complex texts across a range of types and disciplines, and they can construct effective arguments and convey intricate or multifaceted information. Likewise, students are able independently to discern a speaker’s key points, request clarification, and ask relevant questions. They build on others’ ideas, articulate their own ideas, and confirm that they have been understood. Without prompting, they demonstrate command of standard English and acquire and use a wide-ranging vocabulary. More broadly, they become self-directed learners, effectively seeking out and using resources to assist them, including teachers, peers, and print and digital reference materials.

They build strong content knowledge: Students establish a base of knowledge across a wide range of subject matter by engaging with works of quality and substance. They become proficient in new areas through research and study. They read purposefully and listen attentively to gain both general knowledge and discipline-specific expertise. They refine and share their knowledge through writing and speaking.

They respond to the varying demands of audience, task, purpose, and discipline: Students adapt their communication in relation to audience, task, purpose, and discipline. They set and adjust purpose for reading, writing, speaking, listening, and language use as warranted by the

task. They appreciate nuances, such as how the composition of an audience should affect tone when speaking and how the connotations of words affect meaning. They also know that different disciplines call for different types of evidence (e.g., documentary evidence in history, experimental evidence in science).

They comprehend as well as critique: Students are engaged and open-minded—but discerning—readers and listeners. They work diligently to understand precisely what an author or speaker is saying, but they also question an author’s or speaker’s assumptions and premises and assess the veracity of claims and the soundness of reasoning.

They value evidence: Students cite specific evidence when offering an oral or written interpretation of a text. They use relevant evidence when supporting their own points in writing and speaking, making their reasoning clear to the reader or listener, and they constructively evaluate others’ use of evidence.

They use technology and digital media strategically and capably: Students employ technology thoughtfully to enhance their reading, writing, speaking, listening, and language use. They tailor their searches online to acquire useful information efficiently, and they integrate what they learn using technology with what they learn offline. They are familiar with the strengths and limitations of various technological tools and media and can select and use those best suited to their communication goals.

They come to understand other perspectives and cultures: Students appreciate that the twenty-first-century classroom and workplace are settings in which people from often widely divergent cultures and who represent diverse experiences and perspectives must learn and work together. Students actively seek to understand other perspectives and cultures through reading and listening, and they are able to communicate effectively with people of varied backgrounds. They evaluate other points of view critically and constructively. Through reading great classic and contemporary works of literature representative of a variety of periods, cultures, and worldviews, students can vicariously inhabit worlds and have experiences much different than their own.

Portrait of Our Science/Technical Students

Resource 7.7

Course: _____											
Item	Weak ← ----- Strong										
	1	2	3	4	5	6	7	8	9	10	
Our students demonstrate independence.											
Our students build strong content knowledge.											
Our students respond to the varying demands of audience, task, purpose, and discipline.											
Our students comprehend as well as critique.											
Our students value evidence.											
Our students use technology and digital media strategically and capably.											
Our students come to understand other perspectives and cultures.											

College and Career Readiness Anchor Standards for Reading

The grade-specific standards define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Key Ideas and Details

- 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.
- 2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
- 3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure

- 4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
- 5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
- 6. Assess how point of view or purpose shapes the content and style of a text.

Integration of Knowledge and Ideas

- 7. Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
- 8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
- 9. Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.

Range of Reading and Level of Text Complexity

- 10. Read and comprehend complex literary and informational texts independently and proficiently.

LITERACY IN SCIENCE AND TECHNICAL SUBJECTS » GRADES 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the standards for Literacy in Science and Technical Subjects » Grades 9–10 at <http://www.corestandards.org/the-standards/english-language-arts-standards/science-technical/grades-9-10/>.

LITERACY IN SCIENCE AND TECHNICAL SUBJECTS » GRADES 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the standards for Literacy in Science and Technical Subjects » Grades 11–12 at <http://www.corestandards.org/the-standards/english-language-arts-standards/science-technical/grades-11-12/>.

Writing in Science and Technical Subjects

The grades 9–12 standards define what students should understand and be able to do by the end of each grade. They correspond to the College and Career Readiness (CCR) anchor standards below by number. The CCR and grade-specific standards are necessary complements—the former providing broad standards, the latter providing additional specificity—that together define the skills and understandings that all students must demonstrate.

Text Types and Purposes

- 1. Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- 2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
- 3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

Production and Distribution of Writing

- 4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- 5. Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- 6. Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

- 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- 8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
- 9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

Range of Writing

- 10. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

WRITING IN SCIENCE AND TECHNICAL SUBJECTS » GRADES 9–10

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the standards for Writing in Science and Technical Subjects » Grades 9–10 at <http://www.corestandards.org/the-standards/english-language-arts-standards/writing-hst/grades-9-10/>.

WRITING IN SCIENCE AND TECHNICAL SUBJECTS » GRADES 11–12

The CCR anchor standards and high school grade-specific standards work in tandem to define college and career readiness expectations—the former providing broad standards, the latter providing additional specificity. Please review the standards for Writing in Science and Technical Subjects » Grades 11–12 at <http://www.corestandards.org/the-standards/english-language-arts-standards/writing-hst/grades-11-12/>.

Standards for Mathematical Practice

Make sense of problems and persevere in solving them. Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, “Does this make sense?” They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Reason abstractly and quantitatively. Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to *decontextualize*—to abstract a given situation and represent it symbolically and manipulate the representing

symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to *contextualize*, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Construct viable arguments and critique the reasoning of others. Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Model with mathematics. Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Use appropriate tools strategically. Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Attend to precision. Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Look for and make use of structure. Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as $2 + 7$. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y .

Look for and express regularity in repeated reasoning. Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation $(y - 2)/(x - 1) = 3$. Noticing the regularity in the way terms cancel when expanding $(x - 1)(x + 1)$, $(x - 1)(x^2 + x + 1)$, and $(x - 1)(x^3 + x^2 + x + 1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Portrait of Our Mathematics Students											
Resource 7.8											
Course: _____											
Item	Weak ← ----- → Strong										
	1	2	3	4	5	6	7	8	9	10	
Make sense of problems and persevere in solving them											
Reason abstractly and quantitatively											
Construct viable arguments and critique the reasoning of others											
Model with mathematics											
Use appropriate tools strategically											
Attend to precision											
Look for and make use of structure											
Look for and express regularity in repeated reasoning											

High School: Number and Quantity

Please review the Mathematics standards at <http://www.corestandards.org/the-standards/mathematics/hs-number-and-quantity/introduction/>.

Number and Quantity Overview

The Real Number System

- Extend the properties of exponents to rational exponents
- Classify numbers as rational or irrational

Quantities

- Reason quantitatively and use units to solve problems

The Complex Number System

- Perform arithmetic operations with complex numbers
- Represent complex numbers and their operations on the complex plane
- Use complex numbers in polynomial identities and equations

Vector and Matrix Quantities

- Represent and model with vector quantities
- Perform operations on vectors
- Perform operations on matrices and use matrices in applications

Mathematical Practices

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision. Look for and make use of structure
- Look for and express regularity in repeated reasoning

High School: Algebra

Review High School Algebra standards at <http://www.corestandards.org/the-standards/mathematics/high-school-algebra/introduction/>.

Algebra Overview

Seeing Structure in Expressions

- Interpret the structure of expressions
- Write expressions in equivalent forms to solve problems

Arithmetic with Polynomials and Rational Functions

- Perform arithmetic operations on polynomials
- Understand the relationship between zeros and factors of polynomials
- Use polynomial identities to solve problems
- Rewrite rational functions

Creating Equations

- Create equations that describe numbers or relationships

Reasoning with Equations and Inequalities

- Understand solving equations as a process of reasoning and explain reasoning
- Solve equations and inequalities in one variable
- Solve systems of equations
- Represent and solve equations and inequalities graphically

Mathematical Practices

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

High School: Functions

Please review the Mathematics Functions standards at <http://www.corestandards.org/the-standards/mathematics/high-school-functions/introduction/>.

Functions Overview

Interpreting Functions

- Understand the concept of a function and use function notation
- Interpret functions that arise in applications in terms of the context
- Analyze functions using different representations

Building Functions

- Build a function that models a relationship between two quantities
- Build new functions from existing functions
- Linear, quadratic, and exponential models
- Construct and compare linear and exponential models and solve problems
- Interpret expressions for functions in terms of the situation they model

Trigonometric Functions

- Extend the domain of trigonometric functions using the unit circle
- Model periodic phenomena with trigonometric functions
- Prove and apply trigonometric identities

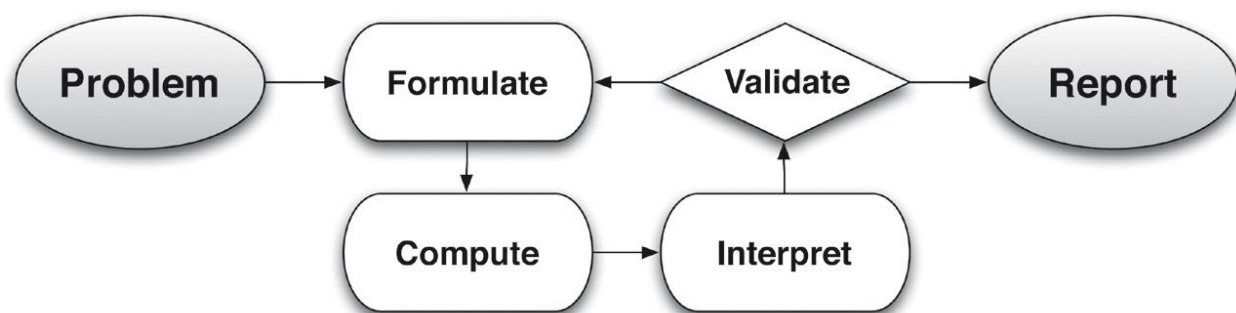
Mathematical Practices

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

High School: Modeling

Please review the mathematic standards for Modeling at <http://www.corestandards.org/the-standards/mathematics/high-school-modeling/introduction/>.

Modeling links classroom mathematics and statistics to everyday life, work, and decision-making. Modeling is the process of choosing and using appropriate mathematics and statistics to analyze empirical situations, to understand them better, and to improve decisions. Quantities and their relationships in physical, economic, public policy, social, and everyday situations can be modeled using mathematical and statistical methods. When making mathematical models, technology is valuable for varying assumptions, exploring consequences, and comparing predictions with data.



The basic modeling cycle is summarized in the diagram. It involves (1) identifying variables in the situation and selecting those that represent essential features, (2) formulating a model by creating and selecting geometric, graphical, tabular, algebraic, or statistical representations that describe relationships between the variables, (3) analyzing and performing operations on these relationships to draw conclusions, (4) interpreting the results of the mathematics in terms of the original situation, (5) validating the conclusions by comparing them with the situation, and then either improving the model or, if it is acceptable, (6) reporting on the conclusions and the reasoning behind them.

Modeling Standards: Modeling is best interpreted not as a collection of isolated topics but rather in relation to other standards. Making mathematical models is a Standard for Mathematical Practice, and specific modeling standards appear throughout the high school standards indicated by a star symbol (★).

High School: Geometry

Please review the High School Mathematics: Geometry standards at <http://www.corestandards.org/the-standards/mathematics/high-school-geometry/introduction/>.

Geometry Overview

Congruence

- Experiment with transformations in the plane
- Understand congruence in terms of rigid motions
- Prove geometric theorems
- Make geometric constructions

Similarity, Right Triangles, and Trigonometry

- Understand similarity in terms of similarity transformations
- Prove theorems involving similarity
- Define trigonometric ratios and solve problems involving right triangles
- Apply trigonometry to general triangles

Circles

- Understand and apply theorems about circles
- Find arc lengths and areas of sectors of circles

Expressing Geometric Properties with Equations

- Translate between the geometric description and the equation for a conic section
- Use coordinates to prove simple geometric theorems algebraically

Geometric Measurement and Dimension

- Explain volume formulas and use them to solve problems
- Visualize relationships between two-dimensional and three-dimensional objects

Modeling with Geometry

- Apply geometric concepts in modeling situations

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.

High School: Statistics and Probability

Please review the High School Mathematics Statistics Probability standards at

<http://www.corestandards.org/the-standards/mathematics/hs-statistics-and-probability/introduction/>.

Statistics and Probability Overview

Interpreting Categorical and Quantitative Data

- Summarize, represent, and interpret data on a single count or measurement variable
- Summarize, represent, and interpret data on two categorical and quantitative variables
- Interpret linear models

Making Inferences and Justifying Conclusions

- Understand and evaluate random processes underlying statistical experiments
- Make inferences and justify conclusions from sample surveys, experiments and observational studies

Conditional Probability and the Rules of Probability

- Understand independence and conditional probability and use them to interpret data
- Use the rules of probability to compute probabilities of compound events in a uniform probability model

Using Probability to Make Decisions

- Calculate expected values and use them to solve problems
- Use probability to evaluate outcomes of decisions

Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Appendix A: Designing High School Mathematics Courses Based on the Common Core Standards

The common Core State Standards (CCSS) for Mathematics are organized by grade level in Grades K-8. At the high school level, the standards are organized by conceptual category (number and quantity, algebra, functions, geometry modeling and probability and statistics), showing the body of knowledge students should learn in each category to be college and career ready. As states consider how to implement the high school standards, an important consideration is how the high school CCSS might be organized into courses that provide a strong foundation for postsecondary success. To address this need, Achieve (in partnership with the Common Core writing team) has convened a group of experts to develop Model Course Pathways in Mathematics based on the Common Core State Standards.

Please read Appendix A for more information on how your district might design the mathematic courses. http://www.corestandards.org/assets/CCSSI_Mathematics_Appendix_A.pdf

VIII. Forms and Resources

The forms and resources (listed below) are interspersed throughout this document. To download a resource as a Microsoft Word or Excel file, visit the toolkit website.

II. Essentials of Career Pathways

- 2.1 Level of Understanding: Education and Economic Development
- 2.2 Level of Understanding: Adult Ed Career Pathways System
- 2.3 Adult Education: Moving Toward the “New Basics”
- 2.4 Employment Sector Growth
- 2.5 Career Pathways: Candidates for Entry of ABE and ESOL Adult Learner
- 2.6 Florida Adult Education Career Pathways Checklist

III. Partnership Development

- 3.1 Connections to Existing Committees
- 3.2 Partners to Include
- 3.3 Return-on-Investment
- 3.4 Roles and Responsibilities of Stakeholders
- 3.5 Specific Agency Roles and Responsibilities
- 3.6 Ground Rules

IV. Model Frameworks

- 4.1 “Chunking” Discussion Form
- 4.2 Curriculum Practices Inventory
- 4.3 Credential Checklist
- 4.4 Credential and Training Provider Crosswalk
- 4.5 Credit Transfer List
- 4.6 Bridge Program Design Steps: Strategies and Timelines

V. Funding for Career Pathways

- 5.1 Career Pathway ROI Worksheet
- 5.2 Worksheet: Career Pathways Framework for Creating a Funding Plan
- 5.3 Sustainable Revenue Budget Worksheets
- 5.4 Monthly Revenue Statement
- 5.5 Sustainable Revenue Plan
- 5.6 Physical Therapy Assistant Equipment List

VI. Effective Advisory Boards

- 6.1 Ideas on How the Advisory Committee May Benefit Your Program
- 6.2 Structure of the Advisory Committee
- 6.3 Roles and Responsibilities for Officers
- 6.4 Potential Chairperson Rating
- 6.5 Choosing Business Members
- 6.6 Nonvoting/Consulting Members
- 6.7 Terms of Office
- 6.8 Sample Letter Requesting Membership
- 6.9 Sample Letter Releasing/Replacing a Member
- 6.10 Items to Be Included in Orientation of New Members
- 6.11a Sample Bylaws
- 6.11b Formalizing Structure Notes
- 6.12 How You Might Communicate with Members
- 6.13 Ideas for Streamlining Meetings
- 6.14 Ground Rules for Meetings
- 6.15 Effective Meeting Checklist
- 6.16 Schedule of Meetings
- 6.17 Sample “Save the Date” Flyer
- 6.18 Sample Invitation Letter
- 6.19 Sample Thank You Letter to Participant
- 6.20 Sample Letter to Meeting Nonparticipant
- 6.21 Checklist for Advisory Committee Meeting
- 6.22 Agenda Items and Sample
- 6.23 Template for Minutes
- 6.24A Sample Annual Report
- 6.24B Sample Press Release
- 6.25 Communication Strategies
- 6.26 How Our Advisory Committee Could Use Technology
- 6.27 Program of Work Objectives
- 6.28 Subcommittee Objectives and Strategies
- 6.29 Program of Work Assessment
- 6.30 Self-Evaluation Tool
- 6.31 Lack of Participation Questions
- 6.32 Stagnant Advisory Committee Questions
- 6.33 Member Appreciation Checklist

VII. College and Career Readiness

7.1 Are We Addressing the Need for 21st-Century Skills?

7.2 Importance of Skills and Knowledge for College and Career Readiness

7.3 CCR Teams (Template A)

7.4 CCR Teams (Template B)

7.5 Portrait of Our English Language Arts Students

7.6 Portrait of Our History/Social Studies Students

7.7 Portrait of Our Science/Technical Students

7.8 Portrait of Our Mathematics Students

IX. Entire Toolkit

In the online version of the toolkit, the link to this section takes you to a PDF of the document you are now reading.

X. Bibliography

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Links

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- Common Core Initiative: <http://www.corestandards.org/>
- Florida Adult and Family Literacy Resource Center (<http://www.floridaliteracy.org>)
- Florida Adult and Technical Distance Education Consortium (<http://www.fatdec.com>)
- Florida Adult ESOL Practitioners' Task Force (<http://www.floridaadultesol.org/>)
- Florida Career Pathways Network (<http://www.ftpn.org>)
- Florida Department of Education (<http://www.fldoe.org>)
- Florida TechNet (<http://www.floridatechnet.org>)
- GED Testing Service (<http://www.gedtestingservice.com>)
- U.S. Department of Education Literacy Information and Communication System (<http://lincs.ed.gov/pd/careerpathways>)
- Workforce Florida, Inc. (<http://www.workforceflorida.com>)
- State Report Cards on Common Core:
[www.all4ed.org/publication material/commonstandardsstatecards](http://www.all4ed.org/publication_material/commonstandardsstatecards)

XI. Index

Florida Toolkit Sections	Pages in FL AECF Toolkit	Florida AECF Eight Areas of Focus	OVAE 10 Components
Introduction and Organization	1		
Essentials of Career Pathways and Adult Education Career Pathways	7	FL#1-Program Design	OVAE#6-Course Sequences OVAE#1-Legislation and Policies
Partnership Development	37	FL#6-Partnerships	OVAE#2-Partnerships
Model Frameworks	51	FL#1-Program Design FL#2-Curriculum and Instruction	OVAE#6-Course Sequences OVAE#7-Credit Transfer Agreements
Funding for Adult Education CP	81	FL#1-Program Design	OVAE#1-Legislation and Policies
Effective Advisory Committees	107	FL#6-Partnerships	OVAE#2-Partnerships
College and Career Readiness	163	FL#2-Curriculum and Instruction	OVAE#5-College and Career Readiness Standards
Forms and Resources	213		
Pending-Forthcoming			
Student Services		FL#4-Student Support	OVAE#8-Guidance Counseling and Academic Advisement
Professional Development Phase 3 (2013)		FL#3-Professional Development	OVAE#3-Professional Development
Assessment Phase 3 (2013)		FL#5-Assessment	OVAE#10-Technical Skills Assessments
Accountability		FL#8-Accountability	OVAE#4-Accountability and Evaluation Systems
Teaching and Learning		FL#2-Curriculum and Instruction	OVAE#9-Teaching and Learning Strategies
Marketing Phase 4 (2014)		FL#7-Marketing	