

Appendix B

Job Posting Analytics

Emsi Q3 2017 Data Set

September 2017

North Central State College



2441 Kenwood Circle
Mansfield, Ohio 44906
1.888.755.4899

Parameters

Regions

11 items selected. See Appendix A for details.

Occupations

Code	Description
17-2141	Mechanical Engineers

Education Levels

Description
Bachelor's degree

Keyword Search

Timeframe

Jan 2017 - Aug 2017

Job Postings Summary

200

Unique Postings (Jan 2017 - Aug 2017)
1,151 Total Postings

6 : 1

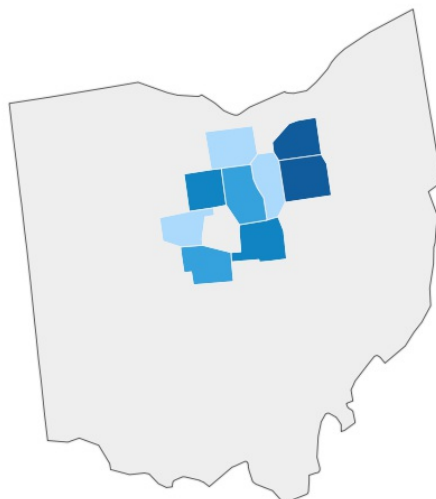
Posting Intensity (Jan 2017 - Aug 2017)

Regional Average: 8 : 1

There were 1,151 total job postings for your selection from January 2017 to August 2017, of which 200 were unique. These numbers give us a Posting Intensity of 6-to-1, meaning that for every 6 postings there is 1 unique job posting.

This is lower than the Posting Intensity for all other occupations and companies in the region (8-to-1), indicating that they may not be trying as hard to hire for this position.

Job Postings Regional Breakdown



County	Unique Postings (Jan 2017 - Aug 2017)
Wayne County, OH	56
Medina County, OH	46
Knox County, OH	33
Crawford County, OH	25
Richland County, OH	16

Top 5 Most Recent Job Postings

Mechanical Engineers – Emerson Electric Company in Mansfield, OH (Aug 2017)

Mechanical Engineer III

Location: Mansfield, OH

O*NET: 17-2141.00

Company: Emerson Electric Company

Job Title: Mechanical Engineers

Imagine being surrounded by intelligent, driven, and passionate innovators all working toward the same goal—to create groundbreaking solutions that leave our world in a better place than we found it. Emerson is a global technology and engineering company providing innovative solutions for customers in industrial, commercial, and residential markets. Our Emerson Automation Solutions business helps process, hybrid, and discrete manufacturers maximize production, protect personnel and the environment while optimizing their energy and operating costs. Our Emerson Commercial and Residential Solutions business helps ensure human comfort and health, protect food quality and safety, advance energy efficiency, and create sustainable infrastructure. A dynamic environment is what you'll discover at Emerson, a Fortune 500 company with \$14.5 billion in sales and 155 manufacturing locations worldwide. Together, we're changing the world, and we have all the resources to help you achieve your professional goals. Whether you're an established professional looking for a career change, an undergraduate student exploring options, or recently received your MBA degree, you'll find a variety of opportunities at Emerson. Join our team and start your journey today. Responsibilities The Mechanical Engineer will support Emerson by working on engineering projects involving products from various Emerson manufacturing plants as assigned by the Engineering Manager. Under minimal supervision, the Mechanical Engineer is responsible for the following duties:

- .
- Development of a comprehensive proposal for sizing and valve selection, etc. .
- Support customers by answering questions of a technical nature. .
- Review and clarify order requirements. .
- Prepare procedures (assembly, test, cleaning, etc.) for products and materials. Propose techniques that will accomplish test objectives. .
- Work with designers and draftspersons to insure that manufacturing drawings are adequate. .
- Complete and provide submittal drawings and other project documentation such as quality inspection and test plans, production plans, test procedures, etc. .
- Troubleshoot problems on the Machine Shop Floor. .
- Interface with other departments including Quality Assurance, Manufacturing, Machine Shop and Assembly. .Requirements
- Bachelor's Degree in Engineering or Technical area, or equivalent experience. .
- Technical knowledge of valves and valve products, administrative writing skills, resolving conflict, coordination and negotiation. .
- Proficiency utilizing Microsoft Office Suite. .
- Oral and written communications, as well as interpersonal skills .

Work Authorization No calls or agencies please. Emerson will only employ those who are legally authorized to work in the United States. This is not a position for which sponsorship will be provided. Individuals with temporary visas such as E, F-1, H-1, H-2, L, B, J, or TN or who need sponsorship for work authorization now or in the future, are not eligible for hire. Equal Opportunity Employer Emerson is an Equal Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to sex, race, color, religion, national origin, age, marital status, political affiliation, sexual orientation, gender identity, genetic information, disability or protected veteran status. We are committed to providing a workplace free of any discrimination or harassment. If you have a disability and are having difficulty accessing or using this website to apply for a position, you can request help by calling 1-314-553-2544 (V/TTY/TDD) or by sending an email to idisability.administrator@emerson.com.

Design Engineers – Worthington Industries, Inc. in Wooster, OH (Aug 2017)

Senior Design Engineer

Location: Wooster, OH

O*NET: 17-2141.00

Company: Worthington Industries, Inc.

Job Title: Design Engineers

Worthington Industries operates under a long-standing corporate philosophy rooted in the Golden Rule, with earning money for its shareholders as the first corporate goal. As a market leader in metals manufacturing for nearly 60 years, we put people first, whether they're our employees, shareholders, customers or suppliers. We're looking for individuals who share our people-first philosophy and can help us continually innovate and grow through their insights, leadership and unique talents. Worthington Industries (

NYSE:

WOR) is a global metals manufacturer serving growing end markets including automotive, construction, energy, agriculture, alternative fuel and many other markets. Our family of 10,000 employees in over 80 facilities throughout 10 countries has helped us earn the respect of our customers, our communities and our industry. With sales of approximately \$ 3 billion annually, our company has been recognized by FORTUNE magazine as a "Most Admired Company" and four times as a "100 Best Companies to Work For."

SUMMARY:

Worthington Industries is looking for a Senior Oil & Gas Design Engineer in Wooster, Ohio. This position is responsible for providing engineering design solutions and sizing calculations to meet customer expectations. This position will require considerable experience in the design of oil and gas separation pressure vessels, piping systems and process control. Proven experience and thorough understanding of the ASME and API codes are required for this position. Proven experience with separation best practices for oil, water and gas are essential for this position. This position will provide leadership to develop new cutting edge technology for well pad vessel design. This position will be able to take a customer request for well pad oil/gas processing and perform the following, under self-direction: conceptual design, design calculations for vessel sizing, piping system design, instrumentation selection and interaction with customers as necessary to refine concept and deliver a finished design. Interaction with Worthington fabrication shops will be necessary to insure a complete and accurate fabrication is achieved.

RESPONSIBILITIES

- On a weekly basis will be receiving customer requests for design and build opportunities, must be able to translate the request into an appropriate solution and communicate concept to designers and estimators
- Interact with customers to identify their specific separation requirements and recommend solutions; either existing designs or new customization
- Size and calculate vessel, coil, and fire tube sizes based on customer well conditions
- Work with designers to insure that drawings accurately reflect expectations
- Mentor less experienced engineers and designers on best design practices
- Develop new product designs to supplement the existing product line
- Travel to customer locations and Worthington locations (up to 20~~ travel)

REQUIREMENTS

- In depth knowledge of oil/gas separation principles, oil/gas vessel design, piping systems design, heat exchangers, liquid/gas flow measurement, process instrumentation and control of hydrates.
- Deeply motivated to understand and deliver solutions to customers. Passionate about translating insights into well designed - physical outputs meeting the demands of the customer.
- Learns by both research and actual construction. Able to determine the most critical issues and develop/execute tests to drive early assessment decisions on new ideas.
- Proficient with reading/checking mechanical drawings and Process and Instrumentation diagrams
- Passionate about doing the work "hands on" (research, sketching, CAD, prototyping, tinkering), and naturally curious to evaluate, do field work and test ideas.
- Expert at Design process (problem definition, research, inspiration, visualization, synthesis, human/trend inspiration).

- Disciplines needed in this role: 1) To move quickly into final design and onto fabrication. 2) Discerning when to stop and move on. 3) Able to adjust their insight, perspective based on new information.
- Extremely comfortable and naturally curious about learning and applying new technical approaches.

Education/Training Required:

- Bachelor's and/or Master's degree in Engineering preferred, but not required
- 10 years of experience in the oil and gas industry with a direct role in engineering design
- ASME training and or experience in section ASME Section VIII Div 1, Div 2, and Div 3 required
- API training in sections 12F and 650
- Pro Engineer or Solid Works, Autocad, Compress (pressure design software) desired Worthington Industries Inc.

, and its subsidiaries, is an equal employment opportunity employer. Qualified applicants are considered regardless of race, color, religion, age, national origin, sex, disability or veteran's status..

Mechanical Engineers – Mtd Products Inc in Valley City, OH (Aug 2017)

Senior Mechanical Engineer	
Location: Valley City, OH	O*NET: 17-2141.00
Company: Mtd Products Inc	Job Title: Mechanical Engineers

Purpose:

MTD Products is seeking an experienced and energized Senior Mechanical Engineer to lead technical platform design projects. The Sr. Mechanical Engineer should be a disciplined individual who is self-motivated, results oriented, and capable of a sustained and continuous effort. We are looking for a person who is passionate about continuous improvement, demonstrates leadership qualities, has years of experience with platform level project management, and thrives in a fast-paced environment. This role will capitalize on your years of major platform design leadership experience and you will report the Platform Engineering Manager.

Essential Duties:

Provide design leadership within a team of Engineers.

The Senior Mechanical Engineer / Platform Development Leader will understand the project goals and make the appropriate specification, performance and cost tradeoffs.

Lead new product development projects from the Idea phase through the Production launch in our production facilities.

Review and provide innovative technical guidance on platform level design projects
Coordinate designs with product marketing, customer service, production, supply chain, accounting and other engineers and departments related to this product line
Participate in a disciplined phase gate process to design and verify outdoor power equipment platform projects
Mentor design Engineers on the design team
Provide support and leadership to all production activities at the production manufacturing location
Keep current with technical advancements and worldwide regulations / standards
Utilize problem-solving skills to analyze engineering sub-systems and implement appropriate corrective actions

Specialized Knowledge/Skills:

Experience working with manufacturing to implement sound designs that meet cost and ease of assembly targets
Excellent communication skills and proven experience interacting with product marketing, customer service, production and supply chain groups
Experience transferring designs into manufacturing including troubleshooting manufacturing issues
Ability to multi-task across teams of engineers and managers on various projects
Motivated to tackle new problems and take on new projects and responsibilities
Strong time management and organizational skills
Ability to understand complex situations and make the best decision possible
Hands-on approach and mechanical aptitude

Experience/Educational Requirements:

Bachelor's degree in Mechanical Engineering or Mechanical Technology (Master's degree preferred)
Leadership experience (5-10 years of experience) and success in managing vehicle/platform level design projects
Knowledge (5-10 years of experience) of vehicle/platform design principles
Experience in high volume consumer products preferred
Experience using Siemens NX, or other engineering software, in the design of parts and complex assemblies
Proficiency with Microsoft Office applications

Work Environment:

Cubicle/Corporate Office Setting Model Shop Travel:

Ability to travel domestically and internationally as required up to 10%
MTD was founded over 80 years ago. Headquartered in Valley City near Cleveland, Ohio, our passion has led MTD to be a worldwide leader of outdoor power equipment with facilities in Europe, Israel, North America, Asia and Australia producing equipment for both residential and commercial markets. We also provide distribution of our products throughout South America. MTD offers a competitive salary and benefit package that includes 401k, Defined Contribution Plan, Health and Dental Insurance, Vision Insurance, Tuition Reimbursement, paid vacation, paid holidays.

MTD is an equal opportunity employer M/F/D/V..

Product Engineers – Overhead Door Corporation in Marion, OH (Aug 2017)

Product Engineer

Location: Marion, OH

O*NET: 17-2141.00

Company: Overhead Door Corporation

Job Title: Product Engineers

The Position Improve quality of product through new concepts, research and development, and process changes. Responsible for designing and developing a product/product family. Ensures production procedures efficiently utilize materials and personnel. Tests finished product for quality purposes and recommends changes to product specifications as necessary. Responsibilities . Create new designs using applicable design software. . Owns the design of a product/product family. . Perform static and dynamic analysis of structural, mechanical and electro-mechanical components and systems to determine performance capabilities. . Design physical tests to validate analysis and prove the component or product will meet CTQ performance characteristics. . Enhance product line and process capabilities and meet customer expectations in quality and service and product design. . Implement product drawing and system changes . Ensure timely and accurate processing of special engineered orders . Analyze product or equipment specification and performance requirements to determine designs which can be produced by existing manufacturing or processing facilities or methods. . Research and analyze data such as customer design proposal, specifications, and manuals to determine feasibility of design or application. . Directs and coordinates fabrications and installation activities to ensure products and systems conforms to engineering design and customer specifications. . Designs products to interface with machines, hardware, and software. Qualifications . Minimum 2-5 years' experience in design engineering application or manufacturing engineering. . Experience working with AutoCAD, SolidWorks, and other applicable design software. . PE certification preferred. . Understanding of manufacturing processes. . Experience with project management. Education . BS in Mechanical Engineering degree preferred or experience equivalent.

Posted by StartWire.

Systems Engineers – Siemens AG in Mount Vernon, OH (Aug 2017)

Fluid Systems Engineer

Location: Mount Vernon, OH

O*NET: 17-2141.00

Company: Siemens AG

Job Title: Systems Engineers

Fluid Systems Engineer Position Overview Design and develop fluid systems for aero derivative gas turbine packages The Fluid Systems Engineer will work within the Fluid Systems team. Organizationally, this team is located within the Power Generation, Distributed Generation, Global Product solutions, Product Standards and Options team. The focus of this role will be on the development of new products and maintenance of product baselines for the Power Generation Market. The Fluid Systems Engineer will be expected to perform tasks on product sub-systems such as gas and liquid fuel system, seal air, bleed air and instrument air system, gas turbine lube oil, driven lube oil, hydraulic start, ISI and cleaning systems. The Fluid Systems Engineer will be expected to reduce cost of the baselines. The Fluid Systems Engineer is also expected to address fleet issues on the sub-systems that are within scope of the fluids team.

Responsibilities:

Development of robust, cost competitive sub-system baselines and options
Creation and release of General Procurement Specification (GPS) for major buy components
Creation and release of Piping & Instrumentation diagrams (P&ID;'s)
Creation and release of engineering reports to document the requirements, design criteria and design tasks to complete the sub-system design for sub-systems in scope.
Creating updating design manuals for the sub-systems within scope of the Fluid Systems. Design manual contains as a minimum the purpose of the sub-system, the functionality needed to fulfil the purpose in life and link between the functionality and the hardware, design criteria the sub-system needs to pass, the design tasks required to meet the design criteria and the methodology associated with each of the design tasks.
Review and approval of engineering drawings
Review and approval of items on Vendor Documentation Requirement List (VDRL)
Review, comment and approve engineering vendor documentation from vendors

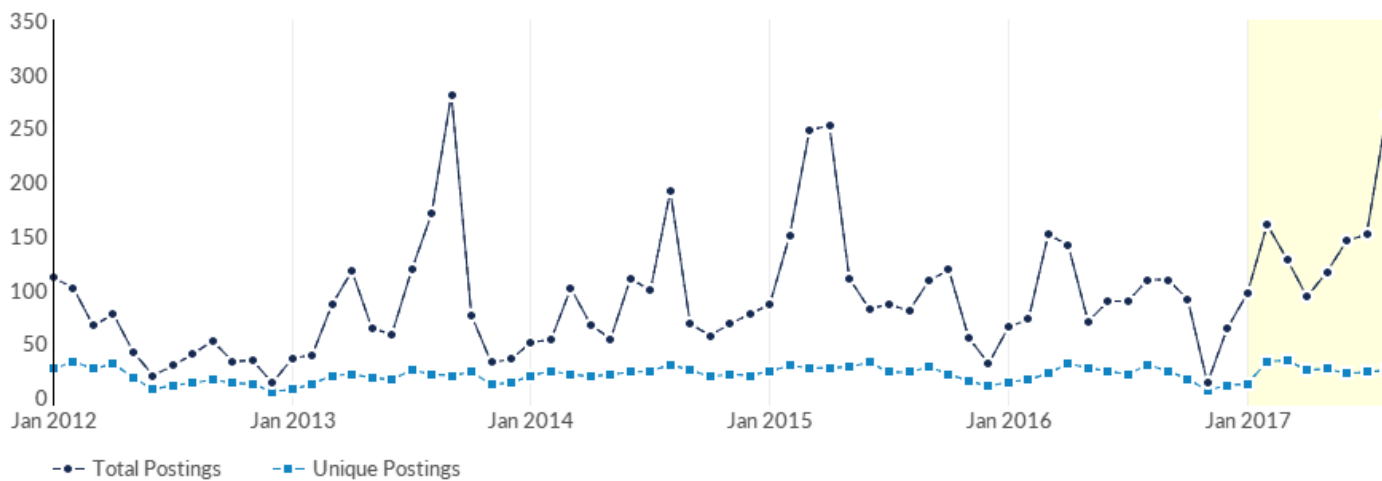
Required Knowledge/Skills, Education, and Experience:

Completed Bachelor's degree in Engineering or related field, Master's Degree is a plus (Examples of related disciplines include but are not limited to Mechanical and Aerospace Engineering)
Minimum of 2 Years of experience, however, a combination of education and related experience may be considered as appropriate
Great written and verbal communication skills
Ability to work effectively within a team environment
Ability to focus on detailed work including performing hand calculations or simulations for sizing the fluidic devices (valves, pumps, heat exchangers, filters, expansions etc)
High awareness of the certification requirements the package needs to meet for CE compliance, and North American equivalent certification
Ability to spec and select components that meet the certification requirements for CE and North American market

Preferred Knowledge/Skills, Education, and Experience:

Previous experience in the power generation or oil & gas markets
Experience using NX and Teamcenter to create 3-D design models
Experience using E-Plan/COMOS to create system P&ID;'s
Experience in using AMESim. Relocation assistance is available for those candidates who are not local to the area, within the United States .
LI-JAT Siemens sets the standard for excellence in power generation, transmission and distribution, and provides innovative customer solutions - from utilities, to industrial space, to oil and gas companies. Siemens' portfolio includes power plants and power-generating equipment, turbines for use as mechanical drives, compressors for industrial applications, power transmission and distribution systems, smart grid applications, and related instrumentation and control systems. For more information, please visit: [Posted by StartWire](#).

Total vs. Unique Postings Trend



Top Companies Posting

Company	Total/Unique (Jan 2017 - Aug 2017)	Posting Intensity	Unique Postings Trend (Jan 2017 - Aug 2017)
Siemens AG	115 / 30	4 : 1	
Mtd Products Inc	147 / 21	7 : 1	
Luk, Corporation	54 / 18	3 : 1	
The Schaeffler Group	105 / 14	8 : 1	
Moog Inc.	103 / 13	8 : 1	
Aerotek, Inc.	42 / 9	5 : 1	
Worthington Industries, Inc.	76 / 8	10 : 1	
Nisource Inc.	24 / 6	4 : 1	
ATS Automation Tooling Systems Inc	14 / 5	3 : 1	
Mj Recruiters LLC	12 / 4	3 : 1	
Plastipak Packaging, Inc.	64 / 4	16 : 1	
Z-Careers	84 / 4	21 : 1	
Ariel Corporation	7 / 3	2 : 1	
Carlisle Companies Incorporated	9 / 3	3 : 1	
David Price Metal Services Inc	21 / 3	7 : 1	
Gorman-Rupp Company	9 / 3	3 : 1	
TE Connectivity Ltd.	41 / 3	14 : 1	
Albert Energy LLC	4 / 2	2 : 1	
Career Professionals Inc	4 / 2	2 : 1	
Carlisle Foodservice Products, Incorporated	4 / 2	2 : 1	
Chesapeake Utilities Corporation	4 / 2	2 : 1	
Client Service Systems Inc	4 / 2	2 : 1	
Emerson Electric Company	27 / 2	14 : 1	

Company	Total/Unique (Jan 2017 - Aug 2017)	Posting Intensity	Unique Postings Trend (Jan 2017 - Aug 2017)
Gallin Associates, Inc	4 / 2	2 : 1	
IKO Industries Ltd	4 / 2	2 : 1	
Joseph Michaels, Inc	4 / 2	2 : 1	
K L A Industries	4 / 2	2 : 1	
Kelly Services, Inc.	8 / 2	4 : 1	
Medteam Staffing Inc	4 / 2	2 : 1	
Overhead Door Corporation	65 / 2	33 : 1	
Pentair, Inc	9 / 2	5 : 1	
RANDSTAD HOLDING nv	5 / 2	3 : 1	
Search Masters, Inc.	19 / 2	10 : 1	
Sky Climber Wind Solutions LLC	7 / 2	4 : 1	
Spherion Corporation	8 / 2	4 : 1	
Stewart, Cooper & Coon, Inc.	4 / 2	2 : 1	
Top Dog	4 / 2	2 : 1	
W. W. Williams Southeast, Inc.	4 / 2	2 : 1	
Belcan Corporation	3 / 1	3 : 1	
Group Management Services Inc	3 / 1	3 : 1	
Loram Maintenance of Way, Inc.	2 / 1	2 : 1	
Oshkosh Corporation	2 / 1	2 : 1	
Patterson Personnel	7 / 1	7 : 1	
Plastipak	5 / 1	5 : 1	
Search Alliance Inc	2 / 1	2 : 1	






























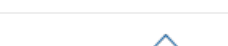

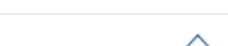

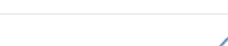





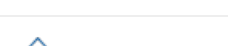
Top Cities Posting

City	Total/Unique (Jan 2017 - Aug 2017)	Posting Intensity	Unique Postings Trend (Jan 2017 - Aug 2017)
Wooster, OH	235 / 40	6 : 1	
Mount Vernon, OH	122 / 33	4 : 1	
Bucyrus, OH	56 / 24	2 : 1	
Valley City, OH	147 / 21	7 : 1	
Medina, OH	132 / 18	7 : 1	
Orrville, OH	109 / 16	7 : 1	
Mansfield, OH	101 / 14	7 : 1	
Brunswick, OH	17 / 6	3 : 1	
Marion, OH	149 / 6	25 : 1	
Lewis Center, OH	14 / 5	3 : 1	
Norwalk, OH	26 / 5	5 : 1	
Ashland, OH	14 / 4	4 : 1	
Delaware, OH	15 / 4	4 : 1	
Ontario, OH	4 / 2	2 : 1	
Galion, OH	7 / 1	7 : 1	
Wadsworth, OH	3 / 1	3 : 1	

Top Posted Occupations

Occupation (SOC)	Total/Unique (Jan 2017 - Aug 2017)	Posting Intensity	Unique Postings Trend (Jan 2017 - Aug 2017)
Mechanical Engineers	1,151 / 200	6 : 1 	

Top Posted Job Titles

Job Title	Total/Unique (Jan 2017 - Aug 2017)	Posting Intensity	Unique Postings Trend (Jan 2017 - Aug 2017)
Design Engineers	286 / 51	6 : 1 	
Mechanical Engineers	295 / 49	6 : 1 	
Systems Engineers	101 / 29	3 : 1 	
Project Engineers	126 / 13	10 : 1 	
Tooling Engineers	45 / 11	4 : 1 	
Product Development Engineers	76 / 9	8 : 1 	
Field Engineers	24 / 6	4 : 1 	
Application Engineers	13 / 4	3 : 1 	
Engineering Analysts	12 / 4	3 : 1 	
Facilities Engineers	15 / 4	4 : 1 	
Product Engineers	81 / 3	27 : 1 	
Quality Assurance Engineers	19 / 3	6 : 1 	
Research and Development (R&D) Engineers	7 / 3	2 : 1 	
Transmission Engineers	25 / 3	8 : 1 	
Maintenance Managers	5 / 2	3 : 1 	
Process Engineers	8 / 2	4 : 1 	
Automation Engineers	4 / 1	4 : 1 	
Electrical Test Engineers	2 / 1	2 : 1 	
Engineering Supervisors	2 / 1	2 : 1 	
Project Managers	5 / 1	5 : 1 	

Top Hard Skills

Skill	Postings with Skill
Mechanical Engineering	84
Computer-Aided Design	46
Oil/Gas	37
Prototyping	35
New Product Development	30
Oil And Gas	30
Product Design	29
Procurement	28
Turbines	24
Market Research	22
Mass Production	21
Systems Design	21
Siemens NX	20
Heat Exchanger	18
Engineering Design Process	15
SolidWorks (CAD)	15
3D Modeling	14
Manufacturing Processes	14
Project Planning	14
Prototype (Manufacturing)	14
AutoCAD	13
Gas Turbine	13
Tooling	13
Transmission	12
Electricity Generation	10
Instrumentation	10
Microsoft Access	10
Pumps	10
Valves (Piping)	10

Skill	Postings with Skill
Water Supply Networks	10
Windows Aero	10
Computer Numerical Control (CNC)	9
Customer Satisfaction	9
Electrical Discharge Machining	9
Mills	9
Product Quality Management	9
Software Engine	9
Conceptual Design	8
Creo Elements/Pro (Computer-Aided Design Software)	8
Electrical Systems	8
Fabrication	8
Hydraulics	8
Lean Manufacturing	8
PTC Creo Elements/Pro	8
Pressure Vessel	8
Sketching	8
Tolerance	8
Ventilation	8
Visualization	8
Blueprinting	7

Top Common Skills

Skill	Postings with Skill
Management	55
Research	43
Communications	26
Operations	22
Microsoft Office	21
Microsoft Excel	16
Verbal Communication Skills	14
Written Communication	14
Leadership	13
Time Management	13
Problem Solving	12
Innovation	10
Presentations	8
Program Management	8
Assertiveness	7
Computer Literacy	7
Physics	7
Microsoft PowerPoint	6
Interpersonal Skills	5
Microsoft Word	5
Sales	5
Construction	4
Coordinating	4
Negotiation	4
Writing	4
Training And Development	3
Critical Thinking	2
Customer Service	2
Decision Making	2

Skill	Postings with Skill
Infrastructure	2
Integration	2
Mathematics	2
Proposal (Business)	2
Cooperation	1
Mentorship	1
Office Suite	1
Prioritization	1
Project Management	1
Quality Assurance	1

Appendix A - Regions

Code	Description
39005	Ashland County, OH
39033	Crawford County, OH
39041	Delaware County, OH
39077	Huron County, OH
39083	Knox County, OH
39101	Marion County, OH
39103	Medina County, OH
39117	Morrow County, OH
39139	Richland County, OH
39169	Wayne County, OH
39175	Wyandot County, OH

Appendix B - Data Sources and Calculations

CareerBuilder/Emsi Job Postings

Job postings are collected from various sources and processed/enriched by Careerbuilder to provide information such as standardized company name, occupation, skills, and geography. Emsi performs additional filtering and processing to improve compatibility with Emsi data.

State Data Sources

This report uses state data from the following agencies: Ohio Department of Job and Family Services, Labor Market Information Division