



In-Demand Career Fields & Education Options

Using Market Data to Identify
Educational Programs of Study



Elgin
Community
College

Rodrigo López- Assistant Dean of School Partnerships

Elgin Community College: College Transitions and Secondary Partnerships

“Working to improve college access by improving college readiness, outreach and early intervention programs.”

Sean Jensen Director of Transfer Services

Elgin Community College: Student Services and Development

“Enhance your educational and personal pursuits and enrich the college experience through the comprehensive assistance and full range of services and activities offered by the division of student services.”



Goals for Today

1. Analysis of Labor Market Data
2. Academic Pathways
3. Building an Academic Roadmap



Analysis of Labor Market Data



What is Emsi data?

Our economy is massive and fast-moving. So if you want to understand what's going on, you need the whole picture. That's why we pull our data from multiple sources: to give you the most complete, nuanced, up-to-date view of the labor market possible.



Analysis of Labor Market Data

Traditional labor market information (LMI)

Source: Government sources (Bureau of Labor Statistics, US Census Bureau, etc.)

What it is: Industry, occupation, education, and demographics data

What it can do: Traditional LMI is great for understanding the structure of an economy and getting a full picture of the major trends in jobs and wages



Analysis of Labor Market Data

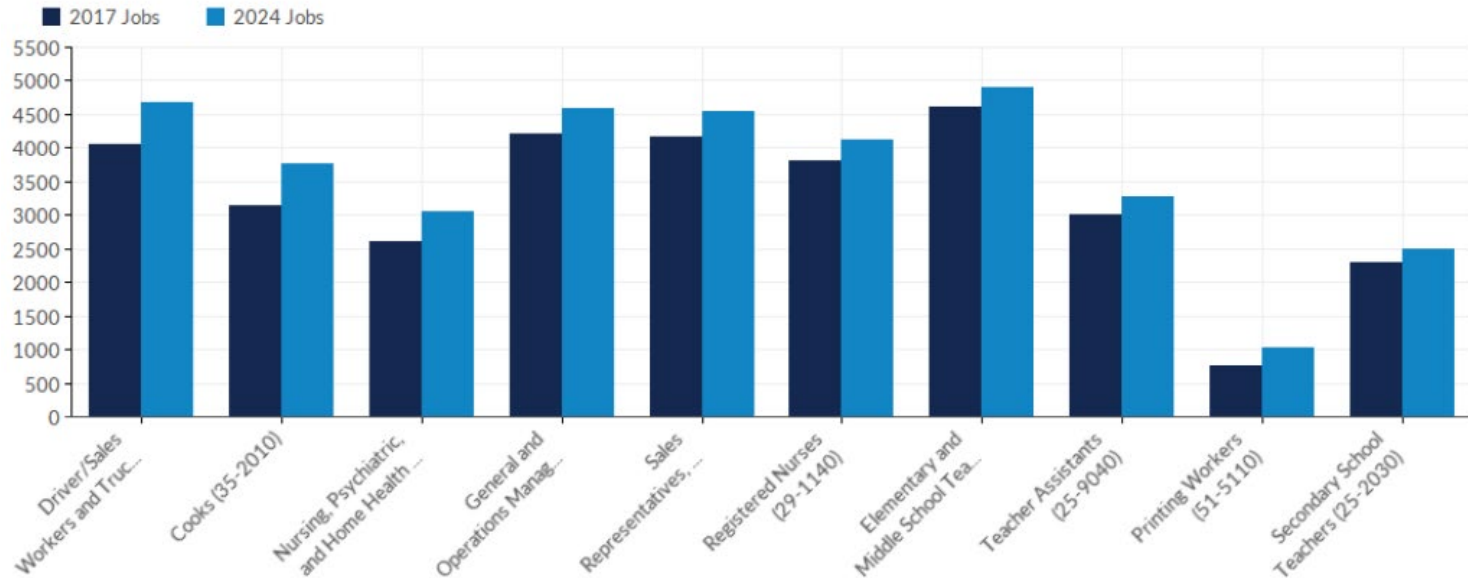
Highest Ranked Occupations

Top 50 Occupations (4-Digit) in Kane County, IL
Emsi Q1 2020 Data Set
February 2020

1. Highest Paying Occupations
2. Fastest Growing Occupations
3. Most Competitive Occupations

Analysis of Labor Market Data

Fastest Growing Occupations





Analysis of Labor Market Data

Fastest Growing Occupations

Occupation	2017 Jobs	2024 Jobs	Change in Jobs (2017-2024)	% Change	2018 Median Hourly Earnings
Driver/Sales Workers and Truck Drivers	4,049	4,670	621	15%	\$18.82
Cooks	3,139	3,759	620	20%	\$11.64
Nursing, Psychiatric, and Home Health Aides	2,610	3,043	433	17%	\$12.99
General and Operations Managers	4,201	4,585	384	9%	\$47.63



Analysis of Labor Market Data

Fastest Growing Occupations

Occupation	2017 Jobs	2024 Jobs	Change in Jobs (2017-2024)	% Change	2018 Median Hourly Earnings
Sales Representatives, Wholesale and Manufacturing	4,157	4,532	375	9%	\$26.70
Registered Nurses	3,809	4,127	318	8%	\$34.29
Elementary and Middle School Teachers	4,612	4,895	283	6%	\$28.64



Secondary and Postsecondary Programs

Industrial Machinery Installation, Repair, and Maintenance Workers

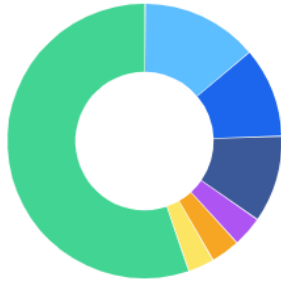
	Region	2017 Jobs	2024 Jobs	Change	% Change
●	Kane County, IL	1,000	1,098	98	9.8%
●	National Average	681	746	65	9.6%
●	D509	904	984	80	8.9%
●	Regional Counties	8,509	8,940	431	5.1%



Secondary and Postsecondary Programs

Industrial Machinery Installation, Repair, and Maintenance Workers

Most Jobs are Found in the Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance Industry Sector















Industry	% of Occupation in Industry (2017)
Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	13.8%
Machinery, Equipment, and Supplies Merchant Wholesalers	10.6%
Plastics Product Manufacturing	10.2%
Building Equipment Contractors	3.6%
Employment Services	3.4%
Dairy Product Manufacturing	3.1%
Other	55.3%



Secondary and Postsecondary Programs

Industrial Machinery Installation, Repair, and Maintenance Workers

Top Companies	Unique Postings
Smithfield Foods, Inc.	29 
OSI Industries, LLC	20 
Aerotek, Inc.	15 
Express Employment Prof...	14 
TeamBradley, Inc.	14 
Espo Engineering Corpora...	10 
Staffmark	10 
Barton Staffing Solutions I...	9 
Factory Cleaning Equipme...	9 
Frigel North America, Inc.	9 

Top Job Titles	Unique Postings
Maintenance Mechanics	201 
Maintenance Technicians (...)	45 
Maintenance Machinists (I...	32 
Equipment Technicians (In...	27 
Manufacturing Maintenanc...	26 
Field Service Technicians	18 
Maintenance Electricians (...)	15 
Systems Technicians (Insta...	15 
Machine Operators (Produ...	14 
CNC Maintenance Technic...	13 



94,000?

Need for options

Need for change

Need for growth



Academic & Career Pathways

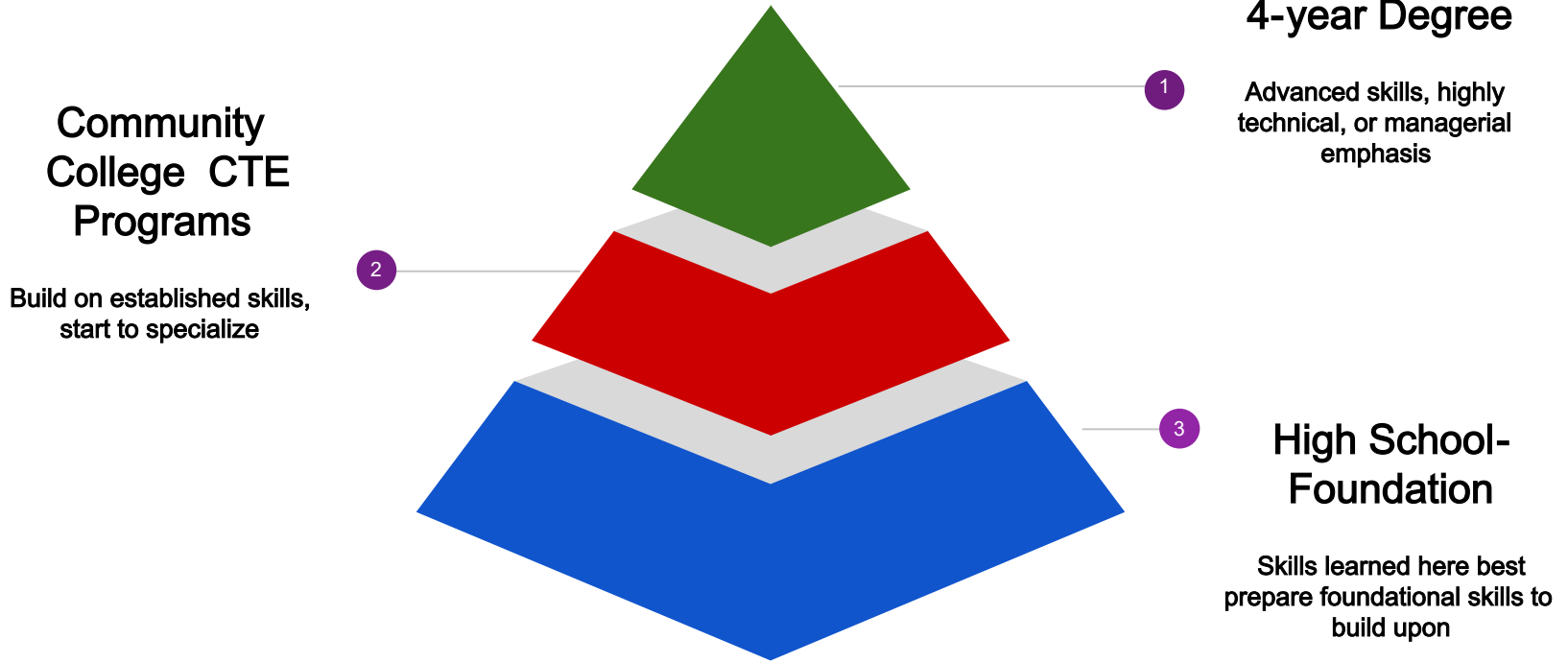
Goal- Continued Advancement

- High school certification
- Employment
- College Vocational Certificates & AAS Degrees
- Advanced Employment Options
- Baccalaureate Options
- Advanced Employment Options





Pathway Collaboration





Career Technical Education Short Term Goal

Prepare Students to enter
the workforce.



Pathways Long Term Goal

Provide opportunity for
advancement in education
and career

A decorative horizontal line consisting of a teal segment on the left and an orange segment on the right.

Partnerships for AAS Transfer Efficiency

Typical Degree path- 2 year degree plan (AA/AS) then 2 years to complete BA/BS degree

Pathway Degree path- 2 years to AAS degree, then 2 years to complete BS degree



Industrial Manufacturing Technology

Elgin Community College

- Industrial Manufacturing Technology- Associate of Applied Science
- Computer Integrated Manufacturing - Vocational Specialist
- Machine Tool Operations- Vocational Specialist
- Mold Making - Vocational Specialist
- CNC Operator - Basic Vocational Specialist
- Tool and Die Making- Basic Vocational Specialist



2+2's & 3+1's



- Goal is 4 year options
- Flexible options
- Accelerated options



4-year Partners

Southern Illinois University-

-B.S. Industrial Management & Applied Engineering (IMAE)

-B.S. Technical Resource Management (TRM)

Online & Chicago area campuses

Northern Illinois University -

-B.S. in Technology with an emphasis in Applied Manufacturing Technology

Fully online completion options

Southern Illinois University Carbondale	Industrial Manufacturing Technology	3+1 Partnership: Capstone option to online BS in Industrial Management and Applied Engineering (IMAE)
Southern Illinois University Carbondale	Machine Tool Technology	3+1 Partnership: Capstone option to online BS in Industrial Management and Applied Engineering (IMAE)
Southern Illinois University Carbondale	Technical Resource Management	2+2 and 3+1 Partnership: Select AAS Technical Programs to BS Technical Resource Management online
Southern Illinois University Carbondale	Welding Fabrication Technology	3+1 Partnership: Capstone option to online BS in Industrial Management and Applied Engineering (IMAE)



Technical Degrees

IMAE Objective- training of qualified personnel who can develop and direct the production and distribution of products and services. The major is designed to prepare management-oriented technical professionals in the economic-enterprise system.



The Association of Technology,
Management, and Applied Engineering



TRANSFER GUIDE

AAS Industrial Mfg Technology transferring into BS Industrial Mgmt & Applied Engineering

Elgin Community College Courses			
AAS Industrial Manufacturing Technology – 67 hours			
ENG 101-3	English Composition I	IMT 104-3	Industrial Manufacturing Tech II
ENG 102-3	English Composition II	IMT 108-3	Industrial Manufacturing Tech III
MTH 112-4	College Algebra	IMT 109-3	Industrial Manufacturing Tech IV
Elective-3	Social/Behavioral Science	IMT 112-3	Metrology - The Study of Measurement
Elective-3	Humanities/Fine Arts	IMT 220-4	Introduction to CNC Programming
CAD 101-4	Intro to Engineering Design	MTH 126-4	Calculus for Business and Social Science
CAD 120-3	Intro to SolidWorks	CAD 205-3	Geometric Dimensioning & Tolerancing
IMT 103-3	Industrial Manufacturing Tech I	IMT Electives-18	Choose 18 hrs from approved courses
Southern Illinois University Carbondale Courses			
BS Industrial Management & Applied Engineering – 68 hours			
CMST 101-3	Intro to Oral Communication	IMAE 376-3	Supply Chain Operations & Logistics
Elective-3	Social Science	IMAE 390-3	Cost Estimating
Elective-3	Life Science	IMAE 392-3	Facilities Planning & Workplace Design
Elective-3	Fine Arts	IMAE 442-3	Fundamentals of Leadership
Elective-3	Multicultural	IMAE 445-3	Computer integrated Manufacturing
PHYS 203/253A-4	College Physics/Lab	IMAE 450-3	Project Management
PHYS 203/253B-4	College Physics/Lab	IMAE 465-3	Lean Manufacturing
IMAE 208-3	Fundamentals of Mfg Processes	IMAE 470A-3	Six Sigma Green Belt I
IMAE 305-3	Industrial Safety	IMAE 470B-3	Six Sigma Green Belt II
IMAE 340-3 or	Intro to Supervision or	IMAE 476-3	Supply Chain Design & Strategy
PSYC 323-3	Organizational Psychology	IMAE Electives-6	Must be at 300/400 level
Total Hours to Bachelor Degree: 135 Hours			

Questions? Contact Us!

Salary Range: \$50,000-\$70,000

Possible Careers: Production Manager
Manufacturing Engineer
Quality Engineer
Plant Manager
Project Engineer

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2 years to complete AAS
degree and Gen Ed
requirements

2 years to complete B.S.
requirements upon
transferring to 4 year
institutions



Where does the Pathway Lead?

Average Earnings

Maintenance & Repair Advancement

→ Maintenance & Repair Workers

- ◆ 2018 Median Hourly Earnings - \$18.59 (\$38,667 annually)

→ First-Line Supervisors

- ◆ 2018 Median Hourly Earnings - \$30.73 (\$63,918 annually)



Where does the Pathway Lead?

Advancement

- Machine Operator to Clinical Assistant Professor
- Sales Associate to Lean Six Sigma Project Manager
- CNC Machine Operator to Project Manager
- CAD Designer to Sales Engineer
- Engine Technician to Product Development Engineer

CTE Pathways

Access to Options

Work & Education Advancement

