LOUISIANA WORKFORCE COMMISSION
The Department of Labor

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Mapping Technicians

Louisiana

Summary of Job Duties

Mapping Technicians Video - Calculate mapmaking information from field notes, and draw and verify accuracy of topographical maps.

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

Mapping Technicians Surveying technicians operate surveying instruments, such as electronic distance-measuring equipment.

Surveying and mapping technicians collect data and make maps of the Earth's surface. Surveying technicians visit sites to take measurements of the land. Mapping technicians use geographic data to create maps. They both assist surveyors, and cartographers and photogrammetrists.

Duties

Surveying technicians typically do the following:

• Visit sites to record survey measurements and other descriptive data
• Operate surveying instruments, such as electronic distance-measuring equipment (robotic total stations), to collect data on a location
• Set out stakes and marks to conduct a survey
• Search for previous survey points, such as old stone markers
• Enter the data from surveying instruments into computers, either in the field or in an office

Surveying technicians help surveyors in the field on teams known as survey parties. A typical survey party has a party chief and one or more surveying technicians. The party chief, either a surveyor or a senior surveying technician, leads day-to-day work activities. After data is collected by the survey party, surveying technicians help process the data by entering the data into computers.

Mapping technicians typically do the following:

• Select needed information from databases to create maps
• Edit and process images that have been collected in the field
• Produce maps showing boundaries, water locations, elevation, and other features of the terrain
• Update maps to ensure accuracy
• Assist photogrammetrists by laying out aerial photographs in sequence to identify areas not captured by aerial photography

Mapping technicians help cartographers and photogrammetrists produce and update maps. They do this work on computers, combining data from different sources. Mapping technicians may use drones to take photos and collect other information required to complete maps or surveys.

Geographic Information System (GIS) technicians use GIS technology to assemble, integrate, and display data about a particular location in a digital format. GIS technicians also maintain and update databases for GIS devices.

Source: U.S. Department of Labor Bureau of Labor Statistics

Job Zone

The section below shows the job zone information for Mapping Technicians. 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 Mapping Technicians and for the related occupational group of Architecture and Engineering Occupations on November 23, 2020 (Jobs De-duplication Level 2).

Occupation	Job Openings
Mapping Technicians	0
Architecture and Engineering Occupations	726

Source: Online advertised jobs data

Monthly Job Count

There is no data available for Mapping Technicians in Louisiana.

Jobs Area Distribution

This section shows the distribution of number of job openings advertised online for Mapping Technicians in Louisiana by parishes on November 23, 2020 (Jobs De-duplication Level 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 Mapping Technicians on November 23, 2020 (Jobs De-duplication Level 2).

Rank	Occupation	Median Wage	Job Openings	*Related By
1	Computer User Support Specialists	N/A	88	O*NET
2	Electronics Engineering Technicians	$57,589	19	SOC4
3	Electrical Engineering Technicians	$57,589	17	SOC4
4	Architectural Drafters	$50,965	13	O*NET
5	Surveying Technicians	$37,697	12	O*NET
6	Industrial Engineering Technicians	$83,502	10	SOC4
7	Drafters, All Other	$53,560	8	SOC4
8	Biological Technicians	$44,282	8	O*NET
9	Mechanical Engineering Technicians	$75,598	5	SOC4
10	Computer Operators	N/A	5	O*NET
11	Electro-Mechanical Technicians	$65,257	4	SOC4
12	Electrical Drafters	$64,801	3	O*NET
13	Mechanical Drafters	$58,355	3	O*NET
14	Environmental Engineering Technicians	$44,182	3	SOC4
15	Non-Destructive Testing Specialists	N/A	3	SOC4

Rank	Occupation	Median Wage	Job Openings	*Related By
16	Manufacturing Production Technicians	N/A	3	SOC4
17	Electronic Drafters	$64,801	2	O*NET
18	Civil Engineering Technicians	$53,863	2	O*NET
19	Engineering Technicians, Except Drafters, All Other	N/A	2	SOC4
20	Geophysical Data Technicians	N/A	2	O*NET
21	Civil Drafters	$50,965	1	O*NET
22	Robotics Technicians	$65,257	1	SOC4
23	Jewelers	$33,916	1	O*NET
24	Photographic Process Workers and Processing Machine Operators	$29,898	1	O*NET

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Job Source: Online advertised jobs data
*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Candidates Available

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

Occupation	Candidates
Mapping Technicians	4
Architecture and Engineering Occupations	3,460

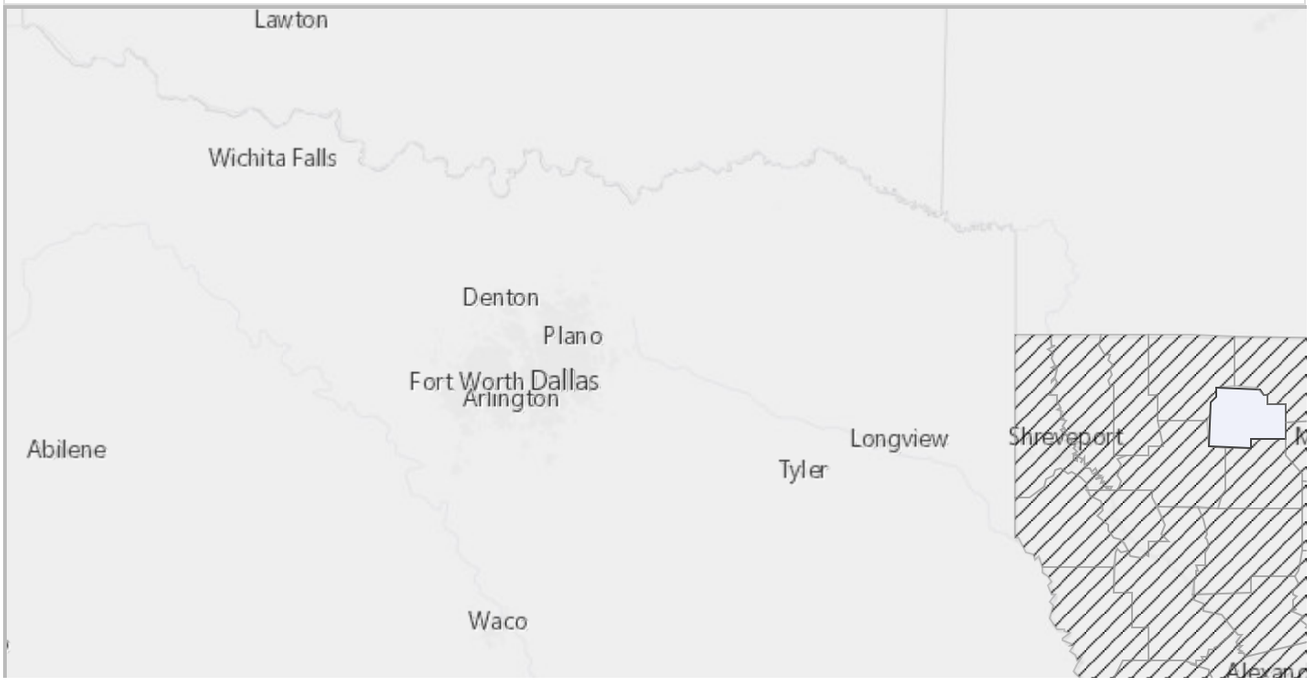
Source: Individuals with active résumés in the workforce system.

Candidate Area Distribution

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

Rank	Area Name	Median Wage	Candidates
1	Lafayette Parish	$37,697 state level wages	3
2	Acadia Parish	$37,697 state level wages	2
3	Allen Parish	$37,697 state level wages	2
4	Avoyelles Parish	$37,697 state level wages	2

Rank	Area Name	Median Wage	Candidates
5	Cameron Parish	$37,697 state level wages	2
6	Evangeline Parish	$37,697 state level wages	2
7	Iberia Parish	$37,697 state level wages	2
8	Iberville Parish	$37,697 state level wages	2
9	Jefferson Davis Parish	$37,697 state level wages	2
10	Lincoln Parish	$37,697 state level wages	2



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 Mapping Technicians on November 23, 2020.

Rank	Occupation	Median Wage	Candidates	*Related By

Rank	Occupation	Median Wage	Candidates	*Related By
1	Computer User Support Specialists	N/A	552	O*NET
2	Manufacturing Production Technicians	N/A	380	SOC4
3	Computer Operators	N/A	180	O*NET
4	Electronics Engineering Technicians	$57,589	172	SOC4
5	Drafters, All Other	$53,560	169	SOC4
6	Camera Operators, Television, Video, and Motion Picture	$34,614	153	O*NET
7	Non-Destructive Testing Specialists	N/A	133	SOC4
8	Mechanical Drafters	$58,355	130	O*NET
9	Industrial Engineering Technicians	$83,502	111	SOC4
10	Architectural Drafters	$50,965	102	O*NET
11	Electrical Engineering Technicians	$57,589	96	SOC4
12	Surveying Technicians	$37,697	81	O*NET
13	Aerospace Engineering and Operations Technicians	N/A	76	SOC4
14	Civil Drafters	$50,965	67	O*NET
15	Biological Technicians	$44,282	65	O*NET
16	Civil Engineering Technicians	$53,863	62	O*NET
17	Engineering Technicians, Except Drafters, All Other	N/A	56	SOC4
18	Electrical Drafters	$64,801	55	O*NET
19	Medical Transcriptionists	$34,158	53	O*NET
20	Electro-Mechanical Technicians	$65,257	52	SOC4
21	Mechanical Engineering Technicians	$75,598	51	SOC4
22	Industrial Engineering Technologists	N/A	47	SOC4
23	Film and Video Editors	N/A	46	O*NET
24	Environmental Engineering Technicians	$44,182	44	SOC4
25	Automotive Engineering Technicians	$75,598	42	SOC4
26	Photographic Process Workers and Processing Machine Operators	$29,898	35	O*NET
27	Prepress Technicians and Workers	$27,814	34	O*NET
28	Jewelers	$33,916	25	O*NET
29	Electronic Drafters	$64,801	23	O*NET
30	Robotics Technicians	$65,257	19	SOC4
31	Electronics Engineering Technologists	N/A	19	SOC4
32	Electrical Engineering Technologists	N/A	17	SOC4
33	Air Traffic Controllers	$81,802	17	O*NET
34	Geographic Information Systems Technicians	N/A	16	O*NET
35	Cartographers and Photogrammetrists	$55,539	12	O*NET
36	Fabric and Apparel Patternmakers	N/A	12	O*NET

Rank	Occupation	Median Wage	Candidates	*Related By
37	Mechanical Engineering Technologists	N/A	11	SOC4
38	Geophysical Data Technicians	N/A	9	O*NET
39	Radio Operators	N/A	9	O*NET
40	Camera and Photographic Equipment Repairers	$39,384	7	O*NET
41	Geodetic Surveyors	$60,435	6	O*NET
42	Electromechanical Engineering Technologists	N/A	6	SOC4
43	Fuel Cell Technicians	N/A	5	SOC4
44	Statistical Assistants	$53,311	5	O*NET
45	Manufacturing Engineering Technologists	N/A	4	SOC4
46	Mapping Technicians	$37,697	4	N/A
47	Desktop Publishers	$24,193	3	O*NET
48	Electrical and Electronic Engineering Technicians	$57,589	2	SOC4
49	Photonics Technicians	N/A	2	SOC4
50	Electrical and Electronics Drafters	$64,801	1	SOC4
51	Nanotechnology Engineering Technicians	N/A	1	SOC4
52	Gem and Diamond Workers	$33,916	1	O*NET

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Candidate Source: Individuals with active résumés in the workforce system.
*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification 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 Mapping Technicians and for the related occupational group of Architecture and Engineering Occupations on November 23, 2020 (Jobs De-duplication Level 2).

Occupation	Job Openings	Candidates	Candidates per Job
Mapping Technicians	0	4	N/A
Architecture and Engineering Occupations	726	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 Mapping Technicians in Louisiana by parishes on November 23, 2020 (Jobs De-duplication Level 2).

Rank	Area Name	Median Wage	Job Openings	Candidates	Candidates per Job
1	Acadia Parish	$37,697 state level wages	0	2	N/A
2	Allen Parish	$37,697 state level wages	0	2	N/A
3	Avoyelles Parish	$37,697 state level wages	0	2	N/A
4	Cameron Parish	$37,697 state level wages	0	2	N/A
5	Evangeline Parish	$37,697 state level wages	0	2	N/A
6	Iberia Parish	$37,697 state level wages	0	2	N/A
7	Iberville Parish	$37,697 state level wages	0	2	N/A
8	Jefferson Davis Parish	$37,697 state level wages	0	2	N/A
9	Lafayette Parish	$37,697 state level wages	0	3	N/A
10	Lincoln Parish	$37,697 state level wages	0	2	N/A

There is no candidates per job data available for Mapping Technicians in Louisiana.

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

Mapping Technicians Employment of surveying and mapping technicians is projected to grow 11 percent from 2016 to 2026, faster than the average for all occupations. Increased demand for mapping technology is expected to require additional technicians to gather and prepare the data.

Job Prospects

Overall prospects for surveying and mapping technicians should be very good due to job growth. Some additional job openings will result from the need to replace workers who leave the occupation.

Demand for surveying services is closely tied to construction activity, and job opportunities will vary by geographic region, often depending on local economic conditions. When real estate sales and construction activity slow down, surveying technicians may face greater competition for jobs.

However, because surveying technicians can work on many different types of projects, they may have steadier work than others when construction slows.

Source: U.S. Department of Labor Bureau of Labor Statistics

Employers by Number of Job Openings

There is no data available for Mapping Technicians in Louisiana.

Advertised Job Skills

There is no data available for Mapping Technicians in Louisiana.

Advertised Tools and Technology

There is no data available for Mapping Technicians in Louisiana.

Typical Job Skills

This section shows the job skills that are related to Mapping Technicians.

Rank	Typical Job Skills	Typical Skill Category
1	Evaluate designs or specifications to ensure quality	Mental Processes
2	Develop software or computer applications	Mental Processes
3	Monitor processes for compliance with standards	Information Input
4	Create maps	Mental Processes
5	Gather physical survey data	Information Input
6	Create graphical representations of structures or landscapes	Mental Processes
7	Explain project details to the general public	Interacting With Others
8	Calculate geographic positions from survey data	Information Input
9	Train personnel on proper operational procedures	Interacting With Others
10	Explain engineering drawings, specifications, or other technical information	Interacting With Others
11	Document technical design details	Work Output
12	Supervise engineering or other technical personnel	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 Mapping Technicians. Click on a link in the Personal Skills column to view more detailed information.

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Reading Comprehension	Understanding written sentences and paragraphs in work related documents.	69

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Mathematics	Using mathematics to solve problems.	66
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.	60
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.	60
Speaking	Talking to others to convey information effectively.	56
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.	53
Writing	Communicating effectively in writing as appropriate for the needs of the audience.	53
Complex Problem Solving	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.	53
Coordination	Adjusting actions in relation to others' actions.	50
Instructing	Teaching others how to do something.	50
Learning Strategies	Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.	50
Monitoring	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.	50
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.	50
Time Management	Managing one's own time and the time of others.	50
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.	47
Management of Personnel Resources	Motivating, developing, and directing people as they work, identifying the best people for the job.	44
Social Perceptiveness	Being aware of others' reactions and understanding why they react as they do.	44
Service Orientation	Actively looking for ways to help people.	41
Operations Analysis	Analyzing needs and product requirements to create a design.	41
Systems Analysis	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.	41
Operation Monitoring	Watching gauges, dials, or other indicators to make sure a machine is working properly.	41
Programming	Writing computer programs for various purposes.	38

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Systems Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	38
Persuasion	Persuading others to change their minds or behavior.	38
Negotiation	Bringing others together and trying to reconcile differences.	31
Technology Design	Generating or adapting equipment and technology to serve user needs.	25
Science	Using scientific rules and methods to solve problems.	25
Operation and Control	Controlling operations of equipment or systems.	25
Management of Financial Resources	Determining how money will be spent to get the work done, and accounting for these expenditures.	25
Management of Material Resources	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.	25
Troubleshooting	Determining causes of operating errors and deciding what to do about it.	22
Equipment Selection	Determining the kind of tools and equipment needed to do a job.	3
Installation	Installing equipment, machines, wiring, or programs to meet specifications.	0
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

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

Mapping Technicians Mapping Technicians usually require at least a High school diploma or equivalent. 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 Mapping Technicians.

Rank	Required Level of Education	Percentage of Respondents
1	Bachelor's Degree	48.22%
2	Some College Courses	14.35%

Rank	Required Level of Education	Percentage of Respondents
3	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)	13.15%
4	Associate's Degree (or other 2-year degree)	10.48%
5	High School Diploma - or the equivalent (for example, GED)	8.64%
6	Master's Degree	5.16%

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 Mapping Technicians.

Rank	On The Job Training	Percentage of Respondents
1	Over 1 month, up to and including 3 months	42.58%
2	Anything beyond short demonstration, up to and including 1 month	19.65%
3	Over 2 years, up to and including 4 years	12.05%
4	Over 6 months, up to and including 1 year	10.11%
5	None or short demonstration	8.72%
6	Over 1 year, up to and including 2 years	6.02%
7	Over 3 months, up to and including 6 months	0.86%

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 in-plant training for Mapping Technicians.

Rank	On-Site or In-Plant Training	Percentage of Respondents
1	Over 1 month, up to and including 3 months	30.85%
2	Up to and including 1 month	25.18%
3	None	19.01%
4	Over 6 months, up to and including 1 year	9.35%
5	Over 2 years, up to and including 4 years	8.72%
6	Over 1 year, up to and including 2 years	4.19%
7	Over 3 months, up to and including 6 months	2.69%

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 Mapping Technicians) 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 2).

Rank	Education Level	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
1	No Minimum Education Requirement	35	4.82%	0	N/A
2	Less than High School	0	N/A	90	2.60%
3	High School Diploma or Equivalent	38	5.23%	728	21.04%
4	1 Year of College or a Technical or Vocational School	1	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	3	0.41%	310	8.96%
8	Associate's Degree	16	2.20%	555	16.04%
9	Bachelor's Degree	131	18.04%	905	26.16%
10	Master's Degree	3	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	499	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 Mapping Technicians in Louisiana.

Provider Name	Program Name	Location	Tuition	Length	WIOA Eligible
South Louisiana Community College	Civil Surveying & Mapping Technology Employment	Lafayette, LA	$8,478	4 Semesters	✔

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

Advertised Job Certifications

There is no data available for Mapping Technicians in Louisiana.

Training Program Completers

There is no data available for Mapping Technicians in Louisiana.

National Education, Training, Licensing and Qualifications

Mapping Technicians Education

Surveying technicians generally need a high school diploma, but some have postsecondary training in survey technology. Postsecondary training is more common among mapping technicians where an associate's degree or bachelor's degree in a relevant field, such as geomatics, is beneficial.

High school students interested in working as a surveying or mapping technician should take courses in algebra, geometry, trigonometry, drafting, mechanical drawing, and computer science. Knowledge of these subjects may help in finding a job and in advancing.

Training

Surveying technicians learn their job duties under the supervision of a surveyor or a surveying party chief. Initially, surveying technicians handle simple tasks, such as placing markers on land and entering data into computers. With experience, they help decide where and how to measure the land.

Mapping technicians receive on-the-job training under the supervision of a lead mapper. During training, technicians learn how maps are created and stored in databases.

Licenses, Certifications, and Registrations

The growing need to make sure that data are useful to other professionals has caused certification to become more common. The American Society for Photogrammetry and Remote Sensing (ASPRS) offers certification for photogrammetry, remote-sensing, and Geographic Information/Land Information Systems (GIS/LIS). The National Society of Professional Surveyors offers the Certified Survey Technician credential, and the GIS Certification Institute offers a GIS Professional certification.

Advancement

Depending on state licensing requirements, surveying technicians with many years of experience and formal training in surveying may be able to become licensed surveyors.

Important Qualities

Decisionmaking skills. Surveying technicians must be able to exercise some independent judgment in the field because they may not always be able to communicate with team members.

Detail oriented. Surveying and mapping technicians must be precise and accurate in their work. Their results are often entered into legal records.

Listening skills. Surveying technicians work outdoors and must communicate with party chiefs and other team members across distances. Following spoken instructions from the party chief is crucial for saving time and preventing errors.

Physical stamina. Surveying technicians usually work outdoors, often in rugged terrain. Physical fitness is necessary to carry equipment and to stand most of the day.

Problem-solving skills. Surveying and mapping technicians must be able to identify and fix problems with their equipment. They must also note potential problems with the day's work plan.

Source: U.S. Department of Labor Bureau of Labor Statistics

Typical Work Experience Requirements

Mapping Technicians 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 Mapping Technicians.

Rank	Related Work Experience	Percentage of Respondents
1	None	22.12%
2	Over 3 months, up to and including 6 months	18.98%
3	Over 2 years, up to and including 4 years	14.53%
4	Over 1 year, up to and including 2 years	10.29%
5	Over 6 years, up to and including 8 years	9.39%
6	Over 4 years, up to and including 6 years	8.72%
7	Over 6 months, up to and including 1 year	8.18%
8	Over 1 month, up to and including 3 months	7.78%

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 Mapping Technicians) 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 2).

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 Mapping Technicians. 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 Surveying and Mapping Technicians (no data available for Mapping Technicians) in 2019.

Rate Type / Statistical Type	Entry level	Median	Experienced
Annual wage or salary	$25,809	$37,697	$65,711
Hourly wage	$12.41	$18.12	$31.59

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

There is no data available for Mapping Technicians in Louisiana.

Desired Salary of Available Candidates

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

Rank	Desired Salary	Potential Candidates	Percentage of Potential Candidates
1	Not Specified	1	25.00%
2	$20,000 - $34,999	1	25.00%
3	$65,000 - $79,999	2	50.00%

Source: Individuals with active résumés in the workforce system.

Wage Rates Area Distribution

There is no data available for Surveying and Mapping Technicians (no data available for Mapping Technicians) 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 Mapping Technicians for Louisiana.

Rank	Occupation	Median	*Related By
1	Industrial Engineering Technicians	$83,502	SOC4
2	Air Traffic Controllers	$81,802	O*NET
3	Mechanical Engineering Technicians	$75,598	SOC4
4	Automotive Engineering Technicians	$75,598	SOC4
5	Electro-Mechanical Technicians	$65,257	SOC4
6	Robotics Technicians	$65,257	SOC4
7	Electrical and Electronics Drafters	$64,801	SOC4
8	Electronic Drafters	$64,801	O*NET

Rank	Occupation	Median	*Related By
9	Electrical Drafters	$64,801	O*NET
10	Geodetic Surveyors	$60,435	O*NET
11	Mechanical Drafters	$58,355	O*NET
12	Electrical and Electronic Engineering Technicians	$57,589	SOC4
13	Electronics Engineering Technicians	$57,589	SOC4
14	Electrical Engineering Technicians	$57,589	SOC4
15	Cartographers and Photogrammetrists	$55,539	O*NET
16	Civil Engineering Technicians	$53,863	O*NET
17	Drafters, All Other	$53,560	SOC4
18	Statistical Assistants	$53,311	O*NET
19	Architectural and Civil Drafters	$50,965	SOC4
20	Architectural Drafters	$50,965	O*NET
21	Civil Drafters	$50,965	O*NET
22	Biological Technicians	$44,282	O*NET
23	Environmental Engineering Technicians	$44,182	SOC4
24	Camera and Photographic Equipment Repairers	$39,384	O*NET
25	Surveying and Mapping Technicians	$37,697	SOC4
26	Surveying Technicians	$37,697	O*NET
27	Mapping Technicians	$37,697	N/A
28	Camera Operators, Television, Video, and Motion Picture	$34,614	O*NET
29	Medical Transcriptionists	$34,158	O*NET
30	Jewelers	$33,916	O*NET
31	Gem and Diamond Workers	$33,916	O*NET
32	Photographic Process Workers and Processing Machine Operators	$29,898	O*NET
33	Prepress Technicians and Workers	$27,814	O*NET
34	Desktop Publishers	$24,193	O*NET

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

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.
*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Wage Rates by Industry

There is no data available for Mapping Technicians in Louisiana.

National Earnings Data Summary

Mapping Technicians The median annual wage for surveying and mapping technicians was $42,450 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 $26,030, and the highest 10 percent earned more than $70,280.

In May 2016, the median annual wages for surveying and mapping technicians in the top industries in which they worked were as follows:

Utilities $58,990
Mining, quarrying, and oil and gas extraction 50,410
Local government, excluding education and hospitals 48,600
Architectural, engineering, and related services 38,940

Surveying and mapping technicians typically work regular schedules but may work additional hours during the summer, when weather and light are most suitable for fieldwork. Construction-related work may be limited during times of harsh weather.

Mapping technicians who develop and maintain Geographic Information System (GIS) databases generally work normal business hours.

Source: U.S. Department of Labor Bureau of Labor Statistics

Occupational Employment & Future Employment Outlook

This section shows the long term employment projections for Surveying and Mapping Technicians (no data available for Mapping Technicians) in Louisiana from 2016-2026.

Occupation	2016 Estimated Employment	2026 Projected Employment	Total 2016-2026 Employment Change	2016-2026 Annual Avg. Percent Change
Surveying and Mapping Technicians	1,272	1,446	174	1.29%
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 Surveying and Mapping Technicians (no data available for Mapping Technicians) in Louisiana by regional labor market area.

Rank	Area	2016 Estimated Employment
1	2nd Regional Labor Market Area, Baton Rouge	390
2	4th Regional Labor Market Area, Lafayette	308
3	1st Regional Labor Market Area, New Orleans	176
4	7th Regional Labor Market Area, Shreveport	122
5	3rd Regional Labor Market Area, Houma	107
6	5th Regional Labor Market Area, Lake Charles	78
7	8th Regional Labor Market Area, Monroe	59
8	6th Regional Labor Market Area, Alexandria	26

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 Mapping Technicians.

Rank	Occupation	2016 Estimated Employment	*Related By
1	Computer User Support Specialists	3,524	O*NET
2	Geographic Information Systems Technicians	2,873	O*NET
3	Electrical Engineering Technologists	1,566	SOC4
4	Electromechanical Engineering Technologists	1,566	SOC4
5	Electronics Engineering Technologists	1,566	SOC4
6	Engineering Technicians, Except Drafters, All Other	1,566	SOC4
7	Fuel Cell Technicians	1,566	SOC4
8	Industrial Engineering Technologists	1,566	SOC4
9	Manufacturing Engineering Technologists	1,566	SOC4
10	Manufacturing Production Technicians	1,566	SOC4
11	Mechanical Engineering Technologists	1,566	SOC4
12	Nanotechnology Engineering Technicians	1,566	SOC4
13	Nanotechnology Engineering Technologists	1,566	SOC4
14	Non-Destructive Testing Specialists	1,566	SOC4
15	Photonics Technicians	1,566	SOC4

Rank	Occupation	2016 Estimated Employment	*Related By
16	Civil Engineering Technicians	1,551	O*NET
17	Electrical and Electronic Engineering Technicians	1,471	SOC4
18	Electrical Engineering Technicians	1,471	SOC4
19	Electronics Engineering Technicians	1,471	SOC4
20	Mapping Technicians	1,272	SOC4
21	Surveying and Mapping Technicians	1,272	SOC4
22	Surveying Technicians	1,272	O*NET
23	Drafters, All Other	1,154	SOC4
24	Medical Transcriptionists	1,140	O*NET
25	Architectural and Civil Drafters	1,134	SOC4
26	Architectural Drafters	1,134	O*NET
27	Civil Drafters	1,134	O*NET
28	Mechanical Drafters	978	O*NET
29	Geodetic Surveyors	910	O*NET
30	Gem and Diamond Workers	798	O*NET
31	Jewelers	798	O*NET
32	Geophysical Data Technicians	707	O*NET
33	Camera Operators, Television, Video, and Motion Picture	474	O*NET
34	Automotive Engineering Technicians	444	SOC4
35	Mechanical Engineering Technicians	444	SOC4
36	Computer Operators	439	O*NET
37	Industrial Engineering Technicians	404	SOC4
38	Environmental Engineering Technicians	374	SOC4
39	Desktop Publishers	247	O*NET
40	Prepress Technicians and Workers	241	O*NET
41	Electrical and Electronics Drafters	229	SOC4
42	Electrical Drafters	229	O*NET
43	Electronic Drafters	229	O*NET
44	Film and Video Editors	224	O*NET
45	Photographic Process Workers and Processing Machine Operators	223	O*NET
46	Air Traffic Controllers	189	O*NET
47	Biological Technicians	165	O*NET
48	Statistical Assistants	82	O*NET
49	Radio Operators	49	O*NET
*	Aerospace Engineering and Operations Technicians	Confidential	SOC4
*	Camera and Photographic Equipment Repairers	Confidential	O*NET
*	Cartographers and Photogrammetrists	Confidential	O*NET
*	Electro-Mechanical Technicians	Confidential	SOC4

Rank	Occupation	2016 Estimated Employment	*Related By
*	Robotics Technicians	Confidential	SOC4

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

* Rank is suppressed for confidential data.

Source: Occupational Employment Projections
*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Projected Annual Openings

This section shows the long term projected annual openings for Surveying and Mapping Technicians (no data available for Mapping Technicians) in Louisiana from 2016 to 2026.

Occupation	Total Annual Average Openings	Annual Average Openings Due to Growth	Annual Average Openings Due to Replacement
Surveying and Mapping Technicians	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 Surveying and Mapping Technicians (no data available for Mapping Technicians) 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	2nd Regional Labor Market Area, Baton Rouge	N/A
3	3rd Regional Labor Market Area, Houma	N/A
4	4th Regional Labor Market Area, Lafayette	N/A
5	5th Regional Labor Market Area, Lake Charles	N/A
6	6th Regional Labor Market Area, Alexandria	N/A
7	7th Regional Labor Market Area, Shreveport	N/A
8	8th Regional Labor Market Area, Monroe	N/A

There is no total annual average openings data available for Mapping Technicians 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 Mapping Technicians from 2016 to 2026.

Rank	Occupation	Total Annual Average Openings	*Related By
1	Air Traffic Controllers	N/A	O*NET
2	Architectural and Civil Drafters	N/A	SOC4
3	Architectural Drafters	N/A	O*NET
4	Automotive Engineering Technicians	N/A	SOC4
5	Biological Technicians	N/A	O*NET
6	Camera Operators, Television, Video, and Motion Picture	N/A	O*NET
7	Civil Drafters	N/A	O*NET
8	Civil Engineering Technicians	N/A	O*NET
9	Computer Operators	N/A	O*NET
10	Computer User Support Specialists	N/A	O*NET
11	Desktop Publishers	N/A	O*NET
12	Drafters, All Other	N/A	SOC4
13	Electrical and Electronic Engineering Technicians	N/A	SOC4
14	Electrical and Electronics Drafters	N/A	SOC4
15	Electrical Drafters	N/A	O*NET
16	Electrical Engineering Technicians	N/A	SOC4
17	Electrical Engineering Technologists	N/A	SOC4
18	Electromechanical Engineering Technologists	N/A	SOC4
19	Electronic Drafters	N/A	O*NET
20	Electronics Engineering Technicians	N/A	SOC4
21	Electronics Engineering Technologists	N/A	SOC4
22	Engineering Technicians, Except Drafters, All Other	N/A	SOC4
23	Environmental Engineering Technicians	N/A	SOC4
24	Film and Video Editors	N/A	O*NET
25	Fuel Cell Technicians	N/A	SOC4
26	Gem and Diamond Workers	N/A	O*NET
27	Geodetic Surveyors	N/A	O*NET
28	Geographic Information Systems Technicians	N/A	O*NET
29	Geophysical Data Technicians	N/A	O*NET
30	Industrial Engineering Technicians	N/A	SOC4
31	Industrial Engineering Technologists	N/A	SOC4
32	Jewelers	N/A	O*NET
33	Manufacturing Engineering Technologists	N/A	SOC4
34	Manufacturing Production Technicians	N/A	SOC4

Rank	Occupation	Total Annual Average Openings	*Related By
35	Mapping Technicians	N/A	SOC4
36	Mechanical Drafters	N/A	O*NET
37	Mechanical Engineering Technicians	N/A	SOC4
38	Mechanical Engineering Technologists	N/A	SOC4
39	Medical Transcriptionists	N/A	O*NET
40	Nanotechnology Engineering Technicians	N/A	SOC4
41	Nanotechnology Engineering Technologists	N/A	SOC4
42	Non-Destructive Testing Specialists	N/A	SOC4
43	Photographic Process Workers and Processing Machine Operators	N/A	O*NET
44	Photonics Technicians	N/A	SOC4
45	Prepress Technicians and Workers	N/A	O*NET
46	Radio Operators	N/A	O*NET
47	Statistical Assistants	N/A	O*NET
48	Surveying and Mapping Technicians	N/A	SOC4
49	Surveying Technicians	N/A	O*NET
*	Aerospace Engineering and Operations Technicians	Confidential	SOC4
*	Camera and Photographic Equipment Repairers	Confidential	O*NET
*	Cartographers and Photogrammetrists	Confidential	O*NET
*	Electro-Mechanical Technicians	Confidential	SOC4
*	Robotics Technicians	Confidential	SOC4

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

* Rank is suppressed for confidential data.

Source: Occupational Employment Projections

Industries by Employment

This section shows the industries that employed the highest number of Surveying and Mapping Technicians (no data available for Mapping Technicians) in Louisiana in 2016.

Rank	Industry Title	Estimated Employment	Percent of Total Employment
1	Professional, Scientific, and Technical Services	1,044	82.08%
2	Self-Employed and Unpaid Family Workers, Primary Job	116	9.12%
3	Utilities	29	2.28%
*	Crop Production	Confidential	Confidential
*	Oil and Gas Extraction	Confidential	Confidential
*	Heavy and Civil Engineering Construction	Confidential	Confidential
*	Specialty Trade Contractors	Confidential	Confidential
*	Merchant Wholesalers, Durable Goods	Confidential	Confidential
*	Management of Companies and Enterprises	Confidential	Confidential

Rank	Industry Title	Estimated Employment	Percent of Total Employment
*	Administrative and Support Services	Confidential	Confidential

* 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 Mapping Technicians 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)
Interacting With Computers	Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.	94
Getting Information	Observing, receiving, and otherwise obtaining information from all relevant sources.	80
Documenting/Recording Information	Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.	74
Analyzing Data or Information	Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.	72
Communicating with Supervisors, Peers, or Subordinates	Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.	67
Processing Information	Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.	66
Updating and Using Relevant Knowledge	Keeping up-to-date technically and applying new knowledge to your job.	65
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.	61
Interpreting the Meaning of Information for Others	Translating or explaining what information means and how it can be used.	59
Identifying Objects, Actions, and Events	Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.	58
Making Decisions and Solving Problems	Analyzing information and evaluating results to choose the best solution and solve problems.	57

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
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.	55
Organizing, Planning, and Prioritizing Work	Developing specific goals and plans to prioritize, organize, and accomplish your work.	55
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 e-mail.	48
Training and Teaching Others	Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.	45
Judging the Qualities of Things, Services, or People	Assessing the value, importance, or quality of things or people.	45
Developing Objectives and Strategies	Establishing long-range objectives and specifying the strategies and actions to achieve them.	44
Scheduling Work and Activities	Scheduling events, programs, and activities, as well as the work of others.	44
Thinking Creatively	Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.	44
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.	43
Establishing and Maintaining Interpersonal Relationships	Developing constructive and cooperative working relationships with others, and maintaining them over time.	43
Controlling Machines and Processes	Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).	42
Coordinating the Work and Activities of Others	Getting members of a group to work together to accomplish tasks.	42
Performing Administrative Activities	Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.	41

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Provide Consultation and Advice to Others	Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.	39
Monitor Processes, Materials, or Surroundings	Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.	36
Developing and Building Teams	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
Monitoring and Controlling Resources	Monitoring and controlling resources and overseeing the spending of money.	28
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.	28
Resolving Conflicts and Negotiating with Others	Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.	26
Guiding, Directing, and Motivating Subordinates	Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.	26
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.	26
Inspecting Equipment, Structures, or Material	Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.	25
Handling and Moving Objects	Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.	21
Operating Vehicles, Mechanized Devices, or Equipment	Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.	21
Selling or Influencing Others	Convincing others to buy merchandise/goods or to otherwise change their minds or actions.	21

Tasks

This section shows the most common tasks required by Mapping Technicians 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)
Check all layers of maps to ensure accuracy, identifying and marking errors and making corrections.	Core	82
Design or develop information databases that include geographic or topographic data.	Core	80
Monitor mapping work or the updating of maps to ensure accuracy, inclusion of new or changed information, or compliance with rules and regulations.	Core	79
Produce or update overlay maps to show information boundaries, water locations, or topographic features on various base maps or at different scales.	Core	78
Determine scales, line sizes, or colors to be used for hard copies of computerized maps, using plotters.	Core	77
Identify and compile database information to create requested maps.	Core	76
Analyze aerial photographs to detect and interpret significant military, industrial, resource, or topographical data.	Core	72
Enter Global Positioning System (GPS) data, legal deeds, field notes, or land survey reports into geographic information system (GIS) workstations so that information can be transformed into graphic land descriptions, such as maps or drawings.	Core	71
Research and combine existing property information to describe property boundaries in relation to adjacent properties, taking into account parcel splits, combinations, or land boundary adjustments.	Core	69
Compare topographical features or contour lines with images from aerial photographs, old maps, or other reference materials to verify the accuracy of their identification.	Core	67
Calculate latitudes, longitudes, angles, areas, or other information for mapmaking, using survey field notes or reference tables.	Core	67
Trace contours or topographic details to generate maps that denote specific land or property locations or geographic attributes.	Core	67
Research resources such as survey maps or legal descriptions to verify property lines or to obtain information needed for mapping.	Core	66
Trim, align, and join prints to form photographic mosaics, maintaining scaled distances between reference points.	Core	62
Answer questions and provide information to the public or to staff members regarding assessment maps, surveys, boundaries, easements, property ownership, roads, zoning, or similar matters.	Supplemental	71

Tasks	Task Description	Rank by Importance (Out of 100)
Compute and measure scaled distances between reference points to establish relative positions of adjoining prints and enable the creation of photographic mosaics.	Supplemental	67
Train staff members in duties such as tax mapping, the use of computerized mapping equipment, or the interpretation of source documents.	Supplemental	67
Redraw or correct maps, such as revising parcel maps, to reflect tax code area changes, using information from official records or surveys.	Supplemental	66
Produce presentations of surface or mineral ownership layers by interpreting legal survey plans.	Supplemental	65
Create survey description pages or historical records related to mapping activities or specifications of section plats.	Supplemental	64
Identify, research, and resolve anomalies in legal land descriptions, referring issues to title or survey experts, as appropriate.	Supplemental	64
Lay out and match aerial photographs in sequences in which they were taken and identify any areas missing from photographs.	Supplemental	64
Complete detailed source and method notes describing the location of routine or complex land parcels.	Supplemental	61
Form three-dimensional images of aerial photographs taken from different locations, using mathematical techniques and plotting instruments.	Supplemental	59
Supervise or coordinate activities of workers engaged in plotting data, drafting maps, or producing blueprints, photostats, or photographs.	Supplemental	59

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

Mapping Technicians Surveying technicians visit sites to take measurements of the land.

Surveying and mapping technicians held about 60,200 jobs in 2016. The largest employers of surveying and mapping technicians were as follows:

Architectural, engineering, and related services 56%
Local government, excluding education and hospitals 11
Self-employed workers 9
Utilities 4
Mining, quarrying, and oil and gas extraction 3

Most surveying and mapping technicians work for firms that provide engineering, surveying, and mapping services on a contractual basis. Local governments also employ these workers in highway and planning departments.

Surveying technicians work outside extensively and can be exposed to all types of weather. They often stand for long periods, walk considerable distances, and may have to climb hills with heavy

packs of surveying instruments. Traveling is sometimes part of the job, and surveying technicians may commute long distances, stay away from home overnight, or temporarily relocate near a survey site.

Mapping technicians work primarily on computers in office environments. However, mapping technicians must sometimes conduct research by using resources such as survey maps and legal documents to verify property lines and to obtain information needed for mapping. This task may require traveling to storage sites, such as county courthouses or lawyers' offices, that house these legal documents.

Work Schedules

Surveying and mapping technicians typically work full time but may work additional hours during the summer, when weather and light conditions are most suitable for fieldwork. Construction-related work may be limited during times of harsh weather.

Mapping technicians who develop and maintain Geographic Information System (GIS) databases generally work normal business hours.

Source: U.S. Department of Labor Bureau of Labor Statistics

Typical Work Conditions

This section shows the most common work conditions required by Mapping Technicians 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?	97
Spend Time Sitting	How much does this job require sitting?	86
Importance of Being Exact or Accurate	How important is being very exact or highly accurate in performing this job?	86
Face-to-Face Discussions	How often do you have to have face-to-face discussions with individuals or teams in this job?	83
Freedom to Make Decisions	How much decision making freedom, without supervision, does the job offer?	83
Indoors, Environmentally Controlled	How often does this job require working indoors in environmentally controlled conditions?	81
Telephone	How often do you have telephone conversations in this job?	81
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?	75
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
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?	74

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Spend Time Making Repetitive Motions	How much does this job require making repetitive motions?	70
Work With Work Group or Team	How important is it to work with others in a group or team 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
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?	62
Time Pressure	How often does this job require the worker to meet strict deadlines?	61
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?	60
Physical Proximity	To what extent does this job require the worker to perform job tasks in close physical proximity to other people?	57
Letters and Memos	How often does the job require written letters and memos?	51
Level of Competition	To what extent does this job require the worker to compete or to be aware of competitive pressures?	50
Responsibility for Outcomes and Results	How responsible is the worker for work outcomes and results of other workers?	48
Deal With External Customers	How important is it to work with external customers or the public in this job?	48
Coordinate or Lead Others	How important is it to coordinate or lead others in accomplishing work activities in this job?	47
Degree of Automation	How automated is the job?	42
Consequence of Error	How serious would the result usually be if the worker made a mistake that was not readily correctable?	35
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?	29
In an Enclosed Vehicle or Equipment	How often does this job require working in a closed vehicle or equipment (e.g., car)?	28
Frequency of Conflict Situations	How often are there conflict situations the employee has to face in this job?	26

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Responsible for Others' Health and Safety	How much responsibility is there for the health and safety of others in this job?	24
Outdoors, Exposed to Weather	How often does this job require working outdoors, exposed to all weather conditions?	24
Spend Time Walking and Running	How much does this job require walking and running?	24
Spend Time Standing	How much does this job require standing?	23
Public Speaking	How often do you have to perform public speaking in this job?	21
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?	20
Very Hot or Cold Temperatures	How often does this job require working in very hot (above 90 F degrees) or very cold (below 32 F degrees) temperatures?	19

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)
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.	56
Independence	Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.	56
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.	42
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.	39
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

Work Value	Work Value Description	Rank By Extent (Out of 100)
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.	28

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 Mapping Technicians.

Detailed Tool	Tool Group
Drafting compasses	Compasses
Desktop computers	Desktop computers
Digital cameras	Digital cameras
Drafting kits	Drafting kits or sets
Global positioning system GPS receivers	Global positioning system GPS receiver
Laser printers	Laser printers
Notebook computers	Notebook computers
Personal computers	Personal computers
Pocket personal computers PC	Personal computers
Plotters	Plotter printers
Protractors	Protractors
Engineering scales	Scales
Digitizers	Scanners
Scanners	Scanners
T-squares	T squares
Tablet computers	Tablet computers
Drafting templates	Templates
Triangles	Triangles

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 Mapping Technicians.

Detailed Technology	Technology Group
Digital elevation model DEM software	Analytical or scientific software
ESRI ArcGIS (analytical or scientific feature)	Analytical or scientific software
ESRI ArcGIS Spatial Analyst	Analytical or scientific software
ESRI ArcToolbox	Analytical or scientific software
PCI Geomatics software	Analytical or scientific software

Detailed Technology	Technology Group
Trimble GPS Pathfinder	Analytical or scientific software
ESRI ArcSDE	Application server software
PCI Geomatics eCognition	Categorization or classification software
3D Nature LLC Visual Nature Studio	Computer aided design CAD software
3D Nature LLC World Construction Set	Computer aided design CAD software
Autodesk 3d Studio Viz	Computer aided design CAD software
Autodesk AutoCAD	Computer aided design CAD software
Autodesk AutoCAD Blue Sky	Computer aided design CAD software
Autodesk AutoCAD Civil 3D	Computer aided design CAD software
Autodesk AutoCAD MAP3D	Computer aided design CAD software
Autodesk Land Desktop	Computer aided design CAD software
Bentley MicroStation	Computer aided design CAD software
Carlson SurvCADD	Computer aided design CAD software
Computer aided design CAD software	Computer aided design CAD software
ESRI ArcView 3D Analyst	Computer aided design CAD software
MicroSurveyCAD	Computer aided design CAD software
Database software	Data base user interface and query software
ESRI ArcCatalog	Data base user interface and query software
ESRI ArcEditor	Data base user interface and query software
ESRI Personal Geodatabase	Data base user interface and query software
Microsoft Access	Data base user interface and query software
Structured query language SQL	Data base user interface and query software
Trimble TerraSync	Data base user interface and query software
QuarkXpress Passport	Desktop publishing software
Microsoft Visual Basic	Development environment software
Microsoft Visual Basic for Applications VBA	Development environment software
Microsoft Visual Basic Scripting Edition VBScript	Development environment software
Adobe Systems Adobe Freehand	Graphics or photo imaging software
Adobe Systems Adobe Illustrator	Graphics or photo imaging software
Adobe Systems Adobe Photoshop	Graphics or photo imaging software
Bentley GeoPak Bridge	Graphics or photo imaging software
Graphics software	Graphics or photo imaging software
Microsoft Visio	Graphics or photo imaging software
Web browser software	Internet browser software
Bentley Systems InRoads Suite	Map creation software
ESRI ArcGIS software	Map creation software
ESRI ArcIMS	Map creation software
ESRI ArcInfo	Map creation software
ESRI ArcView	Map creation software
ESRI Maplex	Map creation software

Detailed Technology	Technology Group
ESRI MapObjects	Map creation software
Geographic information system GIS software	Map creation software
Hexagon Geospatial Imagine Photogrammetry	Map creation software
Hexagon Intergraph	Map creation software
IMAGINE OrthoBASE	Map creation software
Leica Geosystems ERDAS IMAGINE	Map creation software
MapInfo	Map creation software
Mapping software	Map creation software
RockWare ArcMap	Map creation software
TELEDYNE CARIS	Map creation software
Trimble GPS Pathfinder Office	Map creation software
Tripod Data Systems COGO	Map creation software
Microsoft Office	Office suite software
Microsoft PowerPoint	Presentation software
Microsoft SharePoint	Project management software
Microsoft Excel	Spreadsheet software
Hypertext markup language HTML	Web platform development software
JavaScript	Web platform development software
Adobe Systems Adobe Writer	Word processing software

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 Mapping Technicians in Louisiana.

Typical Knowledge Categories

This section shows the most common knowledge categories required by Mapping Technicians 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)
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.	84
Geography	Knowledge of principles and methods for describing the features of land, sea, and air masses, including their physical characteristics, locations, interrelationships, and distribution of plant, animal, and human life.	75
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.	64

Knowledge Category	Knowledge Category Description	Rank by Importance (Out of 100)
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.	53
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.	51
Clerical	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.	49
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.	48
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.	47
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.	39
Communications and Media	Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.	31
Public Safety and Security	Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.	27
Law and Government	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.	25
History and Archeology	Knowledge of historical events and their causes, indicators, and effects on civilizations and cultures.	24
Physics	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.	21

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 Mapping Technicians 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)
Near Vision	The ability to see details at close range (within a few feet of the observer).	75
Written Comprehension	The ability to read and understand information and ideas presented in writing.	69
Mathematical Reasoning	The ability to choose the right mathematical methods or formulas to solve a problem.	66
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).	63
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.	63
Deductive Reasoning	The ability to apply general rules to specific problems to produce answers that make sense.	60
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.	56
Visual Color Discrimination	The ability to match or detect differences between colors, including shades of color and brightness.	56
Category Flexibility	The ability to generate or use different sets of rules for combining or grouping things in different ways.	53
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.	53
Inductive Reasoning	The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).	53
Oral Comprehension	The ability to listen to and understand information and ideas presented through spoken words and sentences.	53
Oral Expression	The ability to communicate information and ideas in speaking so others will understand.	53
Selective Attention	The ability to concentrate on a task over a period of time without being distracted.	53
Speech Recognition	The ability to identify and understand the speech of another person.	53
Visualization	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.	53
Written Expression	The ability to communicate information and ideas in writing so others will understand.	53
Far Vision	The ability to see details at a distance.	50
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).	50

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Number Facility	The ability to add, subtract, multiply, or divide quickly and correctly.	50
Originality	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.	50
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.	50
Speech Clarity	The ability to speak clearly so others can understand you.	50
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.	47
Speed of Closure	The ability to quickly make sense of, combine, and organize information into meaningful patterns.	47
Control Precision	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.	44
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.	41
Memorization	The ability to remember information such as words, numbers, pictures, and procedures.	41
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.	38
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).	35
Hearing Sensitivity	The ability to detect or tell the differences between sounds that vary in pitch and loudness.	25
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.	25
Reaction Time	The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.	25
Wrist-Finger Speed	The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.	25
Auditory Attention	The ability to focus on a single source of sound in the presence of other distracting sounds.	22

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
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.	22
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.	22
Spatial Orientation	The ability to know your location in relation to the environment or to know where other objects are in relation to you.	19
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.	6

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 Mapping Technicians 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.	95
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.	56
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.	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 Work Styles

This section shows the most common work styles required by Mapping Technicians 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)

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.	91
Dependability	Job requires being reliable, responsible, and dependable, and fulfilling obligations.	80
Cooperation	Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.	77
Independence	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.	77
Analytical Thinking	Job requires analyzing information and using logic to address work-related issues and problems.	76
Achievement/Effort	Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.	68
Integrity	Job requires being honest and ethical.	66
Persistence	Job requires persistence in the face of obstacles.	65
Stress Tolerance	Job requires accepting criticism and dealing calmly and effectively with high stress situations.	63
Adaptability/Flexibility	Job requires being open to change (positive or negative) and to considerable variety in the workplace.	62
Initiative	Job requires a willingness to take on responsibilities and challenges.	59
Innovation	Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.	55
Concern for Others	Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.	54
Leadership	Job requires a willingness to lead, take charge, and offer opinions and direction.	53
Self Control	Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.	52
Social Orientation	Job requires preferring to work with others rather than alone, and being personally connected with others on the job.	44

Related Occupations

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

Rank	Related Occupations	Duties	*Related By
1	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
2	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
3	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
4	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
5	Drafters, All Other	All drafters not listed separately.	SOC4
6	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
7	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
8	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
9	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
10	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

Rank	Related Occupations	Duties	*Related By
11	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
12	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.	SOC4
13	Electronics Engineering Technologists	Assist electronics engineers in such activities as electronics systems and instrumentation design or digital signal processing.	SOC4
14	Engineering Technicians, Except Drafters, All Other	All engineering technicians, except drafters, not listed separately.	SOC4
15	Environmental Engineering Technicians	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
16	Fuel Cell Technicians	Install, operate, or maintain integrated fuel cell systems in transportation, stationary, or portable applications.	SOC4
17	Industrial Engineering Technicians	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
18	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
19	Manufacturing Engineering Technologists	Develop tools, implement designs, or integrate machinery, equipment, or computer technologies to ensure effective manufacturing processes.	SOC4
20	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
21	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

Rank	Related Occupations	Duties	*Related By
22	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
23	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
24	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
25	Non-Destructive Testing Specialists	Test the safety of structures, vehicles, or vessels using x-ray, ultrasound, fiber optic or related equipment.	SOC4
26	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
27	Robotics Technicians	Build, install, test, or maintain robotic equipment or related automated production systems.	SOC4
28	Architectural Drafters	Prepare detailed drawings of architectural designs and plans for buildings and structures according to specifications provided by architect.	O*NET
29	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
30	Civil Engineering Technicians	Apply theory and principles of civil engineering in planning, designing, and overseeing construction and maintenance of structures and facilities under the direction of engineering staff or physical scientists.	O*NET
31	Geodetic Surveyors	Measure large areas of the Earth's surface using satellite observations, global navigation satellite systems (GNSS), light detection and ranging (LIDAR), or related sources.	O*NET
32	Surveying Technicians	Adjust and operate surveying instruments, such as the theodolite and electronic distance-measuring equipment, and compile notes, make sketches and enter data into computers.	O*NET
33	Air Traffic Controllers	Control air traffic on and within vicinity of airport and movement of air traffic between altitude sectors and control centers according to established procedures and policies. Authorize, regulate, and control commercial airline flights according to government or company regulations to expedite and ensure flight safety.	O*NET
34	Biological Technicians	Assist biological and medical scientists in laboratories. Set up, operate, and maintain laboratory instruments and equipment, monitor experiments, make observations, and calculate and record results. May analyze organic substances, such as blood, food, and drugs.	O*NET

Rank	Related Occupations	Duties	*Related By
35	Camera and Photographic Equipment Repairers	Repair and adjust cameras and photographic equipment, including commercial video and motion picture camera equipment.	O*NET
36	Camera Operators, Television, Video, and Motion Picture	Operate television, video, or motion picture camera to record images or scenes for various purposes, such as TV broadcasts, advertising, video production, or motion pictures.	O*NET
37	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
38	Computer Operators	Monitor and control electronic computer and peripheral electronic data processing equipment to process business, scientific, engineering, and other data according to operating instructions. Monitor and respond to operating and error messages. May enter commands at a computer terminal and set controls on computer and peripheral devices.	O*NET
39	Computer User Support Specialists	Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, or via telephone or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.	O*NET
40	Desktop Publishers	Format typescript and graphic elements using computer software to produce publication-ready material.	O*NET
41	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
42	Electronic Drafters	Draw wiring diagrams, circuit board assembly diagrams, schematics, and layout drawings used for manufacture, installation, and repair of electronic equipment.	O*NET
43	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
44	Film and Video Editors	Edit moving images on film, video, or other media. May edit or synchronize soundtracks with images.	O*NET
45	Gem and Diamond Workers	Fabricate, finish, or evaluate the quality of gems and diamonds used in jewelry or industrial tools.	O*NET
46	Geographic Information Systems Technicians	Assist scientists, technologists, or related professionals in building, maintaining, modifying, or using geographic information systems (GIS) databases. May also perform some custom application development or provide user support.	O*NET

Rank	Related Occupations	Duties	*Related By
47	Geophysical Data Technicians	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
48	Jewelers	Fabricate and repair jewelry articles. Make models or molds to create jewelry items.	O*NET
49	Mechanical Drafters	Prepare detailed working diagrams of machinery and mechanical devices, including dimensions, fastening methods, and other engineering information.	O*NET
50	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
51	Photographic Process Workers and Processing Machine Operators	Perform work involved in developing and processing photographic images from film or digital media. May perform precision tasks such as editing photographic negatives and prints.	O*NET
52	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
53	Radio Operators	Receive and transmit communications using radiotelephone equipment in accordance with government regulations. May repair equipment.	O*NET
54	Statistical Assistants	Compile and compute data according to statistical formulas for use in statistical studies. May perform actuarial computations and compile charts and graphs for use by actuaries. Includes actuarial clerks.	O*NET

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Source: **Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Career Ladder

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

Occupation Title	Number of Individuals that Moved	Percentage of Individuals that Moved
Surveying Technicians	6	23.08%
Drafters, All Other	3	11.54%
Inspectors, Testers, Sorters, Samplers, and Weighers	3	11.54%
Managers, All Other	2	7.69%

Occupation Title	Number of Individuals that Moved	Percentage of Individuals that Moved
Computer User Support Specialists	2	7.69%
Mechanical Engineers	2	7.69%
Civil Engineering Technicians	2	7.69%
Mechanical Engineering Technicians	2	7.69%
Solar Photovoltaic Installers	2	7.69%
Maintenance and Repair Workers, General	2	7.69%

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Source: Individuals with active résumés in the workforce system.

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