

AN INTRODUCTION TO ILLINOIS CTE PROGRAMS OF STUDY



2008

ILLINOIS STATE BOARD OF EDUCATION



ILLINOIS COMMUNITY COLLEGE BOARD

ILLINOIS



This publication was prepared pursuant to a grant from the Illinois State Board of Education and the Illinois Community College Board and is funded 100% through the federal Carl D. Perkins Career and Technical Education Improvement Act of 2006. The total amount of federal funding involved is \$3,700.00, which represents 100 percent of the cost of producing the publication.

Rod R. Blagojevich, Governor



Illinois State Board of Education
100 North First Street, Springfield, IL 62777-0001
www.isbe.net
Jesse Ruiz, Chair
Christopher A. Koch, Ed.D., Superintendent
An Equal Opportunity/Affirmative Action Employer

Illinois Community College Board
401 E. Capitol Avenue, Springfield, IL 62701-1711
www.iccb.org
Guy H. Alongi, Chair
Geoffrey S. Obrzut, President/Chief Executive Officer
An Equal Opportunity/Affirmative Action Employer

Printed by the Authority of the State of Illinois June 2008 (10,000 copies; ISBE Grant Agreement Number 08-472001-09-010-5450-51, ICCB Grant Agreement Number CTCL08002)

Acknowledgements

Natasha Jankowski is the author of this publication, with support from Catherine Kirby, Jason Taylor, and Debra Bragg. Linda Iliff provided support on the production. In addition to the Office of Community College Research and Leadership (OCCRL) staff, special thanks go to Mark Williams and the professional staff of the Illinois State Board of Education (ISBE) whose work is dedicated to improving Career and Technical Education (CTE). Similarly, we thank Brian Durham of the Illinois Community College Board (ICCB) and the professional staff of the ICCB who are committed to making significant changes to enhance CTE.

Published June 2008 by the Office of Community College Research and Leadership (OCCRL), Department of Educational Organization and Leadership, College of Education, University of Illinois at Urbana-Champaign

INTRODUCTION



Dear Reader:

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) promises to foster significant changes in Illinois' educational landscape. Central to these changes is the goal of enhancing the career opportunities for Illinois students. Through a long standing and committed partnership, the Illinois State Board of Education and the Illinois Community College Board are dedicated to rolling out career and technical education (CTE) Programs of Study in ways that benefit all Illinois students. Illinois educators have the opportunity to help students develop the knowledge and skills that will allow them to be successful in their careers and throughout their lives.

As a part of this effort, our two education agencies have adopted the national Career Cluster framework, an important step for our state. This Career Cluster framework is consistent with other state level efforts that enhance workforce and career development. This informational pamphlet begins to lay the groundwork for common language and themes, creating a shared understanding of CTE Programs of Study by offering definitions and examples. It also contains a link to a PowerPoint that you can copy and use as you work locally with CTE Programs of Study.

Our agencies strive to make sound decisions and implement effective policy. The responsibility of local educational leaders is to shape decisions utilizing local expertise that support the success of all students. The collaboration between secondary and postsecondary educational leadership is more important now than ever. Please join us in welcoming this publication as an important milestone in the development of this joint effort.

Sincerely,

J. Mark Williams
Division Administrator
Career Development and Preparation
Illinois State Board of Education

Brian Durham
Senior Director
Academic Affairs and CTE
Illinois Community College Board



PERKINS IV

The Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins IV) is intended to provide students with the academic and technical skills necessary to succeed in the 21st Century knowledge- and skills-based economy. Perkins IV facilitates seamless transitions for students from secondary to postsecondary education and careers. CTE programs under Perkins IV will be held to specific, valid, and reliable accountability standards as well as industry-based standards.

Perkins IV requires secondary and postsecondary education to work with numerous constituency groups including business and industry, local communities, counselors, principals, parents, and students including special populations in order to place students in high-wage, high-skill, or high-demand occupations.

New Themes

Several themes are evident in Perkins IV:

- Accountability for results and program improvement at all educational levels
- Coordination within the CTE system
- Integration of academic and technical education
- Connection between secondary and postsecondary education, including baccalaureate level
- Involvement of business and industry

http://www.acteonline.org/policy/legislative_issues/Perkins_background.cfm



Secondary and Postsecondary Alignment

Secondary and postsecondary alignment is very important to Perkins IV and the Career Cluster framework. In Illinois, this alignment includes secondary education, community colleges, and four-year institutions through:

- Seamless transition
- Reduced remediation
- Non-duplicated courses
- Integrated academic and CTE curricula
- Standards-based curricula aligned with industry credentials and/or certification
- Dual credit opportunities
- Career development
- Professional development
- Articulation agreements
- Data-sharing agreements
- Partnerships and collaboration
- Continuous improvement

“The premise of this legislation [Perkins IV] is that high schools, industry, and higher education institutions need to work together to provide our workforce with the skills they need in order to achieve and compete in the 21st century. This bill works to ensure that American students are not just getting a world class education, but the best education in the world.”

Sen. Christopher Dodd (D-CT)



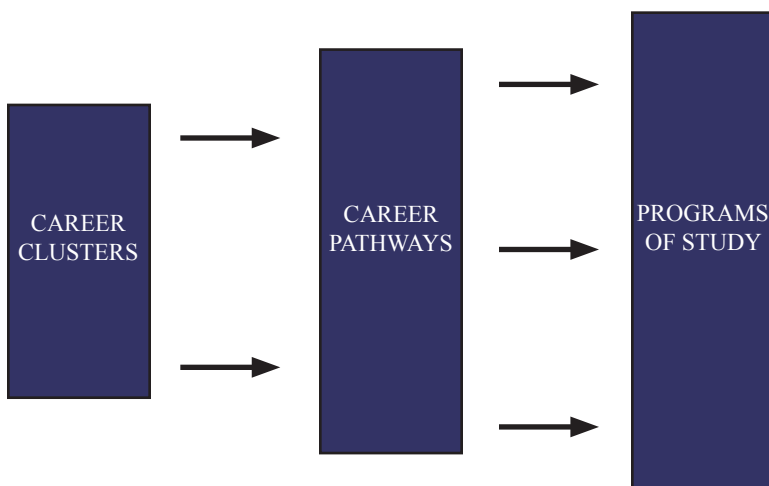
OVERVIEW

What are Career Clusters, Career Pathways, and Programs of Study?

Career Clusters are groups of occupations and industries that have in common a set of foundational knowledge and skills. There are 16 nationally recognized clusters within which are multiple Career Pathways.

Career Pathways are multi-year programs of academic and technical study that prepare students for a full range of postsecondary options within each of the 16 clusters. Currently, there are 81 nationally recognized pathways, each with specific pathway knowledge and skills. These pathways provide a context for exploring career options at all levels of education and a framework for linking learning to the skills and knowledge needed for future education and employment.

Programs of Study (POS) are sequences of courses that incorporate a non-duplicative progression of secondary and postsecondary elements which include both academic and CTE content. Effective Programs of Study should start no later than the ninth grade and continue through at least two years of postsecondary education. Programs of Study include opportunities to earn college credit (dual credit) in high school, an industry-recognized credential or certificate at the secondary/postsecondary level, and an associate or baccalaureate degree.





Why do we need the Career Clusters framework?

Career Pathways, Career Clusters, and POS allow students to get more involved and perform better in school by combining rigorous academics with career education so that students have a clear path to their future. Students who understand the relevance of what they are learning and how it aligns with a pathway to their educational and occupational goals achieve greater success in high school and beyond. Career Clusters:

- Create clear educational pathways students can follow from secondary to postsecondary education to the workplace
- Create smooth transitions in the educational pipeline
- Empower students through information and experiences they need to make educational choices
- Help design individual plans of study
- Comprise a key element in enhancing economic development by connecting schools with business and industry

Who benefits from Career Pathways and Programs of Study?

- Students benefit as POS provide a link between education and careers. Pathways provide career guidance and a framework for students to plan their future. Students are more motivated when they can see the relevance of their education and are provided with smooth transitions to college and careers.
- Educators benefit as POS provide support to integrate academic and CTE curricula, partake in professional development, align with school reform, and receive administrative support. POS also connect educators with local business and industry to ensure that what students learn connects to careers.
- Employers benefit as POS provide the opportunity to partner with educators to prepare future employees by determining the necessary skills, certification, and current knowledge to succeed in the workforce.
- Communities benefit as POS provide an opportunity for business and industry to partner with education for local economic development and educational planning. Higher levels of educational attainment contribute to a healthier local economy.



CLUSTER FRAMEWORK

How can Career Clusters, Career Pathways, and Programs of Study be used?

One use for Career Clusters, Career Pathways, and POS is as a tool for career exploration or career development. Introducing students to broad Career Clusters, and the numerous Career Pathways and occupations within, expands the list of career possibilities for all students to consider.

At the secondary and postsecondary levels, Career Pathways provide curriculum standards that meet business and industry requirements. Implementing these standards helps to ensure student attainment of a high level of academic and technical skills and a seamless transition from secondary to postsecondary education as well as a satisfying career.

“In our view, there should no longer be an artificial split between academic coursework and CTE studies, nor should exposure to career- or interest-based coursework be delayed until late high school or college. Rather, we believe that all coursework, with clearly articulated standards and expectations can help build in for students the mix of skills, aptitudes, and attitudes they will need to succeed after high school.”

Hans Meeder
President of the Meeder Consulting Group, LLC
formerly OVAE Deputy Assistant Secretary of Education



Crosswalk

This table illustrates the relationship between the five CTE areas used by the Illinois State Board of Education and the corresponding 16 Career Clusters.

ISBE CTE Area	Career Cluster
Health Services	<ul style="list-style-type: none">• Health Science
Family and Consumer Sciences	<ul style="list-style-type: none">• Education & Training• Hospitality & Tourism• Human Services
Agricultural Education	<ul style="list-style-type: none">• Agriculture, Food, & Natural Resources
Business, Marketing, and Computer Education	<ul style="list-style-type: none">• Business Management & Administration• Finance• Information Technology• Marketing• Government & Public Administration
Technology and Engineering Education	<ul style="list-style-type: none">• Architecture and Construction• Arts, Audio/Video Technology & Communications• Law, Public Safety, Corrections & Security• Manufacturing• Science, Technology, Engineering & Mathematics• Transportation, Distribution & Logistics



SIXTEEN CAREER CLUSTERS AND



Agriculture, Food & Natural Resources

- Food Products and Processing Systems
- Plant Systems
- Animal Systems
- Power, Structural & Technical Systems
- Natural Resources Systems
- Environmental Service Systems
- Agribusiness Systems



Architecture & Construction

- Design/Pre-Construction
- Construction
- Maintenance/Operations



Arts, Audio/Video Technology & Communications

- Audio and Video Technology and Film
- Printing Technology
- Visual Arts
- Performing Arts
- Journalism and Broadcasting
- Telecommunications



Business Management & Administration

- General Management
- Human Resource Management
- Business Information Management
- Administrative Support
- Operations Management



Education & Training

- Administration and Administrative Support
- Professional Support Services
- Teaching/Training



Finance

- Securities and Investments
- Business Finance
- Banking Services
- Insurance
- Accounting



Government & Public Administration

- Governance
- National Security
- Foreign Service
- Planning
- Revenue and Taxation
- Regulation
- Public Management and Administration



Health Science

- Therapeutic Services
- Diagnostic Services
- Health Informatics
- Support Services
- Biotechnology Research and Development

THEIR PATHWAYS



Hospitality & Tourism

- Restaurants and Food/Beverage Services
- Lodging
- Travel & Tourism
- Recreation, Amusements & Attractions



Human Services

- Early Childhood Development & Services
- Counseling & Mental Health Services
- Family & Community Services
- Personal Care Services
- Consumer Services



Information Technology

- Network Systems
- Information Support and Services
- Web and Digital Communications
- Programming and Software Development



Law, Public Safety, Corrections & Security

- Correction Services
- Emergency and Fire Management Services
- Security & Protective Services
- Law Enforcement Services
- Legal Services

The Career Clusters icons are used with permission of the States' Career Clusters Initiative, 2008.

www.careerclusters.org



Manufacturing

- Production
- Manufacturing Production Process Development
- Maintenance, Installation & Repair
- Quality Assurance
- Logistics & Inventory Control
- Health, Safety and Environmental Assurance



Marketing

- Marketing Management
- Professional Sales
- Merchandising
- Marketing Communications
- Marketing Research



Science, Technology, Engineering & Mathematics

- Engineering and Technology
- Science and Math



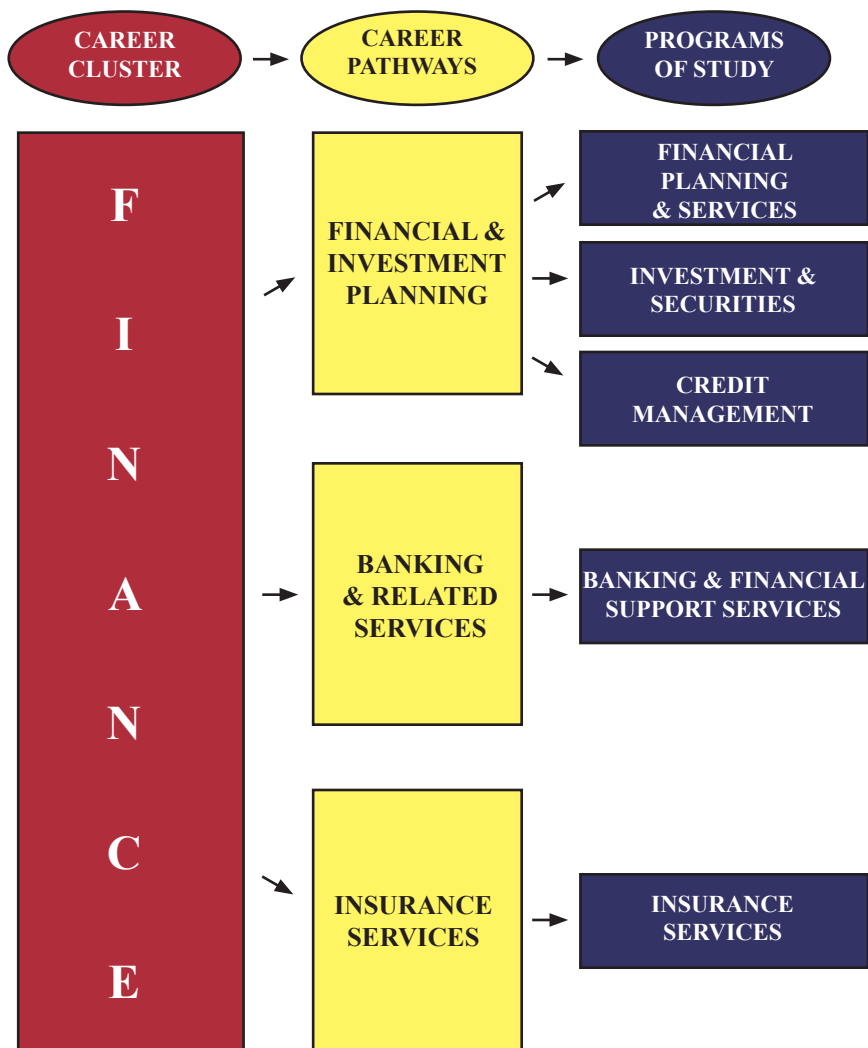
Transportation, Distribution & Logistics

- 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





ILLINOIS CAREER CLUSTER EXAMPLE



The above graphic displays the Finance Career Cluster, three possible Career Pathways, and five POS for the state of Illinois. Occupations related to the Finance cluster include sales agents, revenue agents, loan officers, tellers, customer service representatives, credit report providers, claims clerks, processing clerks, accountants, economists, financial planners, treasurers, and foreign exchange managers.



Career Clusters are groups of occupations and industries that have in common a set of foundational knowledge and skills. There are 16 nationally recognized clusters within which are multiple Career Pathways.

- **Cluster Knowledge and Skills:** The cluster-level knowledge and skill set is built on a common core required for career success in the multiple occupations included in the cluster. This shared core consists of the following elements: academic foundations; communication; problem solving and critical thinking; information technology applications; systems; safety, health, and environment; leadership and teamwork; ethics and legal responsibilities; employability and career development; and technical skills.

Career Pathways are multi-year programs of academic and technical study that prepare high school students for a full range of postsecondary options within each of the 16 clusters. Currently, there are 81 nationally recognized pathways, each with specific pathway knowledge and skills. These pathways provide a context for exploring career options at all levels of education and a framework for linking learning to the skills and knowledge needed for future education and employment.

- **Pathway Knowledge and Skills:** The pathway-level knowledge and skill set is built on a common core of knowledge and skills required for career success in all POS aligned with the pathway. This core is specific to the pathway and consists of elements selected by secondary and postsecondary educators with input from business and industry and other stakeholders.

Programs of Study (POS) are sequences of courses that incorporate a non-duplicative progression of secondary and postsecondary elements which include both academic and CTE content. Effective Programs of Study should start no later than the ninth grade and continue through at least two years of postsecondary education. Programs of Study include opportunities to earn college credit (dual credit) in high school, an industry-recognized credential or certificate at the secondary/postsecondary level, and an associate or baccalaureate degree.

A PowerPoint of the Introduction to Illinois CTE Programs of Study pamphlet is available for use at: <http://occr1.ed.uiuc.edu/Projects/perkins/files/POSpowerpoint.pps> with a PDF version of the PowerPoint notes available at <http://occr1.ed.uiuc.edu/Projects/perkins/files/POSnotespage.pdf>



RESOURCES

Perkins IV

Association for Career and Technical Education (ACTE): <http://www.acteonline.org/>

Illinois 5-year Perkins IV State plan: http://www.iccb.state.il.us/pdf/career_tech/postsecondary/PerkinsStatePlanDraft1-08.pdf

National Alliance for Partnerships in Equity (NAPE): <http://www.napequity.org>

Illinois Resources

Career Development Task Force Report: <http://occr1.ed.uiuc.edu/Projects/careerdev/>

Critical Skills Shortage Initiative: http://www.commerce.state.il.us/dceo/Bureaus/Workforce_Development/Resources/CSSI.htm

Illinois Community College Board: <http://www.iccb.org/cte.html>

Illinois Labor Market Information: <http://lmi.ides.state.il.us/>

Illinois State Board of Education: <http://www.isbe.net/career/default.htm>

Illinois Workforce and Career Information: <http://www.ilworkinfo.com/>

OCCRL Programs of Study Website: <http://occr1.ed.uiuc.edu/Projects/perkins/>

Career Development

Career Voyages – collaboration between the U.S. Department of Labor and U. S. Department of Education: <http://www.careervoyages.gov/about-main.cfm>

National Career Development Guidelines: <http://www.acrnetwork.org/ncdg/documents/NCDG.pdf>

Partnership for 21st Century Skills: <http://www.21stcenturyskills.org/>

Career Clusters Framework

Career Pathways as a Systematic Framework by League for Innovation in the Community College: http://www.league.org/league/projects/ccti/files/Systemic_Framework.pdf



Meeder, H. (2006). *The Perkins act of 2006: Connecting career and technical education with the college and career readiness agenda*. http://www.achieve.org/AchievePolicyBrief_Perkins

National Career Pathways Network (NCPN): <http://www.cord.org/ncpn-index.cfm>

Southern Regional Education Board (SREB): http://www.sreb.org/programs/hstw/publications/2005Pubs/05V07_enhanced_design.pdf

State Directors National Association of State Directors of Career Technical Education Consortium: <http://www.careertech.org/>

The States' Career Cluster Initiative: <http://www.careerclusters.org>

Research

Bragg, D., & Barnett, E. (Eds). (2006). Academic pathways to and from the community college. *New Directions for Community Colleges*, No. 135. San Francisco: Jossey-Bass.

DeLucca, S., Plank, S., & Estacion, A. (2006). *Does career and technical education affect college enrollment?* St. Paul, MN: National Research Center for Career and Technical Education. http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/2b/bc/42.pdf

Hughes, K., & Karp, M. (2006). *Strengthening Transitions by Encouraging Career Pathways: A Look at State Policies and Practices*. New York: Community College Research Center, Teachers College, Columbia University. http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/29/e1/d0.pdf

Karp, M. M., Calcagno, J. C., Hughes, K. L., Jeong, D. W., & Bailey, T. R. (2007). *The postsecondary achievement of participants in dual enrollment: An analysis of student outcomes in two states*. St. Paul, MN: National Research Center for Career and Technical Education. http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/34/e8/1a.pdf

Lekes, N., Bragg, D., Loeb, J., Oleksew, C., Mazsalek, J., Laraviere, M., & Hood, L. (2007). *The impact of career-technical education transition program practices on student outcomes*. St. Paul: National Research Center for Career and Technical Education, University of Minnesota.



Office of Community College Research and Leadership
c/o Dr. Debra D. Bragg, Director
University of Illinois at Urbana-Champaign
51 Gerty Drive, Room 129
Champaign, IL 61820

NON-PROFIT ORG.
US POSTAGE
PAID
CHAMPAIGN, IL
PERMIT NO. 75

