



PATHWAYS TO SUCCESS

A CAREER CLUSTER RESOURCE

This Career Cluster prepares learners for careers in designing, planning, managing, building and maintaining the built environment.



Photo supplied by Henkel Construction Company
(Mason City, IA)



Photo supplied by Master Builders of Iowa
(West Des Moines, IA)

What is a Career Cluster?

Career Clusters identify the knowledge and skills learners need as they follow a pathway toward their goals. The knowledge and skills identified form a strong basis for learners' success, whether the learners are in high school, college, or apprenticeship programs, in the workplace. (U.S. Department of Education definition)

How do I Pursue Education and Training in Architecture and Construction in Iowa?

- There are thousands of challenging education and training opportunities that will prepare you for careers within the highly skilled world of Architecture and Construction.
- Internships and job-shadowing opportunities are available for students to learn skills and knowledge needed for their career.
- Education and training can be obtained in high school, community college, apprenticeship programs, and four-year colleges/universities.
- Learners need a solid background in the application of mathematics and science to the technical skills in Architecture and Construction careers.
- “Earn While You Learn!” Apprenticeship opportunities are available across the state. Apprenticeship programs prepare apprentices with the skills, knowledge, and certifications to succeed in the industry.
- Colleges and universities build on previous learning, knowledge and skills to provide advanced degrees in this highly skilled world of construction and design.



Photo supplied by Neumann Brothers
(Des Moines, IA)

Architecture & Construction Career Paths

Construction

- | | | | |
|---|--|--|---|
| <ul style="list-style-type: none"> • Boilermaker • Carpenter • Carpet Installer • Concrete Finisher • Construction Craft Laborer • Construction Engineer • Construction Foreman • Construction Inspector • Construction Manager • Drywall Installer • Education and Training Director/Coordinator • Electrical & Power Transmission Installer • Electrician • Electronic Systems Technician | <ul style="list-style-type: none"> • Elevator Installer • Equipment and Material Manager • Estimator • Explosives Worker • Field Supervisor • Floor Layer • General Contractor/Builder • Glazier • Heating, Ventilation, Air Conditioning and Refrigeration Mechanic • Insulation Worker • Iron/Metalworker (structural and reinforcing) • Landscaper/Groundskeeper • Line worker | <ul style="list-style-type: none"> • Manufacturer's Representative • Mason • Millwright • Painter • Paperhanger • Pipefitter • Pipelayer • Pipeline Installer • Plasterer/Drywall • Plumber • Preservationist • Project Inspector • Project Manager • Roofer • Safety Director • Sales and Marketing Manager | <ul style="list-style-type: none"> • Scheduler • Security and Fire Alarm Systems Installer • Service Contractor • Sheet Metal Worker • Specialty Contractor • Specialty Trades Subcontractor • Steamfitter • Subcontractor • Superintendent • System Installer • Terrazzo Worker and Finisher • Tile and Marble Setter <p>NOTE: General contractors/builders and specialty contractors typically own the contracting company.</p> |
|---|--|--|---|

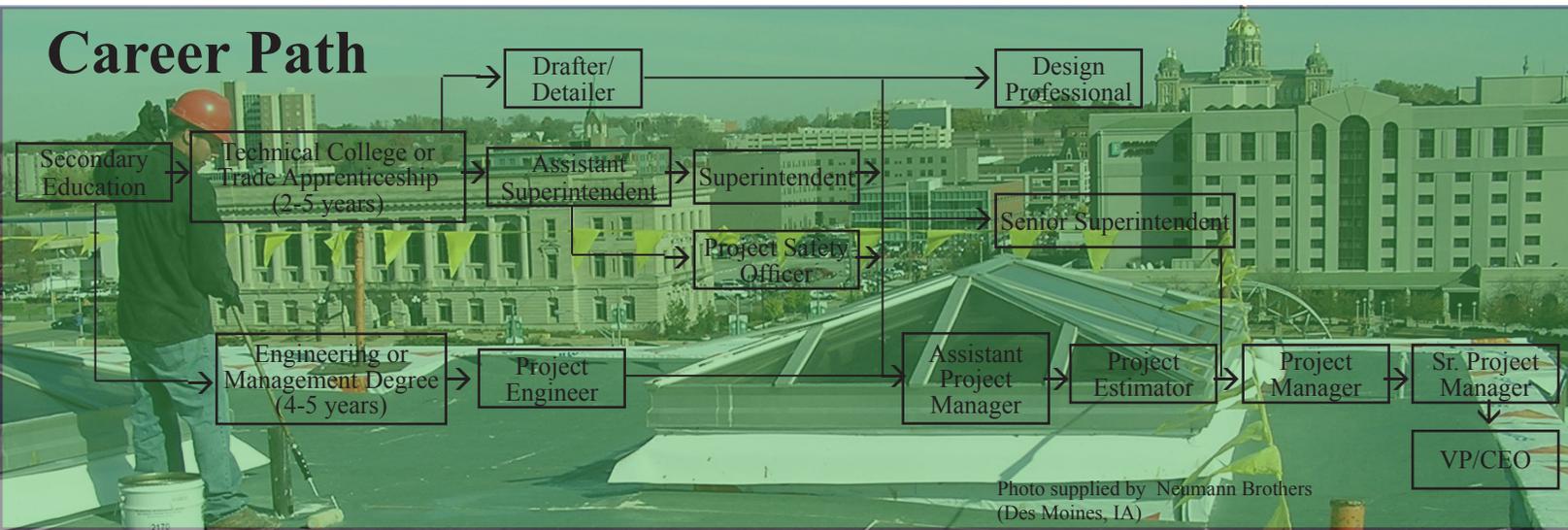
Maintenance/Operations

- | | | | |
|---|---|---|--|
| <ul style="list-style-type: none"> • Boilermaker • Carpenter • Carpet Installer • Concrete Finisher • Construction Manager • Construction Engineer • Construction Foreman • Construction Inspector • Cost Estimator • Demolition Engineer • Drywall Installer • Electrician • Elevator Installer • Environmental Engineer • Equipment and Material Manager • Estimator • Facilities Engineer • Field Supervisor | <ul style="list-style-type: none"> • General Maintenance Contractor • Glazier • Hazardous Materials Remover • Heating, Ventilation, Air Conditioning and Refrigeration Mechanic • Heavy Equipment Operator • Highway Maintenance Worker • Hydro Testing Technician • Insulation Worker • Iron/Metalworker (structural and reinforcing) • Landscaper/Groundskeeper • Maintenance Estimator • Maintenance Planner/Scheduler • Manufacturer's Representative • Mason • Millwright | <ul style="list-style-type: none"> • Operating Engineer • Paperhanger • Pipefitter • Pipelayer • Plumber • Preservationist • Project Inspector • Project Manager • Refractory Technician • Relay Technician • Reliability Engineer • Remodeler • Restoration Technician • Safety Director • Sales and Marketing Manager • Scheduler • Security and Fire Alarm System Installer | <ul style="list-style-type: none"> • Security Controls Manager • Service Contractor • Sheet Metal Worker • Specialty Trades Contractor • Steamfitter • Subcontractor • Substation Mechanic Superintendent • System Installer • Terrazzo Worker and Finisher • Thermal Control Technician • Tile and Marble Setter • Utility Metering and Regulation Technician • Wastewater Maintenance |
|---|---|---|--|

Design/Pre-Construction

- | | | | |
|--|---|--|---|
| <ul style="list-style-type: none"> • Architect • Architectural and Civil Drafter • Civil Engineer (structural, geotechnical, transportation, etc.) • Civil Engineering Technician • Code Official • Computer Aided Drafter (CAD) • Cost Estimator • Drafter • Electrical Engineering Technician | <ul style="list-style-type: none"> • Electrical Engineer (electronics, security, telecommunications) • Environmental Designer • Environmental Engineer (hydro engineering, acoustical, etc.) • Environmental Engineering Technician • Fire Prevention and Industrial Engineer • Interior Designer | <ul style="list-style-type: none"> • Landscape Designer • Landscape Architect • Materials Engineer • Mechanical Drafter • Mechanical Engineer (HVAC, plumbing, fire protection, etc.) • Modeler (traditional and computer) Planner/Designer • Preservationist • Programmer | <ul style="list-style-type: none"> • Protection Engineer • Regional and Urban Renderer (traditional and computer) • Specifications Writer • Building Surveying and Mapping Technician • Surveyor |
|--|---|--|---|

Career Path



Architecture & Construction Programs in Iowa

		Iowa Community College Districts															
		1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	
		N I C C	N I A C C	I L C C	N W C C	I C C C	I V C C	H C C	E I C C	K C C	D M A C C	W I T C C	I W C C	S W C C	I H C C	S C C	
Construction Majors	Architectural Drafting/ CAD Technology							A	A	D,A		A					
	Carpentry Technology/ Technician	D R	D	D,A	D R	D R			R	D	D R	D		D,A			
	Civil Drafting/CAD Technology/Technician													D,A			
	Commercial Construction Technician					D				A							
	Construction Technology/ Technician	A			A	A	D,A		D,P A	A			D,A		A	D,A	
	Electrical Technician/ Technology	D,A			A						D	D		R	R		
	Heating/Ventilation/AC Technology/Technician	D	D,A R						D	A	D R	D,A	D				
	Line Work Technology/ Technician				D,A												
	Masonry Technician										D R						
	Mechanical Drafting/CAD Technology/Technician		A	C	A		A	A	A	D,A	A	A			D,A	D,A	
Plumbing Technician										D R							

Chart Code: R = Registered Apprenticeship D = Diploma C = Certificate A = Associate Degree



Photo supplied by Master Builders of Iowa (Des Moines, IA)

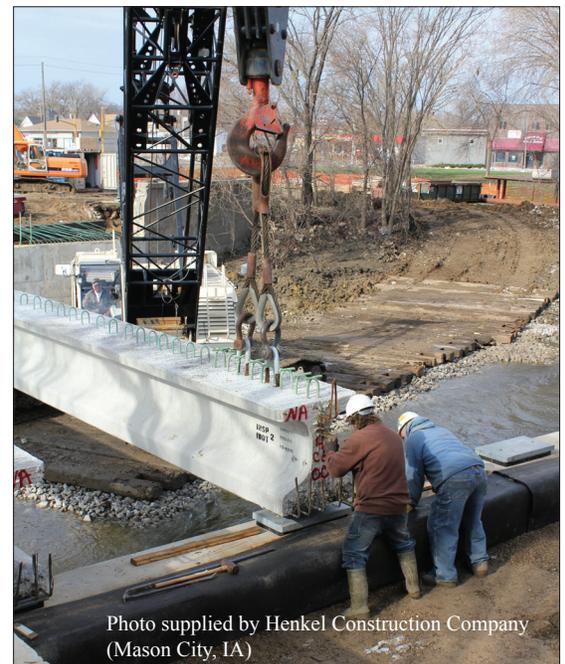
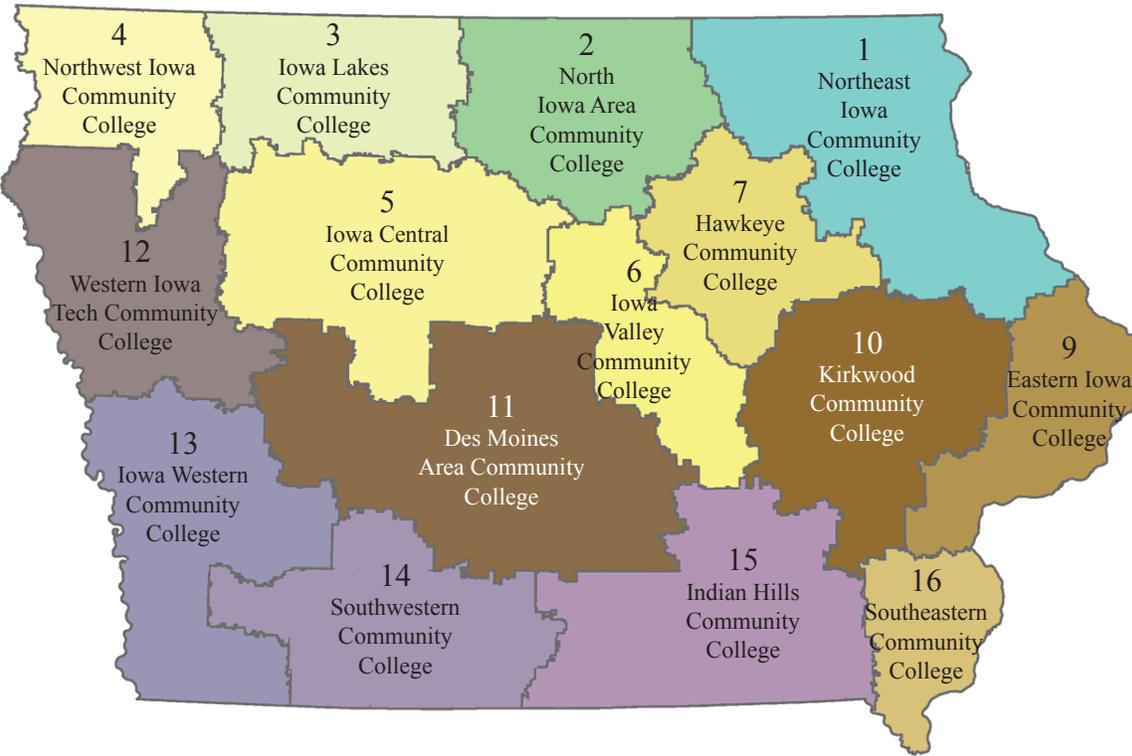


Photo supplied by Henkel Construction Company (Mason City, IA)

Architecture & Construction Programs in Iowa



Northeast Iowa Community College	1	Kirkwood Community College	10
Calmar, Iowa		Cedar Rapids, Iowa	
www.nicc.edu		www.kirkwood.edu	
800.728.2256		800.363.2220	
North Iowa Area Community College	2	Des Moines Area Community College	11
Mason City, Iowa		Des Moines, Iowa	
www.niacc.cc.ia.us		www.dmac.edu	
888.466.4222		877.863.6222	
Iowa Lakes Community College	3	Western Iowa Tech Community College	12
Estherville, Iowa		Sioux City, Iowa	
www.iowalakes.edu		www.witcc.edu	
800.521.5054		800.352.4649	
Northwest Iowa Community College	4	Iowa Western Community College	13
Sheldon, Iowa		Council Bluffs, Iowa	
www.nwicc.edu		www.iwcc.edu	
800.352.4907		800.432.5852	
Iowa Central Community College	5	Southwestern Community College	14
Fort Dodge, Iowa		Creston, Iowa	
www.iowacentral.edu		www.swcciowa.edu	
800.362.2793		800.247.4023	
Iowa Valley Community College	6	Indian Hills Community College	15
Marshalltown, Iowa		Ottumwa, Iowa	
www.iavalley.cc.ia.us/mcc		www.indianhills.edu	
866.622.4748		800.726.2585	
Hawkeye Community College	7	Southeastern Community College	16
Waterloo, Iowa		West Burlington, Iowa	
www.hawkeyecollege.edu		www.scciowa.edu	
800.670.4769		866.722.4692	
Eastern Iowa Community College	9		
Davenport, Iowa			
www.eicc.edu			
800.462.3255			



Architecture & Construction Web Resources

I Have A Plan Iowa™ (IHAPI)
Iowa's career planning resource site
www.ihaveaplaniowa.gov

Master Builders of Iowa (MBI)
www.mbionline.com

National Center for Construction Education and Research (NCCER)
www.nccer.org

Associated Builders and Contractors (ABC)
www.abciowa.org

Associated General Contractors (AGC)
www.agcia.org

Home Builders Association of Iowa (HBA Iowa)
www.hbaiowa.org

Central Iowa Building & Construction Trades Council
www.cibctc.org

US Department of Labor (*ONET)
www.onetcenter.org

Bureau of Labor Statistics
Occupational Outlook Handbook (OOH)
www.bls.gov/oco

Bureau of Labor Statistics
Career Guide to Industries (CGI)
www.bls.gov/oco/cgi

Iowa Workforce Development (IWD)
www.iowaworkforce.org

Iowa Department of Education (DE)
www.educateiowa.gov

American Institute of Architects (AIA)
www.aiaiowa.org

Iowa Registered Apprenticeship
www.iowaworkforce.org/apprenticeship

Labor Market Information
<http://iwin.iwd.state.ia.us/iowa>

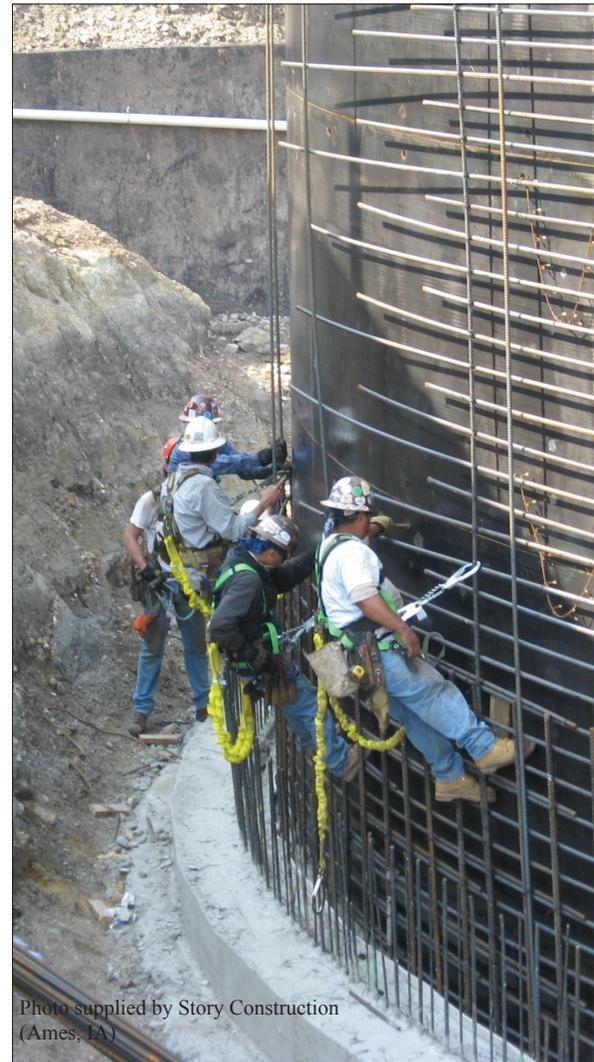


Photo supplied by Story Construction
(Ames, IA)

There Is A Great Future for Salaries and Growth In The Construction/ Design Industry!

- Construction is one of the largest industries in the United States. Based on the latest statistics, this career currently has 5.5 million jobs and is growing!
- Iowa's construction sector comprises 5.3% of all private employment in Iowa.
- The construction sector's average annual wage of \$43,623 is 17% higher than the statewide average for all private industries.
- Iowa salaries range from \$35,000 for starting salaries up to \$75,000 for skilled and experienced workers with specialized training.
- Some starting salaries are significantly higher for construction industry than those of college graduates in other fields.
- There are approximately 9,200 construction locations across Iowa which employ more than 61,500 workers.
- The "green" environmental engineering and technician positions are on a faster track, especially in "Green Building" construction and alternative energy - solar and wind.
- Post-secondary credentials range from specialized skill and training certificates to associate degrees from community colleges and degrees from 4-year colleges.
- The construction industry offers students a great Career Ladder to Success!



Photo supplied by Neumann Brothers
(Des Moines, IA)



Photo supplied by Master Builders of Iowa
(Waterloo, IA)

Iowa Construction Success Stories



The opportunity to gain endless experience and meet people, both in and out of the industry, is one of the main reasons Valarie began her pursuit of a career in the construction industry. “It is extremely rewarding to step back as the building is being erected and recall the hard work and interaction that takes place during the design and estimating phases, right through to everyone on the project team figuring out how all of the pieces are going to be faced and assembled.”

Valarie Meyer
Assistant Project Manager
Story Construction Co.



Katie completed a five-year apprenticeship program and was an honor graduate of her class. After working as a foreman/journeyman for two and a half years, she was offered the position of project engineer at The Waldinger Corporation. Katie felt this employment opportunity was perfect because it allowed her to continue working in the electrical construction industry, as well as take classes towards an electrical engineering degree.

Katie Hoskins
Electrical Project Engineer
The Waldinger Corporation



At the age of 21 with only a truck and the knowledge he had learned in the field, Matt started his own electrical company, Neumiller Electric, out of his garage. Today Neumiller Electric has their own shop, employs 25 field electricians, 3 office staff, and performs over \$4 million worth of electrical work yearly. Oh, and if you are wondering Matt is now 29 years old. “I credit a lot of my success to the fact that I got started in the industry when I was young. If you are interested in the electrical field and willing to learn, I strongly suggest you get started as soon as possible. If you work hard, there is no telling how fast you can rise through the ranks.”

Matt Neumiller
Electrician
Neumiller Electric Co.

For More Information, Contact:

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Community College & Workforce Preparation Division
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