

tarr	alpitre58	
••••	•••••	
	Cancel	Sign In

Forgot your Username or Not Registered?



#### **Summary of Job Duties**

**Electronic Drafters** <u>Video</u> - Draw wiring diagrams, circuit board assembly diagrams, schematics, and layout drawings used for manufacture, installation, and repair of electronic equipment.

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

### **Detailed Job Description**

Electronic Drafters Drafters prepare technical drawings and plans.

Drafters use software to convert the designs of architects and engineers into technical drawings. Most workers specialize in architectural, civil, electrical, or mechanical drafting and use technical drawings to help design everything from microchips to skyscrapers.

**Duties** 

Drafters typically do the following:

- Design plans using computer-aided design (CAD) software
- Work from rough sketches and specifications created by engineers and architects
- Design products with engineering and manufacturing techniques
- Add details to architectural plans from their knowledge of building techniques
- Specify dimensions, materials, and procedures for new products
- Work under the supervision of engineers or architects

Many drafters are referred to as CAD operators. Using CAD systems, drafters create and store technical drawings digitally. These drawings contain information on how to build a structure or machine, the dimensions of the project, and what materials are needed to complete the project.

Drafters work with CAD so they can create schematics that can be viewed, printed, or programmed directly into building information modeling (BIM) systems. These systems allow drafters, architects, construction managers, and engineers to create and collaborate on digital models of physical buildings and machines. Through three-dimensional rendering, BIM software allows designers and

engineers to see how different elements in their projects work together.

The following are examples of types of drafters:

Architectural drafters draw architectural and structural features of buildings for construction projects. These workers may specialize in a type of building, such as residential or commercial. They may also specialize by the materials used, such as steel, wood, or reinforced concrete.

Civil drafters prepare topographical maps used in construction and civil engineering projects, such as highways, bridges, and flood-control projects.

Electrical drafters prepare wiring diagrams that construction workers use to install and repair electrical equipment and wiring in power plants, electrical distribution systems, and residential and commercial buildings.

Electronics drafters produce wiring diagrams, assembly diagrams for circuit boards, and layout drawings used in manufacturing and in installing and repairing electronic devices and components.

Mechanical drafters prepare layouts that show the details for a wide variety of machinery and mechanical tools and devices, such as medical equipment. These layouts indicate dimensions, fastening methods, and other requirements needed for assembly. Mechanical drafters sometimes create production molds.

Source: <u>U.S. Department of Labor Bureau of Labor Statistics</u>

#### Job Zone

The section below shows the job zone information for Electronic Drafters. Job Zone Three: Medium Preparation Needed.

Education	Experience	Training
Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### Jobs Available

This section shows the number of job openings advertised online in Louisiana for Electronic Drafters and for the related occupational group of Architecture and Engineering Occupations on November 23, 2020 (Jobs De-duplication Level <u>2</u>).

Occupation	Job Openings
Electronic Drafters	<u>2</u>
Architecture and Engineering Occupations	<u>726</u>

Source: Online advertised jobs data

## **Monthly Job Count**

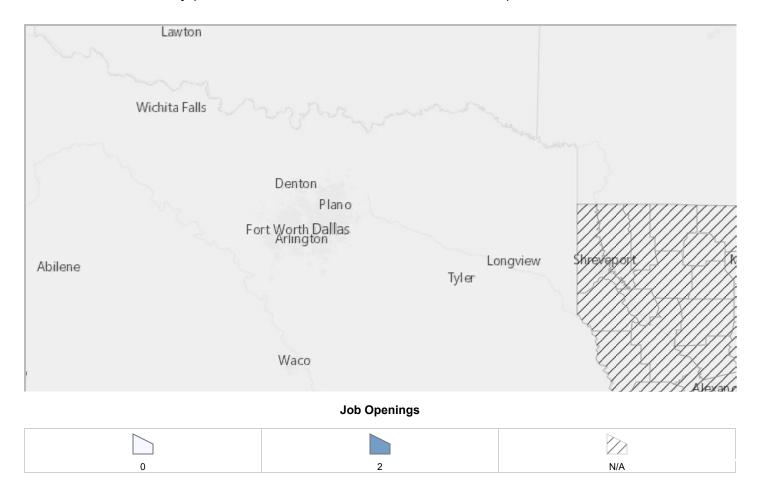
This section shows the number of job openings advertised online for Electronic Drafters in Louisiana October, 2020 (Jobs De-duplication Level 2).

Occupation	Job Openings
Electronic Drafters	2

Source: Online advertised jobs data

#### **Jobs Area Distribution**

This section shows the distribution of number of job openings advertised online for Electronic Drafters in Louisiana by parishes on November 23, 2020 (Jobs De-duplication Level  $\underline{2}$ ).



Job Source: Online advertised jobs data

Wage Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

### **Jobs in Related Occupations**

This section shows the number of job openings advertised online in Louisiana for occupations related to Electronic Drafters on November 23, 2020 (Jobs De-duplication Level  $\underline{2}$ ).

Rank	Occupation	Median Wage	Job Openings	*Related By
1	Computer Programmers	N/A	<u>93</u>	O*NET
2	Electronics Engineering Technicians •	\$57,589	<u>19</u>	O*NET
3	Electrical Engineering Technicians •	\$57,589	<u>17</u>	SOC4
4	Architectural Drafters •	\$50,965	<u>13</u>	O*NET
5	Surveying Technicians	\$37,697	<u>12</u>	SOC4
6	Computer Network Architects	N/A	<u>10</u>	O*NET

Rank	Occupation	Median Wage	Job Openings	*Related By
7	Industrial Engineering Technicians •	\$83,502	<u>10</u>	SOC4
8	<u>Drafters, All Other</u>	\$53,560	<u>8</u>	SOC4
9	Technical Writers	\$72,801	<u>8</u>	O*NET
10	Mechanical Engineering Technicians	\$75,598	<u>5</u>	SOC4
11	Electro-Mechanical Technicians •	\$65,257	<u>4</u>	SOC4
12	Audio and Video Equipment Technicians	\$36,399	<u>4</u>	O*NET
13	Electrical Drafters	\$64,801	<u>3</u>	O*NET
14	Mechanical Drafters	\$58,355	<u>3</u>	O*NET
15	Environmental Engineering Technicians •	\$44,182	<u>3</u>	SOC4
16	Non-Destructive Testing Specialists	N/A	<u>3</u>	SOC4
17	Manufacturing Production Technicians •	N/A	<u>3</u>	SOC4
18	Commercial and Industrial Designers •	\$89,185	<u>3</u>	O*NET
19	Electronic Drafters	\$64,801	<u>2</u>	N/A
20	Civil Engineering Technicians	\$53,863	<u>2</u>	O*NET
21	Engineering Technicians, Except Drafters, All Other	N/A	<u>2</u>	SOC4
22	Geophysical Data Technicians • •	N/A	<u>2</u>	O*NET
23	<u>Civil Drafters</u>	\$50,965	<u>1</u>	O*NET
24	Robotics Technicians •	\$65,257	<u>1</u>	SOC4

BRIGHT OUTLOOK NATIONALLY FREEN OCCUPATIONS

Job Source: Online advertised jobs data

### **Candidates Available**

This section shows potential candidates in the workforce system in Louisiana for Electronic Drafters and for the related occupational group of Architecture and Engineering Occupations on November 23, 2020.

Occupation	Candidates
Electronic Drafters	23
Architecture and Engineering Occupations	3,460

Source: Individuals with active résumés in the workforce system.

#### **Candidate Area Distribution**

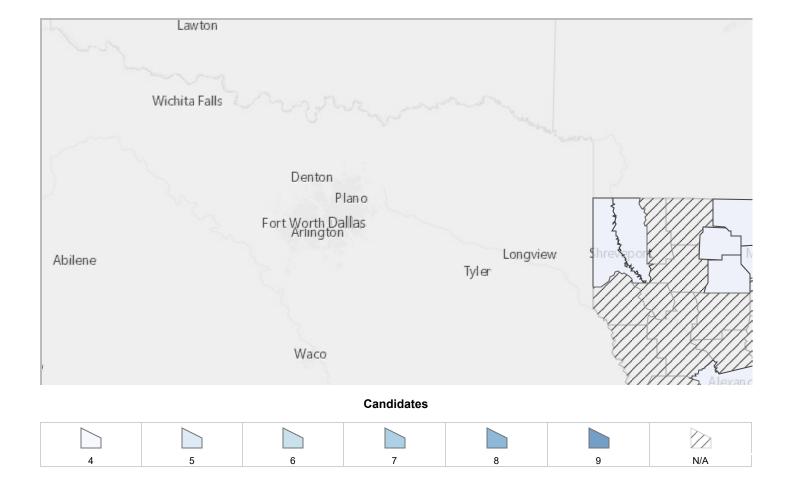
This section shows the distribution of potential candidates in the workforce system for Electronic Drafters in Louisiana by parishes on November 23, 2020.

Rank	Area Name	Median Wage	Candidates

<sup>\*</sup>Related By: O\*NET™ - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

Rank	Area Name	Median Wage	Candidates
1	<u>Jefferson Parish</u>	\$64,801 state level wages	9
2	<u>Orleans Parish</u>	\$64,801 state level wages	9
3	Ascension Parish	\$64,801 state level wages	8
4	<u>Iberia Parish</u>	\$64,801 state level wages	8
5	<u>Lafayette Parish</u>	\$64,801 state level wages	7
6	Acadia Parish	\$64,801 state level wages	6
7	East Baton Rouge Parish	\$64,801 state level wages	6
8	<u>Livingston Parish</u>	\$64,801 state level wages	6
9	<u>Iberville Parish</u>	\$64,801 state level wages	5
10	Pointe Coupee Parish	\$64,801 state level wages	5



Candidate Source: Individuals with active résumés in the workforce system.

Wage Source: Labor Market Statistics, Occupational Employment Statistics Program

The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

## **Candidates in Related Occupations**

This section shows how many potential candidates in the workforce system were looking for work in Louisiana in occupations related to Electronic Drafters on November 23, 2020.

Rank	Occupation	Median Wage	Candidates	*Related By
1	Manufacturing Production Technicians	N/A	380	SOC4
2	Audio and Video Equipment Technicians	\$36,399	235	O*NET
3	Electronics Engineering Technicians	\$57,589	172	O*NET
4	<u>Drafters, All Other</u>	\$53,560	169	SOC4
5	Non-Destructive Testing Specialists	N/A	133	SOC4
6	Mechanical Drafters	\$58,355	130	O*NET
7	Industrial Engineering Technicians •	\$83,502	111	SOC4
8	Architectural Drafters •	\$50,965	102	O*NET
9	Electrical Engineering Technicians	\$57,589	96	SOC4
10	Computer Programmers	N/A	93	O*NET
11	Commercial and Industrial Designers •	\$89,185	89	O*NET
12	Surveying Technicians	\$37,697	81	SOC4
13	Aerospace Engineering and Operations Technicians	N/A	76	SOC4
14	<u>Civil Drafters</u>	\$50,965	67	O*NET

Rank	Occupation	Median Wage	Candidates	*Related By
15	<u>Civil Engineering Technicians</u>	\$53,863	62	O*NET
16	Engineering Technicians, Except Drafters, All Other	N/A	56	SOC4
17	Electrical Drafters	\$64,801	55	O*NET
18	Medical Transcriptionists	\$34,158	53	O*NET
19	Electro-Mechanical Technicians	\$65,257	52	SOC4
20	Mechanical Engineering Technicians	\$75,598	51	SOC4
21	Industrial Engineering Technologists •	N/A	47	SOC4
22	Film and Video Editors >	N/A	46	O*NET
23	Environmental Engineering Technicians •	\$44,182	44	SOC4
24	Computer Network Architects	N/A	42	O*NET
25	Automotive Engineering Technicians •	\$75,598	42	SOC4
26	Prepress Technicians and Workers	\$27,814	34	O*NET
27	Technical Writers >	\$72,801	30	O*NET
28	Electronic Drafters	\$64,801	23	N/A
29	Robotics Technicians •	\$65,257	19	SOC4
30	Electronics Engineering Technologists •	N/A	19	SOC4
31	Electrical Engineering Technologists •	N/A	17	SOC4
32	Cartographers and Photogrammetrists	\$55,539	12	O*NET
33	Fabric and Apparel Patternmakers	N/A	12	O*NET
34	Mechanical Engineering Technologists •	N/A	11	SOC4
35	Geophysical Data Technicians	N/A	9	O*NET
36	Electromechanical Engineering Technologists •	N/A	6	SOC4
37	Fuel Cell Technicians •	N/A	5	SOC4
38	Manufacturing Engineering Technologists  •	N/A	4	SOC4
39	Mapping Technicians	\$37,697	4	O*NET
40	Electrical and Electronic Engineering Technicians	\$57,589	2	SOC4
41	Photonics Technicians •	N/A	2	SOC4
42	Precious Metal Workers	\$33,916	2	O*NET
43	Electrical and Electronics Drafters	\$64,801	1	SOC4
44	Nanotechnology Engineering Technicians	N/A	1	SOC4

BRIGHT OUTLOOK NATIONALLY | P GREEN OCCUPATIONS

Candidate Source: Individuals with active résumés in the workforce system.

\*Related By: O\*NET™ - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u>

system.

#### **Jobs and Candidates Available**

This section shows the number of job openings advertised online, as well as potential candidates in the workforce system in Louisiana for Electronic Drafters and for the related occupational group of Architecture and Engineering Occupations on November 23, 2020 (Jobs De-duplication Level <u>2</u>).

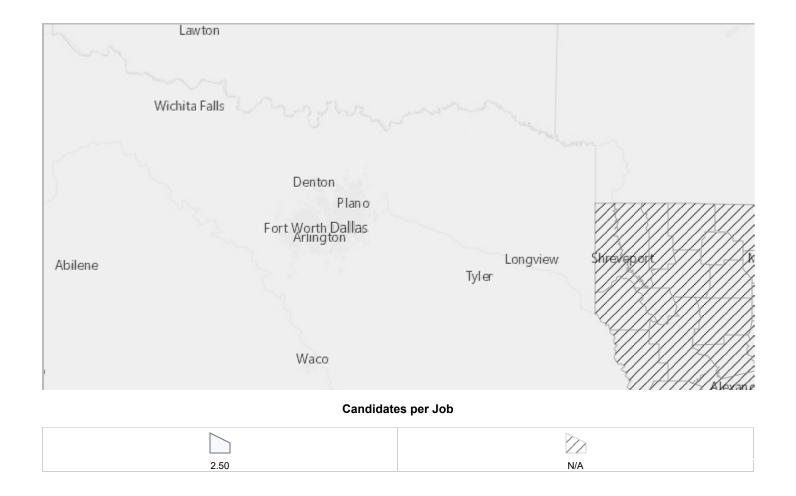
Occupation	Job Openings	Candidates	Candidates per Job
Electronic Drafters	<u>2</u>	23	11.50
Architecture and Engineering Occupations	<u>726</u>	3,460	4.77

Job Source: Online advertised jobs data Candidate Source: Individuals with active résumés in the workforce system.

#### **Jobs and Candidates Area Distribution**

This section shows the distribution of number of job openings advertised online, as well as potential candidates in the workforce system for Electronic Drafters in Louisiana by parishes on November 23, 2020 (Jobs De-duplication Level  $\underline{2}$ ).

Rank	Area Name	Median Wage	Job Openings	Candidates	Candidates per Job
1	<u>Tangipahoa Parish</u>	\$64,801 state level wages	<u>2</u>	5	2.50
2	<u>Acadia Parish</u>	\$64,801 state level wages	0	6	N/A
3	Allen Parish	\$64,801 state level wages	0	4	N/A
4	Ascension Parish	\$64,801 state level wages	0	8	N/A
5	<u>Avoyelles Parish</u>	\$64,801 state level wages	0	4	N/A
6	Bossier Parish	\$64,801 state level wages	0	4	N/A
7	<u>Caddo Parish</u>	\$64,801 state level wages	0	4	N/A
8	Cameron Parish	\$64,801 state level wages	0	4	N/A
9	East Baton Rouge Parish	\$64,801 state level wages	0	6	N/A
10	East Feliciana Parish	\$64,801 state level wages	0	4	N/A



Job Source: Online advertised jobs data
Candidate Source: Individuals with active résumés in the workforce system.
Wage Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

#### **National Supply and Demand Summary**

**Electronic Drafters** Overall employment of drafters is projected to grow 7 percent from 2016 to 2026. Employment growth will vary by specialty. (See table below.)

Growth in the engineering services and construction industries is expected to account for most new jobs for drafters. However, computer-aided design (CAD) and building information modeling (BIM) technologies allow engineers and architects to perform many tasks that used to be done by drafters, which is expected to temper demand for all drafters.

**Job Prospects** 

Overall competition for jobs is expected to be strong.

Specifically, architectural and civil drafters may experience more competition for jobs than mechanical or electrical drafters because of the relatively high number of students graduating in those drafting specialties. Typically, the number of graduates in architectural and civil programs greatly exceeds the number of available positions.

Demand for particular drafting specialties varies across the country because jobs depend on the needs of local industries. Job prospects for mechanical drafters should be best in large manufacturing hubs.

Because many drafting jobs are in construction and manufacturing, job opportunities for drafters will be sensitive to fluctuations in the overall economy.

Candidates proficient in CAD and BIM are likely to have better job opportunities.

Source: <u>U.S. Department of Labor Bureau of Labor Statistics</u>

## **Employers by Number of Job Openings**

This section shows the employers with the highest number of job openings advertised online for Electronic Drafters in Louisiana on November 23, 2020 (Jobs De-duplication Level  $\underline{2}$ ).

Rank	Employer Name	Job Openings
1	DS Services of America, Inc.	<u>1</u>
2	Primo Water Corporation	<u>1</u>

Source: Online advertised jobs data

#### **Advertised Job Skills**

There is no data available for Electronic Drafters in Louisiana.

# **Advertised Tools and Technology**

There is no data available for Electronic Drafters in Louisiana.

### **Typical Job Skills**

This section shows the job skills that are related to Electronic Drafters.

Rank	Typical Job Skills	Typical Skill Category
1	Confer with technical personnel to prepare designs or operational plans	Interacting With Others
2	Operate computer systems	Work Output
3	Review technical documents to plan work	Information Input
4	Create schematic drawings for electronics	Mental Processes
5	Supervise engineering or other technical personnel	Interacting With Others
6	Verify mathematical calculations	Mental Processes
7	Confer with other personnel to resolve design or operational problems	Interacting With Others
8	Select tools, equipment, or technologies for use in operations or projects	Mental Processes
9	Train personnel on proper operational procedures	Interacting With Others

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### **Personal Skills**

This section shows the personal skills that are most useful for Electronic Drafters. Click on a link in the Personal Skills column to view more detailed information.

Personal Skill	Skill Description	Rank by Importance (Out of 100)
<u>Speaking</u>	Talking to others to convey information effectively.	69

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.	66
Reading Comprehension	Understanding written sentences and paragraphs in work related documents.	63
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.	60
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.	53
<u>Systems</u> Anal <u>ysis</u>	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.	50
<u>Time</u> <u>Management</u>	Managing one's own time and the time of others.	50
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.	50
<u>Complex</u> <u>Problem</u> <u>Solving</u>	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.	50
<u>Operations</u> <u>Analysis</u>	Analyzing needs and product requirements to create a design.	50
<u>Writing</u>	Communicating effectively in writing as appropriate for the needs of the audience.	50
<u>Monitoring</u>	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.	50
<u>Social</u> <u>Perceptiveness</u>	Being aware of others' reactions and understanding why they react as they do.	50
<u>Coordination</u>	Adjusting actions in relation to others' actions.	50
<u>Instructing</u>	Teaching others how to do something.	47
<u>Persuasion</u>	Persuading others to change their minds or behavior.	44
<u>Systems</u> Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	44
<u>Negotiation</u>	Bringing others together and trying to reconcile differences.	41
<u>Mathematics</u>	Using mathematics to solve problems.	41
<u>Learning</u> <u>Strategies</u>	Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.	41
<u>Service</u> Orientation	Actively looking for ways to help people.	35

Personal Skill	Skill Description	Rank by Importance (Out of 100)
<u>Technology</u> <u>Design</u>	Generating or adapting equipment and technology to serve user needs.	25
Management of Personnel Resources	Motivating, developing, and directing people as they work, identifying the best people for the job.	25
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.	22
<u>Programming</u>	Writing computer programs for various purposes.	22
Operation Monitoring	Watching gauges, dials, or other indicators to make sure a machine is working properly.	22
<u>Science</u>	Using scientific rules and methods to solve problems.	22
Operation and Control	Controlling operations of equipment or systems.	19
Troubleshooting	Determining causes of operating errors and deciding what to do about it.	10
Management of Material Resources	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.	10
Equipment Selection	Determining the kind of tools and equipment needed to do a job.	6
Management of Financial Resources	Determining how money will be spent to get the work done, and accounting for these expenditures.	3
Repairing	Repairing machines or systems using the needed tools.	0
Equipment Maintenance	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.	0
<u>Installation</u>	Installing equipment, machines, wiring, or programs to meet specifications.	0

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Typical Education Requirements**

**Electronic Drafters** Electronic Drafters usually require at least an Associate's degree. However, not all employers may make this a hiring requirement.

Source: This information is based on the BLS Occupational Outlook Handbook (OOH).

# **Required Level of Education**

This section shows the results of a national survey listing the most common required level of education for Electronic Drafters.

Rank	Required Level of Education	Percentage of Respondents
1	Associate's Degree (or other 2-year degree)	50.89%

Rank	Required Level of Education	Percentage of Respondents
2	Post-Secondary Certificate - awarded for training completed after high school (for example, in agriculture or natural resources, computer services, personal or culinary services, engineering technologies, healthcare, construction trades, mechanic and repair technologies, or precision production)	38.49%
3	Bachelor's Degree	8.64%
4	Some College Courses	1.99%

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **On The Job Training**

This section shows the results of a national survey listing the most common lengths of on the job training for Electronic Drafters.

Rank	On The Job Training	Percentage of Respondents
1	Over 3 months, up to and including 6 months	42.28%
2	Anything beyond short demonstration, up to and including 1 month	28.35%
3	Over 1 month, up to and including 3 months	14.69%
4	Over 1 year, up to and including 2 years	10.10%
5	Over 10 years	3.59%
6	Over 6 months, up to and including 1 year	1.00%

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **On-Site or In-Plant Training**

This section shows the results of a national survey listing the most common lengths of on-site or inplant training for Electronic Drafters.

Rank	On-Site or In-Plant Training	Percentage of Respondents
1	Up to and including 1 month	26.40%
2	None	25.26%
3	Over 6 months, up to and including 1 year	19.01%
4	Over 1 year, up to and including 2 years	10.10%
5	Over 3 months, up to and including 6 months	10.10%
6	Over 1 month, up to and including 3 months	4.58%
7	Over 10 years	3.59%
8	Over 2 years, up to and including 4 years	0.97%

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### **Education Level of Jobs and Candidates**

This section shows the minimum level of education requested by employers on job openings advertised online, as well as the educational attainment of potential candidates in the workforce system that are looking for jobs as Architecture and Engineering Occupations (no data available for Electronic Drafters) in Louisiana on November 23, 2020. There were 499 job openings advertised online that did not specify a minimum education requirement (Jobs De-duplication Level <u>2</u>).

Rank	Education Level	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
1	No Minimum Education Requirement	<u>35</u>	4.82%	0	N/A
2	Less than High School	0	N/A	90	2.60%
3	High School Diploma or Equivalent	<u>38</u>	5.23%	728	21.04%
4	1 Year of College or a Technical or Vocational School	<u>1</u>	0.14%	261	7.54%
5	2 Years of College or a Technical or Vocational School	0	N/A	259	7.49%
6	3 Years of College or a Technical or Vocational School	0	N/A	146	4.22%
7	Vocational School Certificate	<u>3</u>	0.41%	310	8.96%
8	Associate's Degree	<u>16</u>	2.20%	555	16.04%
9	Bachelor's Degree	<u>131</u>	18.04%	905	26.16%
10	Master's Degree	<u>3</u>	0.41%	174	5.03%
11	Doctorate Degree	0	N/A	22	0.64%
12	Specialized Degree (e.g. MD, DDS)	0	N/A	10	0.29%
13	Not Specified	<u>499</u>	68.73%	0	N/A

Job Source: Online advertised jobs data Candidate Source: Individuals with active résumés in the workforce system.

# **Education Training Programs**

This section shows the Education Training Programs for Electronic Drafters in Louisiana.

Provider Name	Program Name	Location	Tuition	Length	WIOA Eligible
Baton Rouge Community College	<u>Drafting &amp; Design</u> <u>Technology</u> An associate degree	Baton Rouge, LA	\$10,585	5 Semesters	•
Bossier Parish Community College	Computer Drafting and Design - Technical Competency Area	Bossier City, LA	\$1,647	1 Semesters	
Central Louisiana Technical Community College	<u>Drafting and Design</u> <u>Technology</u> An associate degree	Alexandria, LA	\$10,248	5 Semesters	

Provider Name	Program Name	Location	Tuition	Length	WIOA Eligible
Fletcher Technical Community College	<u>Drafting and Design</u> <u>Technology Degree</u> An associate degree	Schriever, LA	\$10,240	5 Semesters	•
ITI Technical College	<u>Drafting &amp; Design</u> <u>Technology</u> An associate degree	Baton Rouge, LA	\$29,500	24 Months	•
Louisiana Delta Community College	Drafting and Design Technology An associate degree, Employment, A measurable skills gain leading to a credential, A measurable skills gain leading to employment	West Monroe, LA	\$8,948	104 Weeks	•
Northshore Technical Community College	<u>Drafting &amp; Design</u> <u>Technology (AAS)</u> An associate degree	Lacombe, LA	\$10,258	5 Semesters	•
Northshore Technical Community College	<u>Drafting&amp;Design</u> <u>Technology - CTS</u> An industry- recognized certificate or certification	Lacombe, LA	\$4,503	2 Semesters	•
River Parishes Community College - Gonzales Campus	Drafting & Design Technology An associate degree, A baccalaureate degree, A community college certificate of completion, Employment, A measurable skills gain leading to employment	Gonzales, LA	\$8,611	4 Semesters	•
River Parishes Community College - Gonzales Campus	Drafting & Design Technology An associate degree, A baccalaureate degree, A community college certificate of completion, Employment, A measurable skills gain leading to employment	Reserve, LA	\$8,611	4 Semesters	•

Source: U.S. Department of Commerce, Bureau of the Census, Midyear Estimates

# **Advertised Job Certifications**

There is no data available for Electronic Drafters in Louisiana.

### **Training Program Completers**

There is no data available for Electronic Drafters in Louisiana.

### National Education, Training, Licensing and Qualifications

**Electronic Drafters** Education

Drafters generally need to complete postsecondary education in drafting. This is typically done through a 2-year associate's degree from a technical institute or community college.

Technical institutes offer instruction in design fundamentals, sketching, and computer-aided design (CAD) software and award certificates or diplomas upon completion. Programs vary in length but are generally 2 years of full-time education. The types of courses offered will also vary by institution. Some institutions may specialize in only one type of drafting, such as mechanical or architectural drafting.

Community colleges offer programs similar to those in technical institutes that lead to an associate of applied science in drafting or related degree. After completing an associate's degree program, graduates may get jobs as drafters or continue their education in a related field at a 4-year college. Most 4-year colleges do not offer training in drafting, but they do offer classes in engineering, architecture, and mathematics.

To prepare for postsecondary education, high school students may find it useful to take courses in mathematics, science, computer technology, design, computer graphics, and where available, drafting.

Licenses, Certifications, and Registrations

The American Design Drafting Association (ADDA) offers certification for drafters. Although not mandatory, certification demonstrates competence and knowledge of nationally recognized practices. Certifications are offered for several specialties, including architectural, civil, and mechanical drafting.

**Important Qualities** 

Creativity. Drafters must be able to turn plans and ideas into technical drawings that will guide the creation of real buildings, tools, and systems.

Detail oriented. Drafters must pay close attention to details so that the plans they convert are technically accurate according to the outlined specifications.

Interpersonal skills. Drafters work closely with architects, engineers, and other designers to make sure that final plans are accurate. This requires the ability to communicate effectively and work well with others.

Math skills. Drafters work on technical drawings. They may be required to solve mathematical calculations involving factors such as angles, weights, and costs.

Technical skills. Drafters in all specialties must be able to use computer software, such as CAD, and work with database tools, such as building information modeling (BIM).

Time-management skills. Drafters often work under strict deadlines. As a result, they must work efficiently to produce the required output according to set schedules.

Source: <u>U.S. Department of Labor Bureau of Labor Statistics</u>

# **Typical Work Experience Requirements**

**Electronic Drafters** Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### **Related Work Experience**

This section shows the results of a national survey listing the most common related work experience for Electronic Drafters.

Rank	Related Work Experience	Percentage of Respondents
1	Over 10 years	21.60%
2	Over 2 years, up to and including 4 years	17.14%
3	Over 8 years, up to and including 10 years	13.68%
4	Over 4 years, up to and including 6 years	12.59%
5	Over 1 month, up to and including 3 months	9.21%
6	Up to and including 1 month	8.65%
7	Over 1 year, up to and including 2 years	7.04%
8	Over 6 months, up to and including 1 year	5.05%
9	Over 6 years, up to and including 8 years	5.05%

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

## **Work Experience of Jobs and Candidates**

This section shows the minimum required work experience requested by employers on job openings advertised online, as well as the experience level of potential candidates in the workforce system that are looking for jobs as Architecture and Engineering Occupations (no data available for Electronic Drafters) in Louisiana on November 23, 2020. There were 528 job openings advertised online that did not specify a minimum experience requirement (Jobs De-duplication Level <u>2</u>).

Rank	Experience	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
1	Not Specified	528	72.73%	0	N/A
2	Entry Level	39	5.37%	0	N/A
3	Less than 1 year	4	0.55%	138	3.99%
4	1 Year to 2 Years	53	7.30%	98	2.83%
5	2 Years to 5 Years	64	8.82%	262	7.57%
6	5 Years to 10 Years	29	3.99%	389	11.24%
7	More than 10 Years	9	1.24%	2,573	74.36%

Job Source: Online advertised jobs data

Candidate Source: Individuals with active résumés in the workforce system.

## **Current Job Order Wage Information**

The employer has NOT indicated a salary range for this job. The information below shows statistics on typical salaries in the local labor market for Electronic Drafters. This data is NOT an indication of what this employer is willing to pay for this job.

### **Employment Wage Statistics**

This section shows the estimated employment wage statistics for individuals in Louisiana employed for Electrical and Electronics Drafters (no data available for Electronic Drafters) in 2019.

Rate Type / Statistical Type	Entry level	Median	Experienced
Annual wage or salary	\$33,981	\$64,801	\$95,554
Hourly wage	\$16.34	\$31.15	\$45.94

Source: Labor Market Statistics, Occupational Employment Statistics Program

The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Entry level and Experienced wage rates represent the means of the lower 1/3 and upper 2/3 of the wage distribution, respectively. Data is from an annual survey.

### **Wage Rates on Advertised Jobs**

This section shows a statistical breakdown of available wage data on the <u>2</u> job openings advertised online for Electronic Drafters in Louisiana that posted a salary on November 23, 2020.

Rate Type / Statistical Type	Entry Level	Median	Experienced
Annual wage or salary	N/A	N/A	N/A
Hourly Wage	N/A	N/A	N/A

Source: Online advertised jobs data

Note: This information is based on actual job orders and is not based on a statistically valid labor market survey. Hourly wage rate calculations in this section assume a 40 hour work week.

# **Desired Salary of Available Candidates**

This section shows the desired salary of potential candidates in the workforce system that are looking for jobs as Electronic Drafters in Louisiana on November 23, 2020.

Rank	Desired Salary	Potential Candidates	Percentage of Potential Candidates
1	Not Specified	7	30.44%
2	\$5,000 - \$19,999	2	8.70%
3	\$20,000 - \$34,999	3	13.04%
4	\$35,000 - \$49,999	3	13.04%
5	\$50,000 - \$64,999	4	17.39%
6	\$65,000 - \$79,999	3	13.04%
7	\$95,000 or more	1	4.35%

Source: Individuals with active résumés in the workforce system.

# **Wage Rates Area Distribution**

There is no data available for Electrical and Electronics Drafters (no data available for Electronic Drafters) in Louisiana.

## **Wage Rates in Related Occupations**

This section shows a comparison of 2019 median annual rates for occupations that are in the same occupational family as Electronic Drafters for Louisiana.

Rank	Occupation	Median	*Related By
1	Commercial and Industrial Designers •	\$89,185	O*NET
2	Industrial Engineering Technicians •	\$83,502	SOC4
3	Mechanical Engineering Technicians	\$75,598	SOC4
4	<u>Automotive Engineering Technicians</u> <i>■</i>	\$75,598	SOC4
5	Technical Writers •	\$72,801	O*NET
6	Electro-Mechanical Technicians •	\$65,257	SOC4
7	Robotics Technicians •	\$65,257	SOC4
8	Electrical and Electronics Drafters	\$64,801	SOC4
9	Electronic Drafters	\$64,801	N/A
10	Electrical Drafters	\$64,801	O*NET
11	Mechanical Drafters	\$58,355	O*NET
12	Electrical and Electronic Engineering Technicians	\$57,589	SOC4
13	Electronics Engineering Technicians •	\$57,589	O*NET
14	Electrical Engineering Technicians =	\$57,589	SOC4
15	Cartographers and Photogrammetrists >	\$55,539	O*NET
16	<u>Civil Engineering Technicians</u>	\$53,863	O*NET
17	<u>Drafters, All Other</u>	\$53,560	SOC4
18	Architectural and Civil Drafters	\$50,965	SOC4
19	Architectural Drafters •	\$50,965	O*NET
20	<u>Civil Drafters</u>	\$50,965	O*NET
21	Environmental Engineering Technicians > >	\$44,182	SOC4
22	Surveying and Mapping Technicians	\$37,697	SOC4
23	Surveying Technicians	\$37,697	SOC4
24	Mapping Technicians	\$37,697	O*NET
25	Audio and Video Equipment Technicians.	\$36,399	O*NET
26	Medical Transcriptionists	\$34,158	O*NET
27	Precious Metal Workers	\$33,916	O*NET
28	Prepress Technicians and Workers	\$27,814	O*NET

Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Entry level and Experienced wage rates represent the means of the lower 1/3 and upper 2/3 of the wage distribution, respectively. Data is from an annual survey.

<sup>\*</sup>Related By: O\*NET™ - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

### Wage Rates by Industry

There is no data available for Electronic Drafters in Louisiana.

### **National Earnings Data Summary**

**Electronic Drafters** The median annual wage for drafters was \$53,480 in May 2016. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$33,910, and the highest 10 percent earned more than \$83,300.

Median annual wages for drafters in May 2016 were as follows:

Electrical and electronics drafters \$59,970 Mechanical drafters 54,480 Architectural and civil drafters 51,640 Drafters, all other 50,470

In May 2016, the median annual wages for drafters in the top industries in which they worked were as follows:

Administrative and support and waste management and remediation services \$57,080 Construction 53,730 Manufacturing 53,010 Wholesale trade 52,890 Architectural, engineering, and related services 52,850

Most drafters worked full time in 2016.

Source: <u>U.S. Department of Labor Bureau of Labor Statistics</u>

### **Occupational Employment & Future Employment Outlook**

This section shows the long term employment projections for Electrical and Electronics Drafters (no data available for Electronic Drafters) in Louisiana from 2016-2026.

Occupation	2016 Estimated Employment	2026 Projected Employment	Total 2016- 2026 Employment Change	2016-2026 Annual Avg. Percent Change
Electrical and Electronics Drafters	229	258	29	1.20%
Total All	2,034,986	2,203,144	168,158	0.80%

Source: Occupational Employment Projections

## **Employment Data Area Distribution**

This section shows the distribution of the 2016 estimated employment for Electrical and Electronics Drafters (no data available for Electronic Drafters) in Louisiana by regional labor market area.

Rank	Area	2016 Estimated Employment
1	<u>2nd Regional Labor</u> <u>Market Area, Baton</u> <u>Rouge</u>	61
2	<u>1st Regional Labor</u> <u>Market Area, New</u> <u>Orleans</u>	60
*	<u>3rd Regional Labor</u> <u>Market Area, Houma</u>	Confidential
*	4th Regional Labor Market Area, Lafayette	Confidential
*	<u>5th Regional Labor</u> <u>Market Area, Lake</u> <u>Charles</u>	Confidential
*	6th Regional Labor Market Area, Alexandria	Confidential
*	7th Regional Labor Market Area, Shreveport	Confidential

La Company		LILU
Foi Woi	rt rth	
Austin		
San Antonio	Hous	ton ZZZZ
Est	timated Employm	ent
60	61	N/A
00	01	14// (

<sup>\*</sup> Rank is suppressed for confidential data.

Source: Labor Market Statistics, Occupational Employment Projections Program

# **Employment Data in Related Occupations**

This section shows the 2016 Estimated Employment in Louisiana for occupations related to Electronic Drafters.

Rank	Occupation	2016 Estimated Employment	*Related By
1	Computer Programmers	2,505	O*NET
2	Electrical Engineering Technologists •	1,566	SOC4
3	Electromechanical Engineering Technologists •	1,566	SOC4
4	Electronics Engineering Technologists •	1,566	SOC4
5	Engineering Technicians, Except Drafters, All Other	1,566	SOC4
6	Fuel Cell Technicians •	1,566	SOC4
7	Industrial Engineering Technologists •	1,566	SOC4
8	Manufacturing Engineering Technologists •	1,566	SOC4
9	Manufacturing Production Technicians •	1,566	SOC4
10	Mechanical Engineering Technologists •	1,566	SOC4
11	Nanotechnology Engineering Technicians •	1,566	SOC4
12	Nanotechnology Engineering Technologists •	1,566	SOC4
13	Non-Destructive Testing Specialists	1,566	SOC4
14	Photonics Technicians •	1,566	SOC4
15	<u>Civil Engineering Technicians</u>	1,551	O*NET

Rank	Occupation	2016 Estimated Employment	*Related By
16	Electrical and Electronic Engineering Technicians	1,471	SOC4
17	Electrical Engineering Technicians •	1,471	SOC4
18	Electronics Engineering Technicians •	1,471	O*NET
19	<u>Mapping Technicians</u>	1,272	O*NET
20	Surveying and Mapping Technicians	1,272	SOC4
21	Surveying Technicians	1,272	SOC4
22	<u>Drafters, All Other</u>	1,154	SOC4
23	Medical Transcriptionists	1,140	O*NET
24	Architectural and Civil Drafters	1,134	SOC4
25	Architectural Drafters •	1,134	O*NET
26	<u>Civil Drafters</u>	1,134	O*NET
27	Mechanical Drafters	978	O*NET
28	Precious Metal Workers	798	O*NET
29	Audio and Video Equipment Technicians.	729	O*NET
30	Geophysical Data Technicians > >	707	O*NET
31	Automotive Engineering Technicians •	444	SOC4
32	Mechanical Engineering Technicians	444	SOC4
33	Commercial and Industrial Designers	423	O*NET
34	Industrial Engineering Technicians •	404	SOC4
35	Environmental Engineering Technicians > >	374	SOC4
36	Computer Network Architects	246	O*NET
37	Prepress Technicians and Workers	241	O*NET
38	Electrical and Electronics Drafters	229	SOC4
39	Electrical Drafters	229	O*NET
40	Electronic Drafters	229	SOC4
41	Film and Video Editors >	224	O*NET
42	Technical Writers •	223	O*NET
*	Aerospace Engineering and Operations <u>Technicians</u>	Confidential	SOC4
*	Cartographers and Photogrammetrists	Confidential	O*NET
*	Electro-Mechanical Technicians •	Confidential	SOC4
*	Robotics Technicians •	Confidential	SOC4

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Source: Occupational Employment Projections

# **Projected Annual Openings**

<sup>\*</sup> Rank is suppressed for confidential data.

<sup>\*</sup>Related By: O\*NET™ - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

This section shows the long term projected annual openings for Electrical and Electronics Drafters (no data available for Electronic Drafters) in Louisiana from 2016 to 2026.

Occupation	Total Annual Average Openings	Annual Average Openings Due to Growth	Annual Average Openings Due to Replacement
Electrical and Electronics Drafters	N/A	N/A	N/A
Architecture and Engineering	N/A	N/A	N/A

Source: Labor Market Statistics, Occupational Employment Projections Program

### **Projected Annual Openings Area Distribution**

This section shows the distribution of the total annual average openings for Electrical and Electronics Drafters (no data available for Electronic Drafters) in Louisiana by regional labor market area from 2016 to 2026.

Rank	Area	Total Annual Average Openings
1	1st Regional Labor Market Area, New Orleans	N/A
2	<u>2nd Regional Labor</u> <u>Market Area, Baton</u> <u>Rouge</u>	N/A
*	<u>3rd Regional Labor</u> <u>Market Area, Houma</u>	Confidential
*	4th Regional Labor Market Area, Lafayette	Confidential
*	<u>5th Regional Labor</u> <u>Market Area, Lake Charles</u>	Confidential
*	<u>6th Regional Labor</u> <u>Market Area, Alexandria</u>	Confidential
*	7th Regional Labor Market Area, Shreveport	Confidential
* D I -	is accompanded for a patient	-1-4-

There is no total annual average openings data available for Electronic Drafters in Louisiana.

Source: Labor Market Statistics, Occupational Employment Projections Program

# **Projected Annual Openings in Related Occupations**

This section shows the projected total annual average openings in Louisiana for occupations related to Electronic Drafters from 2016 to 2026.

Rank	Occupation	Total Annual Average Openings	*Related By
1	Architectural and Civil Drafters	N/A	SOC4
2	Architectural Drafters •	N/A	O*NET

<sup>\*</sup> Rank is suppressed for confidential data.

Rank	Occupation	Total Annual Average Openings	*Related By
3	Audio and Video Equipment Technicians.	N/A	O*NET
4	Automotive Engineering Technicians •	N/A	SOC4
5	<u>Civil Drafters</u>	N/A	O*NET
6	<u>Civil Engineering Technicians</u>	N/A	O*NET
7	Commercial and Industrial Designers	N/A	O*NET
8	Computer Network Architects	N/A	O*NET
9	Computer Programmers	N/A	O*NET
10	<u>Drafters, All Other</u>	N/A	SOC4
11	Electrical and Electronic Engineering Technicians	N/A	SOC4
12	Electrical and Electronics Drafters	N/A	SOC4
13	Electrical Drafters	N/A	O*NET
14	Electrical Engineering Technicians •	N/A	SOC4
15	Electrical Engineering Technologists •	N/A	SOC4
16	Electromechanical Engineering Technologists •	N/A	SOC4
17	Electronic Drafters	N/A	SOC4
18	Electronics Engineering Technicians	N/A	O*NET
19	Electronics Engineering Technologists •	N/A	SOC4
20	Engineering Technicians, Except Drafters, All Other	N/A	SOC4
21	Environmental Engineering Technicians • •	N/A	SOC4
22	Film and Video Editors >	N/A	O*NET
23	Fuel Cell Technicians •	N/A	SOC4
24	Geophysical Data Technicians	N/A	O*NET
25	Industrial Engineering Technicians •	N/A	SOC4
26	Industrial Engineering Technologists	N/A	SOC4
27	Manufacturing Engineering Technologists •	N/A	SOC4
28	Manufacturing Production Technicians •	N/A	SOC4
29	Mapping Technicians	N/A	O*NET
30	Mechanical Drafters	N/A	O*NET
31	Mechanical Engineering Technicians	N/A	SOC4
32	Mechanical Engineering Technologists •	N/A	SOC4
33	Medical Transcriptionists	N/A	O*NET
34	Nanotechnology Engineering Technicians	N/A	SOC4
35	Nanotechnology Engineering Technologists •	N/A	SOC4
36	Non-Destructive Testing Specialists	N/A	SOC4
37	Photonics Technicians •	N/A	SOC4
38	Precious Metal Workers	N/A	O*NET
39	Prepress Technicians and Workers	N/A	O*NET
40	Surveying and Mapping Technicians	N/A	SOC4
41	Surveying Technicians	N/A	SOC4

Rank	Occupation	Total Annual Average Openings	*Related By
42	Technical Writers •	N/A	O*NET
*	<u>Aerospace Engineering and Operations</u> <u>Technicians</u>	Confidential	SOC4
*	Cartographers and Photogrammetrists	Confidential	O*NET
*	Electro-Mechanical Technicians •	Confidential	SOC4
*	Robotics Technicians •	Confidential	SOC4

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Source: Occupational Employment Projections

# **Industries by Employment**

This section shows the industries that employed the highest number of Electrical and Electronics Drafters (no data available for Electronic Drafters) in Louisiana in 2016.

Rank	Industry Title	Estimated Employment	Percent of Total Employment
1	Professional, Scientific, and Technical Services	115	50.22%
*	<u>Self-Employed and Unpaid Family Workers, Primary</u> <u>Job</u>	Confidential	Confidential
*	<u>Utilities</u>	Confidential	Confidential
*	Specialty Trade Contractors	Confidential	Confidential
*	Plastics and Rubber Products Manufacturing	Confidential	Confidential
*	Primary Metal Manufacturing	Confidential	Confidential
*	Machinery Manufacturing	Confidential	Confidential
*	Electrical Equipment, Appliance, and Component Manufacturing	Confidential	Confidential
*	Administrative and Support Services	Confidential	Confidential

<sup>\*</sup> Rank is suppressed for confidential data.

Source: Louisiana Workforce Commission, Occupational Projections Program

### **Work Activities**

This section shows the most common work activities required by Electronic Drafters in order of importance. Click on a link in the Work Activity column to view more detailed information.

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Getting Information	Observing, receiving, and otherwise obtaining information from all relevant sources.	93
Interacting With Computers	Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.	82

<sup>\*</sup> Rank is suppressed for confidential data.

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment	Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.	70
Making Decisions and Solving Problems	Analyzing information and evaluating results to choose the best solution and solve problems.	69
Communicating with Supervisors, Peers, or Subordinates	Providing information to supervisors, co- workers, and subordinates by telephone, in written form, e-mail, or in person.	68
Evaluating Information to Determine Compliance with Standards	Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.	60
<u>Updating and Using</u> <u>Relevant Knowledge</u>	Keeping up-to-date technically and applying new knowledge to your job.	60
Documenting/Recording Information	Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.	59
Identifying Objects, Actions, and Events	Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.	58
Processing Information	Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.	58
Organizing, Planning, and Prioritizing Work	Developing specific goals and plans to prioritize, organize, and accomplish your work.	57
Thinking Creatively	Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.	53
Monitor Processes, Materials, or Surroundings	Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.	52
Analyzing Data or Information	Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.	51
Establishing and Maintaining Interpersonal Relationships	Developing constructive and cooperative working relationships with others, and maintaining them over time.	50
Inspecting Equipment, Structures, or Material	Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.	46

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Scheduling Work and Activities	Scheduling events, programs, and activities, as well as the work of others.	45
Controlling Machines and Processes	Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).	40
Provide Consultation and Advice to Others	Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.	38
<u>Developing Objectives</u> <u>and Strategies</u>	Establishing long-range objectives and specifying the strategies and actions to achieve them.	38
Interpreting the Meaning of Information for Others	Translating or explaining what information means and how it can be used.	37
Repairing and Maintaining Electronic Equipment	Servicing, repairing, calibrating, regulating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.	36
Performing Administrative Activities	Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.	35
<u>Training and Teaching</u> <u>Others</u>	Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.	34
Handling and Moving Objects	Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.	34
<u>Developing and Building</u> <u>Teams</u>	Encouraging and building mutual trust, respect, and cooperation among team members.	31
Coaching and Developing Others	Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.	31
Communicating with Persons Outside Organization	Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or email.	30
Estimating the Quantifiable Characteristics of Products, Events, or Information	Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.	30
Coordinating the Work and Activities of Others	Getting members of a group to work together to accomplish tasks.	29

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Performing General Physical Activities	Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.	29
Resolving Conflicts and Negotiating with Others	Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.	29
Judging the Qualities of Things, Services, or People	Assessing the value, importance, or quality of things or people.	28
Assisting and Caring for Others	Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.	28
Repairing and Maintaining Mechanical Equipment	Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.	24
Monitoring and Controlling Resources	Monitoring and controlling resources and overseeing the spending of money.	23
Guiding, Directing, and Motivating Subordinates	Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.	23

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

### **Tasks**

This section shows the most common tasks required by Electronic Drafters in order of importance. Click on a link in the Task column to view more detailed information.

Tasks	Task Description	Rank by Importance (Out of 100)
Consult with engineers to discuss or interpret design concepts, or determine requirements of detailed working drawings.	Core	83
Examine electronic schematics and supporting documents to develop, compute, and verify specifications for drafting data, such as configuration of parts, dimensions, or tolerances.	Core	81
Draft detail and assembly drawings of design components, circuitry or printed circuit boards, using computer-assisted equipment or standard drafting techniques and devices.	Core	79
Locate files relating to specified design project in database library, load program into computer, and record completed job data.	Core	76

Tasks	Task Description	Rank by Importance (Out of 100)
Review work orders or procedural manuals and confer with vendors or design staff to resolve problems or modify design.	Core	63
Generate computer tapes of final layout design to produce layered photo masks or photo plotting design onto film.	Supplemental	86
Key and program specified commands and engineering specifications into computer system to change functions and test final layout.	Supplemental	83
Supervise and coordinate work activities of workers engaged in drafting, designing layouts, assembling, or testing printed circuit boards.	Supplemental	77
Compare logic element configuration on display screen with engineering schematics and calculate figures to convert, redesign, or modify element.	Supplemental	72
Review blueprints to determine customer requirements and consult with assembler regarding schematics, wiring procedures, or conductor paths.	Supplemental	70
Select drill size to drill test head, according to test design and specifications, and submit guide layout to designated department.	Supplemental	62
Plot electrical test points on layout sheets and draw schematics for wiring test fixture heads to frames.	Supplemental	51
Copy drawings of printed circuit board fabrication using print machine or blueprinting procedure.	Supplemental	47
Train students to use drafting machines and to prepare schematic diagrams, block diagrams, control drawings, logic diagrams, integrated circuit drawings, or interconnection diagrams.	Supplemental	46

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

### **National Working Conditions**

Electronic Drafters Drafters spend much of their time working on computers using specialized software in an office.

Drafters held about 207,700 jobs in 2016. Employment in the detailed occupations that make up drafters was distributed as follows:

Architectural and civil drafters 99,600 Mechanical drafters 64,800 Electrical and electronics drafters 27,400 Drafters, all other 15,900

The largest employers of drafters were as follows:

Architectural, engineering, and related services 49% Manufacturing 25 Construction 9 Administrative and support and waste management and remediation services 4

Wholesale trade 2

Although drafters spend much of their time working on computers in an office, some may visit jobsites to collaborate with architects and engineers.

**Work Schedules** 

Most drafters worked full time in 2016.

Source: <u>U.S. Department of Labor Bureau of Labor Statistics</u>

# **Typical Work Conditions**

This section shows the most common work conditions required by Electronic Drafters in order of importance.

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Electronic Mail	How often do you use electronic mail in this job?	100
Indoors, Environmentally Controlled	How often does this job require working indoors in environmentally controlled conditions?	98
Spend Time Sitting	How much does this job require sitting?	96
Importance of Being Exact or Accurate	How important is being very exact or highly accurate in performing this job?	96
Face-to-Face Discussions	How often do you have to have face- to-face discussions with individuals or teams in this job?	96
Work With Work Group or Team	How important is it to work with others in a group or team in this job?	90
Telephone	How often do you have telephone conversations in this job?	89
Importance of Repeating Same Tasks	How important is repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job?	84
Time Pressure	How often does this job require the worker to meet strict deadlines?	82
Contact With Others	How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?	78
Freedom to Make Decisions	How much decision making freedom, without supervision, does the job offer?	78
Structured versus Unstructured Work	To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?	74
Spend Time Making Repetitive Motions	How much does this job require making repetitive motions?	71

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Frequency of Decision Making	How frequently is the worker required to make decisions that affect other people, the financial resources, and/or the image and reputation of the organization?	70
Coordinate or Lead Others	How important is it to coordinate or lead others in accomplishing work activities in this job?	64
Impact of Decisions on Co- workers or Company Results	What results do your decisions usually have on other people or the image or reputation or financial resources of your employer?	64
Deal With External Customers	How important is it to work with external customers or the public in this job?	60
Letters and Memos	How often does the job require written letters and memos?	60
Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls	How much does this job require using your hands to handle, control, or feel objects, tools or controls?	58
Responsibility for Outcomes and Results	How responsible is the worker for work outcomes and results of other workers?	54
Level of Competition	To what extent does this job require the worker to compete or to be aware of competitive pressures?	49
Physical Proximity	To what extent does this job require the worker to perform job tasks in close physical proximity to other people?	47
Sounds, Noise Levels Are Distracting or Uncomfortable	How often does this job require working exposed to sounds and noise levels that are distracting or uncomfortable?	46
Degree of Automation	How automated is the job?	44
Frequency of Conflict Situations	How often are there conflict situations the employee has to face in this job?	44
Consequence of Error	How serious would the result usually be if the worker made a mistake that was not readily correctable?	42
Responsible for Others' Health and Safety	How much responsibility is there for the health and safety of others in this job?	25
Deal With Unpleasant or Angry People	How frequently does the worker have to deal with unpleasant, angry, or discourteous individuals as part of the job requirements?	25
Public Speaking	How often do you have to perform public speaking in this job?	22

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats, or Life Jackets	How much does this job require wearing common protective or safety equipment such as safety shoes, glasses, gloves, hard hats or life jackets?	20

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### **Work Values and Needs**

This section shows the information on the current work values for your selected occupation.

Work Value	Work Value Description	Rank By Extent (Out of 100)
Achievement	Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.	50
Support	Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.	50
Working Conditions	Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.	47
Recognition	Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.	33
Relationships	Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.	33

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Typical Tools**

This section shows common tools used by Electronic Drafters.

<b>Detailed Tool</b>	Tool Group
Desktop computers	Desktop computers
Drafting machines	Drafting kits or sets
Personal computers	Personal computers

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Typical Technology**

This section shows common technology used by Electronic Drafters.

Detailed Technology	Technology Group
Cadence PSpice	Analytical or scientific software
The MathWorks MATLAB	Analytical or scientific software
Autodesk AutoCAD	Computer aided design CAD software
Computer aided design and drafting software CADD	Computer aided design CAD software
Dassault Systemes CATIA	Computer aided design CAD software
Mentor Graphics Expedition Enterprise	Computer aided design CAD software
Mentor Graphics PADS	Computer aided design CAD software
Mentor Graphics Xpedition xDX Designer	Computer aided design CAD software
PTC Creo Parametric	Computer aided design CAD software
SofTech CADRA	Computer aided design CAD software
UGS Solid Edge	Computer aided design CAD software
Zuken CADSTAR	Computer aided design CAD software
1CadCam Unigraphics	Computer aided manufacturing CAM software
Design specification database software	Data base user interface and query software
Microsoft Access	Data base user interface and query software
Verilog	Development environment software
IBM Lotus Notes	Electronic mail software
Bowen & Groves M1 ERP	Enterprise resource planning ERP software
Enterprise resource planning ERP software	Enterprise resource planning ERP software
Epicor Vantage	Enterprise resource planning ERP software
Exact Software Macola ERP	Enterprise resource planning ERP software
Made2Manage Systems M2M ERP	Enterprise resource planning ERP software
Manufacturing resource planning MRP software	Enterprise resource planning ERP software
Sage ERP Accpac	Enterprise resource planning ERP software
SoftBrands Fourth Shift Edition	Enterprise resource planning ERP software
Microsoft Office	Office suite software
Microsoft Project	Project management software
Oracle JD Edwards EnterpriseOne Project Management	Project management software
PTC Pro/INTRALINK	Project management software
Microsoft Excel	Spreadsheet software
Source: This information is based on O*NET™ data	O*NITT is a trademark registered to the LLC

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Licensing Information**

There is no data available for Electronic Drafters in Louisiana.

# **Typical Knowledge Categories**

This section shows the most common knowledge categories required by Electronic Drafters in order of importance. Click on a link in the Knowledge Category column to view more detailed information.

Knowledge Category	Knowledge Category Description	Rank by Importance (Out of 100)
Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	85
<u>Design</u>	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.	67
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.	67
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.	65
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.	61
<u>Clerical</u>	Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.	55
Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.	43
Production and Processing	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.	40
<u>Mechanical</u>	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.	28
<u>Physics</u>	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and subatomic structures and processes.	27

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Typical Work Abilities Required**

This section shows the results of a national survey listing the most common work abilities required by Electronic Drafters in order of importance. Click on a link in the Work Ability column to view more detailed information.

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Work Ability	Work Ability Description	•

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Near Vision	The ability to see details at close range (within a few feet of the observer).	72
Written Comprehension	The ability to read and understand information and ideas presented in writing.	72
Oral Comprehension	The ability to listen to and understand information and ideas presented through spoken words and sentences.	69
Oral Expression	The ability to communicate information and ideas in speaking so others will understand.	69
Written Expression	The ability to communicate information and ideas in writing so others will understand.	63
<u>Deductive</u> <u>Reasoning</u>	The ability to apply general rules to specific problems to produce answers that make sense.	53
Speech Clarity	The ability to speak clearly so others can understand you.	53
Speech Recognition	The ability to identify and understand the speech of another person.	53
<u>Visualization</u>	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.	53
Arm-Hand Steadiness	The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.	50
<u>Category</u> <u>Flexibility</u>	The ability to generate or use different sets of rules for combining or grouping things in different ways.	50
Finger Dexterity	The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.	50
Inductive Reasoning	The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).	50
Information Ordering	The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).	50
Problem Sensitivity	The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.	50
Selective Attention	The ability to concentrate on a task over a period of time without being distracted.	50
Flexibility of Closure	The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.	47
<u>Originality</u>	The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.	47
Visual Color Discrimination	The ability to match or detect differences between colors, including shades of color and brightness.	47

Work Ability	Work Ability Description	Rank by Importance (Out of 100)	
Mathematical Reasoning	The ability to choose the right mathematical methods or formulas to solve a problem.	44	
Time Sharing	The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).	41	
Fluency of Ideas	The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).	38	
Far Vision	The ability to see details at a distance.	35	
Perceptual Speed	The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.	35	
Control Precision	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.	31	
Manual Dexterity	The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.	31	
Number Facility	The ability to add, subtract, multiply, or divide quickly and correctly.	31	
Speed of Closure	The ability to quickly make sense of, combine, and organize information into meaningful patterns.	28	
<u>Auditory</u> <u>Attention</u>	The ability to focus on a single source of sound in the presence of other distracting sounds.	25	
Memorization	The ability to remember information such as words, numbers, pictures, and procedures.	25	
Depth Perception	The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.	22	
<u>Hearing</u> <u>Sensitivity</u>	The ability to detect or tell the differences between sounds that vary in pitch and loudness.	22	
Multilimb Coordination	The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.	13	
<u>Wrist-Finger</u> <u>Speed</u>	The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.	13	
Rate Control	The ability to time your movements or the movement of a piece of equipment in anticipation of changes in the speed and/or direction of a moving object or scene.	6	
Reaction Time	The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.	6	

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Response Orientation	The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). It includes the speed with which the correct response is started with the hand, foot, or other body part.	6
Spatial Orientation	The ability to know your location in relation to the environment or to know where other objects are in relation to you.	3
Trunk Strength	The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing.	3

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Typical Work Interests**

This section shows the results of a national survey listing the most common work interests for Electronic Drafters in order of importance.

Work Interest	Work Interest Description	Rank by Importance (Out of 100)
Conventional	Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.	83
Realistic	Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.	72
Investigative	Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.	56
Artistic	Artistic occupations frequently involve working with forms, designs and patterns. They often require self-expression and the work can be done without following a clear set of rules.	50

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

### **Typical Work Styles**

This section shows the most common work styles required by Electronic Drafters in order of importance. Click on a link in the Work Style column to view more detailed information.

Work Style	Work Style Description	Rank by Importance (Out of 100)
WOIR Style	Work Style Description	of 100)

Work Style	Work Style Description	Rank by Importance (Out of 100)
Attention to Detail	Job requires being careful about detail and thorough in completing work tasks.	93
<u>Dependability</u>	Job requires being reliable, responsible, and dependable, and fulfilling obligations.	89
<u>Persistence</u>	Job requires persistence in the face of obstacles.	83
<u>Integrity</u>	Job requires being honest and ethical.	79
Adaptability/Flexibility	Job requires being open to change (positive or negative) and to considerable variety in the workplace.	78
Stress Tolerance	Job requires accepting criticism and dealing calmly and effectively with high stress situations.	78
<u>Independence</u>	Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.	78
Achievement/Effort	Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.	77
Cooperation	Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.	77
<u>Initiative</u>	Job requires a willingness to take on responsibilities and challenges.	76
Analytical Thinking	Job requires analyzing information and using logic to address work-related issues and problems.	74
<u>Innovation</u>	Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.	72
Self Control	Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.	69
Concern for Others	Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.	60
<u>Leadership</u>	Job requires a willingness to lead, take charge, and offer opinions and direction.	53
Social Orientation	Job requires preferring to work with others rather than alone, and being personally connected with others on the job.	51

Source: This information is based on O\*NET™ data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Related Occupations**

This section shows a list of occupations related to Electronic Drafters. Click an occupation title to see more information about that occupation.

Rank	Related Occupations	Duties	*Related By
1	Aerospace Engineering and Operations Technicians	Operate, install, calibrate, and maintain integrated computer/communications systems, consoles, simulators, and other data acquisition, test, and measurement instruments and equipment, which are used to launch, track, position, and evaluate air and space vehicles. May record and interpret test data.	SOC4
2	Automotive Engineering Technicians	Assist engineers in determining the practicality of proposed product design changes and plan and carry out tests on experimental test devices or equipment for performance, durability, or efficiency.	SOC4
3	<u>Drafters, All Other</u>	All drafters not listed separately.	SOC4
4	Electrical and Electronic Engineering Technicians	Apply electrical and electronic theory and related knowledge, usually under the direction of engineering staff, to design, build, repair, calibrate, and modify electrical components, circuitry, controls, and machinery for subsequent evaluation and use by engineering staff in making engineering design decisions.	SOC4
5	Electrical and Electronics Drafters	Prepare wiring diagrams, circuit board assembly diagrams, and layout drawings used for the manufacture, installation, or repair of electrical equipment.	SOC4
6	Electrical Engineering Technicians	Test or modify developmental or operational electrical machinery or electrical control equipment and circuitry in industrial or commercial plants or laboratories. Usually work under direction of engineers or technologists.	SOC4
7	Electrical Engineering Technologists	Assist electrical engineers in such activities as process control, electrical power distribution, or instrumentation design. May prepare layouts of electrical transmission or distribution systems, supervise the flow of work, estimate project costs, or participate in research studies.	SOC4
8	Electromechanical Engineering Technologists	Assist electromechanical engineers in such activities as computer-based process control, instrumentation, or machine design. May prepare layouts of machinery or equipment, plan the flow of work, conduct statistical studies, or analyze production costs.	SOC4
9	Electro-Mechanical Technicians •	Operate, test, maintain, or calibrate unmanned, automated, servo-mechanical, or electromechanical equipment. May operate unmanned submarines, aircraft, or other equipment at worksites, such as oil rigs, deep ocean exploration, or hazardous waste removal. May assist engineers in testing and designing robotics equipment.	SOC4
10	Electronics Engineering Technologists	Assist electronics engineers in such activities as electronics systems and instrumentation design or digital signal processing.	SOC4
11	Engineering Technicians, Except Drafters, All Other	All engineering technicians, except drafters, not listed separately.	SOC4

Rank	Related Occupations	Duties	*Related By
12	12 Fuel Cell Install, operate, or maintain integrated fuel cell systems in transportation, stationary, or portable applications.		SOC4
13	Apply engineering theory and principles to problems of industrial layout or manufacturing production, usually under the direction of engineering staff. May perform time and motion studies on worker operations in a variety of industries for purposes such as establishing standard production rates or improving efficiency.		SOC4
14	Industrial Engineering Technologists	Assist industrial engineers in such activities as quality control, inventory control, or material flow methods. May conduct statistical studies or analyze production costs.	SOC4
15	Manufacturing Engineering Technologists	Develop tools, implement designs, or integrate machinery, equipment, or computer technologies to ensure effective manufacturing processes.	SOC4
16	Manufacturing Production Technicians	Set up, test, and adjust manufacturing machinery or equipment, using any combination of electrical, electronic, mechanical, hydraulic, pneumatic, or computer technologies.	SOC4
17	Mechanical Engineering Technicians	Apply theory and principles of mechanical engineering to modify, develop, test, or calibrate machinery and equipment under direction of engineering staff or physical scientists.	SOC4
18	Mechanical Engineering Technologists	Assist mechanical engineers in such activities as generation, transmission, or use of mechanical or fluid energy. Prepare layouts of machinery or equipment or plan the flow of work. May conduct statistical studies or analyze production costs.	SOC4
19	Nanotechnology Engineering Technicians	Operate commercial-scale production equipment to produce, test, or modify materials, devices, or systems of molecular or macromolecular composition. Work under the supervision of engineering staff.	SOC4
20	Nanotechnology Engineering Technologists	Implement production processes for nanoscale designs to produce or modify materials, devices, or systems of unique molecular or macromolecular composition.  Operate advanced microscopy equipment to manipulate nanoscale objects. Work under the supervision of nanoengineering staff.	SOC4
21	Non-Destructive Testing Specialists	Test the safety of structures, vehicles, or vessels using x-ray, ultrasound, fiber optic or related equipment.	SOC4
22	Photonics Technicians ≠	Build, install, test, or maintain optical or fiber optic equipment, such as lasers, lenses, or mirrors, using spectrometers, interferometers, or related equipment.	SOC4
23	Robotics Technicians ►	Build, install, test, or maintain robotic equipment or related automated production systems.	SOC4
24	Architectural and Civil Drafters	Prepare detailed drawings of architectural and structural features of buildings or drawings and topographical relief maps used in civil engineering projects, such as highways, bridges, and public works. Use knowledge of building materials, engineering practices, and mathematics to complete drawings.	SOC4

Rank	Related Occupations	Duties	*Related By
25	Apply theory and principles of environmental engineering to modify, test, and operate equipment and devices used in the prevention, control, and remediation of environmental problems, including waste treatment and site remediation, under the direction of engineering staff or scientist. May assist in the development of environmental remediation devices.		SOC4
26	Surveying and Mapping Technicians	Perform surveying and mapping duties, usually under the direction of an engineer, surveyor, cartographer, or photogrammetrist to obtain data used for construction, mapmaking, boundary location, mining, or other purposes. May calculate mapmaking information and create maps from source data, such as surveying notes, aerial photography, satellite data, or other maps to show topographical features, political boundaries, and other features. May verify accuracy and completeness of maps.	SOC4
27	Adjust and operate surveying instruments, such as the theodolite and electronic distance-measuring equipment, and compile notes, make sketches and enter data into computers.		SOC4
28	Electrical Drafters	Develop specifications and instructions for installation of voltage transformers, overhead or underground cables, and related electrical equipment used to conduct electrical energy from transmission lines or high-voltage distribution lines to consumers.	O*NET
29	Electronics Engineering Technicians	Lay out, build, test, troubleshoot, repair, and modify developmental and production electronic components, parts, equipment, and systems, such as computer equipment, missile control instrumentation, electron tubes, test equipment, and machine tool numerical controls, applying principles and theories of electronics, electrical circuitry, engineering mathematics, electronic and electrical testing, and physics. Usually work under direction of engineering staff.	O*NET
30	Fabric and Apparel Patternmakers	Draw and construct sets of precision master fabric patterns or layouts. May also mark and cut fabrics and apparel.	O*NET
31	<u>Mechanical</u> <u>Drafters</u>	Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.	O*NET
32	<u>Precious Metal</u> <u>Workers</u>	Cast, anneal, solder, hammer, or shape gold, silver, pewter or other metals to form jewelry or other metal items such as goblets or candlesticks.	O*NET
33	Architectural Drafters ≠	Prepare detailed drawings of architectural designs and plans for buildings and structures according to specifications provided by architect.	O*NET

Rank	Related Occupations	Duties	*Related By
34	Audio and Video Equipment Technicians	Set up, or set up and operate audio and video equipment including microphones, sound speakers, video screens, projectors, video monitors, recording equipment, connecting wires and cables, sound and mixing boards, and related electronic equipment for concerts, sports events, meetings and conventions, presentations, and news conferences. May also set up and operate associated spotlights and other custom lighting systems.	
35	Cartographers and Photogrammetrists	Collect, analyze, and interpret geographic information provided by geodetic surveys, aerial photographs, and satellite data. Research, study, and prepare maps and other spatial data in digital or graphic form for legal, social, political, educational, and design purposes. May work with Geographic Information Systems (GIS). May design and evaluate algorithms, data structures, and user interfaces for GIS and mapping systems.	O*NET
36	Civil Drafters  Prepare drawings and topographical and relief maps used in civil engineering projects, such as highways, bridges, pipelines, flood control projects, and water and sewerage control systems.		O*NET
37	Apply theory and principles of civil engineering in  Civil Engineering planning, designing, and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.		O*NET
38	Commercial and Industrial Designers	talent with research on product use, marketing, and	
39	Computer Network Architects	Design and implement computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. Perform network modeling, analysis, and planning. May also design network and computer security measures. May research and recommend network and data communications hardware and software.	O*NET
40	<u>Computer</u> <u>Programmers</u>	Create, modify, and test the code, forms, and script that allow computer applications to run. Work from specifications drawn up by software developers or other individuals. May assist software developers by analyzing user needs and designing software solutions. May develop and write computer programs to store, locate, and retrieve specific documents, data, and information.	O*NET
41	Film and Video Editors	Edit moving images on film, video, or other media. May edit or synchronize soundtracks with images.	O*NET
42	<u>Geophysical Data</u> <u>Technicians</u> ◆ ≠	Measure, record, or evaluate geological data, using sonic, electronic, electrical, seismic, or gravity-measuring instruments to prospect for oil or gas. May collect or evaluate core samples or cuttings.	O*NET
43	<u>Mapping</u> <u>Technicians</u>	Calculate mapmaking information from field notes, and draw and verify accuracy of topographical maps.	O*NET

Rank	Related Occupations	Duties	*Related By
44	Medical Transcriptionists	Transcribe medical reports recorded by physicians and other healthcare practitioners using various electronic devices, covering office visits, emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries. Transcribe dictated reports and translate abbreviations into fully understandable form. Edit as necessary and return reports in either printed or electronic form for review and signature, or correction.	O*NET
45	Prepress Technicians and Workers	Format and proof text and images submitted by designers and clients into finished pages that can be printed. Includes digital and photo typesetting. May produce printing plates.	O*NET
46	<u>Technical Writers</u> ◆	Write technical materials, such as equipment manuals, appendices, or operating and maintenance instructions. May assist in layout work.	O*NET

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Source: \*\*Related By: O\*NET™ - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

#### **Career Ladder**

This section shows the top 10 occupations and the corresponding individuals in the workforce system who were previously Electronic Drafters and have changed their occupation over the last 5 years.

Occupation Title	Number of Individuals that Moved	Percentage of Individuals that Moved
Electrical Drafters	10	22.73%
<u>Drafters, All Other</u>	7	15.91%
Mechanical Drafters	5	11.36%
<u>Civil Drafters</u>	4	9.09%
Architectural Drafters •	4	9.09%
Commercial and Industrial Designers	4	9.09%
<u>Designers, All Other</u>	4	9.09%
Security Guards	2	4.55%
Hotel, Motel, and Resort Desk Clerks	2	4.55%
Maintenance and Repair Workers, General • •	2	4.55%

BRIGHT OUTLOOK NATIONALLY PREEN OCCUPATIONS

Source: Individuals with active résumés in the workforce system.

×	
	View more occupational videos on CareerOneStop