Statewide Model Programs of Study

Architecture, Construction, and Energy

February 22, 2022
Thank you for joining!
We will get started shortly.

Education Systems Center
NORTHERN ILLINOIS UNIVERSITY

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 Architecture, Construction, and Energy
- POS in Action: Kankakee Community College
- Feedback and Next Steps

Welcome from Illinois Community College Board

Janelle Washington

Director for CTE

EdSystems Staff

Jon Furr
Executive 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:

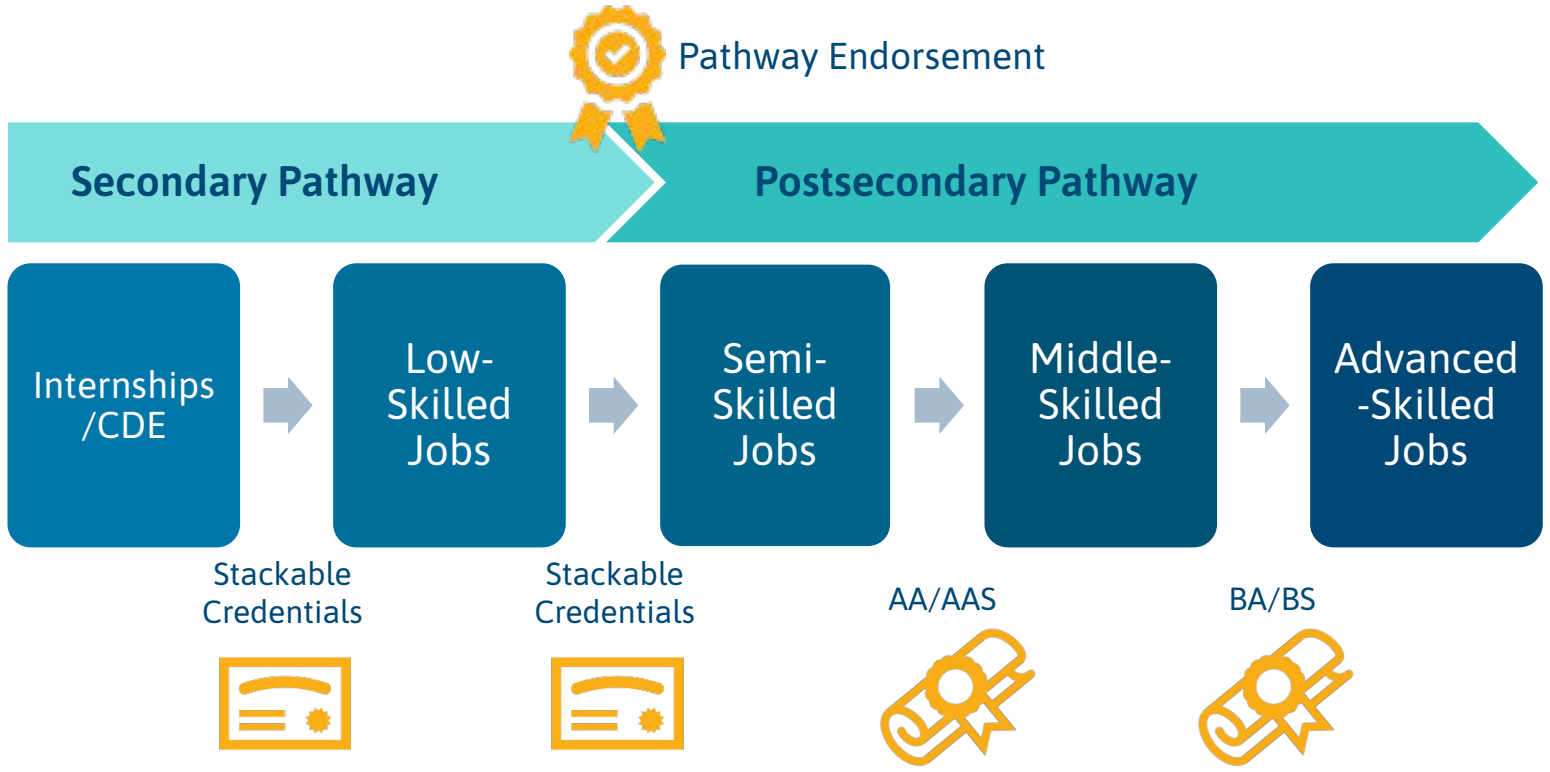
- High school faculty working in pathways
- Community College faculty and staff (e.g. academic deans & department heads, early college liaisons, etc.)
- Education for Employment System Directors

Subsequent Presentations

- March 15: Finance and Business Services
- April 19: Arts and Communications

State Pathways Model

- Individualized Planning
- Career Focused Instruction
- Work-Based Learning
- Core Academics



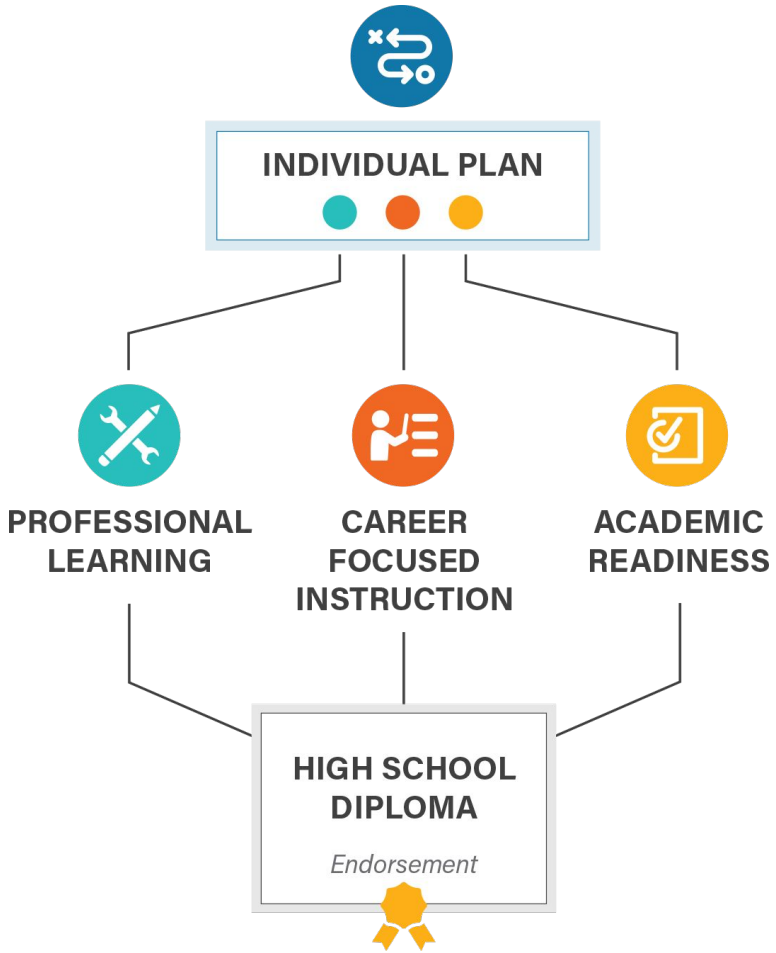
OUTCOMES:

Credential Attainment

&

Labor Market / Economic Development

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

POSTSECONDARY AND WORKFORCE READINESS ACT

EXPECTATIONS · PATHWAYS · READINESS · COMPETENCIES

CAREER & TECHNICAL EDUCATION

Career Connected Learning for All Students

DUAL Credit

Saving Time and Money for Illinois Students!

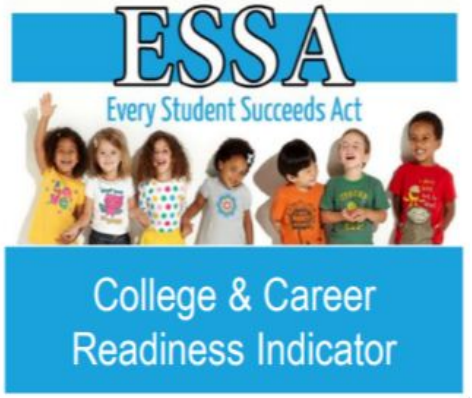
TEACH ILLINOIS

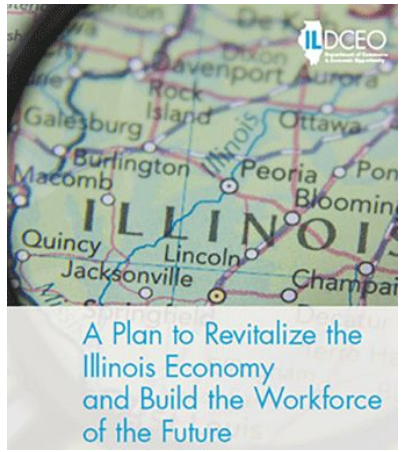
STRONG TEACHERS, STRONG CLASSROOMS

POLICY SOLUTIONS TO ALLEVIATE TEACHER SHORTAGES IN ILLINOIS

SEPTEMBER 2018

ILLINOIS STATE BOARD OF EDUCATION

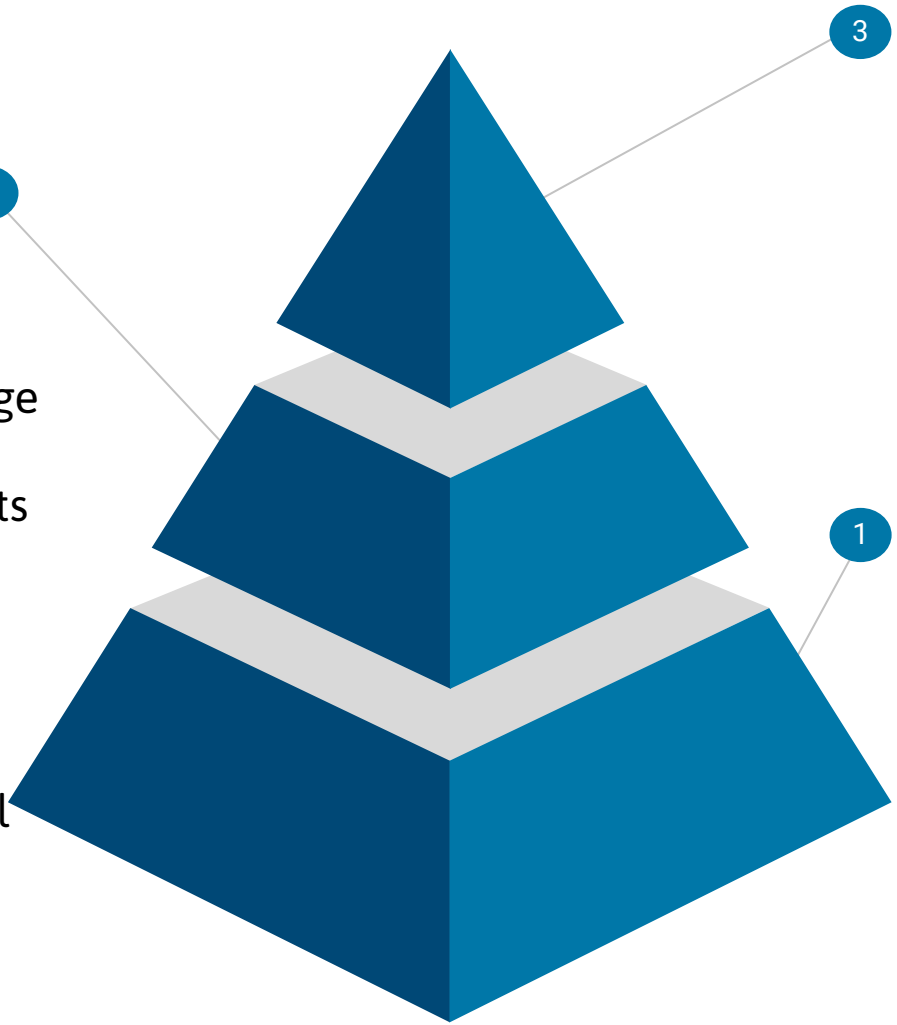




State Pathways Policy Framework: College, Career and Life Ready

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

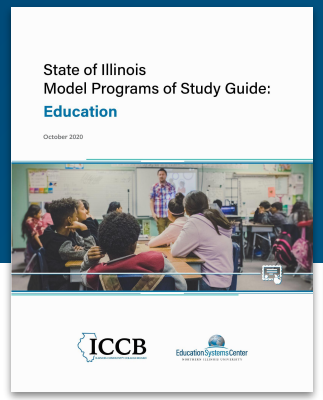


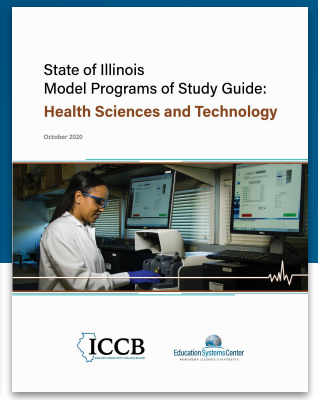
Academically Ready for College

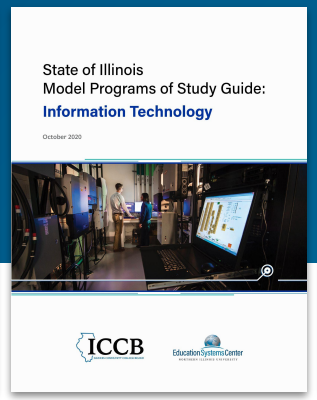
- Required success in College-Level, career-focused coursework and electives
- Required placement college-level placement in Math and English (through collaboration with local Community College)

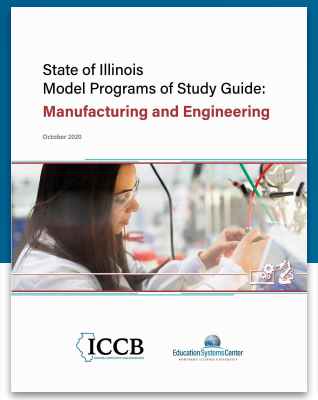
Foundational Skills for All Careers

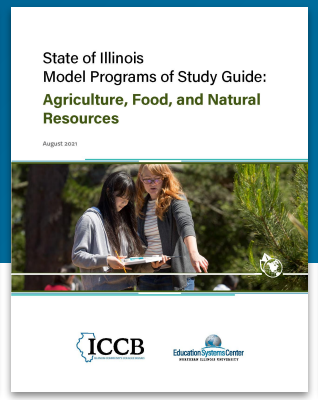
- General employability and entrepreneurial skills embedded in HS experience
- Student have a familiarity with work-based setting and robust experience in problem-based learning

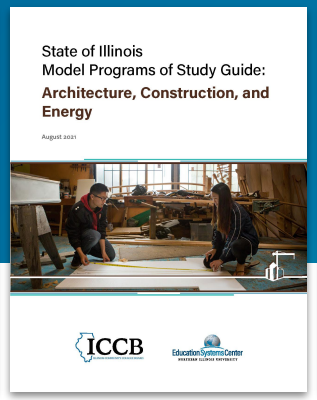


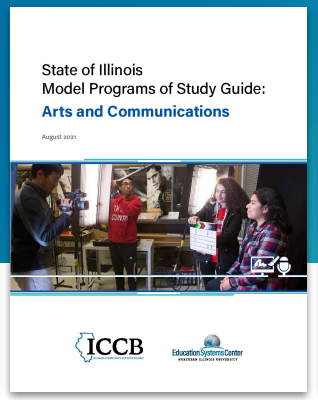


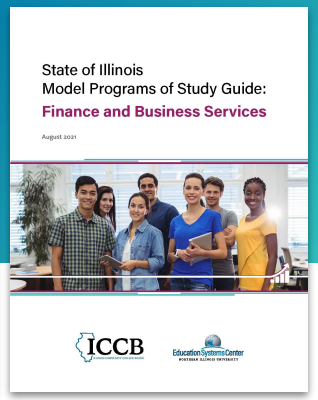












2020 Guides

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

edsystemsniu.org/guides

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

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

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

Common CC Programs → Leading to Occupations/Careers

Guided Transfer

- Business AA**^^
- Accounting AA**^^
- Actuary AA^^

Business AAS, with specialities/certs^^

- General,**
- Insurance,
- HR,**
- Entrepreneurship,**
- Management,**
- Marketing,**
- Hospitality**

Supply Chain

- Supply Chain AAS, AA/AS^^

Accounting

- Accounting AAS**^^

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

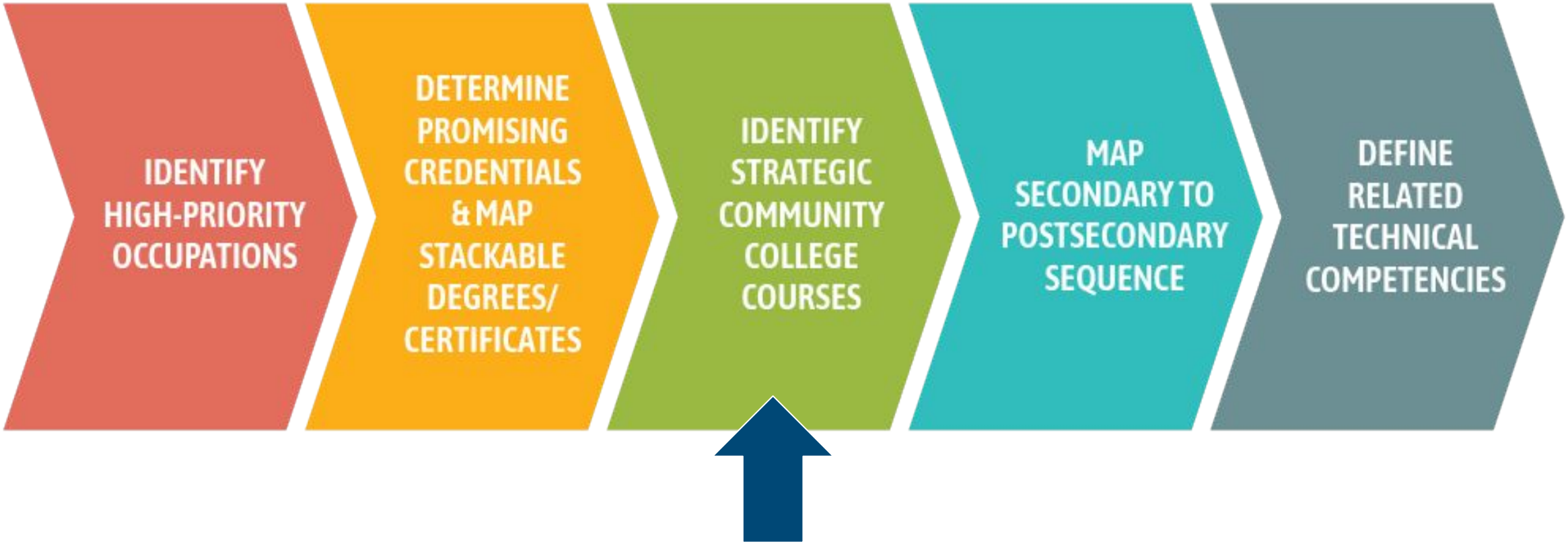
Clerk Roles

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

** Aligns with ISBE CTE Program of Study Matrix

^^Degree Stacks

Model Programs of Study Mapping Process

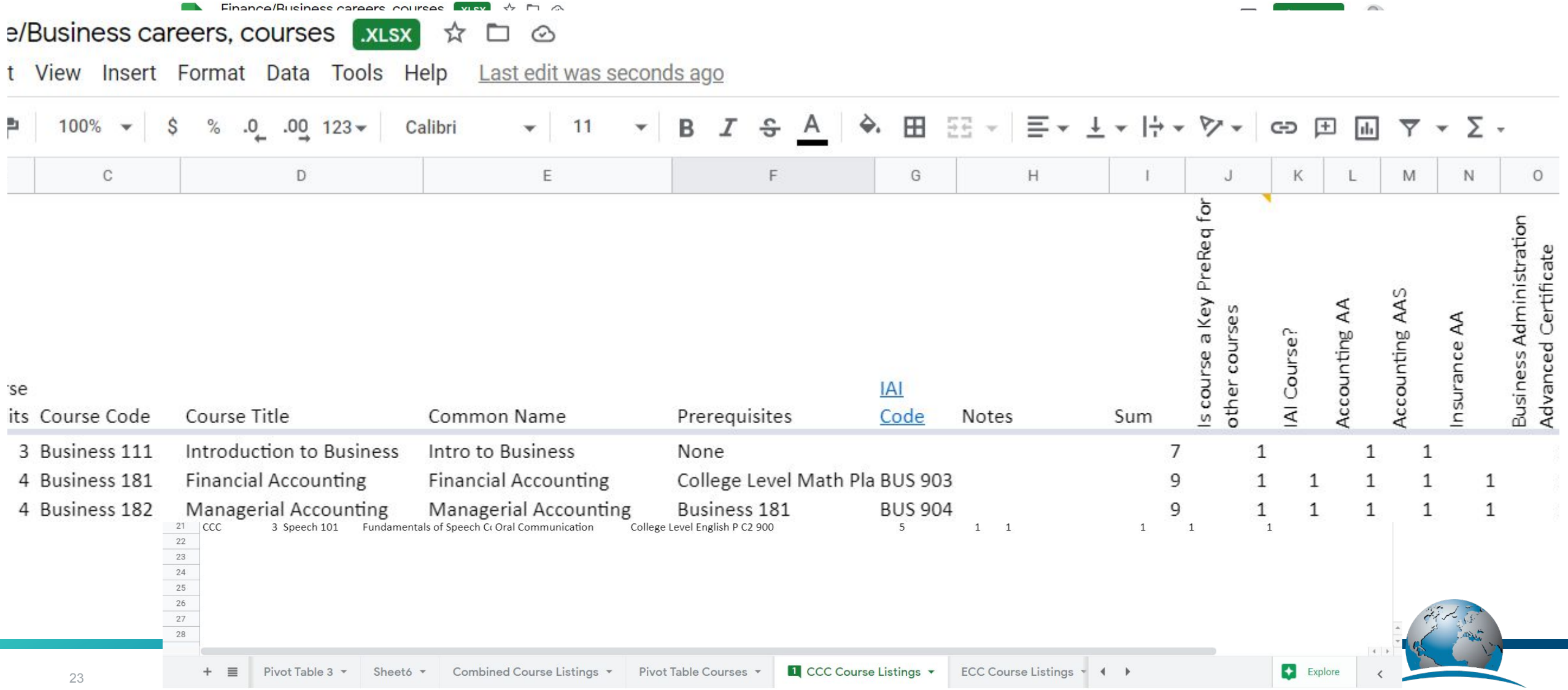


Identify Strategic Community College Courses

- 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



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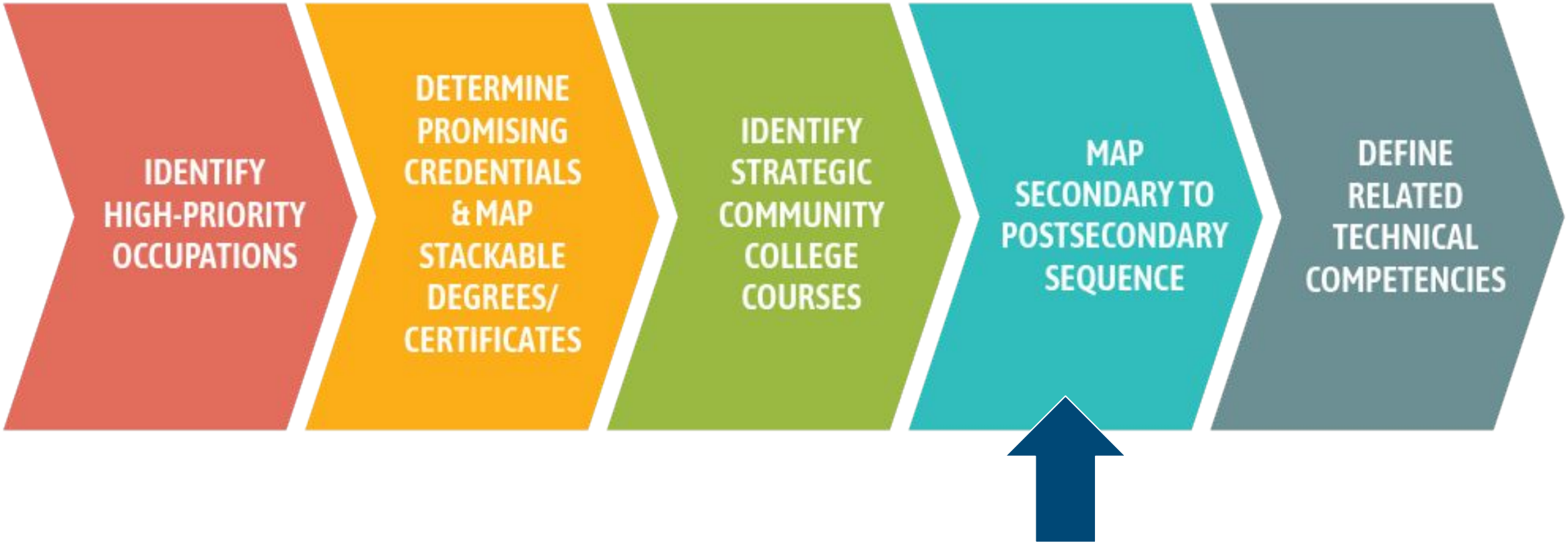
	C	D	E	F	G	H	I	J	K	L	M	N	O
se its	Course Code	Course Title	Common Name	Prerequisites	IAI Code	Notes	Sum	Is course a Key PreReq for other courses	IAI Course?	Accounting AA	Accounting AAS	Insurance AA	Business Administration Advanced Certificate
3	Business 111	Introduction to Business	Intro to Business	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	1	1	1	

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

Model Programs of Study Mapping Process



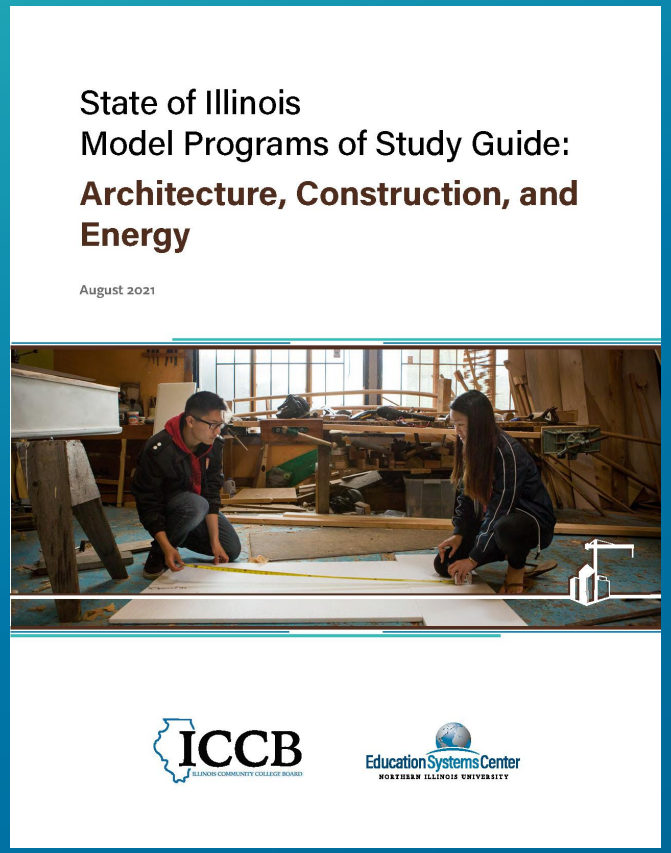
Map Secondary to Postsecondary Sequence

- 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)



Review of the Architecture, Construction, and Energy Guide

Model Programs of Study Guide:

Architecture, Construction, & Energy

Education Systems Center, Northern Illinois University | ICCB

	ORIENTATION / INTRODUCTION Grades 9–10	SKILL DEVELOPMENT Grades 10–12	CAPSTONE / ADVANCED Grades 12	POSTSECONDARY COURSES ⊕ Recommended 1st Year
CAREER FOCUSED COURSES *Construction Trades & Energy Technicians* *HVACR & Weatherization* *Architecture & Surveying* *Construction & Energy Management* *Engineering: Refer to the Manufacturing & Engineering Model Programs of Study*	Computer Applications for Business & Intro to Technology, Trades, and Engineering *or* Intro to Engineering Design	Construction Trades I *(w/ Geometry in Construction)* & Introductory CAD Construction Trades I *(w/ Geometry in Construction)* & Intro to Business	Construction Trades II *&/or* Electrical Trades I / II HVACR I / II *or* Beginning Welding Civil Engineering and Architecture Intro to Management *or* Financial Accounting	Apprenticeship Training *or* Certificate Course Sequence Apprenticeship Training *or* Certificate Course Sequence *AAS:* AAS Course Sequence *or AA/AES:* GECC AAS Course Sequence
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 AP Physics »	Science Sequence Survey of Renewable Energy	Science Sequence
SOCIAL SCIENCE	Social Science Sequence	Social Science Sequence	Social Science	Social Science
MATH	Algebra/Geometry *(Geometry in Construction)*	Geometry *(Geometry in Construction)*/Algebra 2	Technical Math Transitional Math: STEM	Technical Math College Algebra
Trades, Technicians, HVACR *Other Pathways*	Algebra/Geometry *(Geometry in Construction)*	Algebra 2/Pre-Calculus	College Algebra AP Calculus » AP Stats »	College Algebra/Trig Calculus
ENGLISH	English Sequence	English Sequence	AP Language & Composition » English Composition I & II	English Composition I & II

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

* *May be offered through Career and Technical Student Organizations (CTSOs) including SkillsUSA Illinois and Technology Student Association (TSA)*

» *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

1a **CONSTRUCTION TRADES**
- Construction Trades Apprenticeships *&/or* Certificates → Advanced Certificates

1b **ENERGY TECHNICIANS**
- Energy Technician Certificates → Energy Technician AAS

2 **HVACR & WEATHERIZATION**
- HVACR Trades Apprenticeships *&/or* Certificates → HVACR / Maintenance AAS → Bachelor of Science, Applied Technology
- Weatherization Certificates → HVACR / Maintenance AAS → Bachelor of Science, Applied Technology

3 **ARCHITECTURE & SURVEYING**
- Architectural Technology / CAD → Architectural Technology / CAD AAS
- Guided Transfer: Architecture → Pre-Architecture AAS → Bachelor of Arts *or* Science, Architecture
- Guided Transfer: Surveying → Geographic Information Systems AA → Bachelor of Science, Surveying Technology

4 **CONSTRUCTION & ENERGY MANAGEMENT**
- → Construction Management AAS → Bachelor of Arts *or* Science, Construction Management

SELECTED OCCUPATIONS, WAGES, & JOB GROWTH

	Program	Typical Job	Near or Above Living Wage Threshold for 1 Adult + 1 Child [1]	Median Hourly Wage [2]	Growth in IL: Annual Job Openings [2]	Growth in IL: % Change Over 10 years [2]	Stackable?
1a	Construction Trades	Construction Carpenters	Y	$33.22	3,250	6%	Not Typically Stackable
		Electricians	Y	$39.17	2,580	7%	
		Pipefitters & Steamfitters	Y	$43.85	2,160	14%	
1b	Energy Technicians	Electrical Power Line Installers & Repairers	Y	$43.49	310	11%	Typically Stacks to Related Bachelor's Programs at **Select** IL Universities
		Wind Turbine Service Technicians	Y	$25.76	170 [3]	57% [3]	
		Solar Photovoltaic Installers	N	$21.58	720 [4]	20% [4]	
2	HVACR & Weatherization	Heating & Air Conditioning Mechanics & Installers	Y	$27.52	800	13%	
		First-Line Supervisors of Mechanics, Installers, & Repairers	Y	$33.55	1,390	7%	
		Weatherization Installers & Technicians	Y	$26.42	170	9%	
3	Architecture, CAD, and Surveying	Architectural & Civil Drafters	Y	$30.20	240	5%	Typically Stacks to Related Bachelor's Programs at **Most** IL Universities
		Architects	Y	$38.06	390	0%	
		Surveyors	Y	$33.89	90	6%	
4	Construction & Energy Management	Construction Managers	Y	$43.59	960	7%	
		Cost Estimators	Y	$32.04	740	9%	
		Energy Auditors	Y	$36.81	5,570	7%	

1. Living wage calculations are based on: Glasmeier, Amy K. Living Wage Calculator. 2020. Massachusetts Institute of Technology. livingwage.mit.edu. As of January 2021 for the state of Illinois, the "Living Wage" for 1 Adult + 1 Child equaled $26.27/hour and "near," defined as 85% of that statewide living wage, was $22.33/hour. In March of 2021, the Living Wage calculator updated its calculations for Illinois, but information presented in this guide reflects the wage levels as of January 2021, when the project team conducted its analysis.
2. U.S. Department of Labor, CareerOnestop (careeronestop.org/explorecareers), Illinois Department of Employment Security Virtual Labor Market Information (www2.illinois.gov/ides), except where otherwise noted
3. Estimate derived from available data on CareerOnestop
4. Estimate derived from data published in National Solar Jobs Census 2019

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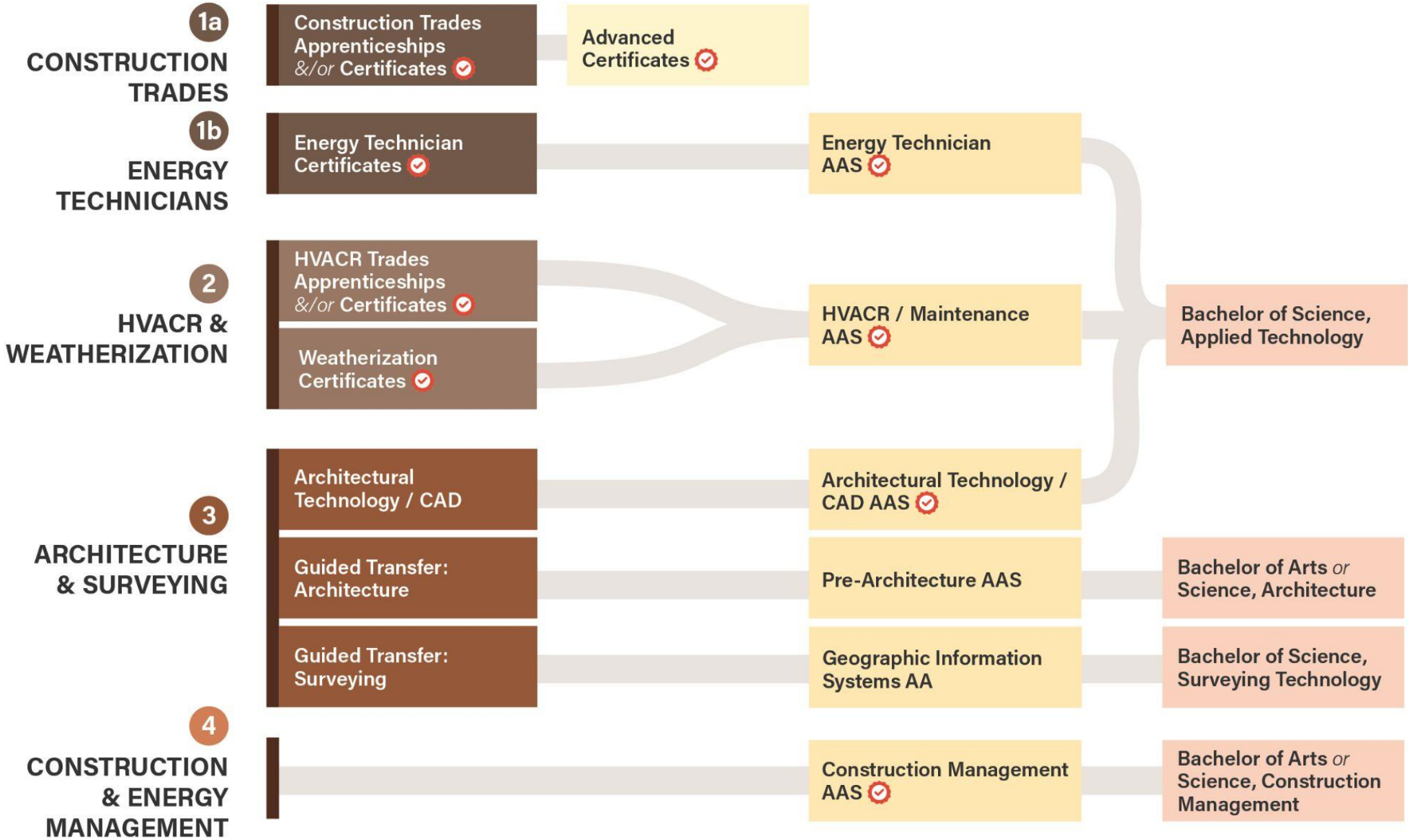
POSTSECONDARY OPTIONS



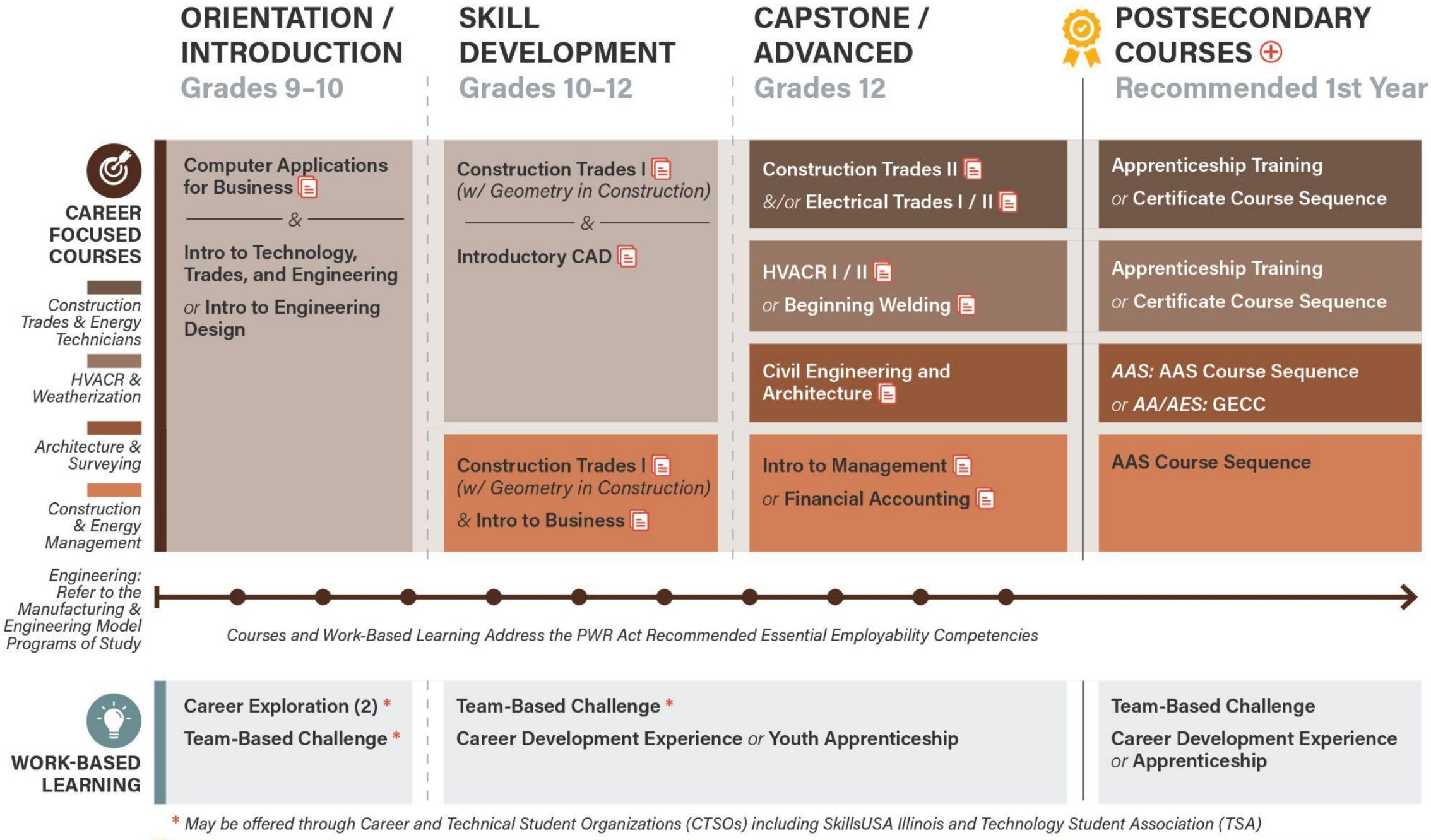
Union vs. Non-Union Pathway Opportunities

- Unionization rate of IL construction workers: one-third to one-half
  - Union positions can be highly competitive, few trade apprentices begin immediately out of high school
  - High school pathway coordinators should seek strong relationships with trade apprenticeship programs to increase opportunities for HS graduates

- Hourly wages vary significantly – non-union starting positions typically closer to minimum wages

- Annual compensation levels dependent on hours worked

- Vast majority of construction trades training outside of union apprenticeships is for electricians, HVACR, and welding. CC programs in trades/HVACR either provide prep for an apprenticeship program, or non-unionized entry-level employment in trades or with utilities


ORIENTATION / INTRODUCTION
Grades 9–10
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CAPSTONE / ADVANCED
Grades 12
POSTSECONDARY COURSES ⊕
Recommended 1st Year
CAREER FOCUSED COURSES
Construction Trades & Energy Technicians
HVACR & Weatherization
Architecture & Surveying
Construction & Energy Management
Engineering: Refer to the Manufacturing & Engineering Model Programs of Study
Computer Applications for Business
&
Intro to Technology, Trades, and Engineering
or Intro to Engineering Design
Construction Trades I
(w/ Geometry in Construction)
&
Introductory CAD
Construction Trades I
(w/ Geometry in Construction)
& Intro to Business
Construction Trades II
&/or Electrical Trades I / II
HVACR I / II
or Beginning Welding
Civil Engineering and Architecture
Intro to Management
or Financial Accounting
Apprenticeship Training
or Certificate Course Sequence
Apprenticeship Training
or Certificate Course Sequence
AAS: AAS Course Sequence
or AA/AES: GECC
AAS Course Sequence
Courses and Work-Based Learning Address the PWR Act Recommended 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
* May be offered through Career and Technical Student Organizations (CTSOs) including SkillsUSA Illinois and Technology Student Association (TSA)

SCIENCE	Science Sequence	Science Sequence AP Physics »	Science Sequence Survey of Renewable Energy	Science Sequence
SOCIAL SCIENCE	Social Science Sequence	Social Science Sequence	Social Science	Social Science
MATH	Algebra/Geometry *(Geometry in Construction)*	Geometry *(Geometry in Construction)*/Algebra 2	Technical Math Transitional Math: STEM	Technical Math College Algebra
Trades, Technicians, HVACR *Other Pathways*	Algebra/Geometry *(Geometry in Construction)*	Algebra 2/Pre-Calculus	College Algebra AP Calculus » AP Stats »	College Algebra/Trig Calculus
ENGLISH	English Sequence	English Sequence	AP Language & Composition » English Composition I & II	English Composition I & II

» *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*

CONSTRUCTION TRADES I

Recommended for all students in ACE pathways

Career Awareness: Students can demonstrate awareness of the career pathways in architecture, construction, and energy in order to plan a personalized pathway leading to a promising credential.

Students have engaged in career exploration activities that include guest speakers and virtual and in-person site visits with architecture and construction firms, renewable energy companies, and utilities.

Safety Mindset: Students can use their awareness of safety practices and PPE in order to demonstrate a safety mindset when navigating a construction environment.

Students are prepared to attain an OSHA 10-hour course completion card.

Introduction to Tools: Students can use their understanding of simple hand and power tools in order to identify, correctly set-up, and operate them.

Material Handling: Students can use their knowledge of material types, standard sizes, and safe handling practices to identify and utilize materials needed for basic project types.

Measuring and Scaling: Students can use their understanding of measurement systems and scaling concepts to demonstrate proper use of measuring tools, as well as conversion between decimal and fraction units.

Design and Construction Process: Students can use their awareness of basic concepts in design and construction in order to describe the steps in a residential construction project, with an introduction to, at minimum, blueprints, floor plans, foundations, carpentry, plumbing, electrical, HVAC, and masonry systems.

Layout and Schematic Reading: Students can use their understanding of basic project layout and schematic concepts to differentiate among schematics needed for different trade areas (e.g., carpentry, electrical, plumbing) and apply their understanding in authentic situations.

Cost Estimation: Students can apply of basic cost estimation principles to estimate labor and material costs in an authentic situation.

Students have completed at least one team-based challenge involving an authentic construction project that involves hands-on experience with, at minimum, framing, drywalling, and finishing.

CROSS-CUTTING COMPETENCIES

Employability Competencies:

- Generally, see the Statewide Recommended Essential Employability Entrepreneurial Competencies (p. 20 of this Guide)
- For ACE pathways, priority emphasis on: Communication; Problem-Solving; Initiative & Self-Drive; Reliability & Accountability; Adaptability & Flexibility

Technical Math:

- Generally, see the Statewide Transitional Math, Competencies, and Policies — Transition to Technical Math Content Competencies (p. 15-18)

Strategic Dual Credit Course Competencies

CONSTRUCTION TRADES II

Scaffolding upon Construction Trades I; tailored to lead into both construction trades and energy technician pathways

Career Decision Making: Students can use their understanding of the physical demands, education requirements, transportation needs, and earning potential of various construction career pathways in order to make an informed decision as to whether to pursue postsecondary training and employment in a particular pathway.

Students are aware of and prepared for local apprenticeship application, interview, testing, and fitness demonstration processes and requirements.

Safety Compliance: Students can use their knowledge of safety principles and regulations in order to maintain a secure work environment, safely engage in construction processes, and comply with local, federal, and jobsite health and safety demands.

Students are prepared to attain or renew CPR and First Aid certifications from an accrediting body.

Work at Height: Students can use their understanding of ladders, scaffolding, safety harnesses, and rigging to engage in safe work at height construction practices; students understand work at height expectations in various trade areas.

If work at height cannot be safely experienced or a classroom setting or is restricted by insurance policies, students may be able to utilize virtual reality and augmented reality systems to experience work at height expectations in different trade areas.

Cost Estimation: Students can use their knowledge of material and labor costs and technical math principles to accurately estimate both the material and labor costs of an authentic project.

Energy Utilization and Efficiency: Students can apply their understanding of building envelopes and mechanical, electrical, and plumbing (MEP) systems in an authentic assessment of impacts on a building's energy utilization and efficiency.

Construction Application: Students can use their knowledge of schematic reading and apply fundamental construction skills and techniques to, with minimal supervision, interpret the requirements of schematics and safely construct or install an authentic project.

Ideally, students are allowed to choose an area of specialization such as carpentry, plumbing, electrical, or masonry.

Students have engaged in a career development experience of a minimum of 60 hours with a construction employer.

CROSS-CUTTING COMPETENCIES

Foundations of Production & Manufacturing Processes (Minimum 3–6 Dual Credit Hours)

Employability Competencies:

- General, see the State's Recommended Essential Employability Competencies (p. 6)
- For ACE pathways, priority emphasis on: Communication; Problem-Solving; Initiative & Self-Drive; Reliability & Accountability; Adaptability & Flexibility

Technical Math:

- Generally, see the Statewide Transitional Math, Competencies, and Policies — Transition to Technical Math Content Competencies (p. 15-18)

Strategic Dual Credit Course Competencies

INTRODUCTION TO COMPUTER AIDED DRAFTING (CAD)

Key Competencies

Students can use their understanding of the construction drawing process and various trades to read and interpret authentic architectural and engineering drawings, including drawings from various trades areas.

CAD Hardware: Students can use their knowledge of a CAD workstation to identify and use its hardware configurations.

Basic Drawing Functions: Students can use their knowledge of CAD software to construct and revise 2-D Drawings, including basic draw, editing, and layering.

View Selections: Students can utilize their understanding of appropriate CAD drawing views to choose among orthographic, section, auxiliary, and pictorial where appropriate.

Notation: Students can produce appropriate drawing notes, symbols, and schedules.

Dimensioning and Tolerancing: Students can apply their understanding of basic dimensioning and tolerancing concepts in authentic scenarios.

2D and 3D Comparison: Students can demonstrate an understanding of how 2D and 3D CAD operations and software are each used in authentic scenarios and processes.

Reading and Interpretation: Students can use their understanding of the construction drawing process and various trades to read and interpret authentic architectural and engineering drawings, including drawings from various trades areas.

Strategic Dual Credit Course Competencies

Model Programs of Study in Action: Kankakee Community College

Department Overview

- Electrical Engineering Technology
  - Renewable Energy Technology
    - Renewable Energy Technology Track, AAS
  - Industrial Electrical Technology Track, AAS
  - Industrial Instrumentation and Process Control Track, AAS
  - Industrial Machinery Maintenance Track, AAS
- Air Conditioning and Refrigeration
- Automotive
- Machine Tool Technology, Advanced Cert
- Manufacturing Technology
- Millwright, Advanced Certificate
- Global Supply Chain, Certificate
- Supply Chain Management, Certificate
- Welding
- Computer Graphic Technology
- Agriculture and Horticulture
- Law Enforcement
- Education

Dual Credit/Dual Enrollment Options

Career Center

- Welding
- AutoCAD
- Law Enforcement

Tech Math

Successes

- Nucor Steel
- CSL Berhig
- Job Placement

Challenges


Enrollment
Budget
Incoming High schoolers:
•Math skills
Changing the way companies think about training
Turn over in management

What's Next?

HIGH SCHOOL NUMBERS ON THE DECLINE

FLEXIBILITY

Something still circling in my mind is...

Something that squares with my thinking is...

3 Takeaways I have are...

Share Your Feedback

Survey QR Code

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

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

Explore the Resource Hub and sign up for the newsletter

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

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

Guides: edsystemsniu.org/guides