State of Illinois DRAFT FOR PUBLIC COMMENT State of Illinois Model Programs of Study Guide: State of Illinois State of Illinois Model Programs of Study Guide: Model Programs of Study Guide: Model Programs of Study Guide: Architecture, Construction, and Agriculture, Food, and Natural **Finance and Business Services** Arts and Communications Energy Resources March 2021 March agar March ages Month adds ICCB **ICCB ICCB** ICCB duration

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### **Model Programs of Study Guides** April 16, 2021

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March 302

Resources

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March pop

State of Illinois Model Programs of Study Guide: **Finance and Business Services** 

DRAFT FOR PUBLIC COMMENT State of Illinois Model Programs of Study Guide: Arts and Communications



March 2021



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### Agenda

- Background and Overview
- Model Programs of Study Mapping •
- Role of Advisory Committee •
- **Review of Draft Content and Key** Takeaways
  - Arts and Communication
  - Architecture, Construction and Energy
  - Agriculture, Food, and Natural Resources
  - Finance and Business Services
- Process for Public Comment



Welcome from Illinois Community College Board

### Whitney Thompson

Deputy Director for Workforce Education <a href="http://www.whitney.thompson@illinois.gov">whitney.thompson@illinois.gov</a>

### Natasha Allan

Senior Director for CTE <u>natasha.allan@illinois.gov</u>



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### Background on Model Programs of Study



### Why Develop Statewide Model Programs of Study?

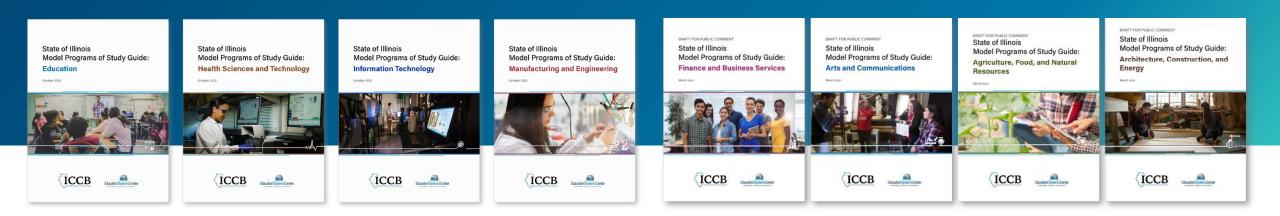
The primary purposes and goals for the Model Programs of Study are to:

- 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.
- Establish a framework for State agencies to develop and implement program supports.
- Identify priority dual credit 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.



### **Policy Alignment**





### **Current Statewide Guides**

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

### edsystemsniu.org/guides

### **New Guides**

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



# **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:

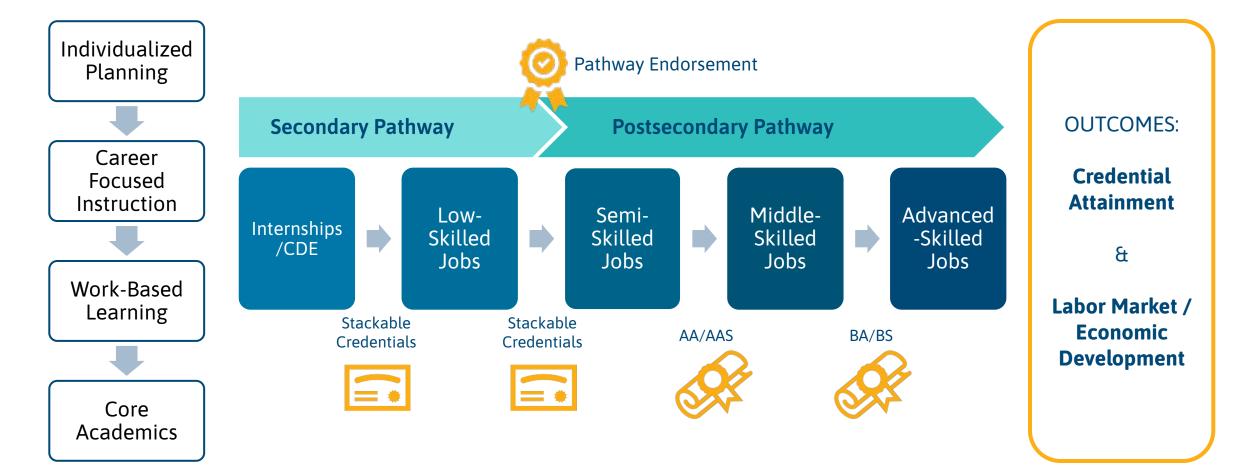
- Pathway map approach
- Selecting strategic early college credit courses
- Identifying key competencies (building from existing State technical competencies)



### Mapping Process



## **State Pathways Model**





## Model Programs of Study Mapping Process





## **Model Programs of Study Mapping Process**





AL CONTROL

# **High Priority Occupations**

Using Department of Labor data and the MIT Living Wage Calculator for the State of Illinois as a reference, High Priority Occupation defined as:

- Occupation with a positive growth outlook
- Occupations whose salaries are near or greater than the "Living Wage" 1
   Adult + 1 Child
  - U.S. Department of Labor, CareerOnestop (<u>careeronestop.org/explorecareers</u>), Illinois Department of Employment Security Virtual Labor Market Information (<u>www2.illinois.gov/ides</u>)
  - Living wage calculations are based on: Glasmeier, Amy K. Living Wage Calculator. 2020. Massachusetts Institute of Technology. <u>livingwage.mit.edu</u>. 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.



# **Medical Assistants**

### Illinois

2016 Employment

20,500

2026 Employment

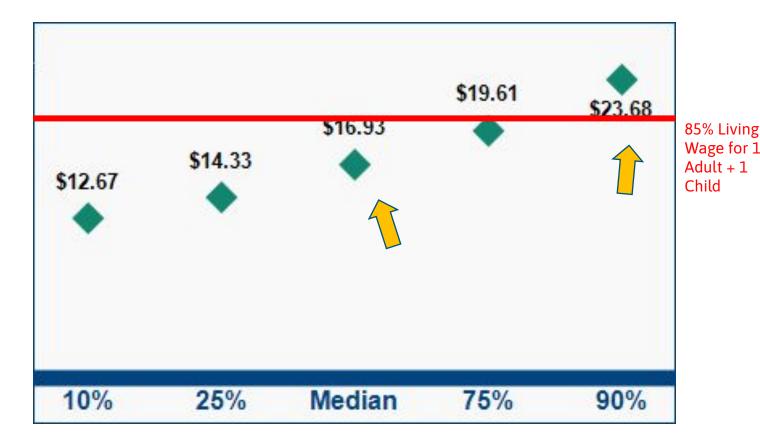
23,250

Percent change

13%

### Annual projected job openings

2580



#### Education and experience to get started

Postsecondary certificate, No work experience, No on-the-job training



## **Model Programs of Study Mapping Process**

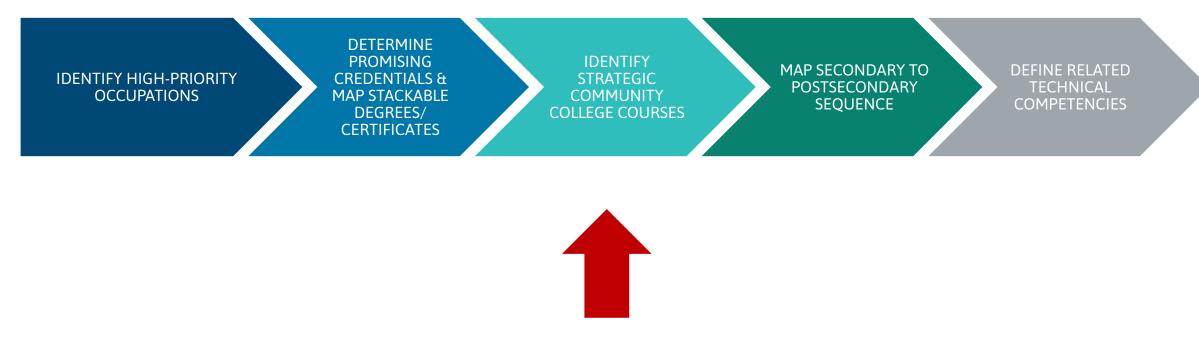


## **Promising Credentials**

- A "promising credential" is a degree or college certification that immediately prepares an individual for entry into a high-priority occupation.
- 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.
  - Classic Example: Certified Nursing Assistant Hourly wage is \$13.72 Credential is required for LPN or RN, wages of \$24.24 and \$34.74 respectively



## **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



## **Model Programs of Study Mapping Process**





### Map Secondary to Postsecondary Sequence

- Start early college pathway courses no later than Junior year of HS if possible, Goal is to at least get 6+ career-focused credit hours
- Consider typical school/student scheduling practices of a full time HS and college student
- Keep open possibility for unique opportunities, i.e. work-based learning or capstone course, in senior year of high school
- Recommend sequence in other subject areas that can map down to secondary courses with early college and AP supplements



## **Model Programs of Study Mapping Process**







# **Define Related Technical Competencies**

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



### **Review Draft Content**





Course or Program

Industry Credential

Prepares for

POSTSECONDARY OPTIONS



#### SELECTED OCCUPATIONS, WAGES, & JOB GROWTH

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

College and Caree

Earned

Pathway Endorsement

**Postsecondary** 

with IAJ Code

Course Affiliated

	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 IL: Annual Job Openings <sup>2</sup>	Growth in IL: % Change Over 10 years <sup>2</sup>	Stackable?
		Commercial & Industrial Designer	γ	\$30.18	170	4%	
1	Fine Arts & Design	Fine Artists, Sculptors & Illustrators	N	\$20.43	50	3%	
		Multimedia Artists and Animators	γ	\$29.74	190	3%	
		Graphic Designers	Y	\$26.10	1,130	6%	
		Interior Designers	Y	\$24.17	270	4%	
		Producers & Directors	Y	\$29.37	360	12%	Typically Stacks to
		Musicians & Singers	Y	\$32.29	510	2%	Bachelor's Program AFA and AAS Degrees Typically Stack to
2	Performing Arts	Music Directors & Composers	N	\$18.18	250	1%	
		Dancers & Choreographers	N	\$17.15-\$24.97	2,400	1%	Related Bachelor's
		Broadcast News Analysts	Y	\$24.51	30	0%	<ul> <li>Program at Select Illinois Universities</li> </ul>
		Public Relations Specialist	Y	\$27.43	960	7%	
	Mass Media &	Producers	Y	\$29.37	360	12%	7
3	Communication	Film and Video Editors	Y	\$30.69	50	13%	
		Sound Engineering Technicians	Y	\$26.89	40	5%	1
		Photographer	N	\$16.31	26	18%	

 Living wage calculations are based on: Glasmeier, Amy K. Living Wage Calculator. 2020. Massachusetts Institute of Technology. <u>livingwage.mit.edu</u>. 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 86% 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.
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#### DRAFT FOR PUBLIC COMMENT | APRIL 2021

APO

Dual Credit

Dual Credit

Course

Dual Credit Course

Affiliated With IAI

Code

### 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 IL: Annual Job Openings <sup>2</sup>	Growth in IL: % Change Over 10 years <sup>2</sup>	Stackable?
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	ORIENTATION / INTRODUCTION Grades 9-10	SKILL DEVELOPMENT Grades 10–12	CAPSTONE / ADVANCED Grades 12	POSTSECONDARY COURSES Recommended 1st Year
CAREER FOCUSED COURSES	Beginning Digital Graphics or Beginning Graphic Communication	Drawing I 🕞 or AP Drawing 🕨 Intro to Digital Design 🖻 or Digital Graphics	2-Dimensional Design or AP 2-D Art & Design Graphic Communications I & II	Drawing II 🗞 3-Dimensional Design 🚼 Graphic Design I
Fine Arts & Design	Introduction to Performing Arts	Stage craft 🛃	Acting I 🛃	Acting II or Performance of Literature 💽
Performing Arts Mass Media & Communication	Beginning Audio/ Visual Production or Production Technology	Introduction to Media and Communication Arts/Mass Communication or Audio/Visual Production I & II	Introduction to Broadcasting 🛃 or Multimedia Production 📄	Introduction to Audio Production Writing for Multimedia 🛃 Interpersonal Communication 🛃
	Courses and Work-Based Le	arning Address the PWR Act Recommend	ded Technical and Essential Employability Compe	itencies

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

>> AP or Dual Credit e

Dual

Credit

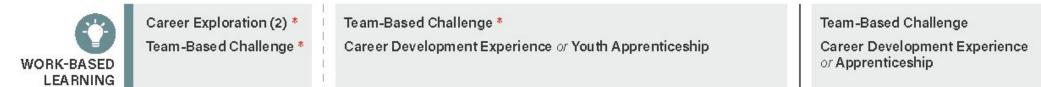
Course

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 Ð

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



\* May be offered through Career and Technical Student Organizations (CTSOs) including Business Professionals of America (BPA), Future Business Leaders of America (FBLA), SkillsUSA Illinois, and Technology Student Association (TSA)

SCIENCE	Science Sequence	Science Sequence	Science Sequence	Science Sequence		
SOCIAL SCIENCE	Social Science Sequence	Social Science Sequence	Art, Music, Dance, or Theater Appreciation or AP Art History »	Art Appreciation 🚯		
MATH	Algebra or Geometry	Geometry or Algebra 2 or Pre-Calculus	Transitional Math: Quantitive Literacy Statistics or Pre-Calculus or Calculus or General Education Statistics	General Education Statistics 🔂		
ENGLISH	English Sequence	English Sequence Oral Communication 🛃 or AP Speech ≫	AP Language & Composition » or English Composition I & II 🛃	English Composition I & II 🛃		
ELECTIVES	Business & Technology Concepts Foundations to Teaching	Entrepreneurship 🕞 Intro to Education 📑 / Educational Methodology	Introduction to Website Development 🛃 Diversity in Education 🔚 Business Management / Intro to Marketing 📄	Introduction to Website Development Entrepreneurship Introduction to Education		
	P or ual Credit Course Affiliated V Code		Postsecondary Course Affiliated with IAI Code Course Affiliated Course Affiliated Course Affiliated Course Affiliated 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		

AAS or Major Courses

# Arts & Communications – Key Takeaways

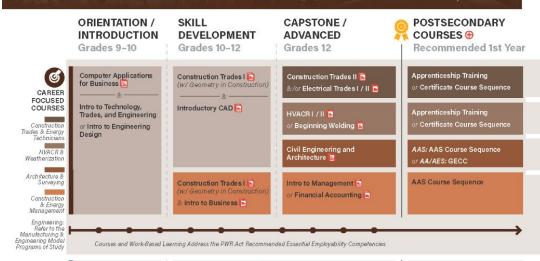
- Suggested Courses and Postsecondary programs in A&C go beyond traditional CTE CIP codes
- Orientation/Introduction courses should recognize both the focused and interdisciplinary options to support students' individualized planning and electives should be incorporated as able
- Occupations are included that do not meet the living wage and/or growth outlook criteria as conversation pieces since they are highly sought after and have the potential for a living wage dependent on the type and consistency of work an individual is able to secure
- Where possible students should complete a social science dual credit course in an IAI-affiliated Appreciation course in their career interest area
- Competency descriptions highlight how experiences within Arts & Communications develop Essential Employability Competencies



### Model Programs of Study Guide: Architecture, Construction, & Energy

Course

With IAJ Code



Education Systems Center

**(ICCB** 

0	Career Exploration (2) *	Team-Based Challenge *	Team-Based Challenge
	Team-Based Challenge *	Career Development Experience ⊘r Youth Apprenticeship	Career Development Experience
WORK-BASED LEARNING	-		or Apprenticeship

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

	Science Sequence	Science Sequence AP Physics 📎	Science Sequence Survey of Renewable Energy 💽	Science Sequence	
SOCIAL	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 汝	College Algebra/Trig 🕞 Calculus English Composition I & II 🕵	
ENGLISH	English Sequence	English Sequence	AP Language & Composition » English Composition I & II 💽		
	AP or Dual Dual Credit	Dual Credit Course or Program Prepares for	Postsecondary Course Affiliated Course Affiliated	If courses in this column were accomplished through early college credit, students should	

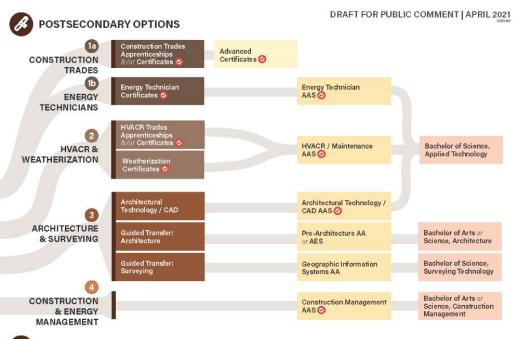
with IAI Code

Earned

take the next required course in the sequence

or, if none, additional AAS or Major Courses

Industry Credential



#### 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 IL: Annual Job Openings <sup>2</sup>	Growth in IL: % Change Over 10 years <sup>2</sup>	Stackable?			
		Construction Carpenters	γ	\$33.22	3,250	6%				
1a	Construction Trades	Electricians	Y	\$39.17	2,580	7%	Not Typically Stackable			
		Pipefitters & Steamfitters	Y	\$43.85	2,160	14%				
		Electrical Power Line Installers & Repairers	Y	\$43.49	310	11%				
1b	Energy Technicians	Wind Turbine Service Technicians	Y	\$25.76	170 3	57% <sup>3</sup>				
		Solar Photovoltaic Installers	N	\$21.58	720 4	20% <sup>4</sup>	1			
		Heating & Air Conditioning Mechanics & Installers	Y	\$27.52	800	13%	Typically Stacks to Related Bachelor's Programs at <b>Select</b>			
2	HVACR & Weatherization	First-Line Supervisors of Mechanics, Installers, & Repairers	Y	\$33.55	1,390	7%	IL Universities			
		Weatherization Installers & Technicians	γ	\$26.42	170	9%				
		Architectural & Civil Drafters	Y	\$30.20	240	5%	]			
3	Architecture, CAD, and Surveying	Architects	Y	\$38.06	390	0%				
		Surveyors	Y	\$33.89	90	6%	Typically Stacks to			
		Construction Managers	Y	\$43.59	960	7%	Related Bachelor's Programs at Most IL Universities			
4	Construction & Energy Management	Cost Estimators	Y	\$32.04	740	9%				
	<i></i>	Energy Auditors	Y	\$36.81	6,670	7%	1			

 Living wage calculations are based on: Glasmeier, Amy K. Living Wage Calculator. 2020. Massachuseth Ishitute of Technology. <u>livingwage mit.edu</u>. As of January 2021 for the state of Illinois, the "Living Wage" for 1 Adult + 1 Child equaled \$26.27 /hour and "neat" defined as 85% of that statewide living wage, was \$22.30 /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.

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except where otherwise noted

3. Estimate derived from available data on CareerOnestop

4. Estimate derived from data published in National Solar Jobs Census 2019

**SELECTED OCCUPATIONS, WAGES, & JOB GROWTH** 

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4	Construction & Energy Management	Cost Estimators	Y	\$32.04	740	9%	Universities
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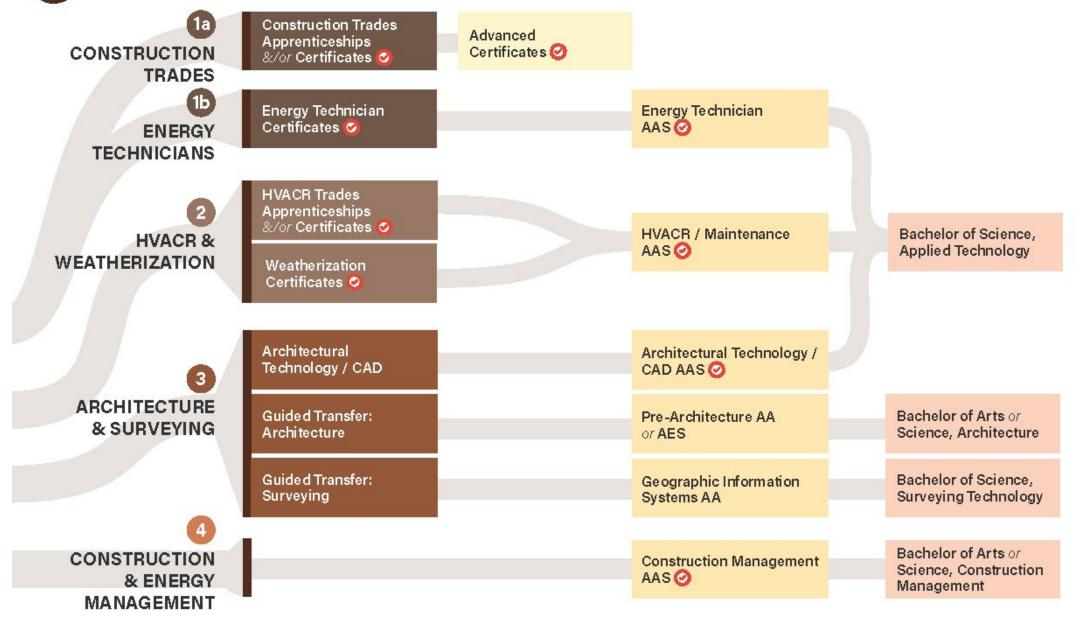
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	ORIENTATION / INTRODUCTION Grades 9–10	SKILL DEVELOPMENT Grades 10–12	CAPSTONE / ADVANCED Grades 12	POSTSECONDARY COURSES 🕀 Recommended 1st Year
CAREER FOCUSED COURSES Construction Trades & Energy Technicians	Computer Applications for Business 🖻 ————————————————————————————————————	Construction Trades I (w/ Geometry in Construction) & Introductory CAD	Construction Trades II &/or Electrical Trades I / II HVACR I / II or Beginning Welding	Apprenticeship Training or Certificate Course Sequence Apprenticeship Training or Certificate Course Sequence
HVACR & Weatherization			Civil Engineering and Architecture	AAS: AAS Course Sequence or AA/AES: GECC
Architecture & Surveying Construction & Energy Management		Construction Trades I	Intro to Management  or Financial Accounting	AAS Course Sequence
Engineering: Refer to the Manufacturing & Engineering Model Programs of Study	Courses and Work-Based Lea	arning Address the PWR Act Recommend	led Essential Employability Competencies	



B Dual Dual Credit Credit Course Affiliated Course With IAI Code

Course or Program Prepares for Industry Credential

=



Postsecondary Course Affiliated with IAT Code



College and Career

Earned

Pathway Endorsement

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

		Team-Based Challenge * Career Development Experier	ıce -	or Youth Apprentice ship		Team-Based Challenge Career Development Experience or Apprenticeship	
	* May be offered through Career a	and	Technical Student Organizations (CTS	50s)	including SkillsUSA Illinois and Technology	Stu	dent Association (TSA)
A	Science	Ť L	Science Sequence	Î L	Science Sequence	1	Science Sequence

	Science Sequence			Science AP Phys	Sequence sics »		Science Sequ Survey of Rer	ience newable Energy <mark>国</mark>	Scie	nce Sequence
SOCIAL	Algebra/Geometry (Geometry in Construction) Algebra/Geometry (Geometry in Construction)			Social Science Sequence Geometry (Geometry in Construction)/Algebra 2 Algebra 2/Pre-Calculus		Social Science Technical Math 📄 Transitional Math: STEM		Soci	al Science	
MATH									inical Math ege Algebra	
Trades, Technicians, HVACR Other Pathways							College Algebra 盲 AP Calculus ≫ AP Stats ≫		Colle Calc	ege Algebra/Trig <mark> </mark> _ ulus
ENGLISH	English Sequence			English Sequend	ce			& Composition <b>》</b> position I & II 🔂	Engl	ish Composition I & II 🛃
	Por [ Dual Credit (	Dual Du Credit Co	al Cred ourse Af. th IAI C	filiated	Course or Program Prepares for Industry Credential	Pa Ca	ostsecondary ourse Affiliated ith IA I Code	<b>Sec</b> College and Career Pathway Endorsement Earned	through take the	es in this column were accomplished early college credit, students should next required course in the sequence ne, additional AAS or Major Courses

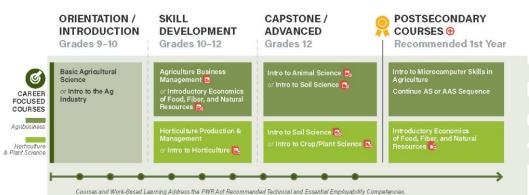
# Architecture, Construction, Energy – Key Takeaways

- Occupations in architecture, construction, and energy encompass an ever-growing array of well-paying career opportunities across Illinois
- Levels of education needed vary greatly, with trades and technicians roles accessible after high school or upon completion of a short-term postsecondary credential, with construction and energy management typically requiring a bachelor's degree
- Individuals seeking to enter the construction trades after high school need to understand the options for union apprenticeships, non-union entry-level employment, and postsecondary education at a community college
- In high school, a set of foundational courses including Computer Applications for Business; Intro to Technology, Trades, and Engineering; & Construction Trades I provides a strong foundation across all pathways
- The courses and competencies needed for student success in the construction trades also provide a foundation for energy technician pathways



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0		Agriculture AA/AS 🧿	
GUIDED TRANSFER		Conservation AS 🥝	
		Agricultural Business	
AGRIBUSINESS		Agricultural Production	Bachelor of Arts or Sciences
		Precision Agricultural	
3		Horticulture AAS 🧭	
HORTICULTURE & PLANT SCIENCE		Plant and Soil Science	
0 1			
ANIMAL	Veterinary Tech Certificate	Animal Science AAS 🧿	

WORK-BASED LEARNING	Career Exploration (2) * Team-Based Challenge * Team-Based Challenge * Supervised Agricultural Experience or Youth Apprenticeship			Team-Based Challenge Supervised Agricultural Experience or Apprenticeship	
	* May be offered through Career a	nd Technical Student Organizations (C1	TSOs) including Illinois Association of Agricultura	l Education (FFA) and Science Olympiad	
SCIENCE	Science Sequence	Science Sequence	Biology ≫ or General Biology for Non-Majors ₽	Chemistry	
SOCIAL	Social Science Sequence	Social Science Sequence	Microeconomics 📎	Microeconomics or Macroeconomics	
MATH	Algebra/Geometry	Geometry/Algebra 2	General Education Math ♂ Transitional Math: Quantitive Literacy Statistics	General Education Math 🅵 or Statistics	
ENGLISH	English Sequence	English Sequence	English Composition > E	English Composition or Oral Communication	

#### E $\odot$ Ð R Eò If courses in this column were accomplished Dual Dual Credit Course or Program Postsecondary College and Career Dual Credit Pathway Endorsement Credit Course Affiliated Prepares for Course Affiliated through early college credit, students should With IAJ Code Course Industry Credential with IAI Code Farned take the next required course in the sequence or, if none, additional AAS or Major Courses

#### **SELECTED OCCUPATIONS, WAGES, & JOB GROWTH**

POSTSECONDARY OPTIONS

	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 IL: Annual Job Openings <sup>2</sup>	Growth in IL: % Change Over 10 years <sup>2</sup>	Stackable?
1	Guided Transfer	Soil and Water Conservationist/ Conservation Scientists	Y	\$ 29.43	70	5%	Typically Stacks to Required Bachelor's Degree
		Agricultural Inspectors	Y	\$25.52	50	8%	
		First-Line Supervisors of Animal Husbandry & Animal Care Workers	Y	\$23.43	70	3%	
2	Agribusiness	Precision Agriculture Technicians	Y	\$24.07	440	8%	Not Typically Stackable
		Farm and Ranch Managers	Y	\$29.61	4,390	1%	
		First-Line Supervisors of Farming, Fishing, & Forestry Workers	Y	\$23.43	70	3%	
		Farm Equipment Mechanics and Service Technicians	Y	\$22.31	170	9%	
		Agricultural Sales	Y	\$28.19	7,990	8%	
		First-Line Supervisor of Agricultural Crop Workers	Y	\$23.43	70	30%	
3	Horticulture & Plant Science	First-Line Supervisor of Horticultural Workers	Y	\$23.43	70	30%	Typically Stacks to Related Bachelor's Program at <b>Select</b> IL Universities or with Additional Coursework
		Nursery and Greenhouse Managers	Y	\$29.61	4,390	1%	
		Soil and Plant Scientist	Y	\$26.57	60	11%	

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 \$28.27/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 Vintual Labor Market Information (www2.illinois.gov/ides)

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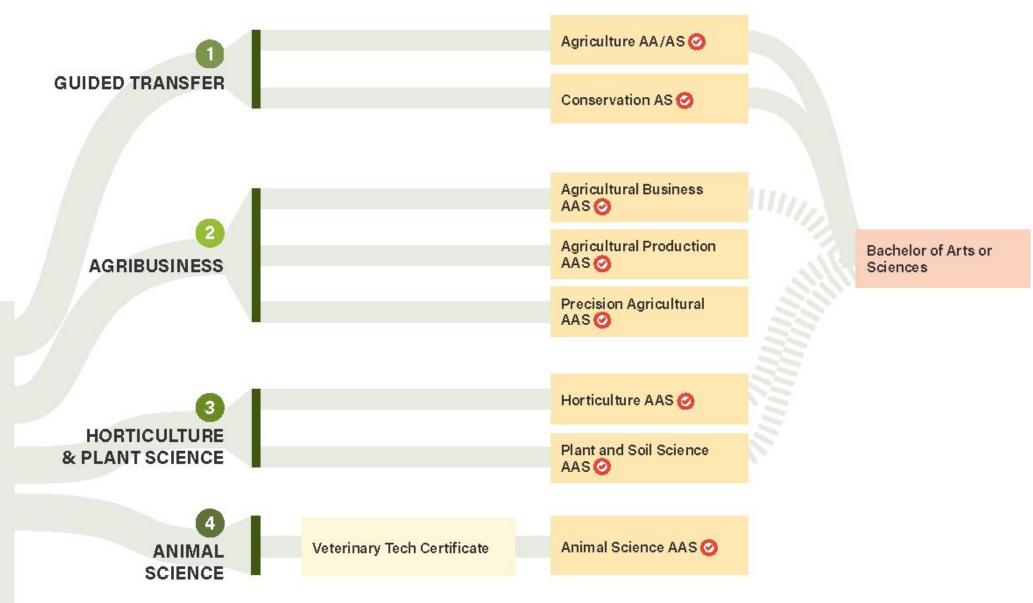
APor

#### 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 IL: Annual Job Openings <sup>2</sup>	Growth in IL: % Change Over 10 years <sup>2</sup>	Stackable?	
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1		Agricultural Inspectors	Y	\$25.52	50	8%	Required Bachelor's Degree	
		First-Line Supervisors of Animal Husbandry & Animal Care Workers	Y	\$23.43	70	3%		
		Precision Agriculture Technicians	Y	\$24.07	440	8%		
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		First-Line Supervisor of Agricultural Crop Workers	Υ.	\$23.43	70	30%	<ul> <li>Typically Stacks to Required Bachelor's</li> </ul>	
3	Horticulture & Plant Science	First-Line Supervisor of Horticultural Workers	Y	\$23.43	70	30%		
		Nursery and Greenhouse Managers	Y	\$29.61	4,390	1%	Program at Select IL	
		Soil and Plant Scientist	Y	\$26.57	60	11%	2019년 1월 201 1월 2019년 1월 2	

Living wage calculations are based on: Glasmeier, Amy K. Living Wage Calculator. 2020. Massachusetts Institute of Technology. <u>livingwage.mit.edu</u>. 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.
 U.S. Department of Labor, CareerOnestop (careeronestop.org/explorecareers), Illinois Department of Employment Security Virtual Labor Market Information (www2.illinois.gov/ides)





	ORIENTA INTRODU Grades 9	JCTION	SKILL DEVELOPMENT Grades 10–12		CAPSTON ADVANCI Grades 12	ED 🏅	R	POSTSECONDARY COURSES 🕣 Recommended 1st Year
CAREER FOCUSED COURSES	Basic Agricultural Science or Intro to the Ag Industry		Agriculture Business Management or Introductory Economics of Food, Fiber, and Natural Resources		Intro to Anima or Intro to Soi	al Science 🔁 I Science 🔂	/	ntro to Microcomputer Skills in Agriculture Continue AS or AAS Sequence
Agribusiness Horticulture & Plant Science			Horticulture Production & Management or Intro to Horticulture 🛃		Intro to Soil S or Intro to Cro	cience 🖪 op/Plant Science 💽		ntroductory Economics of Food, Fiber, and Natural Resources 📸
Courses and Work-Based Learning Address the PWR Act Recommended Technical and Essential Employability Competencies								cies
AP Du	or Dual al Credit Cred			P	ostsecondary ourse Affiliated	👷 College and Career Pathway Endorsement		> courses in this column were accomplished rough early college credit, students should

with IA I Code

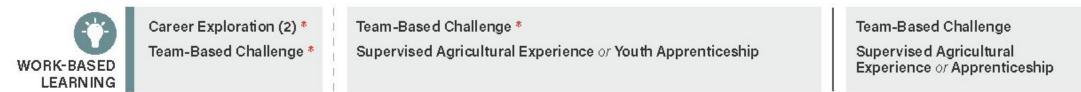
Earned

With IAI Code

Course

Industry Credential

take the next required course in the sequence or, if none, additional AAS or Major Courses



\* May be offered through Career and Technical Student Organizations (CTSOs) including Illinois Association of Agricultural Education (FFA) and Science Olympiad

	Science Sequence	Science Sequence	Biology ≫ or General Biology for Non-Majors 🔂	Chemistry
SOCIAL	Social Science Sequence	Social Science Sequence	Microeconomics ≫	Microeconomics or Macroeconomics
MATH	Algebra/Geometry	Geometry/Algebra 2	General Education Math or Transitional Math: Quantitive Literacy Statistics	General Education Math 🗞 or Statistics
English Sequence		English Sequence	English Composition <b>》</b> or Transitional English	English Composition or Oral Communication
1218	Por Dual I ualCredit Credit (	Dual Credit Course or Program Course Affiliated Prepares for Vith IAI Code Industry Credential	Postsecondary College and Career Course Affiliated Pathway Endorsement with IAI Code 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

AFNR Systems & Integration	Students can identify and analyze the breadth, depth, and interconnectivity of AFNR systems in order to make sustainable and innovative management decisions.
Technology	Students can apply their understanding of relevant technology and tools to collect information and execute effective practices across AFNR systems.
Policy & Regulations	Students can seek out, analyze, and apply information about relevant public policy and regulations to manage their impact on AFNR production, processing, distribution, and management practices.
Society & Culture	Students can use their understanding of the local natural and cultural resources, food, and economic context to steward consumer education and connections to AFNR stakeholders.
Resource Stewardship	Students can identify and analyze essential resources in order to steward them and implement sustainable management practices.
Ethical Production	Students can apply their understanding of ethical standards and practices in order to produce, process, and distribute AFNR goods and services with integrity.
Research & Innovation	Students can apply research and critical thinking skills to design innovative practices that address complex challenges in AFNR operations and industries.
Health, Safety, & Compliance	Students can use their understanding of personal safety and environmental regulations to comply with health and safety requirements as well as maintain safe and proper use of AFNR tools and equipment.

#### Agriculture, Food, & Natural Resources

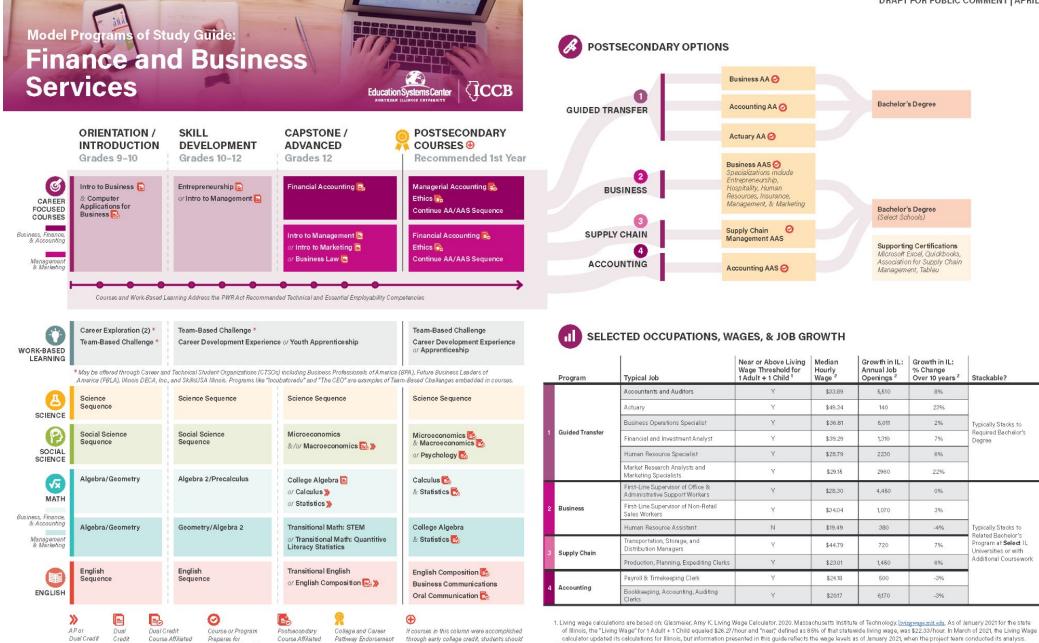
Top Technical Competencies



## Agriculture, Food, & Natural Resources – Key Takeaways

- AFNR roles span a breadth of occupations and sectors and can attract students with a variety of interests
  - AFNR technical employability competencies developed in this process reflect this interconnectedness
- Many promising careers in AFNR can be reached through an Associate degree
- Across AFNR pathways at a postsecondary level, there are many common initial courses that then lead into more specialized courses
- Introductory Economics of Food, Fiber, and Natural Resources is a critical course across AFNR pathways, but due to teacher credentialing requirements might be difficult to offer as IAI dual credit and should be considered for a capstone
  - Agricultural Business Management was selected as a course for competency development, which aligns with the secondary CTE program matrix
- Pathway has many early college opportunities as early as sophomore year of HS, in both career-focused and general education course sequences, many of which are also IAI courses





take the next required course in the sequence

or, if none, additional AAS or Major Courses

2. U.S. Department of Labor, CareerOnestop (careeronestop.org/explorecareers), Illinois Department of Employment Security Virtual Labor Market Information (www2.illinois.gov/ides)

With IAI Code

Course

with IAI Code

Earned

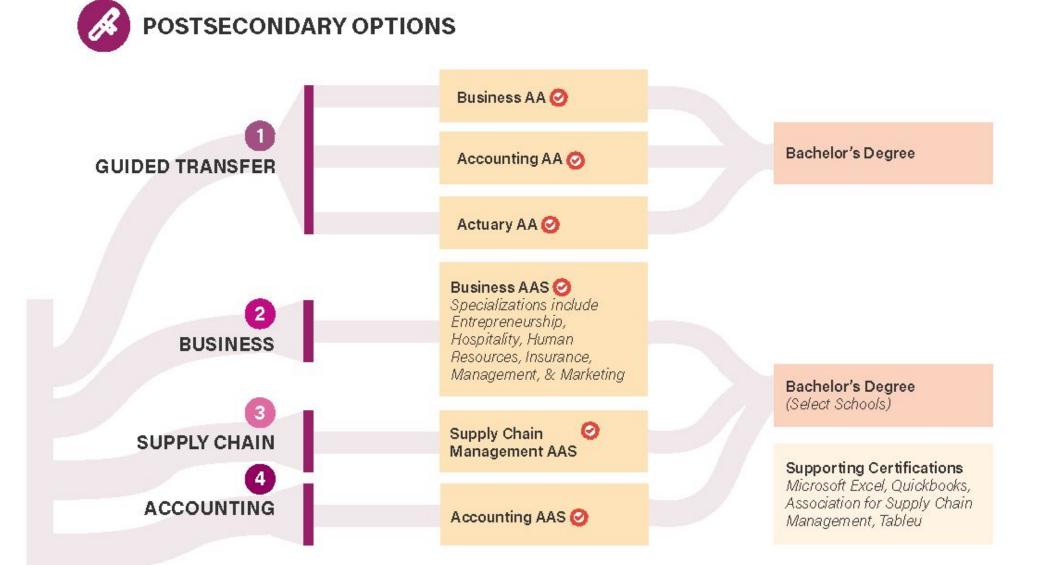
Industry Credential

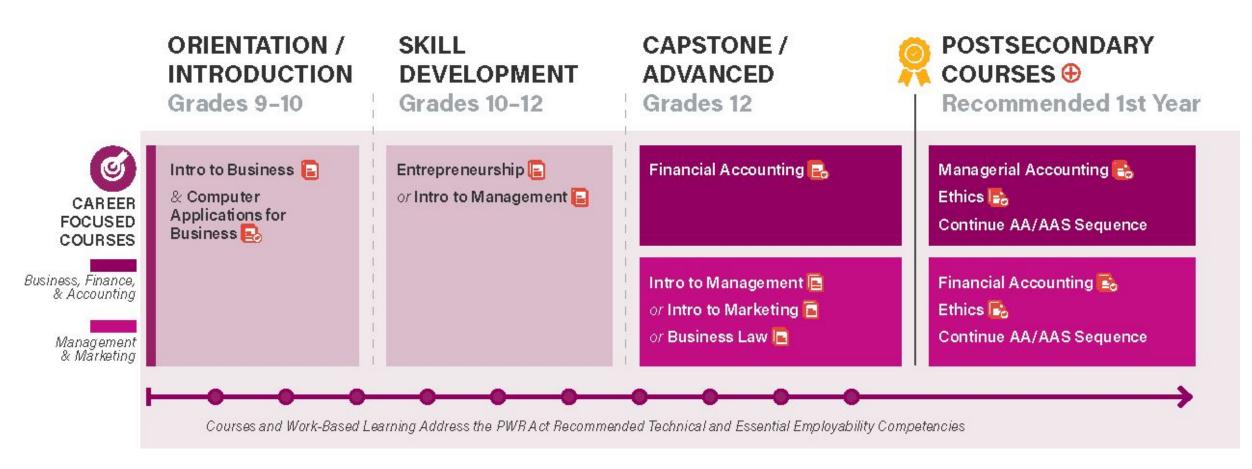


#### SELECTED OCCUPATIONS, WAGES, & JOB GROWTH

	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 IL: Annual Job Openings <sup>2</sup>	Growth in IL: % Change Over 10 years <sup>2</sup>	Stackable?
		Accountants and Auditors	Y	\$33.89	5,510	8%	
		Actuary	Y	\$49.34	140	23%	
		Business Operations Specialist	Y	\$36.81	5,011	2%	Typically Stacks to Required Bachelor's Degree
1	Guided Transfer	Financial and Investment Analyst	Y	\$39.29	1,310		
		Human Resource Specialist	Y	\$28.79	2230	6%	
		Market Research Analysts and Marketing Specialists	Y	\$29.15	2960	22%	
	Business	First-Line Supervisor of Office & Administrative Support Workers	Y	\$28.30	4,450	0%	
2		First-Line Supervisor of Non-Retail Sales Workers	Y	\$34.04	1,070	3%	
		Human Resource Assistant	N	\$19.49	380	-4%	Typically Stacks to
3	Supply Chain	Transportation, Storage, and Distribution Managers	Y	\$44.79	720	7%	<ul> <li>Related Bachelor's Program at Select IL Universities or with</li> </ul>
	a of protection.	Production, Planning, Expediting Clerks	Y	\$23.01	1,450	6%	Additional Coursework
	10 1000	Payroll & Timekeeping Clerk	Y	\$24.18	500	-3%	]
4	Accounting	Bookkeeping, Accounting, Auditing Clerks	Y	\$20.17	6,170	-3%	1

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)





>> APor Dual Credit

B Dual Dual Credit

E

Credit Course Affiliated Course With IAI Code

Course or Program Prepares for Industry Credential

Postsecondary Course Affiliated with IAT Code

College and Career

Earned

Pathway Endorsement

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



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 Business Professionals of America (BPA), Future Business Leaders of America (FBLA), Illinois DECA, Inc., and SkillsUSA Illinois. Programs like "Incubatoredu" and "The CEO" are examples of Team-Based Challenges embedded in courses.

SCIENCE	Sequence		Science Sequence	Science Sequence Science Sequence	
			Social Science Sequence	Microeconomics &/or Macroeconomics	
MATH	Algebra/Geometry		Algebra 2/Precalculus	College AlgebraCalculusor Calculus& Statisticsor Statistics	
Business, Finance, & Accounting Management & Marketing	Algebra/Geometry		Geometry/Algebra 2	Transitional Math: STEMCollege Algebraor Transitional Math: Quantitive Literacy Statistics& Statistics	
ENGLISH	English Sequence		English Sequence	Transitional English or English Composition 	
	AP or Dual Dual Credit Course	Dual Cre Course A With IAI (	Affiliated Prepares for	PostsecondaryCollege and CareerIf courses in this column were accomplisCourse AffiliatedPathway Endorsementthrough early college credit, students shwith IAI CodeEarnedtake the next required course in the seq	hould wence

## Finance and Business Services – Key Takeaways

- Many of the higher-paying, entry-level roles typically involve a bachelor's degree, but many regional supervisory roles can be accessed with an Applied Associate's that still transfers relatively well.
- Pathway has many early college opportunities as early as sophomore year of HS, in both career-focused and general education course sequences, and easy overlap with secondary CTE program matrices/CIP codes
  - AP or Dual Credit Economics is an excellent choice for students in this pathway
- Financial Accounting is the most important course in this sector, but has high math eligibility requirements. Local pathway designers should prepare students to take course as a capstone HS experience or first year of college
- Entrepreneurship programs are enticing to students and should be pursued as potential dual credit partnership with local CC
  - Entrepreneurship and Intro to Business selected for competency development



### **Process for Public Comment**



### **Public Comment**

ICCB and EdSystems invite public comment and feedback on the draft diagrams and guides by completing the Feedback Survey by June 5th, 2021.

Feedback provided through the survey will inform the final version of the Model Programs of Study Guides and Competencies that will be adopted by ICCB later this year.

Survey link: <a href="mailto:edsystemsniu.org/guides">edsystemsniu.org/guides</a>



# Thank You

edsystemsniu.org/guides