

# High School Transformation:

## Connecting the Dots for PaCE, CCPE and CCRI

### Background

In 2016, the Postsecondary and Workforce Readiness (PWR) Act<sup>1</sup> was signed into law. The Act included multiple policy frameworks, such as the Postsecondary and Career Expectations (PaCE) framework and the College and Career Pathway Endorsement (CCPE) framework. Throughout 2016-17, the Illinois State Board of Education (ISBE) developed the Illinois Every Student Succeeds Act (ESSA) State Plan and included a College and Career Readiness Indicator (CCRI) in the School Quality Framework. This document lays out the key areas of alignment between these frameworks and is intended to help practitioners understand the connections across the three areas as they implement them.

### A new approach to College/Postsecondary and Career Readiness

These three frameworks signal a new approach to college/postsecondary and career readiness that is grounded in a philosophy of college and career pathways. Undergirding all three frameworks is the notion that no single measure can convey an individual's preparedness for what comes after high school. Under this philosophy, the State is moving toward an approach that sees academic preparation as going hand-in-hand with career exploration and preparation for all students as they move through their secondary careers. The PaCE framework provides a helpful organizing frame for this understanding, focusing on three primary areas of importance: career exploration and development; financial aid and literacy; and postsecondary education, exploration, preparation and selection. Both the CCRI and CCPE align to this overarching vision. For example, if a student were to complete all of the activities outlined in PaCE, they would ostensibly meet the CCRI threshold, and the requirements to receive a CCPE on their high school diploma.

### This approach to college and career readiness includes two major elements:

- (1) Academic Readiness: At their core, these three frameworks embrace the idea that students should complete their secondary education ready for credit-bearing college coursework (i.e., requiring no English or math remediation in college), and having earned some early college credit via Advanced Placement or dual credit coursework.
- (2) Postsecondary and Career Exploration and Preparation: Both the PWR Act and the State's ESSA plan emphasize the importance of a range of experiences and activities that support students to prepare for and make decisions about what comes after completing their secondary credential.
  - *Connecting Secondary to Postsecondary*: Students should know why it is important to learn and do the things expected of them in their high school career. These frameworks center on planning for and connecting secondary coursework and experiences to postsecondary and career planning and preparation.
  - *Exposure, Exploration, & Preparation*: Students should be empowered to make informed decisions about what comes after high school based on their interests and skills. This includes exposure to career clusters, as well as participating in activities along a continuum of work-based learning that support exploration and preparation.
  - *Financial Aid Implications*: Students should know what their financial aid options are and how to access them, no matter what their postsecondary pathway entails.

### Why is this important?

Ultimately, the goal of this approach to college/postsecondary and career readiness is to better prepare young people for what comes after high school, both in terms of making an informed choice, as well as being adequately prepared to enter directly into whatever their choice of postsecondary pathway might be. Students who have met the CCRI, by engaging in activities and learning that are promoted in the PaCE framework, will be both more knowledgeable about and prepared for life after high school. In this way, they will be able to advance along their career pathway of choice more efficiently.

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<sup>1</sup> For more detailed information on the PWR Act and its component parts, please visit [www.pwract.org](http://www.pwract.org)





Career Exploration & Development	PaCE Element <sup>1</sup>	ISBE College & Career Readiness Indicator (CCRI)	CCPE	
Post-Secondary Education, Exploration, Preparation, and Selection	Visit at least one workplace aligned to career interests (10th)	Supports baseline component (Identify a career area of interest by the end of 10th grade)		Meets Professional Learning 9th/10th grade requirement (At least 2 career exploration activities)
	Revisit career cluster survey and take a career interest survey (9th)	Supports baseline component (Identify a career area of interest by the end of 10th grade)		Meets Career-Focused Instructional Sequence 9th/10th grade component
	Complete an orientation to the career clusters (9th)			
	Complete an orientation course to a particular career cluster or cluster grouping (10th)			
	Select a career pathway (CP) within a career cluster of interest (10th)	Meets baseline component (Identify a career area of interest by the end of 10th grade)		Supports Individualized Plan
	Identify an internship opportunity related to CP (11th)	Supports meeting Career Ready Indicator (Career Development Experience)		Supports meeting Career Ready Indicator (Career Development Experience)
	Address any remedial needs in Math/ELA (12th)	Meets Academic Ready Indicators (Transitional ELA/Math Course Completion)		Meets Academic Competencies (Ready for non-remedial coursework in reading and math by HS graduation)
	Obtain an internship opportunity relating to CP (12th)	Meets Career Ready Indicator (Career Development Experience)		Meets Professional Learning 11th/12th grade requirement (career development experiences)
	Complete one or more team-based challenges or projects relating to CP (12th)	N/A		Meets Professional Learning component (At least 2 team-based challenges with adult mentoring)
	Meet with a counselor to discuss coursework and postsecondary (PS)/career plans with the ISBE CCRI (9th)	Supports overall planning and preparation to meet the CCRI		Supports Individualized Plan
	Begin determining eligibility for AP courses (9th & 10th)	Supports Academic Indicator (ELA/Math AP Courses/Exams); Supports Career Ready Indicator (Dual Credit Career Pathway Course)		Supports Career-Focused Instructional Sequence 11th/12th grade components (Early College Credit)
	Outline a plan for community service and extracurricular activities related to PS plans (9th)	Supports Career Ready Indicator (25 hours community service, co-curricular activities)		Supports Individualized Plan
	Compare student cumulative GPA, academic, and career indicators to ISBE CCRI (every year)	Supports overall planning and preparation to meet the CCRI		N/A
	Determine readiness for college-level coursework in Math/ELA and enrolled in either "catch-up" or "speed up" course (11th)	Meets Academic Ready Indicators (Transitional ELA/Math Course Completion)		Meets Academic Competencies (Ready for non-remedial coursework in reading and math by HS graduation)
	Complete or enroll in at least one early college credit opportunity (11th)	Meets Academic Indicator (ELA/Math AP Courses/Exams);  Supports Career Ready Indicator (Dual Credit Career Pathway Course)		Meets Career-Focused Instructional Sequence 11th/12th grade components (Early College Credit)

PaCE Framework's Elements for Financial Aid and Literacy support some elements of the CCPE but do not meet requirements for either CCPE or CCRI

signifies that the component **supports** the CCRI and the CCPE but does not meet all the requirements

signifies that the component **meets** the requirements of the CCRI and CCPE

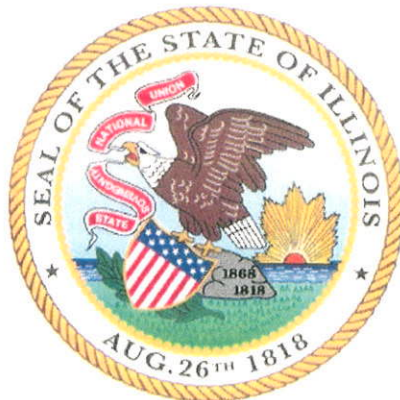
<sup>1</sup> The primary focus of this crosswalk are the elements within PaCE pertaining to activities/experiences a student should be supported to do.

# Postsecondary & Workforce Readiness Act

Statewide Public-Private Steering Committees for  
**College and Career Pathway Endorsements**

Recommended Technical and Essential Employability Competencies

*July 2018*





## Background

The competencies set forth in this document were developed through an iterative process involving public-private steering committees established pursuant to the Postsecondary and Workforce Readiness (PWR) Act in order to implement College and Career Pathway Endorsements.

The competencies have been reviewed and recommended for approval by the Workforce Readiness through Apprenticeships and Pathways Steering Committee of the Governor's Cabinet on Children and Youth, but they remain subject to further review and modification by State agencies. This process has been led by a partnership between Education Systems Center at NIU and JFF with generous support from JPMorgan Chase & Co.

### About JFF



JFF is a national nonprofit that drives transformation in the American workforce and education systems. For 35 years, JFF has led the way in designing innovative and scalable solutions that create access to economic advancement for all.

JFF's Pathways to Prosperity Initiative develops, implements, and scales systems of college and career pathways to expand economic opportunity for all young people and meet state and regional talent needs. This forward-looking approach depends on strong cross-sector partnerships and mobilizes K-12 and postsecondary education leaders, policymakers, and employers, bringing together diverse stakeholders to build a future that works. For more information, visit [www.jff.org](http://www.jff.org) and [www.ptopnetwork.org](http://www.ptopnetwork.org).



### About Education Systems Center

Education Systems Center (EdSystems) shapes and strengthens education and workforce systems that prepare more young people for productive careers and lives in a global economy. EdSystems leads and manages the Illinois P-20 Council's College and Career Readiness Committee, which recently drove the development and adoption of the Postsecondary and Workforce Readiness Act ([www.pwract.org](http://www.pwract.org)). Learn more about EdSystems at [www.edsystemsniu.org](http://www.edsystemsniu.org).

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### About JPMorgan Chase

JPMorgan Chase & Co. is a leading global financial services firm with assets of \$2.6 trillion and operations worldwide. The firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing and asset management. A component of the Dow Jones industrial average, JPMorgan Chase & Co. serves millions of customers in the United States and many of the world's most prominent corporate, institutional and government clients under its J.P. Morgan and Chase brands. Information about JPMorgan Chase & Co. is available at [www.jpmorganchase.com](http://www.jpmorganchase.com).





July 2018

## Introduction and Background

Enacted in 2016, the Postsecondary and Workforce Readiness (PWR) Act established a voluntary system for school districts to award College and Career Pathway Endorsements (CCPEs) to high school graduates. Endorsements signify that a student is ready to pursue postsecondary education or enter a career related to the CCPE industry area. Endorsements incentivize career exploration and development and are available in eight sector areas, including a multidisciplinary option.

Students earn CCPEs by completing an individualized learning plan, a career-focused instructional sequence, and professional learning (which includes career exploration activities, 60 hours of career development experiences, and two team-based challenges). Technical and professional competencies connected to CCPEs indicate that a student is equipped with the knowledge, skills, and abilities to advance to entry-level employment, college-level coursework, or advanced sector-based training in the endorsement sector area. School districts can apply to the Illinois State Board of Education to offer CCPEs during the 18-19 school year, and can start to award them to the graduating class of 2020.

### College and Career Pathway Endorsements Indicate:



Completion of individualized learning plan



Career-focused instructional sequence: two years of coursework or equivalent competencies



Professional learning including career exploration activities, 60 hours of career development experiences, such as internships, two team-based challenges



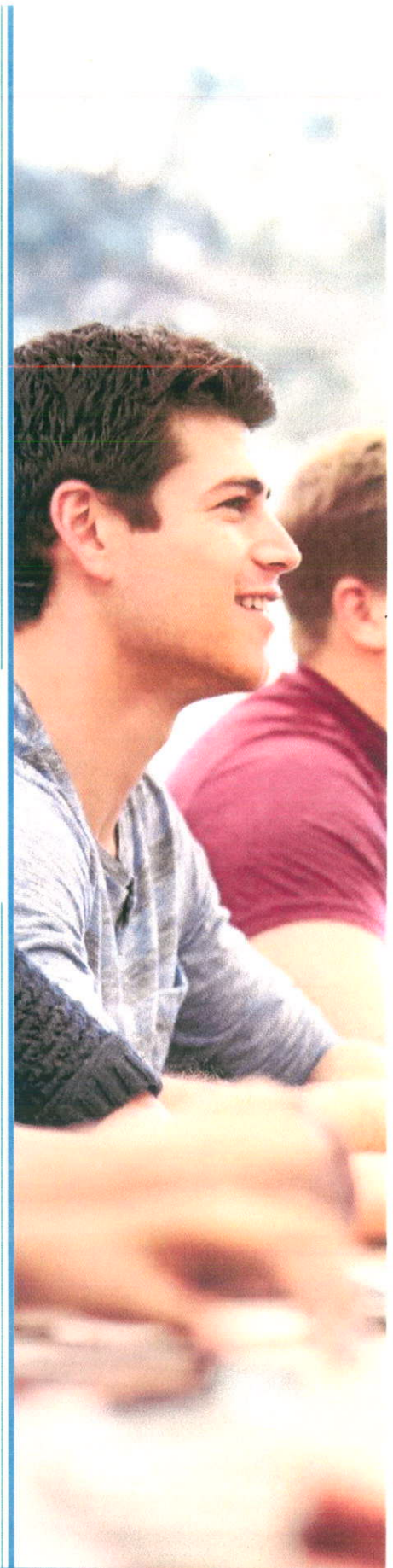
Demonstration of readiness in reading and math for postsecondary education pathways courses

In consultation with state agencies and key industry experts including hiring professionals, education and training professionals, and industry associations, industry-based steering committees were formed to identify and propose technical and professional competencies in four initial sectors, selected due to their alignment with state economic development priorities:

- Health Sciences and Technology (HST)
- Information Technology (IT)
- Manufacturing, Engineering, Technology, and Trades (METT)
- Finance and Business Services (FBS)

The draft competencies for these four industry clusters are included in this brief report. Similar competency mapping is planned for the following additional sectors (to commence in June 2018):

- Agriculture, Food, and Natural Resources (AFNR)
- Arts and Communication (A&C)
- Human and Public Services (HPS) (specifically, the Education Pathway within HPS)



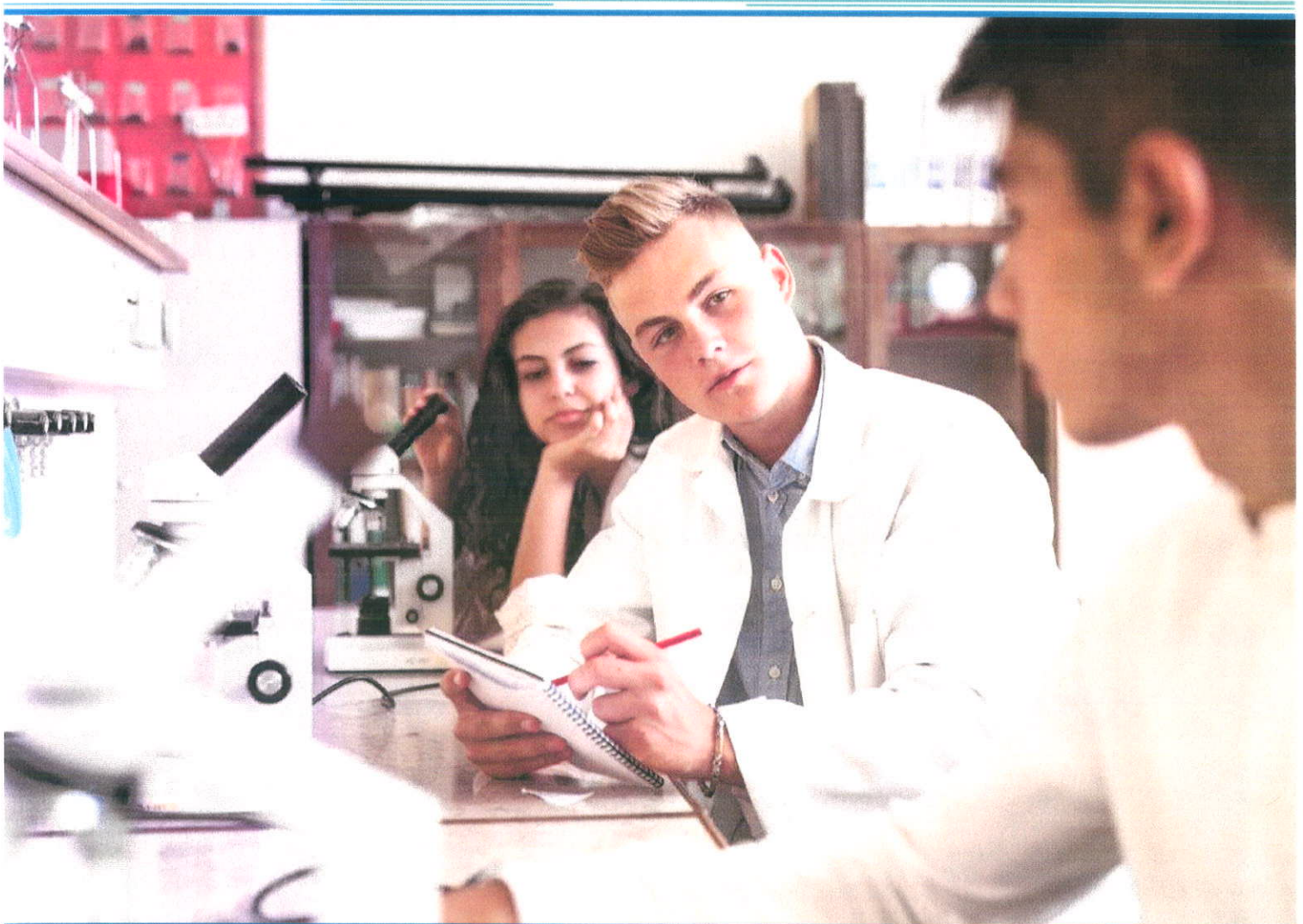


## What Do the Competencies Represent?

The CCPE Technical and Employability Competencies serve as quality indicators of an individual's readiness to enter an industry or to pursue further education. Competency statements apply to current industry needs, contain both employability skills and technical skills, and leave opportunity for specialized training and career advancement.

While competencies are defined differently depending on the desired outcome and setting, the U.S. Department of Labor (U.S. DOL) defines a competency as "a cluster of related knowledge, skills, and abilities that affects a major part of one's job that correlates with performance on the job, that can be measured against well-accepted standards and can be improved through training development and experience." This description ensures that competency statements are defined as a combination of learned content and the application of skills and abilities that can be demonstrated and evaluated.

For each CCPE sector area, competencies are organized into two broad categories: essential employability and technical competencies. Essential employability competencies, often connected to employability skills or "soft" skills, are workplace dispositions and attitudes connected to often-performed work tasks and behaviors. Applicable across many industries, employability competencies include the ability to connect industry knowledge to one's personal efficacy in the workplace. The ten employability competencies included in this report apply across all sectors. Technical competencies relate to specific industry knowledge and skills, and the ability to apply that learning in a workplace environment. Taken together, the universal employability competencies and sector-specific technical competencies will inform how schools design pathways courses and professional learning experiences.





## Competency Research Approach and Development Process

From June 2017 through March 2018, public-private steering committees consisting of industry experts across Health Science, Advanced Manufacturing/Engineering, Finance and Business Services, and IT have reviewed national research and data from Illinois Human Resources professionals to draft core technical and essential employability competencies through the following phased process:

### Phase 1: Analysis of Historical and Real-Time Labor Market Information

Phase 1 provided an analysis of historical and real-time labor-market information to identify or verify high-growth, high-demand, high-wage industries in the region.

Based on this analysis, JFF conducted and synthesized research, including the following:

- Review and analysis of existing national resources, e.g.; Department of Labor, O\*Net, and national credentialing agencies
- Industry-specific implications regarding the future of work

### Phase 2: Analysis of National Resources and Local Talent Pipeline Demands

To ensure competencies are aligned with the demand of the local labor market, Phase 2 of the competency mapping process involved the following:

- Interviews with local Human Resources and Talent Acquisition professionals in the industry
- Review and analysis of state and/or regional entry level job descriptions along with trends and implications

### Phase 3: Establish Sector-Specific Steering Committee for Iterative Review

In Phase 3, sector-specific steering committees reviewed the national and local research and coalesced on a list of top ten essential employability and sector-wide technical competencies. These committees convened and developed competency statements in a series of in-person and virtual meetings.

Committees included local industry experts with the following perspectives: Human Resources and Talent Acquisitions, Workforce Development and Training, Higher Education, Secondary Education and Career and Technical Education.

### Phase 4: Public Comment Period

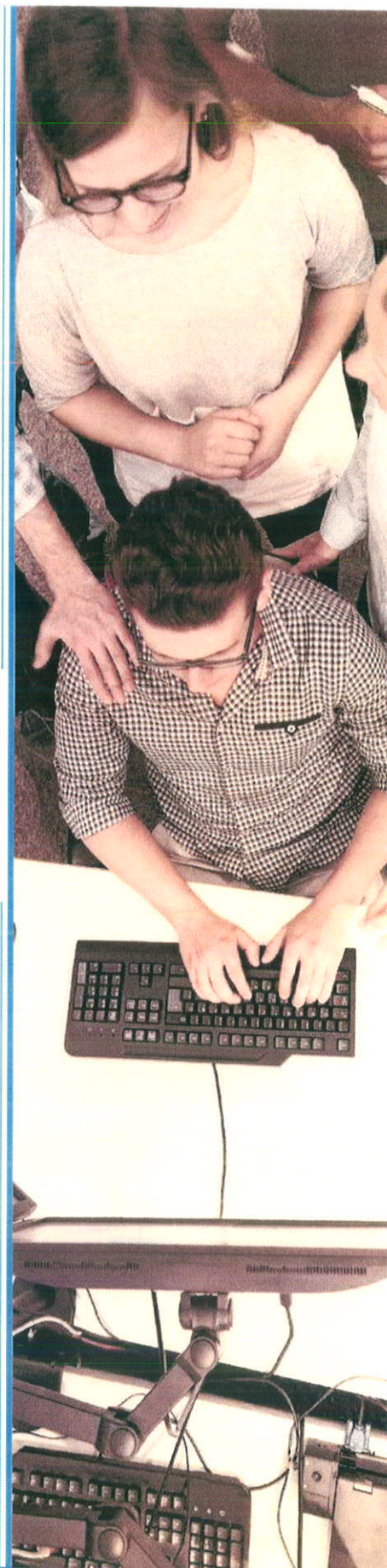
Prior to finalization and dissemination, broad-based industry feedback was collected and incorporated to encourage wider adoption for use in educational and industry-based settings. Public comment occurred through a digital survey. The survey results were then collected, analyzed and incorporated.





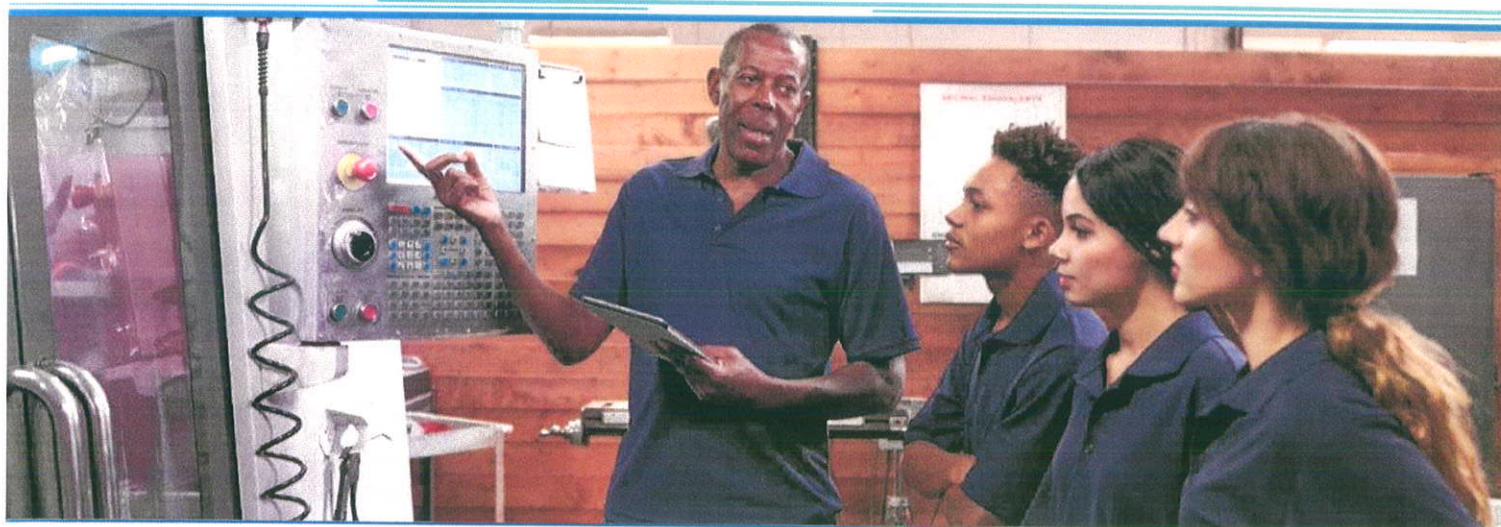
**TOP 10 CROSS-SECTOR  
ESSENTIAL EMPLOYABILITY COMPETENCY STATEMENTS  
COLLEGE & CAREER PATHWAY ENDORSEMENTS**

<b>Teamwork &amp; Conflict Resolution</b>	Students can use their understanding of working cooperatively with others to complete work assignments and achieve mutual goals.
<b>Communication</b>	<p><b>Verbal:</b> Students can use their understanding of English grammar and public speaking skills to convey an idea, express information, and be understood by others.</p> <p><b>Written:</b> Students can use their understanding of standard business English to ensure that written work is clear, direct, courteous, and grammatically correct.</p> <p><b>Digital:</b> Students can use their understanding of email, keyboarding, word processing, and digital media to convey work that is clear, direct, courteous, and grammatically correct.</p>
<b>Problem Solving</b>	Students can use their critical thinking skills to generate and evaluate solutions as they relate to the needs of the team, customer, and company.
<b>Decision Making</b>	Students can use their understanding of problem solving to implement and communicate solutions.
<b>Critical Thinking</b>	Students can use their understanding of logic and reasoning to analyze and address problems.
<b>Adaptability &amp; Flexibility</b>	Students can use their understanding of workplace change and variety to be open to new ideas and handle ambiguity.
<b>Initiative &amp; Self-Drive</b>	Students can use their understanding of goal setting and personal impact to achieve professional goals and understand personal impact.
<b>Reliability &amp; Accountability</b>	Students can use their understanding of commitment, time management, and follow through to ensure that a professional team functions properly and meets collective goals.
<b>Cultural Competence</b>	Students can use their understanding of diversity and inclusion to communicate and work effectively across a multitude of cultures.
<b>Planning &amp; Organizing</b>	Students can use their understanding of time management to plan effectively and accomplish assigned tasks.





<b>Equipment Safety</b>	Students can use their understanding of equipment usage, practices, and procedures to maintain a healthy, safe, and secure work environment.
<b>Manufacturing Environment</b>	Students can use their understanding of workstations, tools, and equipment operations to safely navigate a manufacturing environment.
<b>Personal Health &amp; Safety</b>	Students can use their understanding of personal safety and environmental regulations to comply with local, federal, and company health/safety demands.
<b>Spatial Reasoning</b>	Students can use their understanding of objects in relation to one another to understand three-dimensional imaging.
<b>Process, Design, &amp; Development</b>	Students can use their understanding of technical drawings and schematics to complete the design and development process.
<b>Installation</b>	Students can use their understanding of tools to assemble and disassemble simple tools.
<b>Customer Focus</b>	Students can use their understanding of communication and project management to understand client needs and complete project accordingly.
<b>Quality Assurance &amp; Continuous Improvement</b>	Students can use their understanding of product and process to meet quality systems requirements as defined by customer specifications.
<b>Digital Manufacturing</b>	Students can use their understanding of digital manufacturing tools and computer-based programs to complete the design and develop implementation process.
<b>Supply Chain Logistics</b>	Students can use their understanding of materials, suppliers, and internal systems to plan and monitor movement and storage of materials and products.





<b>Cash &amp; Capital Principles</b>	Students can use their understanding of the nature of cash, monetary systems, and the value of money in order to recognize the risk, return, and opportunity cost associated with capital.
<b>Technical Applications</b>	Students can use their understanding of spreadsheets and accounting software to maintain, update, and retrieve data from records.
<b>Project Management</b>	Students can use their understanding of time management and organization to set timely and measurable goals leading to project completion.
<b>Principles of Economics &amp; Business</b>	Students can use their understanding of micro- and macro-economics to understand how an economy functions locally and globally.
<b>Financial Reporting</b>	Students can use their understanding of financial statements to assess a business's financial information.
<b>Financial Statements</b>	Students can use their understanding of financial statements to prepare and interpret balance sheets, income statements, cash flow statements, and retained earnings.
<b>Customer Care &amp; Marketing</b>	Students can use their understanding of market demands to meet the needs of a client.
<b>Business Operations</b>	Students can use their understanding of transaction management to perform business operations.
<b>Principals of Customer Relationship Management</b>	Students can use their understanding of customer communication and customer relationship management software to attract new customers and sustain existing customers.
<b>Fundamentals of Sales</b>	Students can use their understanding of personalized service and market demands to secure successful sales interactions.





<b>Medical Terminology</b>	Students can use their understanding of basic medical terminology, including abbreviations, acronyms, and diagnostic terms, to communicate effectively with healthcare personnel and patients.
<b>Healthcare Industry &amp; Culture</b>	Students can use their understanding of the basic components and culture of the health industry to understand the purpose and function of key stakeholders, practices, practitioners, and regulations.
<b>Healthcare Delivery Practices</b>	Students can use their understanding of the practices, procedures, and personnel involved in delivering quality patient care to evaluate the appropriateness of a plan, instructions, or assigned task.
<b>Healthcare Industry Ethics</b>	Students can use their understanding of confidentiality, morality, and legal concepts to evaluate and apply the merits, risks, and social concerns to workplace decisions.
<b>Health Professions Licensure</b>	Students can use their understanding of education requirements, licensure, and certification to ensure proper adherence to regulations that guide service delivery.
<b>Emergency Response</b>	Students can use their understanding of emergency procedures and protocols to respond to and expedite safety in an emergency situation.
<b>Healthcare Confidentiality</b>	Students can use their understanding of HIPPA to adhere to legal requirements and maintain confidentiality.
<b>Healthcare Personnel &amp; Roles</b>	Students can use their understanding of the practices, procedures, and personnel used to deliver quality patient care to identify one's role on a team and within the overall health environment.
<b>Healthcare Sanitation</b>	Students can use their understanding of sanitation and health regulations to ensure that healthcare facilities and tools meet standards for cleanliness.
<b>Healthcare Rules &amp; Regulation</b>	Students can use their understanding of basic laws and regulations (Patient Bill of Rights, CLIA, EMTALA, OSHA, etc.) to meet accreditation standards and to obey the law.

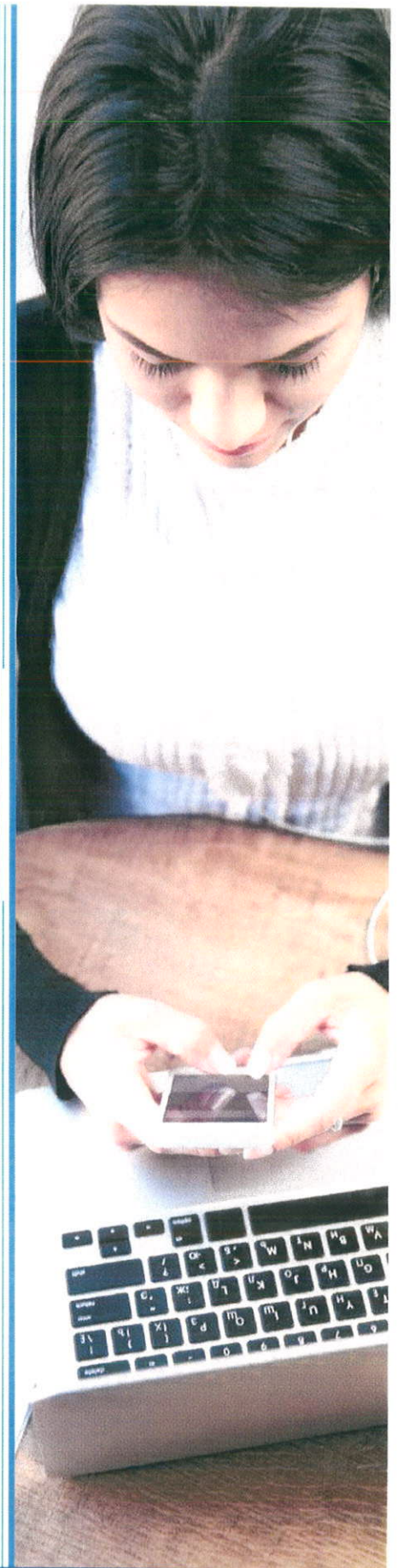




# INFORMATION TECHNOLOGY

## TOP 10 TECHNICAL COMPETENCY STATEMENTS FOR INFORMATION TECHNOLOGY COLLEGE & CAREER PATHWAY ENDORSEMENTS

<b>Basic Principles of Information Technology Concepts, Systems, Platforms &amp; Tools</b>	Students can use their understanding of fundamental IT concepts, systems, platforms, tools, and technology to understand the common roles of IT professionals.
<b>Security</b>	Students can use their understanding of malware, firewall, IDS, and IPS to recognize and describe basic threats to networked computers.
<b>Logic &amp; Fundamentals of Computer Languages</b>	Students can use their understanding of how computer languages communicate to build basic mobile and web applications.
<b>Routing &amp; Network Configuration</b>	Students can use their understanding of common networking protocols to explain the purpose of routing, network configuration, and monitoring.
<b>User &amp; Customer Support</b>	Students can use their understanding of the range of services used to provide assistance and technical support to help users implement and solve problems related to information technology.
<b>Basic Principles of Hardware</b>	Students can use their understanding of communication systems hardware to describe the purpose and function of fundamental end user devices, switches, routers, wireless access points, etc.
<b>Risk Management &amp; Information Assurance</b>	Students can use their understanding of the standards and applications needed to protect the confidentiality, integrity, and availability of information and information systems.
<b>Basic Principles of Software Development</b>	Students can use their understanding of designing, writing, testing, and maintaining source code of computer programs to manage and maintain software.
<b>Networks</b>	Students can use their understanding of hardware and software to facilitate communication between people and computer systems.
<b>Basics of Virtualization &amp; Cloud Computing</b>	Students can use their understanding of the features, benefits, and concepts of virtualization and cloud computing to differentiate among types of cloud services.





## Appendix I: Illinois Essential Employability Skills Framework Cross Analysis

In order to ensure cross-systems alignment, committees reviewed the Illinois Essential Employability Skills Framework, a resource designed to define and clarify essential employability skills and provide a standard for the state. This framework was developed through a collaboration of the Illinois Community College Board, Illinois Department of Commerce and Economic Opportunity, representatives of Illinois businesses, local chambers of commerce, educators, and other stakeholders.

The chart below illustrates the ten PWR Act CCPE Essential Employability Competencies' alignment with the Illinois Essential Employability Skills Framework. A full review of the Illinois Essential Employability Skills Framework can be found at:

<http://icsps.illinoisstate.edu/wp-content/uploads/2017/07/Essential-Employability-Skills-Framework-Final-Printed-Version.pdf>.

ILLINOIS ESSENTIAL EMPLOYABILITY SKILLS FRAMEWORK	PWR ACT CCPE ESSENTIAL EMPLOYABILITY COMPETENCIES
<b>Personal Ethic:</b> Integrity, Respect, Perseverance, Positive Attitude	Decision Making, Critical Thinking, Adaptability and Flexibility, Reliability and Accountability
<b>Work Ethic:</b> Dependability, Professionalism	Initiative and Self-Drive, Planning and Organizing
<b>Teamwork:</b> Critical Thinking, Effective and Cooperative Work	Teamwork and Conflict Resolution Problem Solving, Cultural Competence
<b>Communication:</b> Active Listening, Clear Communication	<b>Communication:</b> Written, Verbal, and Digital

