

# Statewide Model Programs of Study Information Technology

February 8, 2022  
Thank you for joining!  
We will get started shortly.



# Quick Notes

- We highly encourage you to use the Q&A and Chat Box
- This webinar is being recorded
- The slide deck link will be shared in the chat

# Agenda

- Welcome from ICCB and EdSystems
- Background on Model POS Guides
  - Policy Alignment
  - Role of Advisory Committee
- Model POS Mapping Process
- Review of POS Guide for Information Technology
- POS in Action: Rock Valley Community College and District 214 Wheeling High School
- Feedback and Next Steps



# Welcome from Illinois Community College Board



**Janelle Washington**  
Director for CTE



# EdSystems Staff



Juan Jose Gonzalez  
Pathways Director



Meagan Mitchell  
Pathways Manager



# The EdSystems Mission

Shape and strengthen education and workforce systems to advance racial equity and prepare more young people for productive careers and lives in a global economy.



**College &  
Career Pathways**



**Bridges to  
Postsecondary**



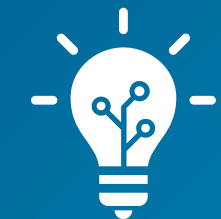
**Data Impact &  
Leadership**



**Statewide**



**Community Networks**



**Innovation**

# Background on Model Programs of Study



# Why Develop Statewide Model Programs of Study?

The primary purposes and goals for the Model Programs of Study Guides are to:

- Provide guidance and exemplars for local programs to adopt or customize as they develop programs of study for approval as part of the [Perkins V Plan](#).
- Identify priority dual credit and early college courses that are foundational to the industry area and well-situated for statewide scaling and articulation.
- Define the competencies that should be sequenced across a program of study course sequence to prepare students for the future of work in that industry area.
- Identify entry points for employers to support coursework and related experiences.



# Why Develop Statewide Model Programs of Study? Pt. 2

Intended audiences:

- High school faculty working in pathways
- Community College faculty and staff (e.g. academic deans & department heads, early college liaisons, etc.)
- Education for Employment System Directors

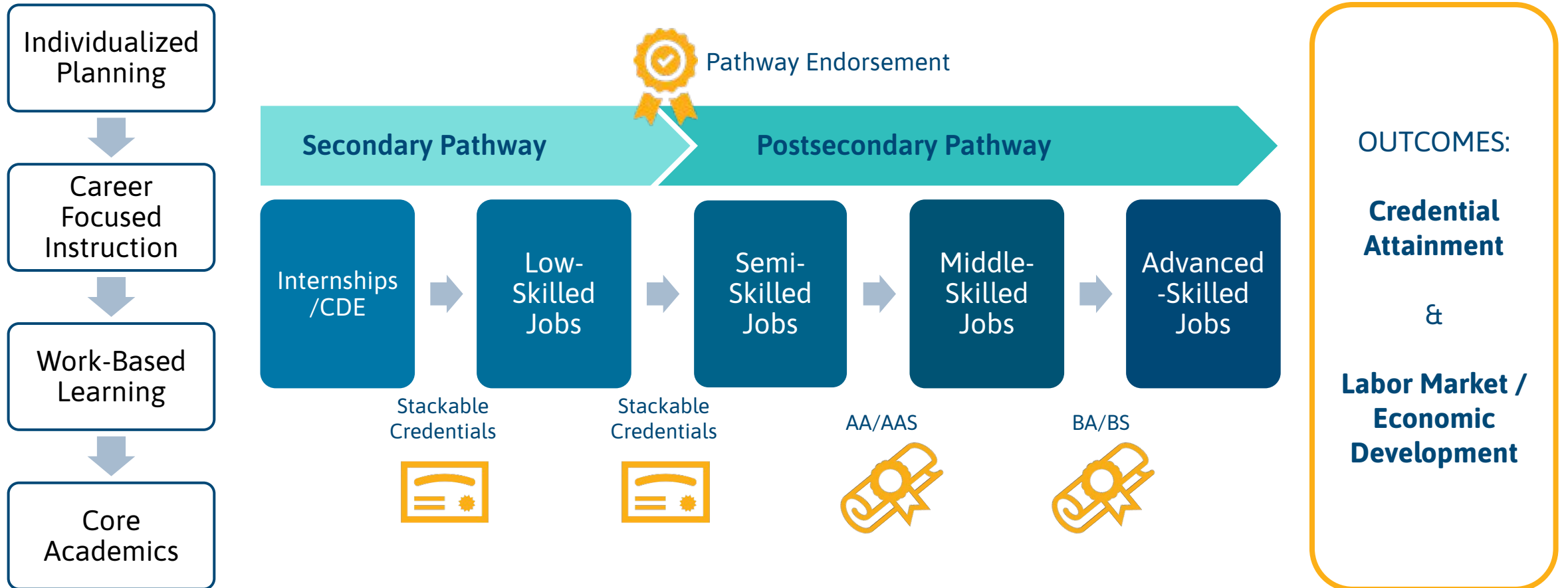
Subsequent Presentations

- February 22: Architecture, Construction, and Energy
- March 15: Finance and Business Services
- April 19: Arts and Communications



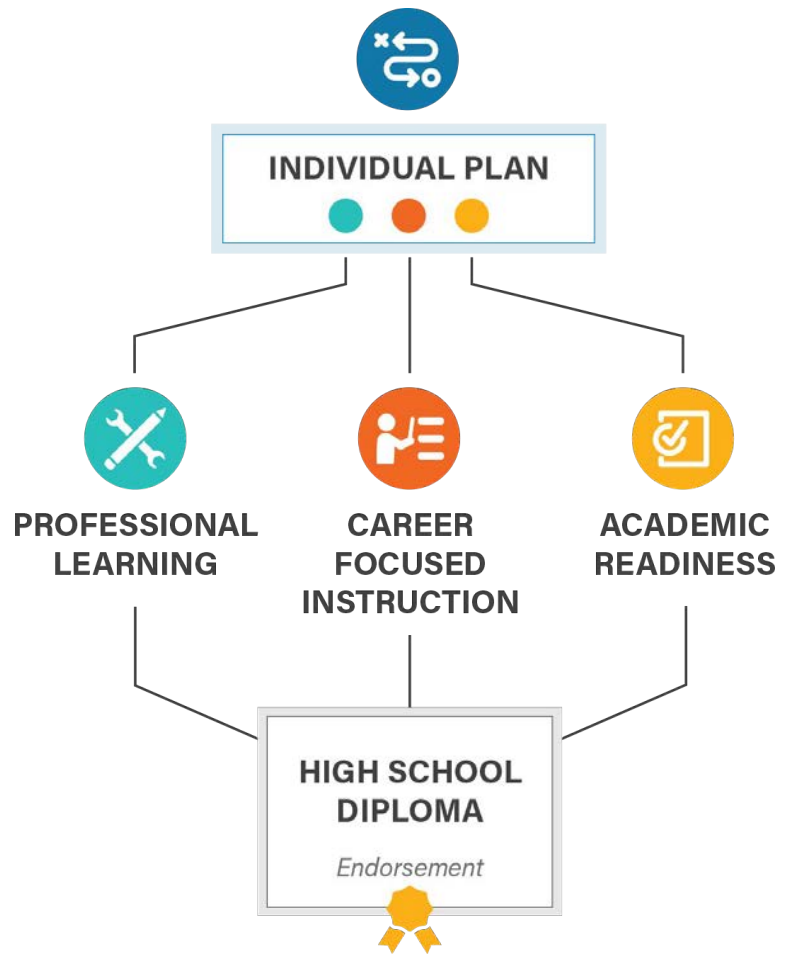


# State Pathways Model





# College and Career Pathway Endorsement Framework



## INDIVIDUAL PLAN

Each student completing an endorsement must have an individualized plan, which includes college planning linked to early understanding of career goals, financial aid, resume, and personal statement.

## PROFESSIONAL LEARNING

Awareness, exploration, and preparation activities that provide opportunities for students to interact with adults in their workplace

9th	10th	11th	12th
At least 2 career exploration activities or 1 intensive experience		60 cumulative hours of paid or credit supervised career development experience with a professional skills assessment	
At least 2 team-based challenges with adult mentoring			

*Through these experiences, a student gains essential employability and technical competencies in their identified sector.*

## CAREER-FOCUSED INSTRUCTIONAL SEQUENCE

Two years of secondary coursework, or equivalent competencies, that articulate to a postsecondary credential with labor market value. Must include at least 6 hours of early college credit.

9th	10th	11th	12th
Orientation / Introduction			
	Skill Development		
			Capstone / Advanced Courses

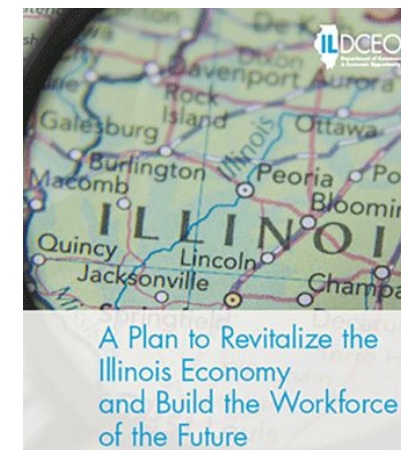
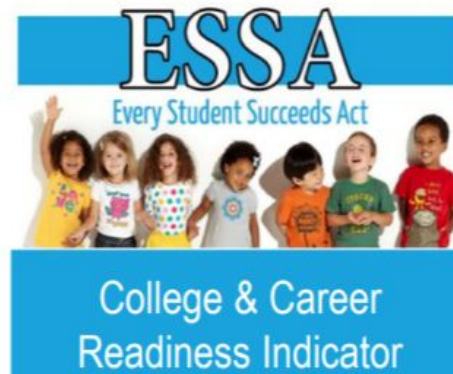
## ACADEMIC READINESS

Ready for non-remedial coursework in reading and math by high school graduation through criteria defined by district and local community college

# Policy Alignment



TEACH ILLINOIS  
STRONG TEACHERS, STRONG  
CLASSROOMS  
POLICY SOLUTIONS TO ALLEVIATE TEACHER SHORTAGES IN ILLINOIS  
SEPTEMBER 2018  
ILLINOIS STATE BOARD OF EDUCATION

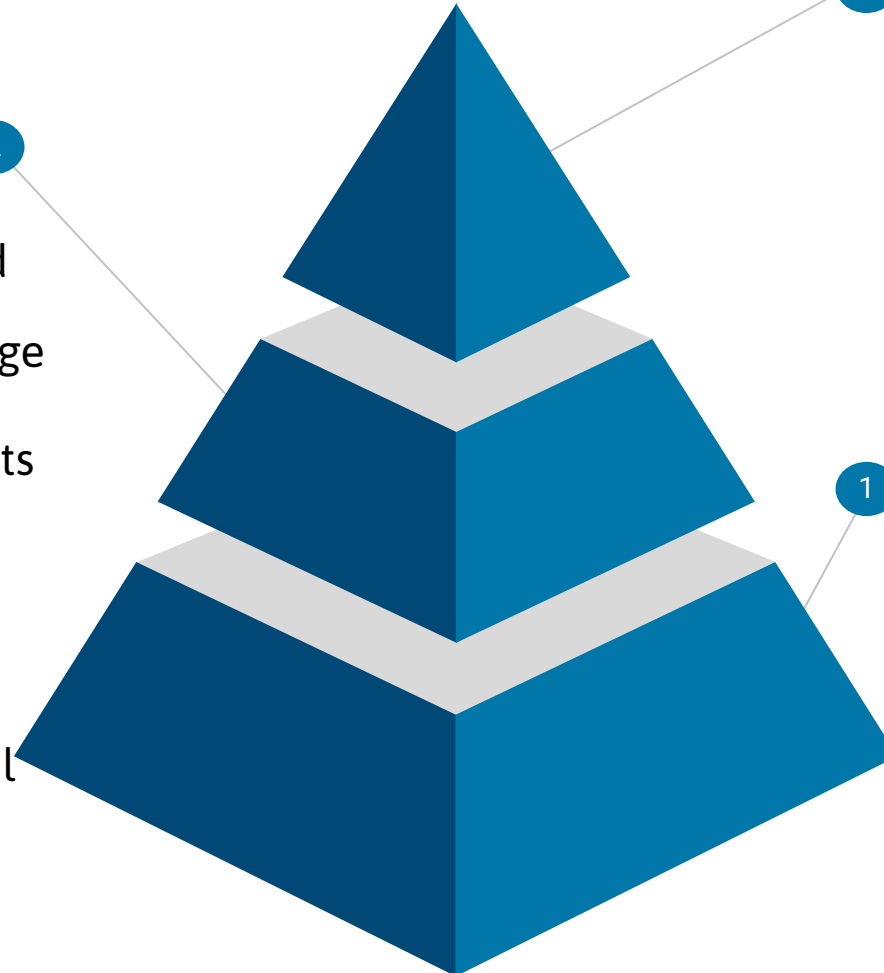


# State Pathways Policy Framework: College, Career and Life Ready

## Accelerated Towards a Career Area

- Multiple years of coursework, increasing commitment to the field
- Emphasis on Early college coursework in “Career-focused” subjects
- Courses go Beyond Traditional High School CTE and Industry Credentials, include Complementary General Education Courses

2



3

## Academically Ready for College

- Required success in College-Level, career-focused coursework and electives
- Required placement college-level placement in Math and English (through collaboration with local Community College)

1

## Foundational Skills for All Careers

- General employability and entrepreneurial skills embedded in HS experience
- Student have a familiarity with work-based setting and robust experience in problem-based learning





## 2020 Guides

- Education
- Health Sciences
- Information Technology
- Manufacturing and Engineering

[edsystemsniu.org/guides](https://edsystemsniu.org/guides)

## 2021 Guides

- Agriculture, Food and Natural Resources
- Architecture, Construction and Energy
- Arts and Communications
- Finance and Business Services







# Role of Advisory Committee

## Expertise and guidance:

- What are trends in the industry that aren't reflected in Labor Market Information?
- What credentials/degrees are emerging as most promising in the field?
- How does our desk analysis relate to on-the-ground implementation?
- What are future of work implications for this sector?

## Inform key decision-points in this process:

- Pathway map approach
- Selecting strategic early college credit courses
- Identifying key competencies (building from existing State technical competencies)



# Mapping Process



# Model Programs of Study Mapping Process



**6 month process**





# Model Programs of Study Mapping Process





# High Priority Occupations & Promising Credentials

- Using Department of Labor data and the MIT Living Wage Calculator for the State of Illinois as a reference, High Priority Occupation defined
  - Occupations with a positive growth outlook and
  - Occupations whose salaries are near or greater than the “Living Wage” of 1 Adult + 1 Child in Illinois.
- A “promising credential” is a degree or college certification that immediately prepares an individual for **entry into a high-priority occupation**, with a focus on credentials available in **typical Illinois Community College**.
  - Credential may also be is a **clear precursor to or stackable credential** for a high-priority occupation



<b>Finance/Business Example</b>	Median Wage Hourly	Living Wage?	Growth?	Entry Education	Annual Job Openings	Percentage Growth (2016-2026)
<a href="#">Accountants and Auditors</a>	 33.89	Yes	Yes	Bachelor's Degree	5,510	8%
<a href="#">Business Operations Specialist</a>	 36.81	Yes	Yes	Bachelor's Degree		
<a href="#">Financial Analyst</a>	 39.29	Yes	Yes	Bachelor's Degree	1,310	7%
<a href="#">Actuary</a>	 49.34	Yes	Yes	Bachelor's Degree	140	23%
<a href="#">Market Research Analysts and Marketing Specialists</a>	 29.15	Yes	Yes	Bachelor's Degree	2960	22%
<a href="#">Human Resource Specialist</a>	 28.79	Yes	Yes	Bachelor's Degree	2230	6%
<a href="#">First-Line Supervisor of Retail Sales Workers</a>	18.74	No	Yes	High school diploma	5,620	3%
<a href="#">First-Line Supervisor of Office &amp; Administrative Support Workers</a>	 28.3	Yes	No	High school diploma	4,450	0%
<a href="#">First-Line Supervisor of Non-Retail Sales Workers</a>	 34.04	Yes	Yes	High school diploma	1,070	3%
<a href="#">Human Resource Assistant</a>	 19.49	No	No	Postsecondary nondegree award	380	-4%
<a href="#">Lodging Manager</a>	21.62	No	Yes?	High school diploma or equivalent	180	9%
<a href="#">Insurance Claims and Policy Processing Clerks</a>	19.94	No	Yes	High school diploma or equivalent	1090	10%

## Common CC Programs



## Leading to Occupations/Careers

### Guided Transfer

- Business AA<sup>\*\*^^</sup>
- Accounting AA<sup>\*\*^^</sup>
- Actuary AA<sup>^^</sup>

### Business AAS, with specialities/certs<sup>^^</sup>

- General,<sup>\*\*</sup>
- Insurance,
- HR,<sup>\*\*</sup>
- Entrepreneurship,<sup>\*\*</sup>
- Management,<sup>\*\*</sup>
- Marketing,<sup>\*\*</sup>
- Hospitality<sup>\*\*</sup>

### Supply Chain

- Supply Chain AAS, AA/AS<sup>^^</sup>

### Accounting

- Accounting AAS<sup>\*\*^^</sup>

### Entry Level Bachelor's Degree Positions

- Business Operations Specialist OR Financial Analyst OR Market Research Analysts OR Human Resource Specialist
- Accountants and Auditors
- Actuary

### Small/Local Business

- First-Line Supervisor of Retail Sales Workers OR Office & Administrative Support Workers OR First-Line Supervisor of Non-Retail Sales Workers
- Human Resource Assistant OR Lodging Manager OR Insurance Claim Clerk

### Supply Chain

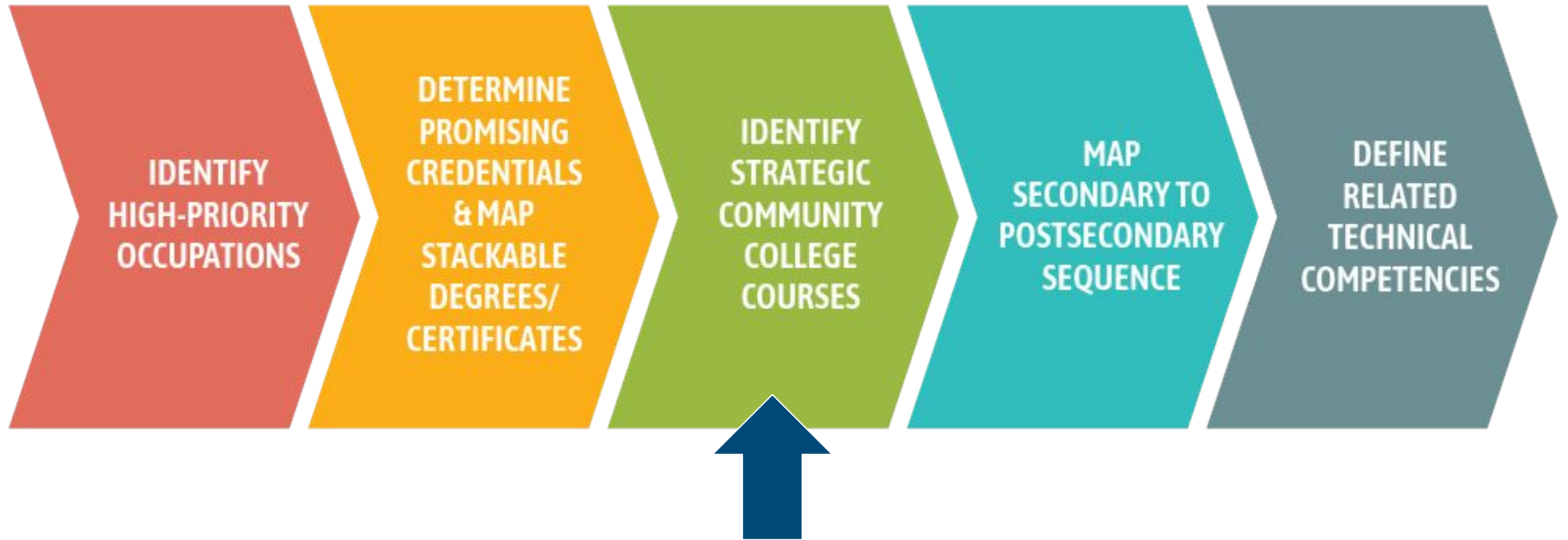
- Supply Chain Manager OR Production, Planning, & Expediting Clerks

### Clerk Roles

- Payroll & Timekeeping, OR, Bookkeeping, Accounting, & Auditing Clerk, OR Billing and Posting Clerks



# Model Programs of Study Mapping Process







# Identify Strategic Community College Courses

- Analyze “promising credential” program requirements at various Community Colleges in the state
- **Tally and label** all of the “career-focused” & “general education” courses across programs to determine which of these courses:
  - Are **most common** across targeted programs,
  - Are more likely **accessible** for dual credit, and
  - Have the potential for **transferability** and currency (through the Illinois Articulation Initiative) or have **industry credentials**



# Identify Strategic Community College Courses

Finance/Business careers, courses .XLSX


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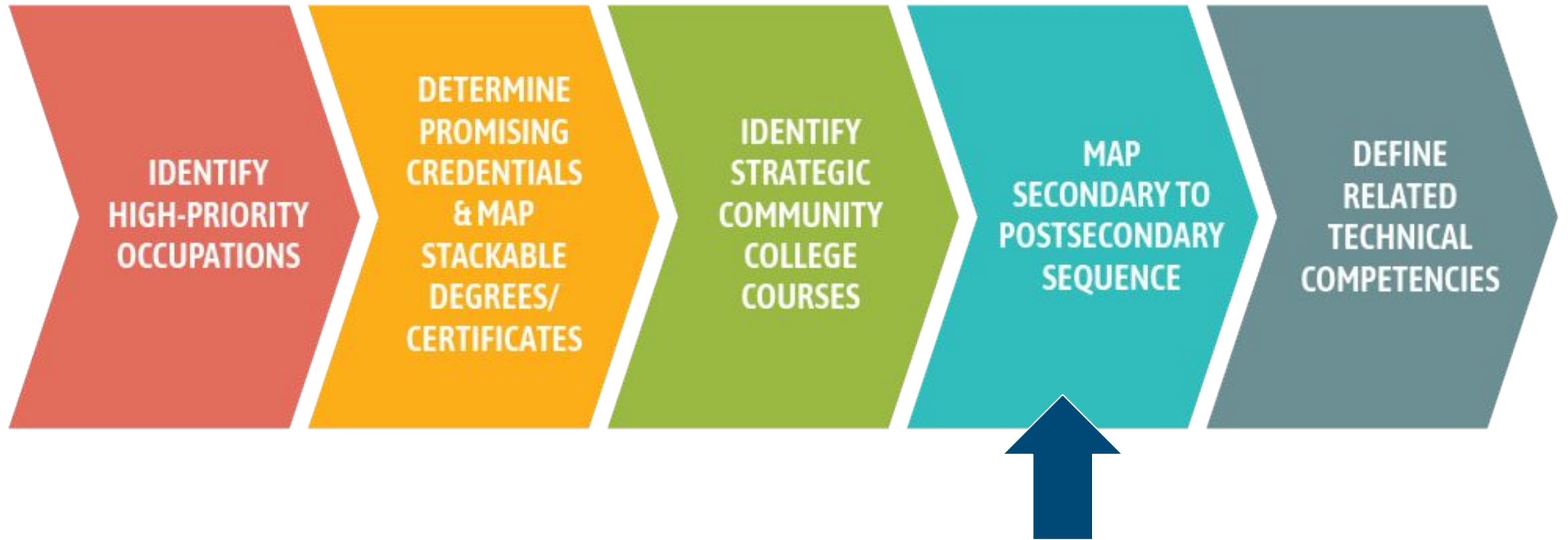
Course Code	Course Title	Common Name	Prerequisites	IAI Code	Notes	Sum	Is course a Key PreReq for other courses	IAI Course?	Accounting AA	Accounting AAS	Insurance AA	Business Administration Advanced Certificate
3 Business 111	Introduction to Business	Intro to Business	None			7	1		1	1		
4 Business 181	Financial Accounting	Financial Accounting	College Level Math Pla	BUS 903		9	1	1	1	1	1	
4 Business 182	Managerial Accounting	Managerial Accounting	Business 181	BUS 904		9	1	1	1	1	1	
21	CCC	3 Speech 101	Fundamentals of Speech C	Oral Communication	College Level English P C2 900	5	1	1				

21 22 23 24 25 26 27 28

Pivot Table 3 Sheet6 Combined Course Listings Pivot Table Courses 1 CCC Course Listings ECC Course Listings Explore



# Model Programs of Study Mapping Process







# Map Secondary to Postsecondary Sequence

- Recommend early college courses reasonably accessible to HS students, goal is to at least get **6+ career-focused** credit hours by HS graduation
- Keep open possibility for unique opportunities, i.e. work-based learning or capstone course
- Consider typical teacher and faculty credentials, as well as course delivery and approval processes
- Suggest initial post secondary courses and sequences that continue to accelerate student
- Recommend sequence in general education subject areas, including early college and AP supplements



# Model Programs of Study Mapping Process







# Define Related Technical Competencies for Key Courses

- Select foundational courses in each Model Programs of Study area
  - Courses map to multiple credentials within the industry area,
  - Can be accessed for early college credit at secondary level, and
  - Not currently recognized by the IL Articulation Initiative (IAI)
- Determine a set of technical competencies for each course (i.e. learning objectives)



State of Illinois  
Model Programs of Study Guide:  
**Information Technology**

October 2020



# Review of the Information Technology Guide



Model Programs of Study Guide:

# Information Technology



### ORIENTATION / INTRODUCTION Grades 9-10

Computer Applications for Business

### SKILL DEVELOPMENT Grades 10-12

Intro to Computer Info Systems  
or  
AP Computer Science Principles

Mobile Application / Web Development Course(s)

Hardware / Operating System Course(s) Aligned with IT Certification

### CAPSTONE / ADVANCED Grades 12

Computer Science I  
or  
AP Computer Science A

Intro to Networking Aligned with IT Certification

### POSTSECONDARY COURSES Recommended 1st Year

Computer Science I  
Computer Science II  
Intro to Web Development

Continue AS or AAS Course Sequence Aligned with IT Certification

**CAREER FOCUSED COURSES**

Information Technology

Programming

Networking

Courses and Work-Based Learning Address the PWR Act Recommended Technical and Essential Employability Competencies

### WORK-BASED LEARNING

Career Exploration (2)

Team-Based Challenge

Team-Based Challenge

Career Development Experience  
or  
Youth Apprenticeship

Team-Based Challenge

Career Development Experience  
or  
Apprenticeship

### SCIENCE

Science Sequence

Science Sequence

Science

Science

### SOCIAL SCIENCE

Social Science Sequence

Social Science Sequence

Social Science

Social Science

### MATH

Algebra

Geometry

Geometry

Algebra 2

Pre-Calculus

Transitional Math: STEM

College Algebra

Calculus

Statistics

### ENGLISH

English Sequence

English Sequence

Transitional English

English Composition

English Composition

Oral Communication

» AP or Dual Credit

📄 Dual Credit Course

📖 Dual Credit Course Affiliated With IAI Code

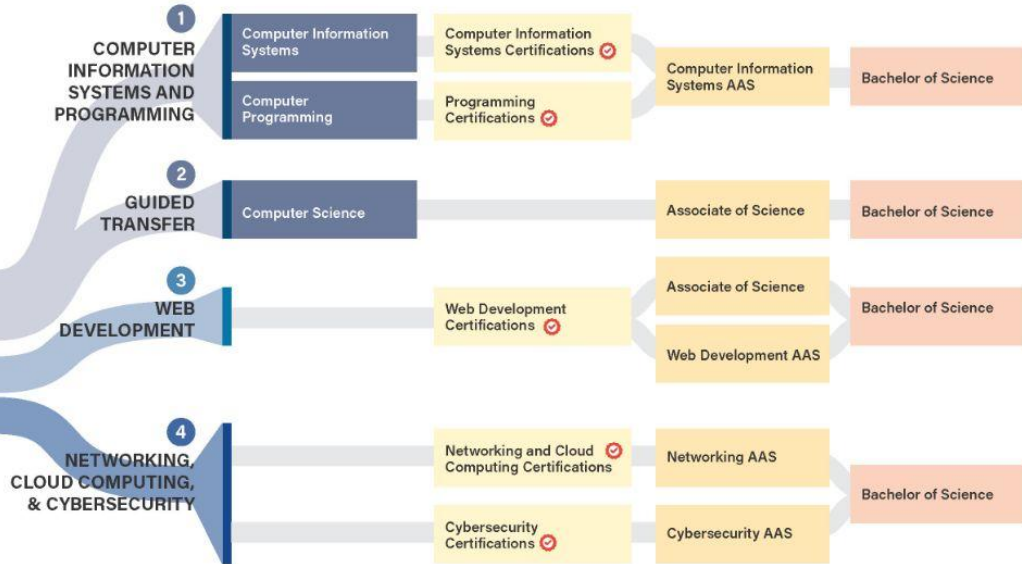
🏆 Course or Program Prepares for Industry Credential

📄 Postsecondary Course Affiliated with IAI Code

🏆 College and Career Pathway Endorsement Earned

⊕ If courses in this column were accomplished through early college credit, students should take the next required course in the sequence or, if none, additional AAS or Major Courses

## POSTSECONDARY OPTIONS



## SELECTED OCCUPATIONS, WAGES, & JOB GROWTH

Program	Typical Job	Near or Above Living Wage Threshold for 1 Adult + 1 Child <sup>1</sup>	Median Hourly Wage <sup>2</sup>	Growth in Illinois: Annual Job Openings <sup>2</sup>	Growth in Illinois: % Change Over 10 years <sup>2</sup>	Stackable?
1 Computer Information Systems and Programming	Computer Systems Analysts	Y	\$41.67	2,230	9%	Typically Stacks to Bachelor's Program
	Computer User Support Specialists	Y	\$24.27	220	11%	
2 Computer Science	Computer and Information Systems Managers	Y	\$65.12	1,370	10%	
	Computer Hardware Engineers	Y	\$50.35	110	12%	
	Software Developers - Applications	Y	\$45.88	2,690	28%	
	Software Developers - Systems Software	Y	\$51.63	1,030	13%	
	Computer and Information Research Scientists	Y	\$55.43	90	21%	
3 Web Development	Web Developers	Y	\$33.85	515	15%	
4 Networking, Cloud Computing, and Cybersecurity	Computer Network Architects	Y	\$56.07	400	7%	
	Information Security Analysts	Y	\$46.13	430	23%	
	Network and Computer Systems Administrators	Y	\$39.87	970	5%	
	Computer Network Support Specialists	Y	\$29.80	840	8%	

1. Living wage calculations are based on MIT's Living Calculator ([livingwage.mit.edu](http://livingwage.mit.edu)), where the "Living Wage" for 1 Adult + 1 Child is \$26.27/hour for the state of Illinois. "Near" defined as 85% of the statewide living wage, which is \$22.33/hour

2. U.S. Department of Labor, CareerOnestop ([careeronestop.org/explorecareers](http://careeronestop.org/explorecareers))





## SELECTED OCCUPATIONS, WAGES, & JOB GROWTH

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		Computer Hardware Engineers	Y	\$50.35	110	12%	
		Software Developers - Applications	Y	\$45.88	2,690	28%	
		Software Developers - Systems Software	Y	\$51.63	1,030	13%	
		Computer and Information Research Scientists	Y	\$55.43	90	21%	
3	Web Development	Web Developers	Y	\$33.85	515	15%	
4	Networking, Cloud Computing, and Cybersecurity	Computer Network Architects	Y	\$56.07	400	7%	
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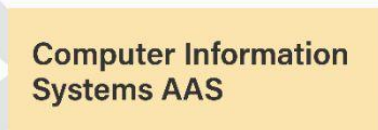
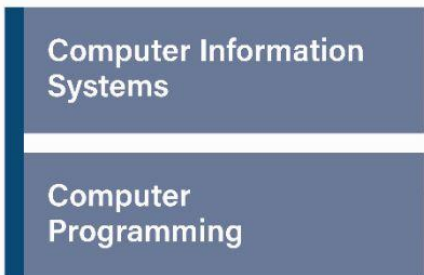
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# POSTSECONDARY OPTIONS

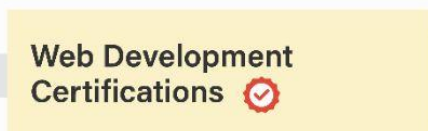
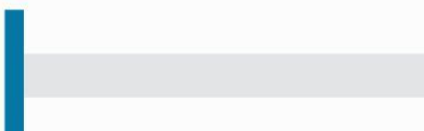
## 1 COMPUTER INFORMATION SYSTEMS AND PROGRAMMING



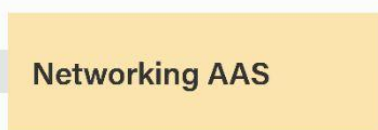
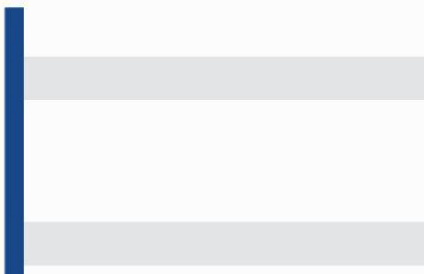
## 2 GUIDED TRANSFER



## 3 WEB DEVELOPMENT



## 4 NETWORKING, CLOUD COMPUTING, & CYBERSECURITY



## ORIENTATION / INTRODUCTION Grades 9-10

## SKILL DEVELOPMENT Grades 10-12

## CAPSTONE / ADVANCED Grades 12



## POSTSECONDARY COURSES <sup>+</sup> Recommended 1st Year



### CAREER FOCUSED COURSES

- Information Technology
- Programming
- Networking

Computer Applications for Business

Intro to Computer Info Systems or AP Computer Science Principles

Mobile Application / Web Development Course(s)

Hardware / Operating System Course(s) Aligned with IT Certification

Computer Science I or AP Computer Science A

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Computer Science I

Computer Science II

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Continue AS or AAS Course Sequence Aligned with IT Certification



### WORK-BASED LEARNING

Career Exploration (2)

Team-Based Challenge

Team-Based Challenge

Career Development Experience or Youth Apprenticeship

Team-Based Challenge

Career Development Experience or Apprenticeship



AP or Dual Credit



Dual Credit Course



Dual Credit Course Affiliated With IAI Code



Course or Program Prepares for Industry Credential



Postsecondary Course Affiliated with IAI Code



College and Career Pathway Endorsement Earned



If courses in this column were accomplished through early college credit, students should take the next required course in the sequence or, if none, additional AAS or Major Courses



**ORIENTATION / INTRODUCTION**  
Grades 9-10

**SKILL DEVELOPMENT**  
Grades 10-12

**CAPSTONE / ADVANCED**  
Grades 12

 **POSTSECONDARY COURSES**   
Recommended 1st Year

  
**WORK-BASED LEARNING**

Career Exploration (2)  
Team-Based Challenge

Team-Based Challenge  
Career Development Experience  
or  
Youth Apprenticeship

Team-Based Challenge  
Career Development Experience  
or  
Apprenticeship

  
**SCIENCE**

Science Sequence

Science Sequence

Science 


Science 

  
**SOCIAL SCIENCE**

Social Science Sequence

Social Science Sequence






Social Science 



Social Science 

  
**MATH**

Algebra  
Geometry

Geometry  
Algebra 2  
Pre-Calculus


Transitional Math: STEM  
College Algebra   
Pre-Calculus  
Calculus    
Statistics  



College Algebra  
Calculus   
Statistics 

  
**ENGLISH**

English Sequence

English Sequence

Transitional English  
English Composition 

English Composition   
Oral Communication 

  
AP or  
Dual Credit


  
Dual  
Credit  
Course

  
Dual Credit  
Course Affiliated  
With IAI Code

  
Course or Program  
Prepares for  
Industry Credential

  
Postsecondary  
Course Affiliated  
with IAI Code

  
College and Career  
Pathway Endorsement  
Earned

  
If courses in this column were accomplished through early college credit, students should take the next required course in the sequence or, if none, additional AAS or Major Courses

## INTRODUCTION TO COMPUTER INFORMATION SYSTEMS

### Key Competencies

Applications and Software	<ul style="list-style-type: none"><li>• Students can use their understanding of system software and software applications to explain the purposes and functions of operating systems, essential system utilities, general business software applications, and mobile and web-based applications.</li><li>• Students can use their understanding of general software development to describe the life cycle of a software product from gathering requirements through deployment, maintenance, and next iteration.</li></ul>
Data and File Structures	<ul style="list-style-type: none"><li>• Students can use their understanding of common data and file structures to move, store, reference, access, and manipulate data or files necessary to create information.</li></ul>
Hardware	<ul style="list-style-type: none"><li>• Students can use their understanding of computer and peripheral hardware to explain the purposes and functions of the system unit and its components, input and output devices, and physical and virtual network devices and media.</li></ul>
Information Technology and Systems	<ul style="list-style-type: none"><li>• "Students can use their understanding of fundamental IT concepts, systems, platforms, tools, and technology to understand the common roles of IT professionals." – <a href="#">PWR</a></li><li>• Students can use their understanding of information systems to explain the purposes and functions of transactional, management, decision support, and other system types relevant to information technology.</li></ul>
Networking and Cloud Computing	<ul style="list-style-type: none"><li>• Students will use electronic resources and research methods to read medical writings and understand the medical information contained in them.</li><li>• Students will analyze and interpret patient records, lab reports, diagnostic summaries, etc., and the information contained in them.</li></ul>
Privacy, Security, and Ethics	<ul style="list-style-type: none"><li>• Students can use their understanding of fundamental privacy to identify and describe common and emerging privacy issues relevant to information technology and data.</li><li>• Students can use their understanding of physical and virtual security controls to identify, describe, mitigate, and prevent basic threats to computers and data.</li><li>• Students can use their understanding of fundamental ethics to identify and describe common and emerging ethical issues relevant to information technology, data, and artificial intelligence.</li></ul>
Programming	<ul style="list-style-type: none"><li>• Students can use their understanding of programming to code and debug basic programs via a graphical user interface and a command line interface.</li></ul>
Problem Solving and User Support	<ul style="list-style-type: none"><li>• Students can use their understanding of information technology and basic problem solving to identify a business problem; determine the problem's cause(s); and create, communicate, implement, and document a plan to resolve the problem.</li><li>• Students can use their understanding of computers and communications to assist and support computer users in addressing common hardware and software issues.</li></ul>

# Strategic Dual Credit Course Competencies



## INTRODUCTION TO NETWORKING

### Key Competencies

Devices and Media	<ul style="list-style-type: none"><li>Students can use their understanding of networking infrastructure to explain the purposes, functions, and appropriate deployment of various network devices, media, and technology.</li></ul>
Software	<ul style="list-style-type: none"><li>Students can use their understanding of system software and software applications to explain the purposes and functions of a network operating system and common network utilities.</li></ul>
Models and Protocols	<ul style="list-style-type: none"><li>Students can use their understanding of the Open Systems Interconnect (OSI) model to identify and differentiate between OSI layers and their respective devices, protocols, and other components.</li><li>Students can use their understanding of TCP/IP to subnet and address an IP network.</li><li>Students can use their understanding of networking protocols to explain the purposes and functions of common ports.</li></ul>
Types and Topologies	<ul style="list-style-type: none"><li>Students can use their understanding of LAN and WAN to configure and monitor basic networks of each type.</li><li>Students can use their understanding of physical and logical network topology to compare, contrast, and deploy bus, mesh, ring, and star topologies.</li></ul>
Security	<ul style="list-style-type: none"><li>"Students can use their understanding of malware, firewall, IDS, and IPS to recognize and describe basic threats to networked computers." – <a href="#">PWR</a></li><li>Students can use their understanding of physical and virtual security controls to secure basic local and wireless networks.</li></ul>
Privacy and Ethics	<ul style="list-style-type: none"><li>Students can use their understanding of fundamental privacy to identify and describe common and emerging privacy issues relevant to information technology and data.</li><li>Students can use their understanding of fundamental ethics to identify and describe common and emerging ethical issues relevant to information technology and data.</li></ul>
Troubleshooting and Support	<ul style="list-style-type: none"><li>Students can use their understanding of troubleshooting to identify common network issues; determine an issue's cause(s); and create, communicate, implement, and document a plan to resolve the issue.</li><li>Students can use their understanding of networking and communications to assist and support network users in addressing common network issues.</li></ul>
Virtualization and Cloud Computing	<ul style="list-style-type: none"><li>Students can use their understanding of networking and the Internet to describe the concepts of virtualization and cloud computing.</li><li>"Students can use their understanding of the features, benefits, and concepts of virtualization and cloud networking to differentiate among types of cloud services." – <a href="#">PWR</a></li></ul>

# Strategic Dual Credit Course Competencies





# Model Programs of Study in Action Part 1: Rock Valley Community College



# Department Overview

## CIS

- Computers & Information Systems AAS (64 credits)
- C/C++ Programming (15 Credits)
- Mobile Application Development (11 credits)

## PCT

- Network Systems Administration AAS (64 credits)
- Cisco Networking Certificate (17 credits)
- MS Server Administrator Certificate (9 credits)
- Network Technican Certificate (12 credits)

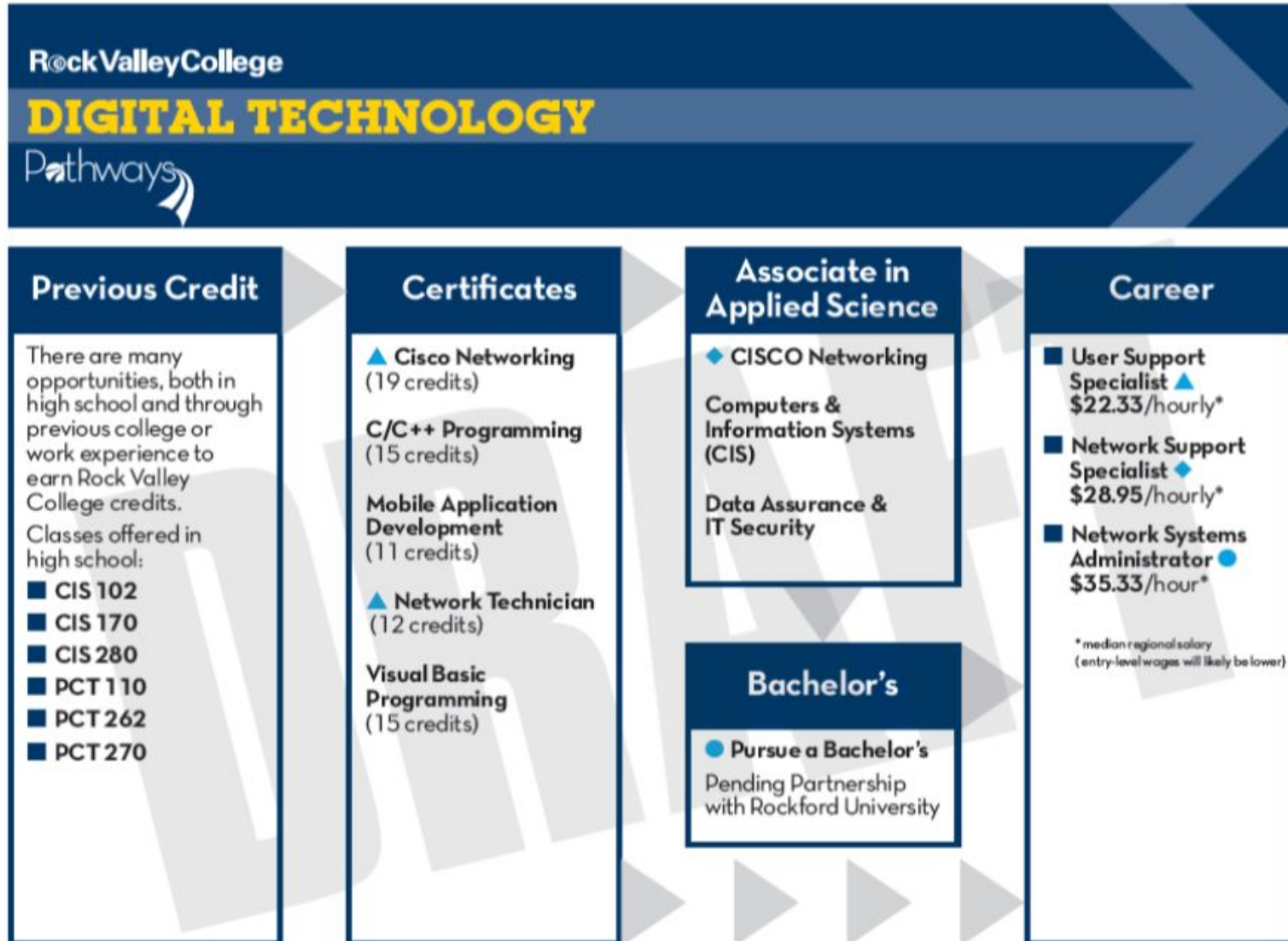
## PCT

- Cybersecurity Specialist AAS (64 credits)
  - Center for Academic Excellence in Cyber Defense (CAE-CD)
- Cisco CCNA Security Certificate (10 credits)

## WEB

- Web Programming and Design AAS (64 credits)
- Web Development Certificate (16 credits)
- Web Design Certificate (14 Credits)

# WHERE WE ARE



# CHALLENGES

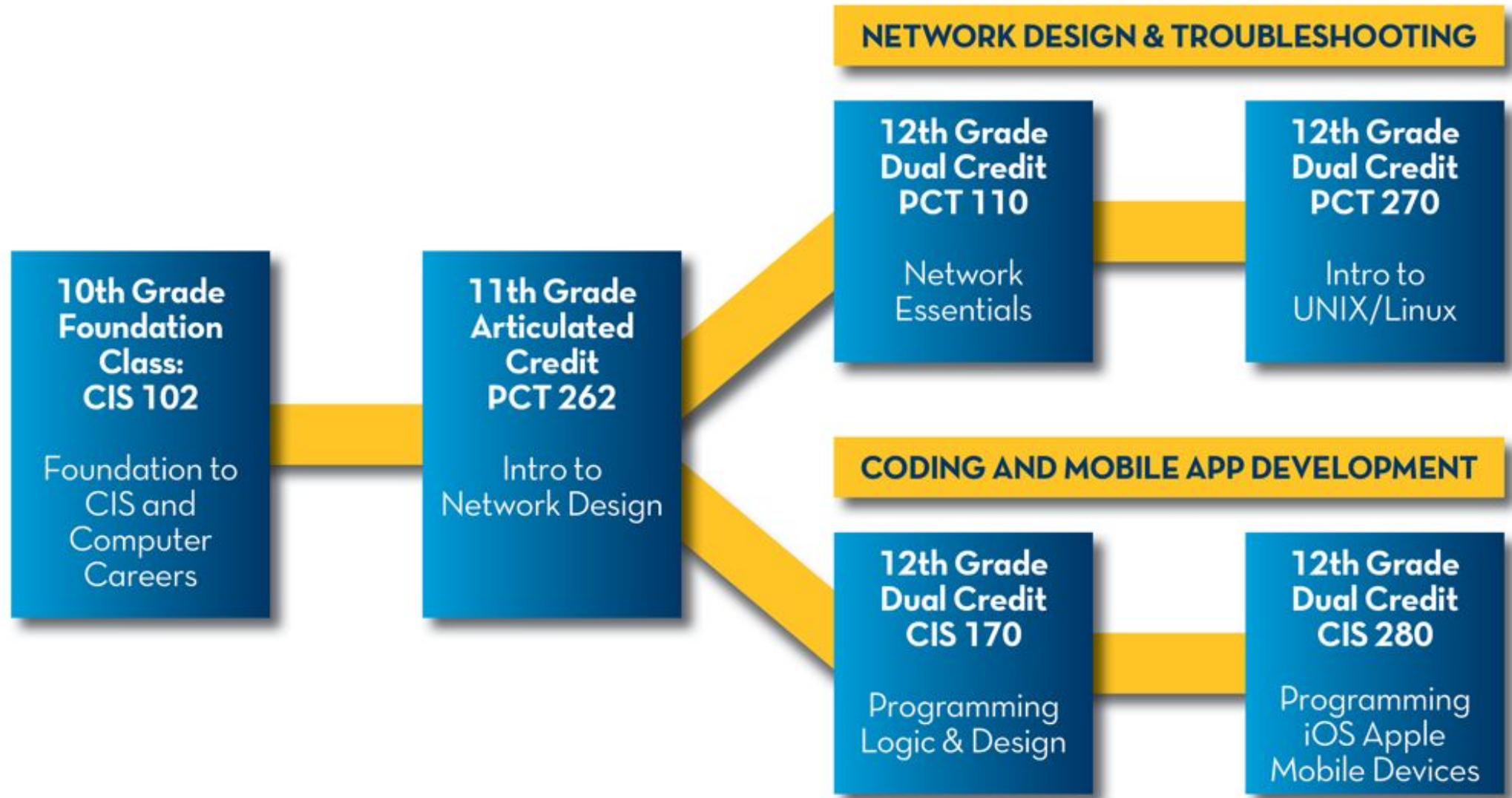
- HS Faculty Qualifications
  - Networking Pathway
  - Programming Pathway
- Qualified Faculty Leaving
- HS Faculty Mentoring
- Transition to new courses or new course materials for HS

# SUCSESSES

- Bootcamps
- LMS class shells for College faculty & H.S. Instructors to access
- District100 partnership
- IT Networking Pathway implemented fully in 3 HS
- Exploring future pathways
- Pathway correlates to industry certifications
  - CompTia A+ and Network +



# Dual Credit/Dual Enrollment Options



# What's Next?

- Expand or change the pathways as technology changes
  - Possible Cybersecurity Pathway
  - Move away from Mobile App Development Pathway
  - Updated programming pathways
- Implement pathway into additional area high schools

# Model Programs of Study in Action Part 2: District 214 Wheeling High School





## High School District 214

7 campus high school district with 12,000 students located in northwest suburbs of Chicago

College and Career Pathway Focused - 38 career pathways - 80+ dual credit courses  
30+ AP courses - 37,000+ Early College Credits - 950+ Industry Partners - 2,500+ workplace learning experiences



## Wheeling High School

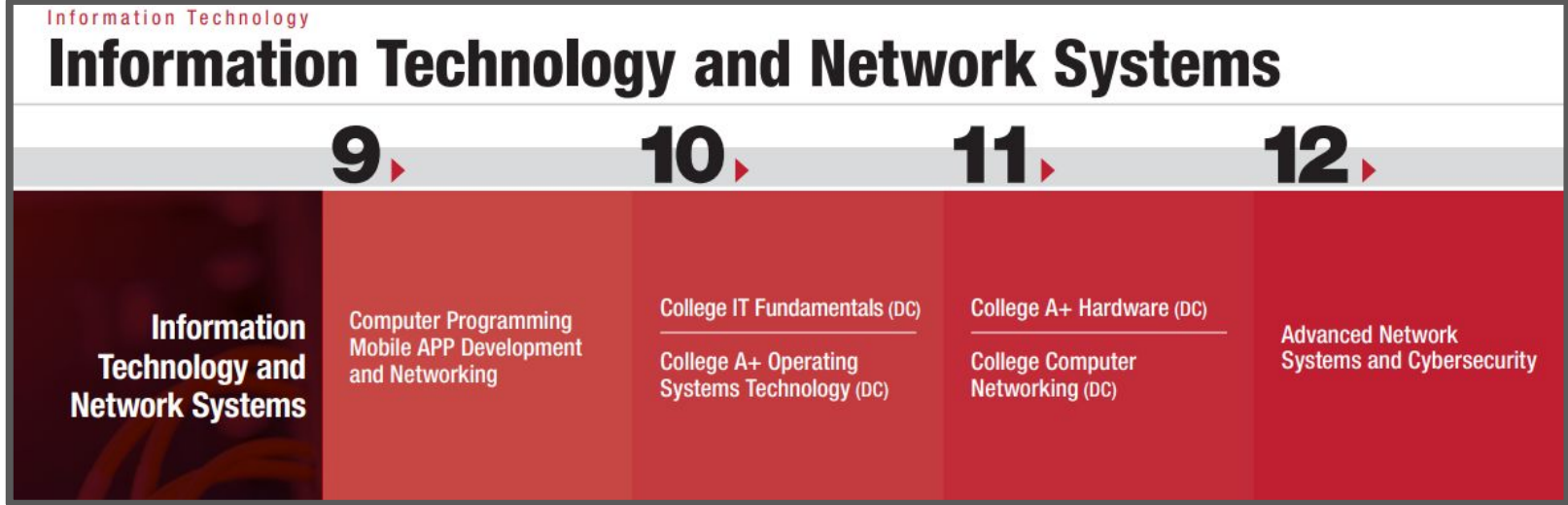
Majority-minority comprehensive high school with a STEM focus with 1,700 students.  
(64% Latinx, 25% white, 6% Asian, 2% black)

20% English Learners - 76% non-English home primary language - 47% Low Income  
- 71% First Generation

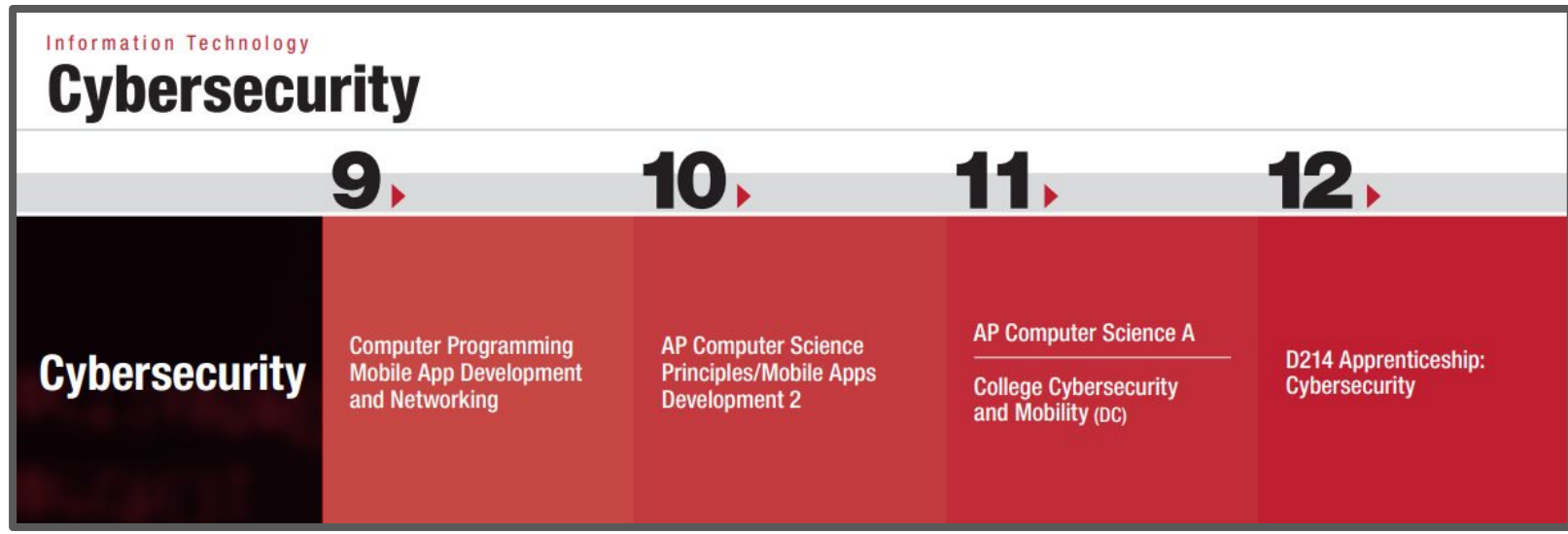
71% graduates successful in career dual credit coursework - 35% earn industry credential - 45% participate in internship or workplace learning experience - 85% graduates successfully complete AP, dual credit or transition core courses

*“Empowering students and staff to explore, care, connect and grow in a changing world”*

Model Program of Study  
Networking



Model Program of Study  
Programming



*“Empowering students and staff to explore, care, connect and grow in a changing world”*



# IT Pathway Certifications and Early College Credit

## Certifications

### CompTIA

IT Fundamentals

A+

Network+

Security+

## Early College Credit

### Advanced Placement

AP Computer Science Principles

Computer Science A

### Dual Credit

#### Harper College

NET105 IT Fundamentals

NET111 A+ Hardware

NET112 A+ Operating Systems  
Technology

NET121 Computer Networking

#### Moraine Valley Community College

LAN101 Orientation to IT Careers

LAN103 Security Awareness

LAN153 IT Security Essentials - Security+  
(Additional dual credit specific Apprenticeships)

# Career Pathways and Apprenticeships



**Middle School Outreach**

**HS coursework**

**AP, Dual Credit & Certification focused coursework**  
**Internships and other introductory work-based learning**

**YOUTH and REGISTERED APPRENTICESHIPS**

*“Empowering students and staff to explore, care, connect and grow in a changing world”*



# D214 IT Career Pathways and Apprenticeships



Current Areas - Cyber Security Technician and IT Generalist/Help Desk

- Capstone work-based learning experience during non-traditional senior year
- Teaching and learning aligned to employment competencies through paid on-the-job training and related technical instruction
- Leverages existing work-based learning, certification and dual credit programs and post-secondary alignments

Addresses some challenges of pathway specialization vs. generalization

*“Empowering students and staff to explore, care, connect and grow in a changing world”*

# Successes in Pathway Development

- Enrollment Growth
- Modernization of pathway offerings
- Development of relevant capstone extensions and transitions to existing pathway efforts

# Challenges in Pathway Development


- Teacher recruitment, certification program alignment and professional development
- Knowledge and response to industry trends and changes
- Sustaining / growing role of industry partnership



## What's Next?

- Recruitment and professional development for teaching staff
- Redevelopment of orientation experiences
- Expansion of capstone work-based learning and apprenticeship experiences
- Expanding focus on aspects of DEI within pathway

*“Empowering students and staff to explore, care, connect and grow in a changing world”*

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**Something still  
circling in my  
mind is...**

A teal square containing white text.

**Something that  
squares with my  
thinking is...**

A grey triangle containing white text.

**3  
Takeaways  
I have are...**

# Share Your Feedback

## Survey QR Code



[https://niu.az1.qualtrics.com/jfe/form/SV\\_4VhZXbPLe740vC6](https://niu.az1.qualtrics.com/jfe/form/SV_4VhZXbPLe740vC6)



# Survey Questions

1

## **Model Programs of Study**

Assess the implementation of the Model Programs of Study.

2

## **Advisory Committee**

Assess the effectiveness of the committee or join an upcoming committee.

3

## **Webinar Review**

Assess the effectiveness of the Webinar session.



# Next Steps: Upcoming Statewide Model Programs of Study Webinars

## **Architecture, Construction, and Energy**

February 22, 2022 | 2–3:30 p.m.

## **Finance and Business Services**

March 15, 2022 | 2–3:30 p.m.

## **Arts and Communications**

April 19, 2022 | 2–3:30 p.m.





# Next Steps: Potential Statewide Model POS Guides Creation

*Select from the following:*

**HUMAN & PUBLIC  
SERVICES** 

(Non-Education)

**HOSPITALITY**   
 **& TOURISM**

Culinary and Hospitality





# I-WIN

Illinois Work-Based Learning  
Innovation Network



Highlight and explore innovative models for work-based learning, initial focus on virtual



Engage in conversations on creating sustainable, high-quality models that provide broader and more equitable access, focusing on building social capital for Black and Latinx students

Explore the [Resource Hub](#) and [sign up for the newsletter](#)



Build connections among communities to share best practices, learnings and resources



Identify needs for state policy changes or support systems



# Education Systems Center

NORTHERN ILLINOIS UNIVERSITY

## Thank You

Survey: [https://niu.az1.qualtrics.com/jfe/form/SV\\_4VhZXbPLe740vC6](https://niu.az1.qualtrics.com/jfe/form/SV_4VhZXbPLe740vC6)

Guides: [edsystemsniu.org/guides](https://edsystemsniu.org/guides)

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