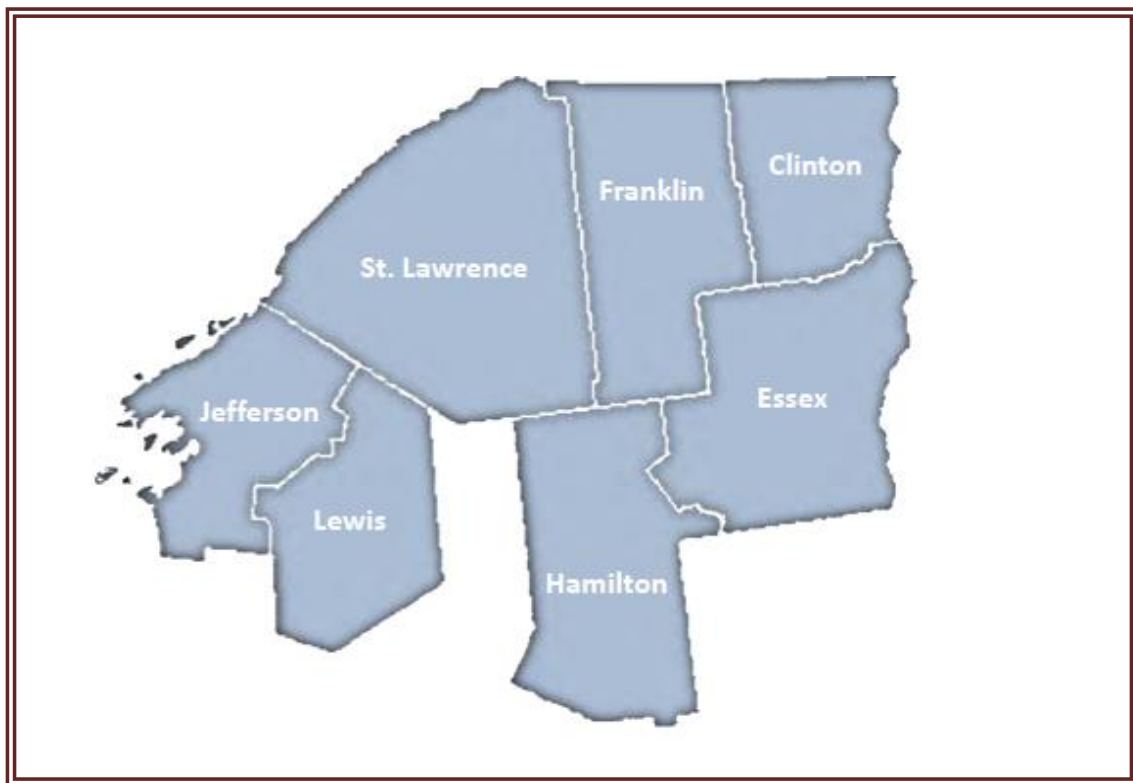# North Country Regional Economic Development Council
2017
Workforce Survey

With

Job Descriptions, Education Requirements

and Local Educational Opportunities

Table of Contents

Executive Summary

Background

The 2017 REDC Guidebook charges the Workforce Workgroup with surveying both industries and educational institutions in our regions to identify the skills gaps as well as the programmatic availability of workforce training opportunities in high schools, community colleges and universities. The North Country Regional Economic Development Workgroup along with representation from the Community College Council have surveyed and collaborated on this project.

Given the short time frame in which to complete this task, the group quickly identified occupations and surveyed businesses within the strategic sectors located in the North Country. These sectors are transportation, manufacturing, agriculture and hospitality. The tasks were divided amongst the members and then complied into the report. This has resulted in two types of instruments that were used to survey. In order to provide a more comprehensive report, more time would be needed and sample sizes would have to be calculated. The results of the survey has provided the insights needed for Workforce professionals and their partners to work on closing the skills gaps that exist in the region.

The employers were surveyed in Phase I of the project and then the training opportunities were complied. The results of the survey are put together so that it is user friendly and can be a tool in mapping viable occupations and training opportunities for both students, current workers and businesses.

The North Country as a whole has a plethora of training and educational opportunities to meet the current and future needs of its employers. However, not all programs are available in all areas of the NCREDC territory. Depending upon interest and career direction, an individual may have to travel or relocate within the region to obtain the desired or necessary training or college degree.

The North Country employment picture may differ from the national or state profiles. The statistics related to the types and number of jobs may differ depending upon the data collected and geographic focus. The types and size of industries, seasonal flux, regional economic conditions and reporting formats may also influence the data.

Observations, Challenges and Strategies

Observations

1. Employers throughout the North Country often require a small number of employees to fill a need within an organization. The small number of employees needed does not support the creation of new training programs. However, this does support the need for apprenticeships, On-the-Job training and online training programs.

2. While the region provides many and varied trainings, not all training opportunities are available within all areas or within a realistic travelling distance for job seekers.

3. Companies are looking for specific training offerings for incumbent workers, either to reinforce present skills or to expand skills and knowledge.
    a. These are generally smaller companies where it is cost prohibitive to have training in-house for a small number of employees. Therefore, companies either forego the training or spend the training budget to address the need.
    b. Companies are often unaware of local training options despite the best efforts of the community colleges, BOCES and other third party trainers.
    c. Employers are looking for targeted training that is non-credited and satisfies a specific need within the company.
    d. Training providers need to create and expand micro-credentials and online degrees.

4. Employers are not familiar with training programs and opportunities in the area.

5. Employers throughout the North Country are looking for and concerned about recruiting and retaining skilled workers. The number may be small at each company (i.e. one maintenance mechanic, instrumentation technician, electrician or machinist/tool maker) but these are critical positions to keep the processes going and to maintain the facility. There are some companies that utilize the NYS Registered Apprenticeship program, while others develop their own programs or recruit from outside of the area.

6. The most common observation from all employers is regarding the need for professional skills (formally known as soft skills) for entry level applicants. The applicant may have the technical skill to do the specific job they are being considered for, but are lacking in skills such as communication, problem solving, teamwork, punctuality or passing a drug test.

7. Employers are projecting a need for middle skill level positions.

Challenges

1. Connecting in-house and external training opportunities has been a challenge. The Workforce Development Board (WDB) should seek to explore apprenticeship programs. Boards will look to explore formalized trainings rather than seek apprenticeship programs. The NYS DOL needs to be more visible and make the process user-friendly to draw businesses to their programs. While individual offerings are available, no coordinated NYS DOL regional efforts exist.

2. Current elementary & high school programs are not incorporating project-based and problem solving learning techniques in everyday teaching methods.

3. Federal and state budget cuts have limited available training funds at a time of transition in workforce needs. More flexible funding needs to be made available.

4. Hosting interns and co-ops requires planning and takes significant work on the part of the participating business.

5. Employers often cannot complete the apprenticeship training outlines over the required years along with providing the formalized training requirements. Smaller companies do not have the staff and know-how to run On-the-Job trainings and apprenticeship programs.

6. The process of becoming a sponsor and participating in a registered apprenticeship program offers employers the ability to pull talented workers within organizations and provide them with a pathway to expand their skills. The NYS DOL needs to be more engaged with companies to educate employers in order to develop more programs.

7. When required qualifications were reviewed, most companies wanted 3 to 5 years of experience.

8. A challenge for employers is to retain and attract people from outside the area due to the difficulty of often having to offer low wages.

Strategies

1. Promote and collaborate with training providers such as CITEC, the Workforce Development Institute (WDI) and colleges and universities to provide core or foundational skills for training participants within businesses online or face-to-face.

2. Create opportunities for multiple employers to collectively offer training. Science and technology is changing so rapidly that there is an increasing need for the retraining of employees.

3. Provide meaningful career exploration opportunities for students to prepare them for in demand careers.

4. Create career pathways partnering high schools, community colleges, colleges and universities. Begin to develop workforce skills, critical thinking skills and problem solving skills through project-based learning beginning in elementary school to high school through p-tech programs and innovation hubs.

5. Support and promote Science, Technology, Engineering & Math (STEM) education and 21st Century skill sets in pre-school through high school through project-based learning.

6. Workforce Development Boards (WDBs), WDI, CITEC & economic development boards should collaborate on efforts to promote training opportunities.

7. Employers should provide opportunities to their employees to provide progress overall. Internships and co-ops should be encouraged as only at 20% of businesses currently offered these opportunities.

8. Employers should expand intern and co-op opportunities for students to develop skills and to gain experience to meet requirements in critical areas.

Workforce Survey Results

Question 1 – Company Name

Answer Options	Response Count
Fill in company name	48
answered question	48
skipped question	1

Question 2 – NAICS Code

Answer Options	Response Count
Fill in NAICS code	31
answered question	31
skipped question	18

Question 3 – Company Size

Answer Options	Response Percent	Response Count
Small (<29 employees)	38.8%	19
Large (>30 employees)	61.2%	30
answered question		49
skipped question		0

Company Size
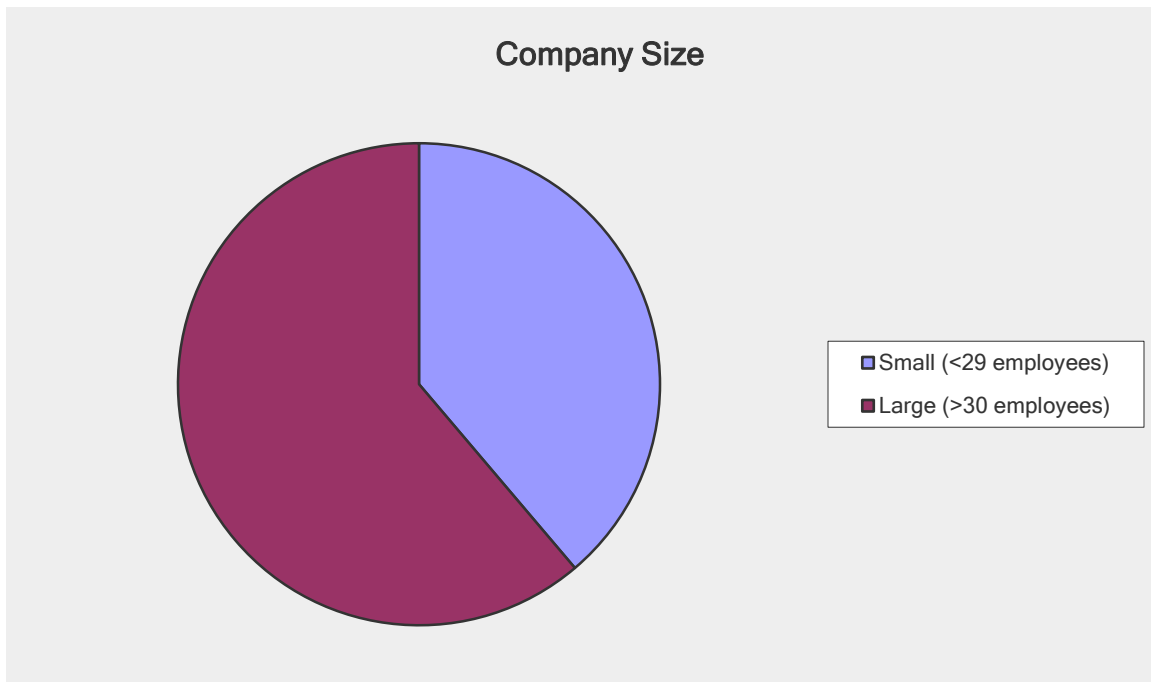
Question 4 - **For each job title, please indicate the number of positions currently in your organization:**

Answer Options	0	1-5	6-10	>10	I am having trouble filling the position(s)	Response Count
General and Operations Managers	5	39	2	1	3	47
Office and Administrative Support	7	32	3	5	1	46
Marketing and Sales Managers	17	22	2	1	1	42
Financial Managers	15	27	0	0	1	42
Industrial Production Managers	11	29	4	0	2	44
Purchasing	13	27	2	1	0	43
Transportation, Storage, and Distribution	19	18	2	3	0	42
Human Resources	12	28	1	0	0	41
Accounting	9	32	2	0	2	43
Customer Service Representatives	16	19	6	1	0	42
Shipping, Receiving, and Warehouse	12	27	3	3	1	45
Public Relations	32	6	0	0	0	38
OSHA Generalist	23	17	0	0	1	40
Other	8	6	0	10	3	25
Other (please specify)						18
					answered question	48
					skipped question	1
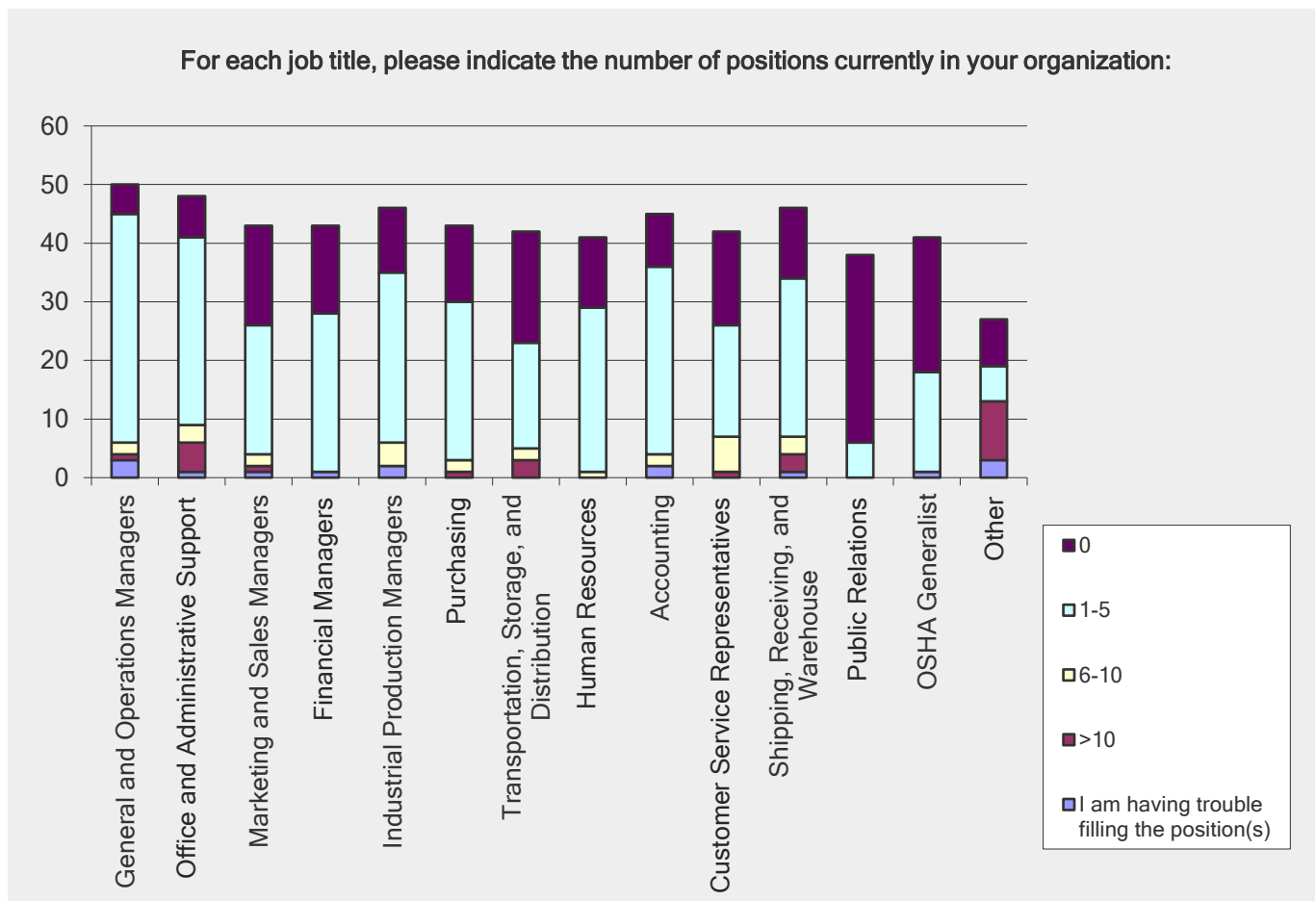
For each job title, please indicate the number of positions currently in your organization:

Question 5 - For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:

Answer Options	0	1-5	6-10	>10	Response Count
General and Operations Managers	7	37	4	0	48
Office and Administrative Support	6	34	3	4	47
Marketing and Sales Managers	19	20	4	1	44
Financial Managers	15	27	1	0	42
Industrial Production Managers	11	27	6	0	44
Purchasing	12	28	1	2	43
Transportation, Storage, and Distribution	20	17	4	2	43
Human Resources	11	30	1	0	42
Accounting	11	32	0	2	45
Customer Service Representatives	14	23	5	0	42
Shipping, Receiving, and Warehouse	10	29	2	4	45
Public Relations	33	6	0	0	39
OSHA Generalist	23	17	0	0	40
Other	9	7	1	9	26
Other (please specify)					11
				answered question	48
				skipped question	1

For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:
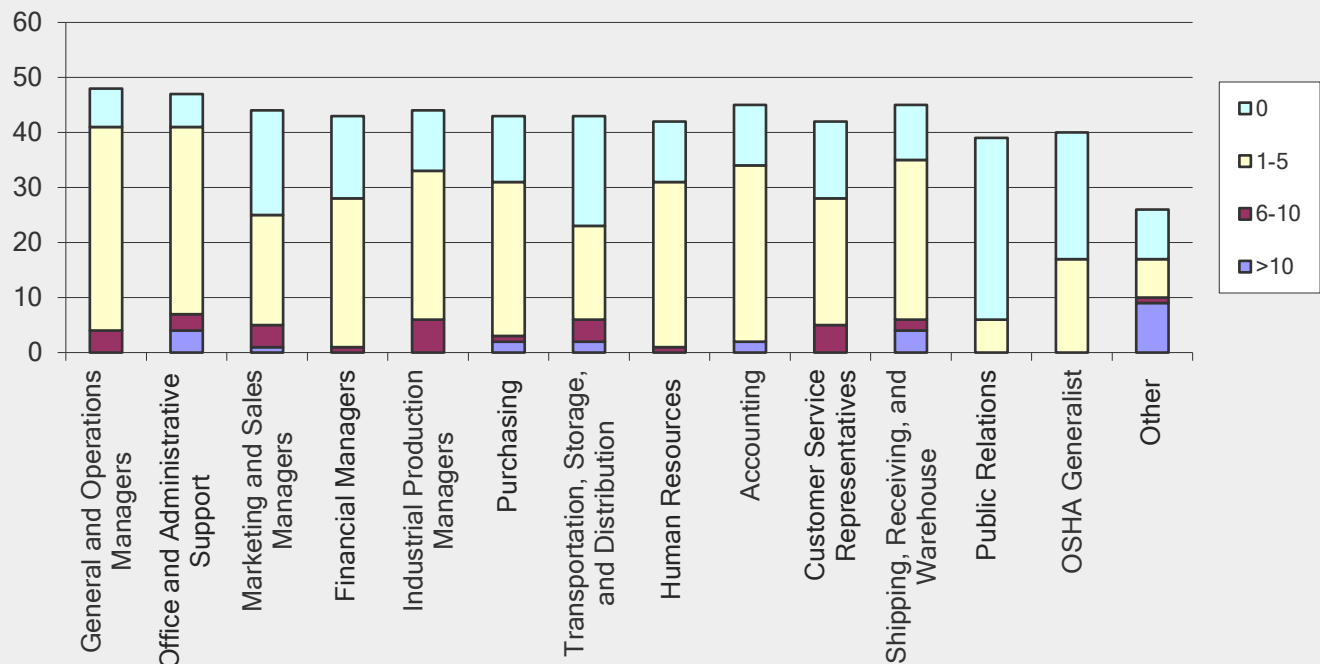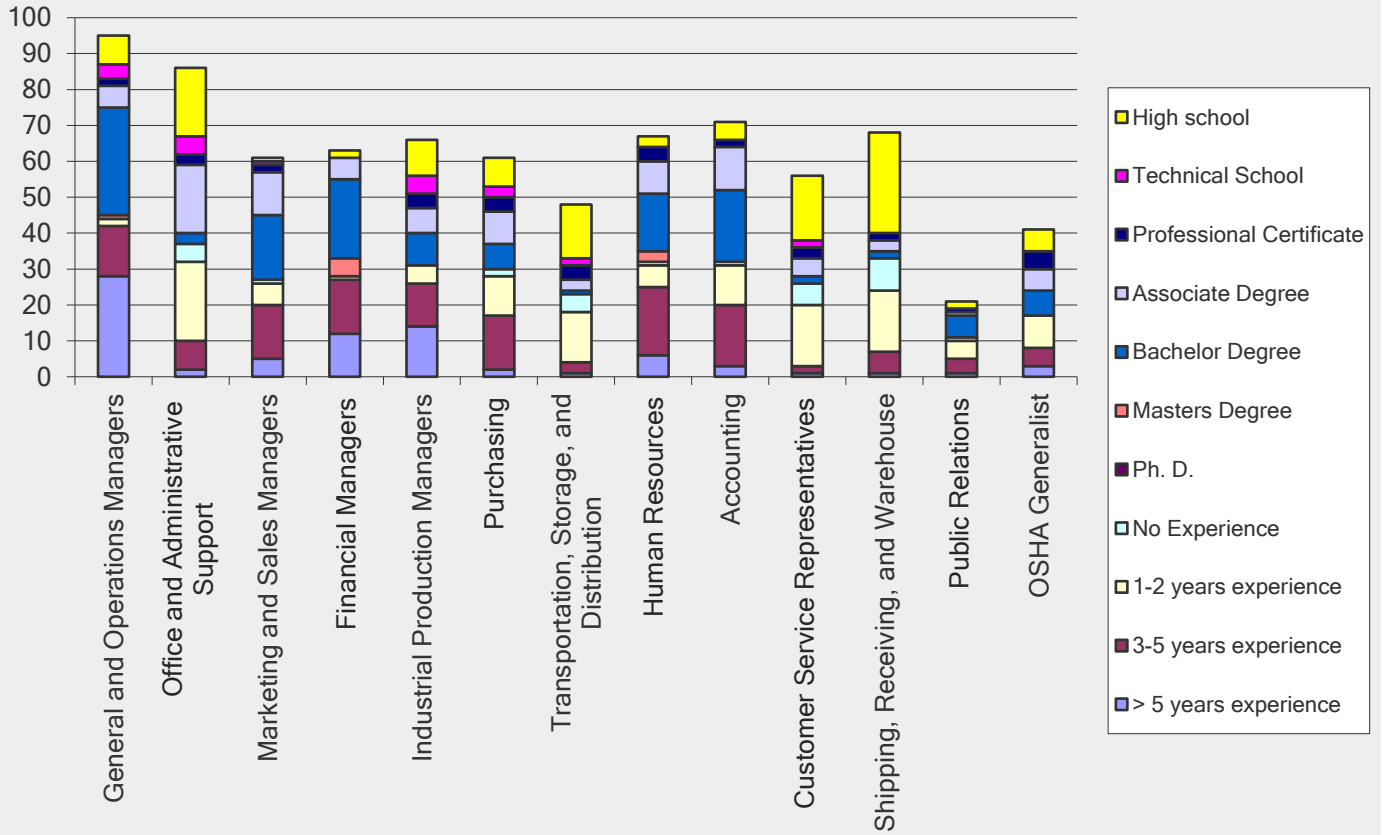
Question 6 - Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:

Answer Options	High school	Technical School	Professional Certificate	Associate Degree	Bachelor Degree	Masters Degree	Ph. D.
General and Operations Managers	8	4	2	6	30	1	0
Office and Administrative Support	19	5	3	19	3	0	0
Marketing and Sales Managers	1	1	2	12	18	0	0
Financial Managers	2	0	0	6	22	5	0
Industrial Production Managers	10	5	4	7	9	0	0
Purchasing	8	3	4	9	7	0	0
Transportation, Storage, and Distribution	15	2	4	3	1	0	0
Human Resources	3	0	4	9	16	3	0
Accounting	5	0	2	12	20	0	0
Customer Service Representatives	18	2	3	5	2	0	0
Shipping, Receiving, & Warehouse	28	0	2	3	2	0	0
Public Relations	2	0	1	1	6	0	0
OSHA Generalist	6	0	5	6	7	0	0

Answer Options	No Experience	1-2 years experience	3-5 years experience	> 5 years experience	Response Count
General and Operations Managers	0	2	14	28	48
Office and Administrative Support	5	22	8	2	42
Marketing and Sales Managers	1	6	15	5	31
Financial Managers	0	1	15	12	33
Industrial Production Managers	0	5	12	14	34
Purchasing	2	11	15	2	32
Transportation, Storage, and Distribution	5	14	3	1	25
Human Resources	1	6	19	6	34
Accounting	1	11	17	3	36
Customer Service Representatives	6	17	2	1	30
Shipping, Receiving, & Warehouse	9	17	6	1	36
Public Relations	1	5	4	1	12
OSHA Generalist	0	9	5	3	21
answered question					48
skipped question					1

Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:

Legend:
- High school
- Technical School
- Professional Certificate
- Associate Degree
- Bachelor Degree
- Masters Degree
- Ph. D.
- No Experience
- 1-2 years experience
- 3-5 years experience
- > 5 years experience

Categories:
General and Operations Managers, Office and Administrative Support, Marketing and Sales Managers, Financial Managers, Industrial Production Managers, Purchasing, Transportation, Storage, and Distribution, Human Resources, Accounting, Customer Service Representatives, Shipping, Receiving, and Warehouse, Public Relations, OSHA Generalist
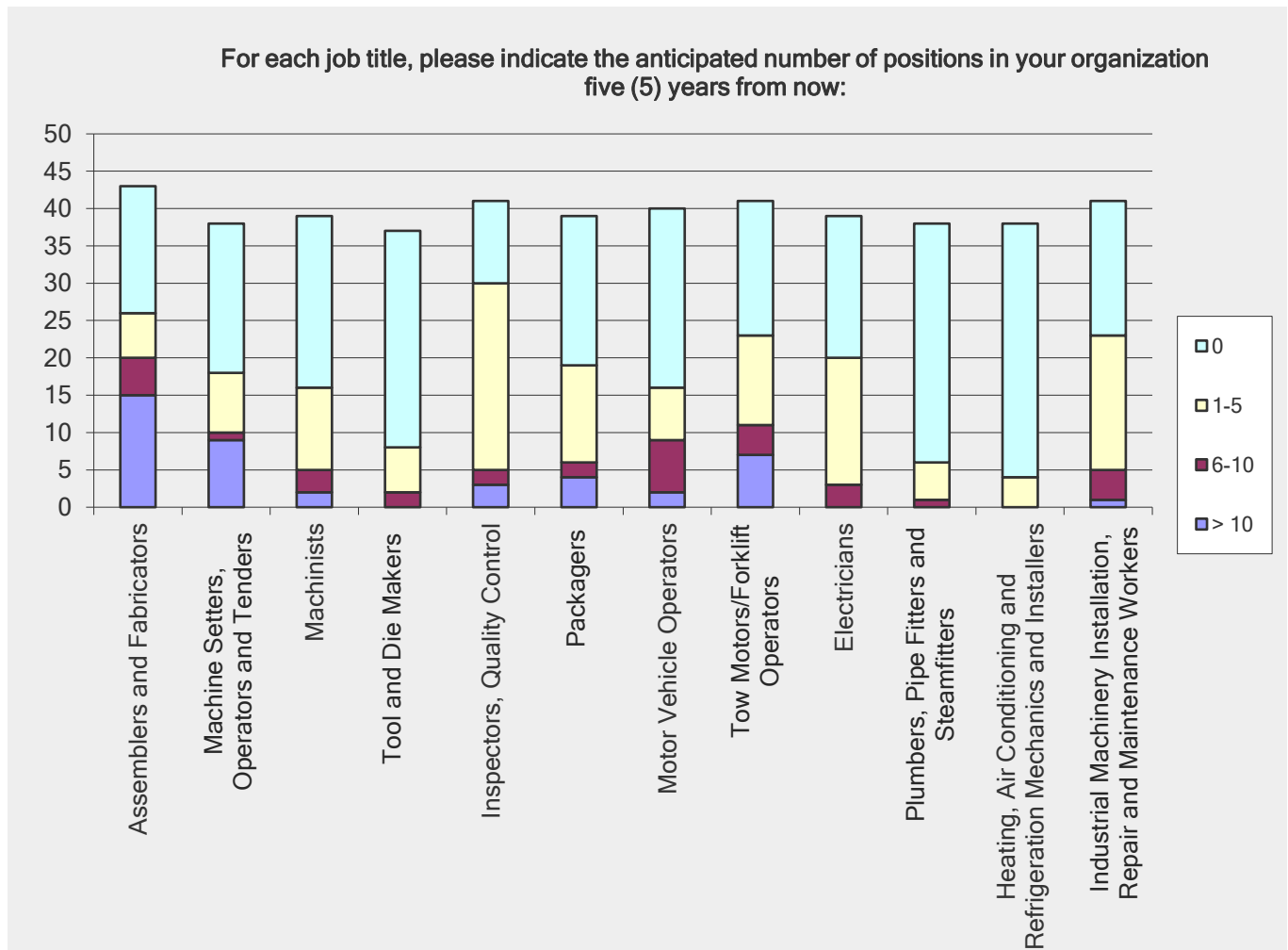
Question 7 - For each job title, please indicate the number of positions currently in your organization:

Answer Options	0	1-5	6-10	> 10	I am having trouble filling the position(s)	Response Count
Assemblers and Fabricators	18	8	2	14	1	43
Machine Setters, Operators, and Tenders	19	10	0	8	1	38
Machinists	24	13	0	1	0	38
Tool and Die Makers	31	5	1	0	1	38
Inspectors, Quality Control	14	23	2	1	1	41
Packagers	19	12	4	3	0	38
Motor Vehicle Operators	24	8	4	4	0	40
Tow Motors/Forklift Operators	16	13	4	7	0	40
Electricians	20	18	0	0	0	38
Plumbers, Pipe Fitters, and Steamfitters	34	5	0	0	0	39
Heating, Air Conditioning and Refrigeration Mechanics and Installers	35	4	0	0	0	39
Industrial Machinery Installation, Repair, and Maintenance Workers	17	18	4	0	1	40
					answered question	44
					skipped question	5

For each job title, please indicate the number of positions currently in your organization:
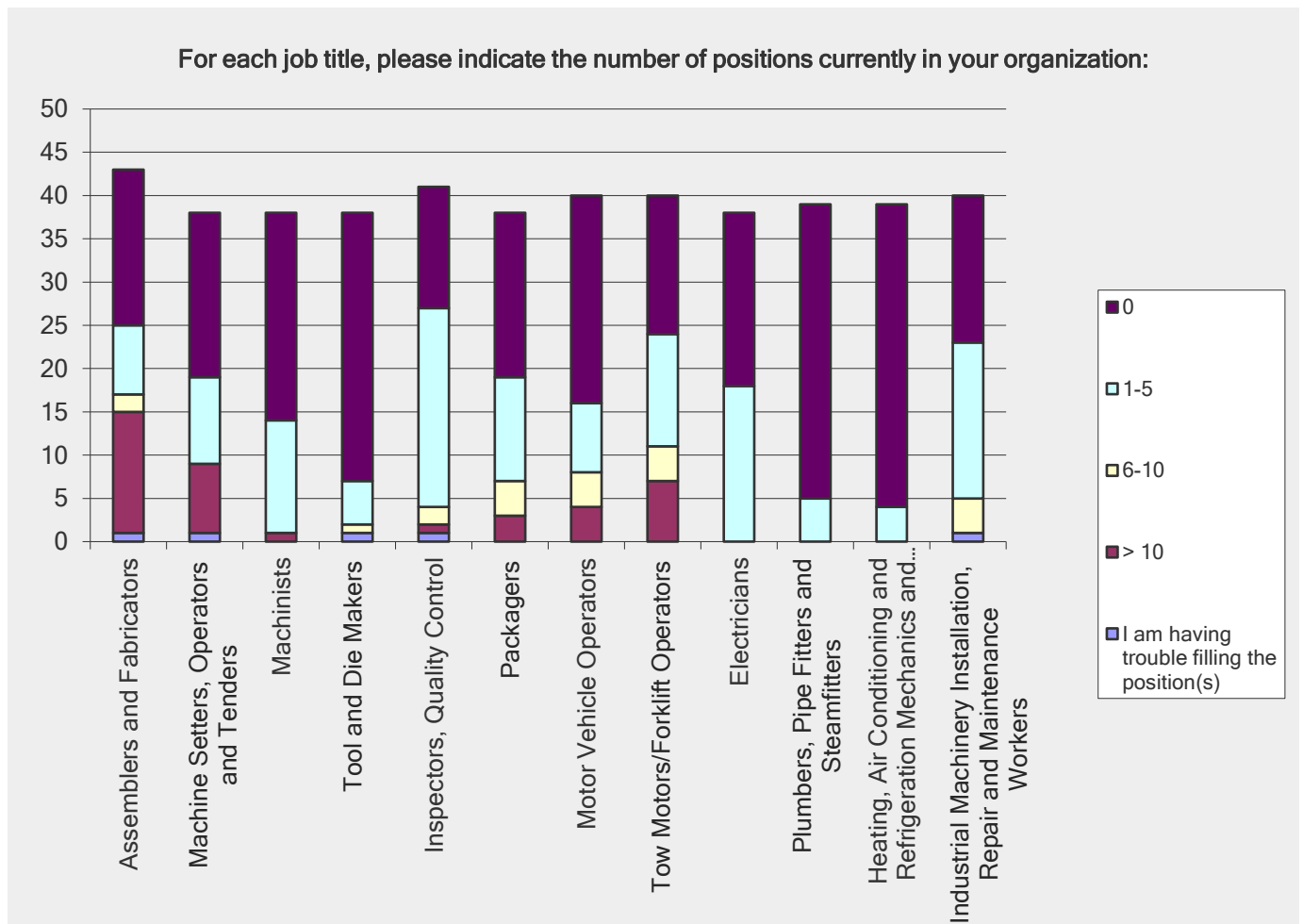
Question 8 - **For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:**

Answer Options	0	1-5	6-10	> 10	Response Count
Assemblers and Fabricators	17	6	5	15	43
Machine Setters, Operators, and Tenders	20	8	1	9	38
Machinists	23	11	3	2	39
Tool and Die Makers	29	6	2	0	37
Inspectors, Quality Control	11	25	2	3	41
Packagers	20	13	2	4	39
Motor Vehicle Operators	24	7	7	2	40
Tow Motors/Forklift Operators	18	12	4	7	41
Electricians	19	17	3	0	39
Plumbers, Pipe Fitters, and Steamfitters	32	5	1	0	38
Heating, Air Conditioning and Refrigeration Mechanics and Installers	34	4	0	0	38
Industrial Machinery Installation, Repair, and Maintenance Workers	18	18	4	1	41
			answered question		44
			skipped question		5

For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:
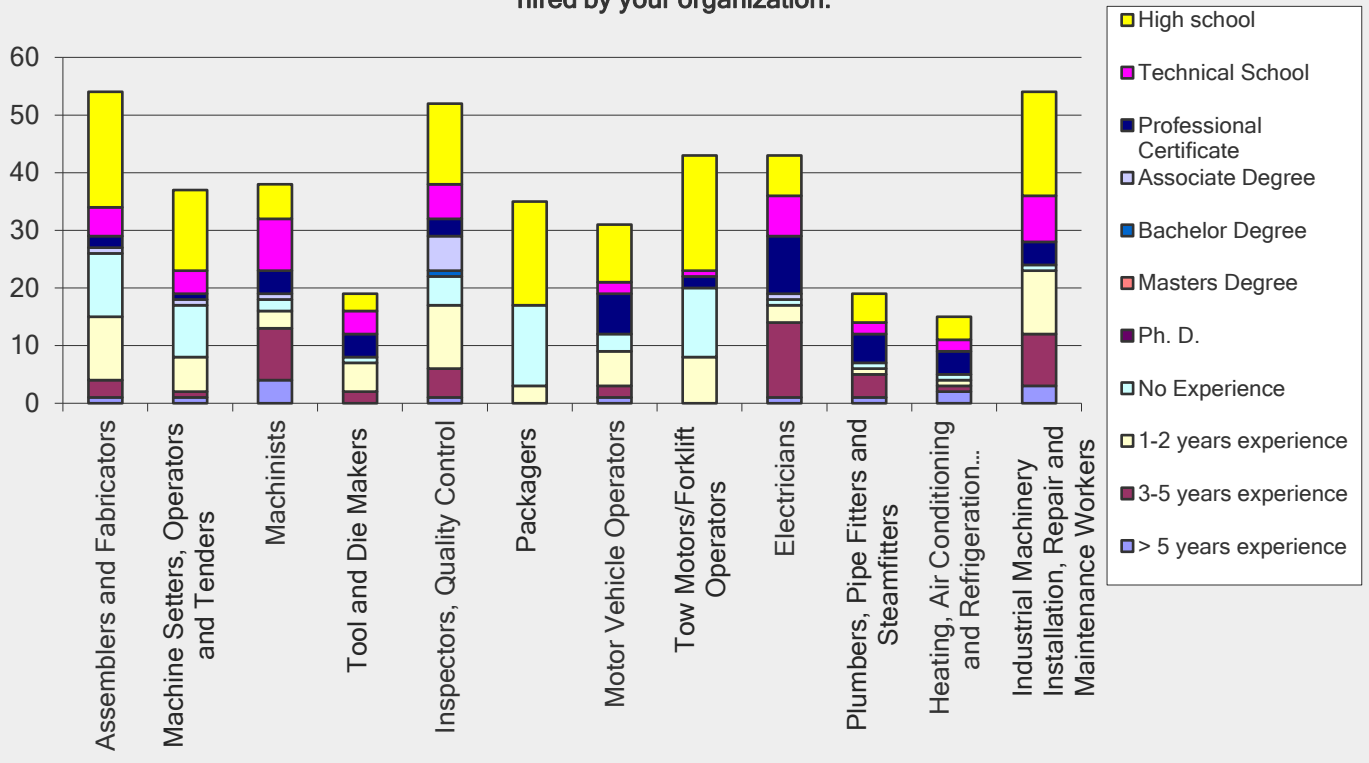
Question 9 - Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:

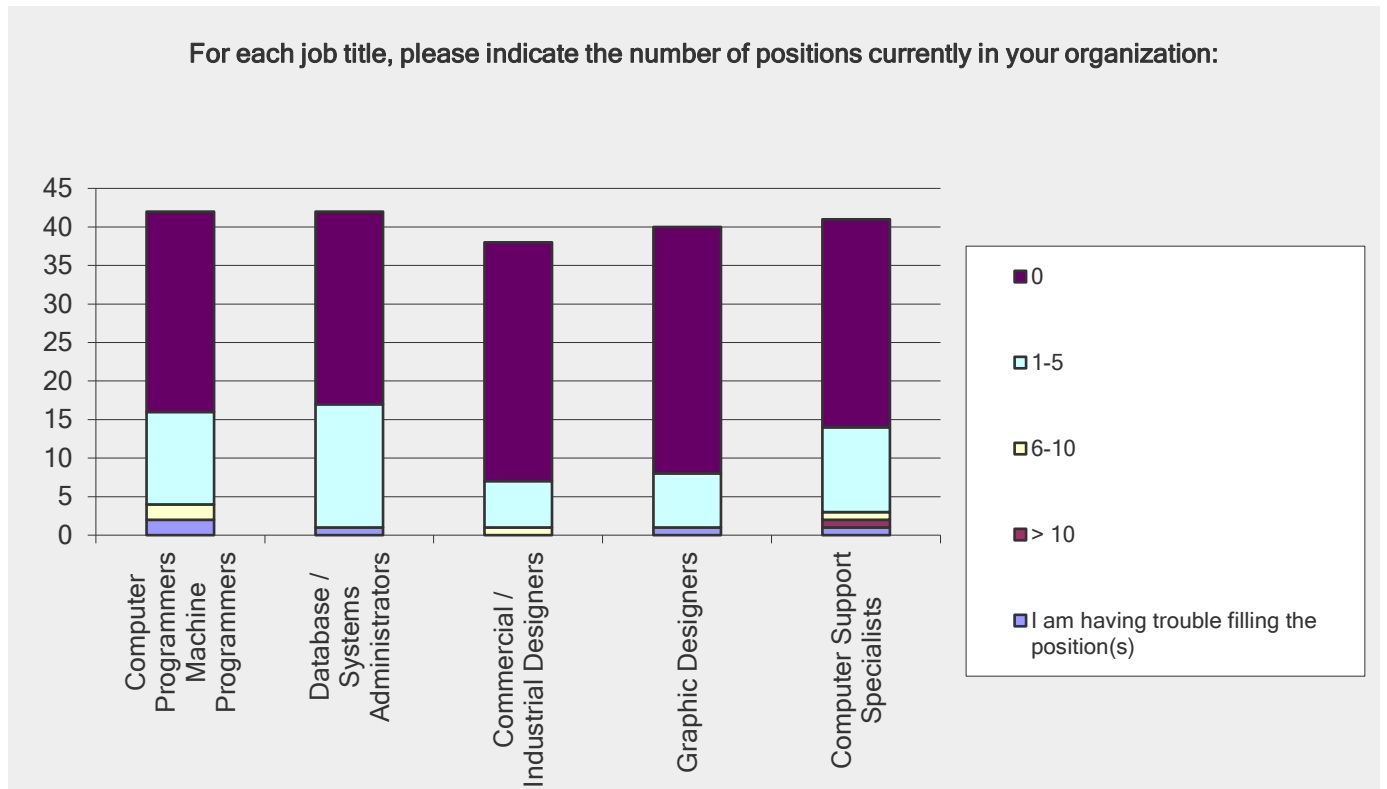| Answer Options	High school	Technical School	Professional Certificate	Associate Degree	Bachelor Degree	Masters Degree	Ph. D.
Assemblers and Fabricators	20	5	2	1	0	0	0
Machine Setters, Operators, and Tenders	14	4	1	1	0	0	0
Machinists	6	9	4	1	0	0	0
Tool and Die Makers	3	4	4	0	0	0	0
Inspectors, Quality Control	14	6	3	6	1	0	0
Packagers	18	0	0	0	0	0	0
Motor Vehicle Operators	10	2	7	0	0	0	0
Tow Motors/Forklift Operators	20	1	2	0	0	0	0
Electricians	7	7	10	1	0	0	0
Plumbers, Pipe Fitters, and Steamfitters	5	2	5	0	0	0	0
Heating, Air Conditioning and Refrigeration Mechanics and Installers	4	2	4	0	0	0	0
Industrial Machinery Installation, Repair, and Maintenance Workers	18	8	4	0	0	0	0

Answer Options	No Experience	1-2 years experience	3-5 years experience	> 5 years experience	Response Count
Assemblers and Fabricators	11	11	3	1	29
Machine Setters, Operators, and Tenders	9	6	1	1	19
Machinists	2	3	9	4	19
Tool and Die Makers	1	5	2	0	10
Inspectors, Quality Control	5	11	5	1	26
Packagers	14	3	0	0	20
Motor Vehicle Operators	3	6	2	1	18
Tow Motors/Forklift Operators	12	8	0	0	24
Electricians	1	3	13	1	22
Plumbers, Pipe Fitters, and Steamfitters	1	1	4	1	10
Heating, Air Conditioning and Refrigeration Mechanics and Installers	1	1	1	2	8
Industrial Machinery Installation, Repair, and Maintenance Workers	1	11	9	3	25
answered question					43
skipped question					6

Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:

Legend:
- High school
- Technical School
- Professional Certificate
- Associate Degree
- Bachelor Degree
- Masters Degree
- Ph. D.
- No Experience
- 1-2 years experience
- 3-5 years experience
- > 5 years experience

Categories:
Assemblers and Fabricators; Machine Setters, Operators and Tenders; Machinists; Tool and Die Makers; Inspectors, Quality Control; Packagers; Motor Vehicle Operators; Tow Motors/Forklift Operators; Electricians; Plumbers, Pipe Fitters and Steamfitters; Heating, Air Conditioning and Refrigeration...; Industrial Machinery Installation, Repair and Maintenance Workers

Question 10 - For each job title, please indicate the number of positions currently in your organization:

Answer Options	0	1-5	6-10	> 10	I am having trouble filling the position(s)	Response Count
Computer Programmers and Machine Programmers	26	12	2	0	2	40
Database / Systems Administrators	25	16	0	0	1	41
Commercial / Industrial Designers	31	6	1	0	0	38
Graphic Designers	32	7	0	0	1	39
Computer Support Specialists	27	11	1	1	1	39
					answered question	42
					skipped question	7

For each job title, please indicate the number of positions currently in your organization:

Question 11 - For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:

Answer Options	0	1-5	6-10	> 10	Response Count
Computer Programmers and Machine Programmers	26	13	2	0	41
Database / Systems Administrators	24	18	0	0	42
Commercial / Industrial Designers	31	5	2	0	38
Graphic Designers	33	5	1	0	39
Computer Support Specialists	28	10	1	2	41
				answered question	43
				skipped question	6

For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:
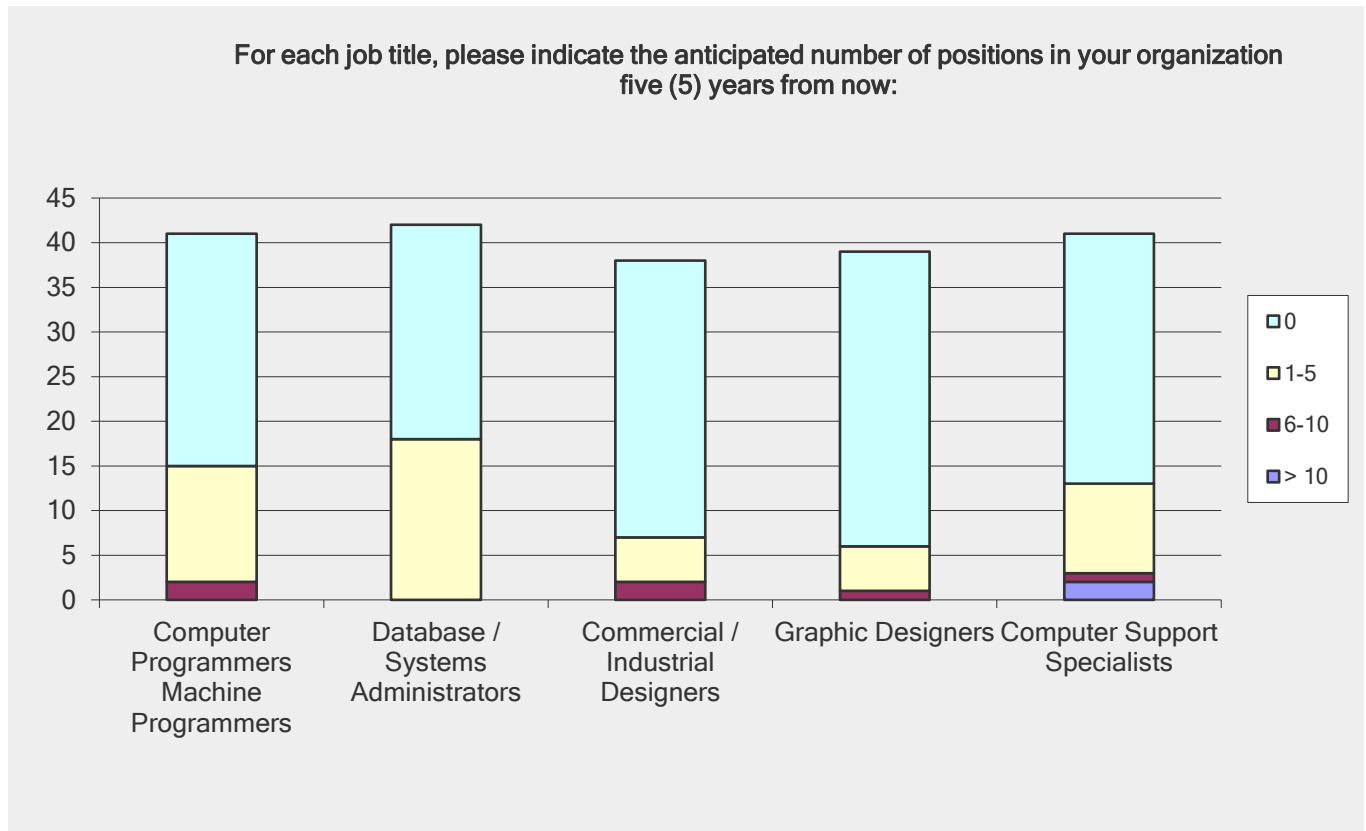
Question 12 - Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:

Answer Options	High school	Technical School	Professional Certificate	Associate Degree	Bachelor Degree	Masters Degree	Ph. D.
Computer Programmers and Machine Programmers	3	4	1	8	4	0	0
Database / Systems Administrators	4	1	4	6	11	0	0
Commercial / Industrial Designers	1	0	2	4	6	0	0
Graphic Designers	2	1	1	4	3	0	0
Computer Support Specialists	4	2	1	9	5	0	0

Answer Options	No Experience	1-2 years experience	3-5 years experience	> 5 years experience	Response Count
Computer Programmers and Machine Programmers	3	7	5	3	19
Database / Systems Administrators	1	9	10	2	22
Commercial / Industrial Designers	1	4	4	0	11
Graphic Designers	3	7	0	0	11
Computer Support Specialists	3	7	5	1	16
answered question					29
skipped question					20

Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:
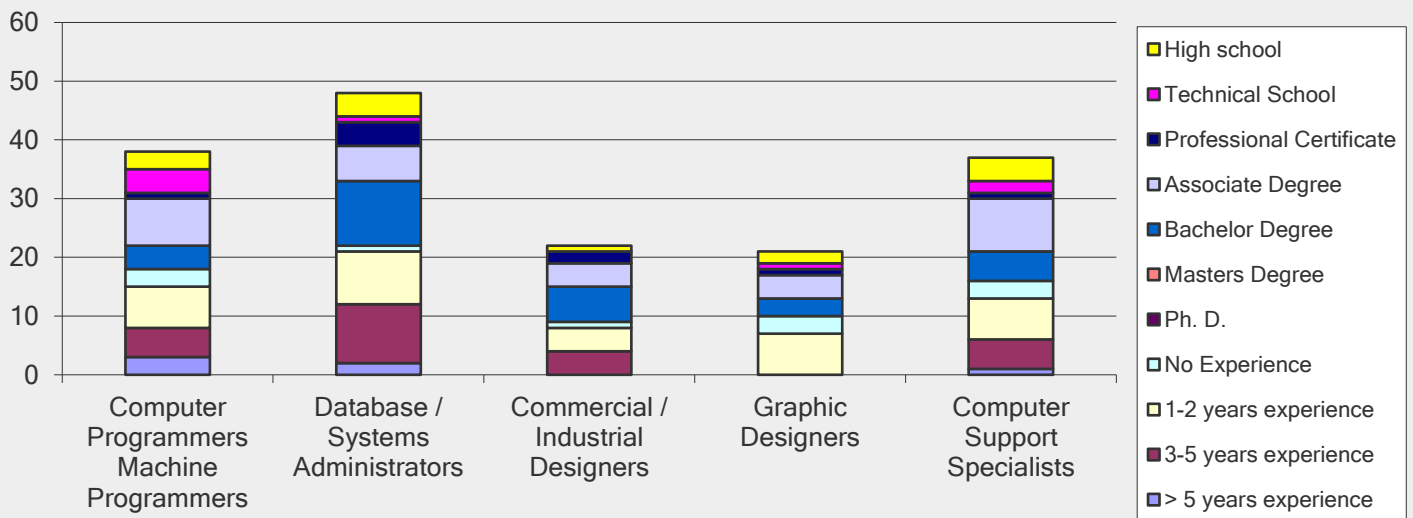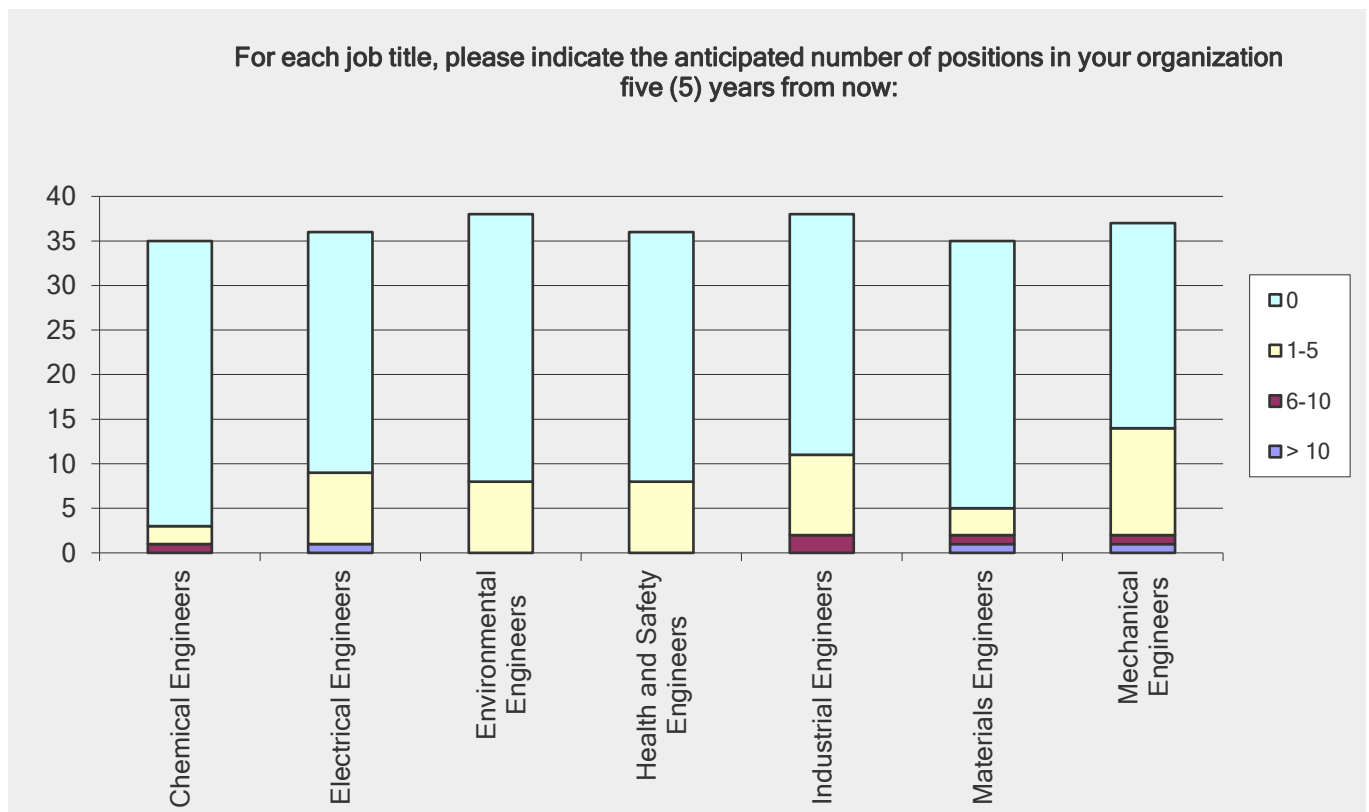
Question 13 - For each job title, please indicate the number of positions currently in your organization:

Answer Options	0	1-5	6-10	> 10	I am having trouble filling the position(s)	Response Count
Chemical Engineers	34	3	0	0	0	37
Electrical Engineers	29	7	0	1	0	37
Environmental Engineers	32	7	0	0	0	39
Health and Safety Engineers	29	8	0	0	0	37
Industrial Engineers	28	8	2	0	0	38
Materials Engineers	32	3	2	0	0	37
Mechanical Engineers	25	10	1	1	0	37
Other (please specify)						3
					answered question	39
					skipped question	10

For each job title, please indicate the number of positions currently in your organization:
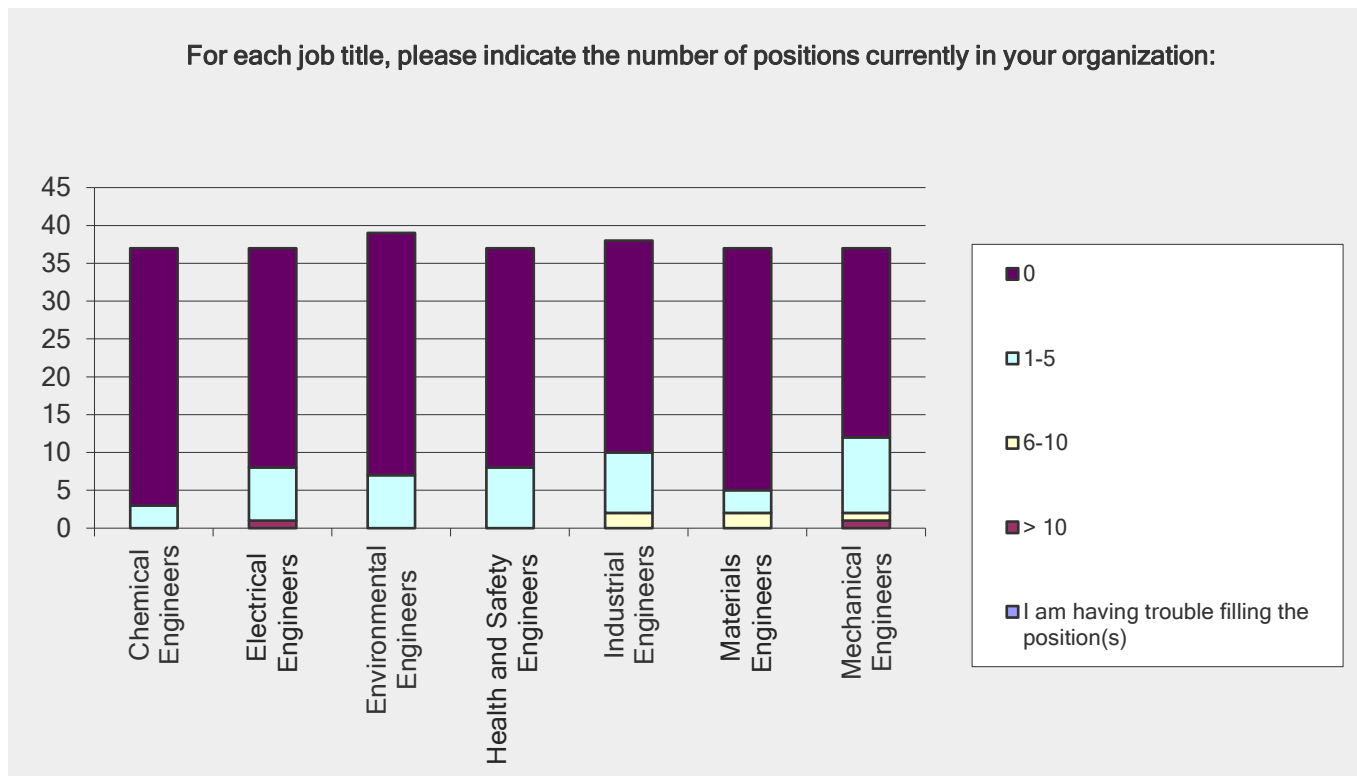
Question 14 - For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:

Answer Options	0	1-5	6-10	> 10	Response Count
Chemical Engineers	32	2	1	0	35
Electrical Engineers	27	8	0	1	36
Environmental Engineers	30	8	0	0	38
Health and Safety Engineers	28	8	0	0	36
Industrial Engineers	27	9	2	0	38
Materials Engineers	30	3	1	1	35
Mechanical Engineers	23	12	1	1	37
Other (please specify)					1
				answered question	39
				skipped question	10

For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:

Question 15 - **Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:**

Answer Options	High school	Technical School	Professional Certificate	Associate Degree	Bachelor Degree	Masters Degree	Ph. D.
Chemical Engineers	1	0	1	0	6	0	0
Electrical Engineers	1	1	2	0	10	0	0
Environmental Engineers	1	0	1	1	9	0	0
Health and Safety Engineers	1	0	1	0	10	0	0
Industrial Engineers	1	0	1	0	13	0	0
Materials Engineers	1	0	1	1	7	0	0
Mechanical Engineers	1	0	1	0	16	0	0

Answer Options	No Experience	1-2 years experience	3-5 years experience	> 5 years experience	Response Count
Chemical Engineers	2	1	3	0	9
Electrical Engineers	1	4	4	0	14
Environmental Engineers	2	4	4	0	13
Health and Safety Engineers	2	4	5	1	13
Industrial Engineers	3	7	4	1	16
Materials Engineers	1	4	3	0	10
Mechanical Engineers	3	6	8	0	19
				answered question	27
				skipped question	22

Please indicate BOTH the level of education and the amount of experience required to be hired by your organization:

21
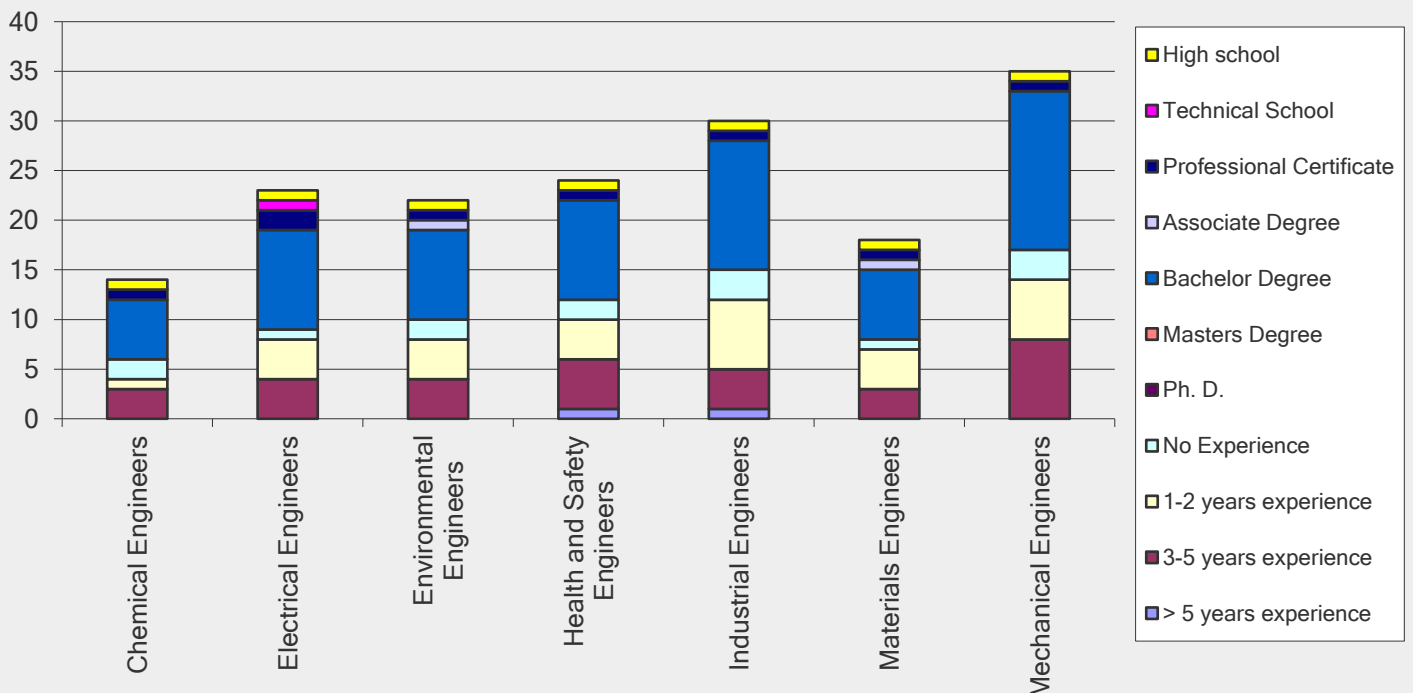
Question 16 - What training resources does your organization currently use to meet the skill needs of its workforce?
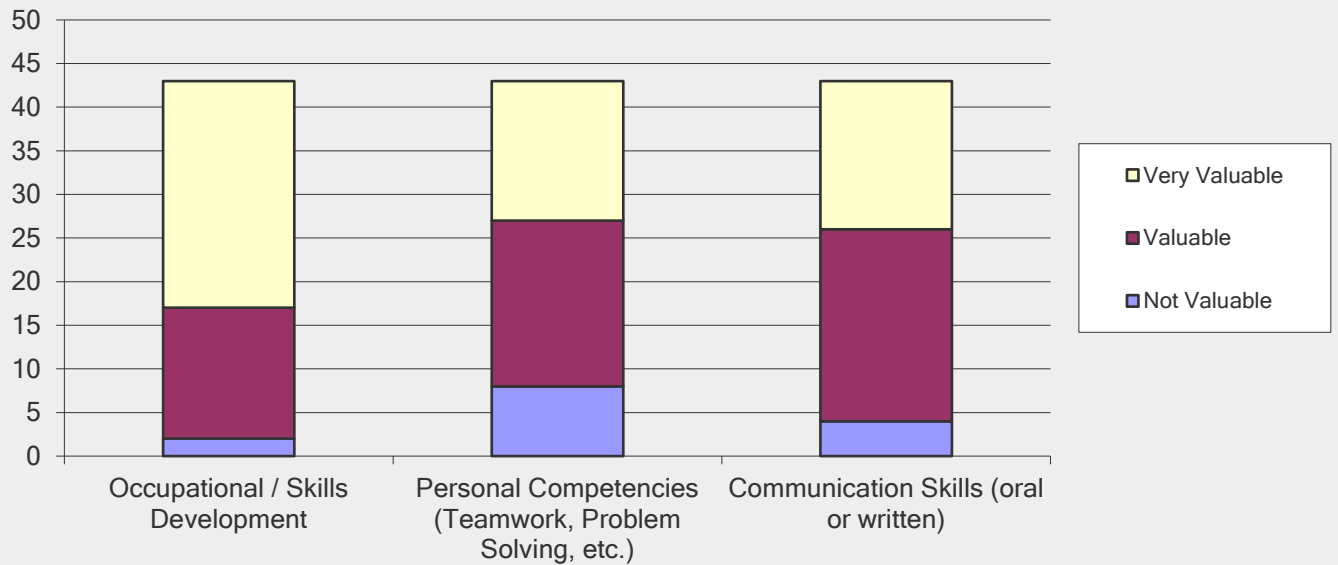
Answer Options	Response Percent	Response Count
Seminars	79.1%	34
Private Vendor Training	62.8%	27
Additional College Coursework	37.2%	16
In-House Trainers/On-the-Job Training	93.0%	40
Online Training	46.5%	20
Intern/Co-Op	30.2%	13
Other (please specify)		5
	answered question	43
	skipped question	6

What training resources does your organization currently use to meet the skill needs of its workforce? (Select all that apply)

Question 17 - As your organization looks toward the future, what type of training would benefit your employees as you seek to improve your workforce?

Answer Options	Very Valuable	Valuable	Not Valuable	Response Count
Occupational / Skills Development	26	15	2	43
Personal Competencies (Teamwork, Problem Solving, etc.)	16	19	8	43
Communication Skills (oral or written)	17	22	4	43
			answered question	43
			skipped question	6

As your organization looks toward the future, what type of training would benefit your employees as you seek to improve your workforce? (Please check one for each option)

Question 18 - How often do you use the services of the following?

Answer Options	Never	Sometimes	Usually	Always	Response Count
Workforce Investment Board (WIB)	30	8	1	3	42
Workforce Development Institute	36	6	0	0	42
CITEC	17	18	7	2	44
MACNY	38	3	0	0	41
				answered question	44
				skipped question	5

How often do you use the services of the following? (Please check one for each option)
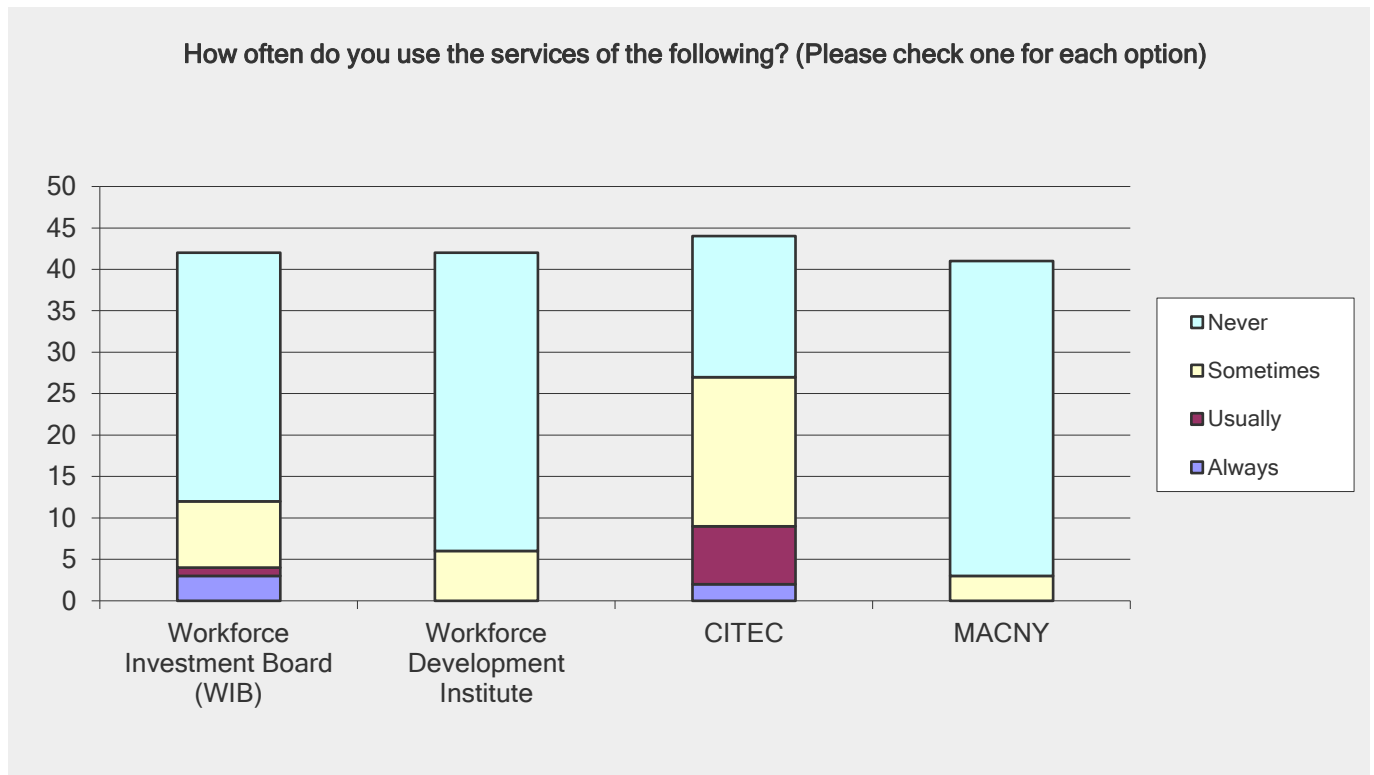
Question 19 - Please indicate the primary reason(s) applicants are rejected for the positions posted

Answer Options	Rarely	Occasionally	Frequently	Response Count
Lack of relevant work experience	7	20	16	43
Lack of technical skills	4	25	15	44
Poor Work Record	7	19	17	43
Criminal Activity/Record	26	15	2	43
Failure to pass drug screening	26	12	5	43
Information from Reference Check	18	20	5	43
Lack of literacy and numeracy skills	22	14	6	42
			answered question	44
			skipped question	5
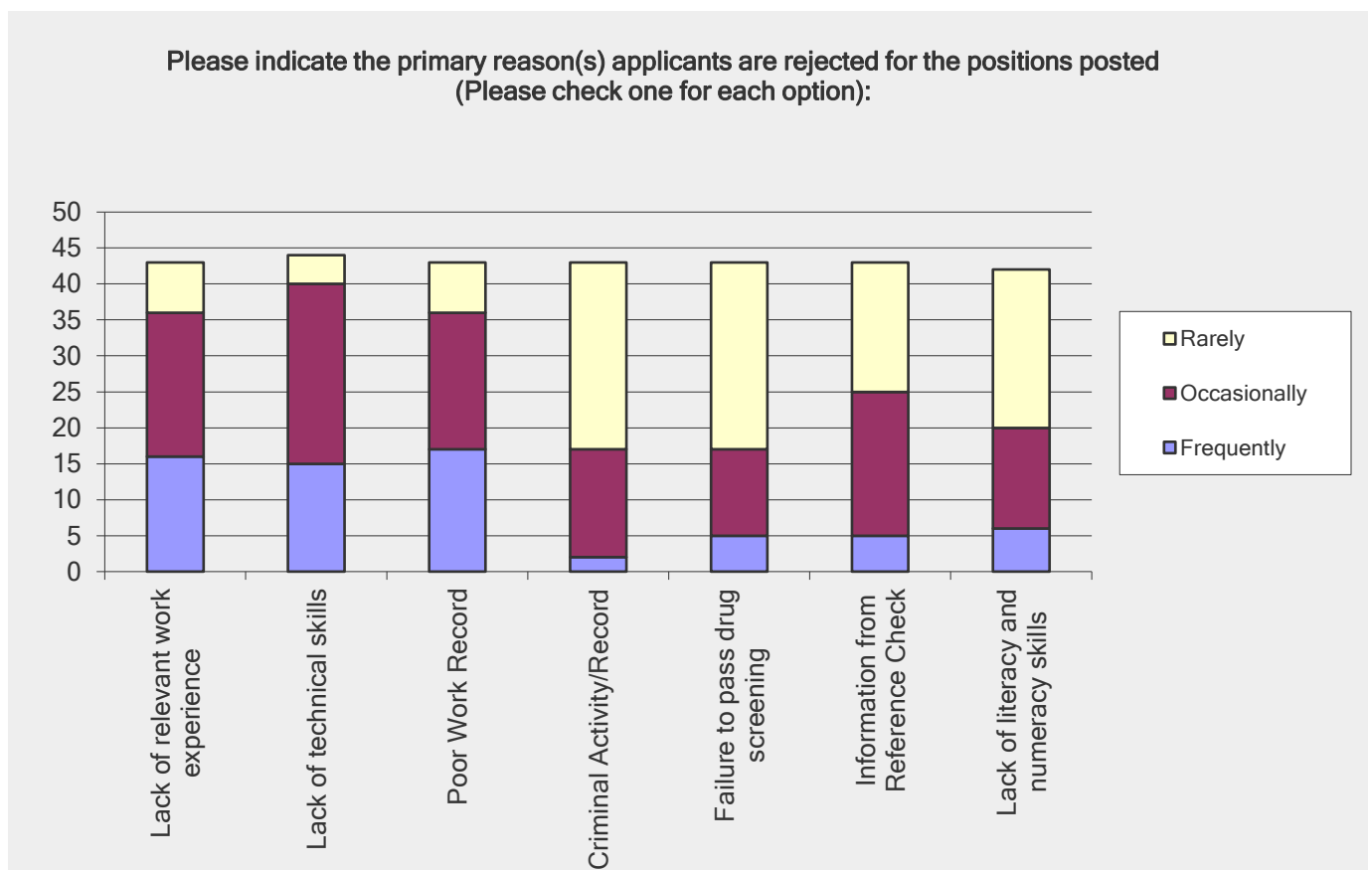
Please indicate the primary reason(s) applicants are rejected for the positions posted
(Please check one for each option):

Question 20 - Please indicate the primary reason(s) that existing employees are dismissed/fired

Answer Options	Rarely	Occasionally	Frequently	Response Count
Inability to Master Technical Skills	23	19	2	44
Poor Work Ethic	10	21	13	44
Criminal Activity/Record	40	4	0	44
Failure to pass drug screening	30	10	1	41
			answered question	44
			skipped question	5

Please indicate the primary reason(s) that existing employees are dismissed/fired (Please check one for each option):
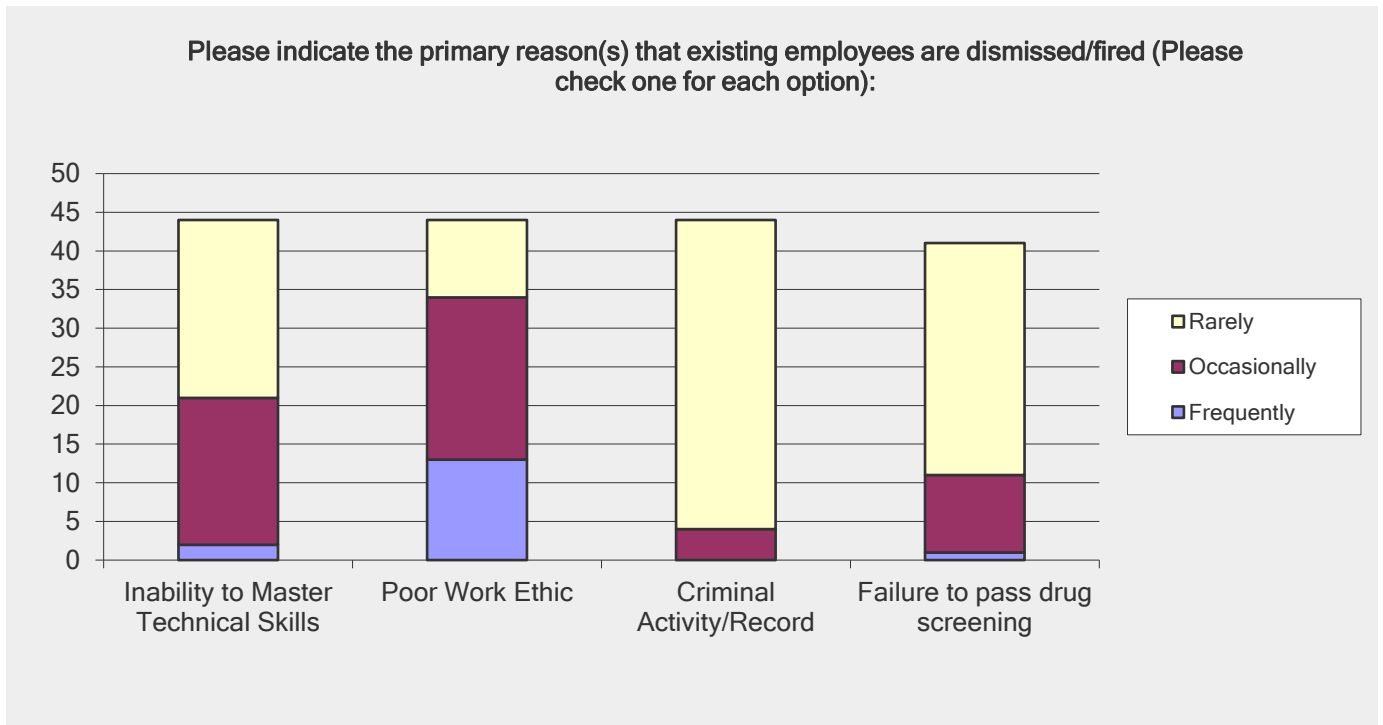
Question 21 - If you have any additional comments that you believe will be beneficial to the Workforce Development members please explain them in the area provided below:

Answer Options	Response Count
	4
answered question	4
skipped question	45

Additional Responses
- The County is made up of companies that distribute product, and so prior skills using UPS & Fed Ex software would be helpful
- Personality/Customer Service Skills
- Big Issue- lots of understanding of how manufacturing works
- There perhaps should be a "never" in 19 and 20

Workforce Survey Results
for Agriculture and Hospitality
(*Agricultural and Hospitality/Tourism companies were surveyed anonymously.*)
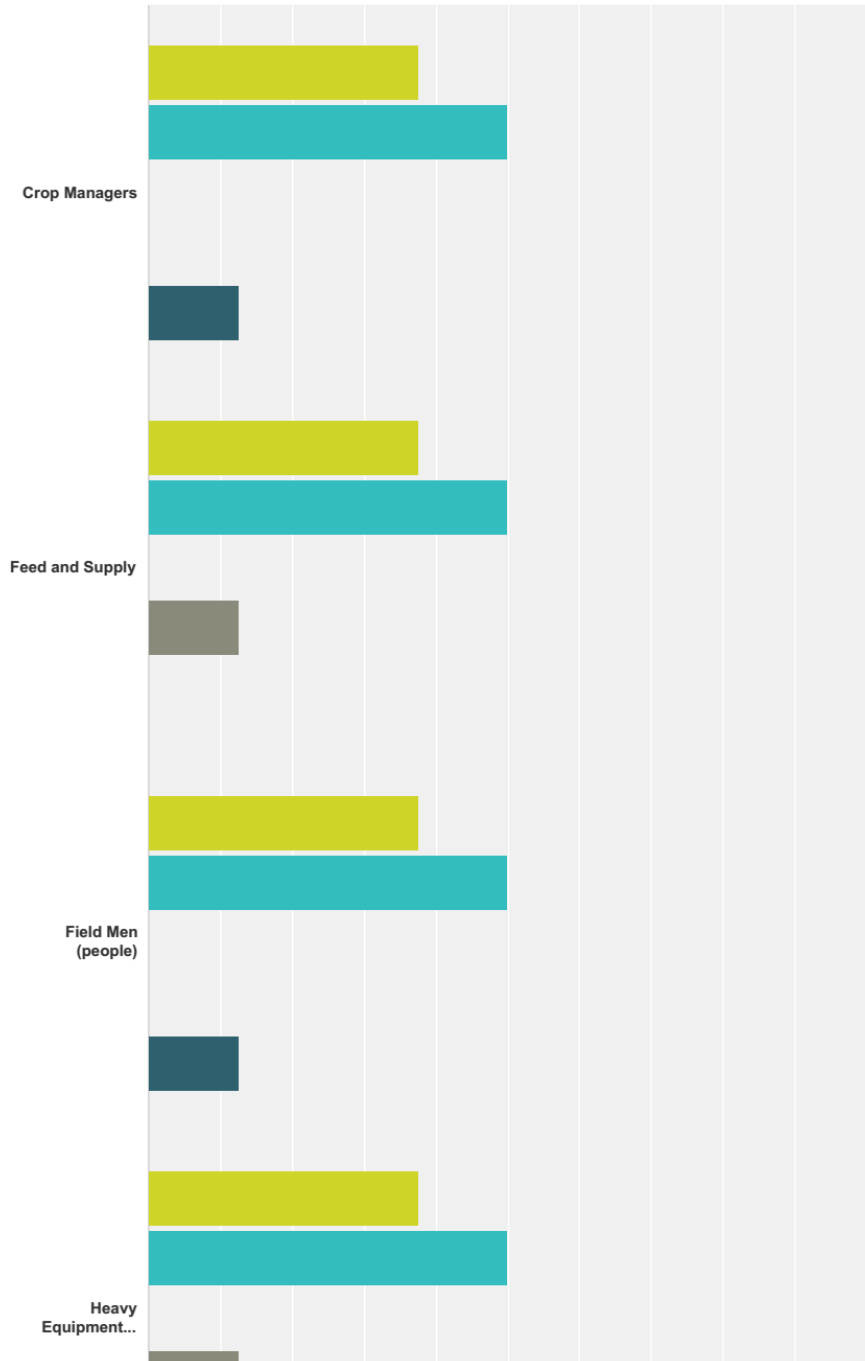
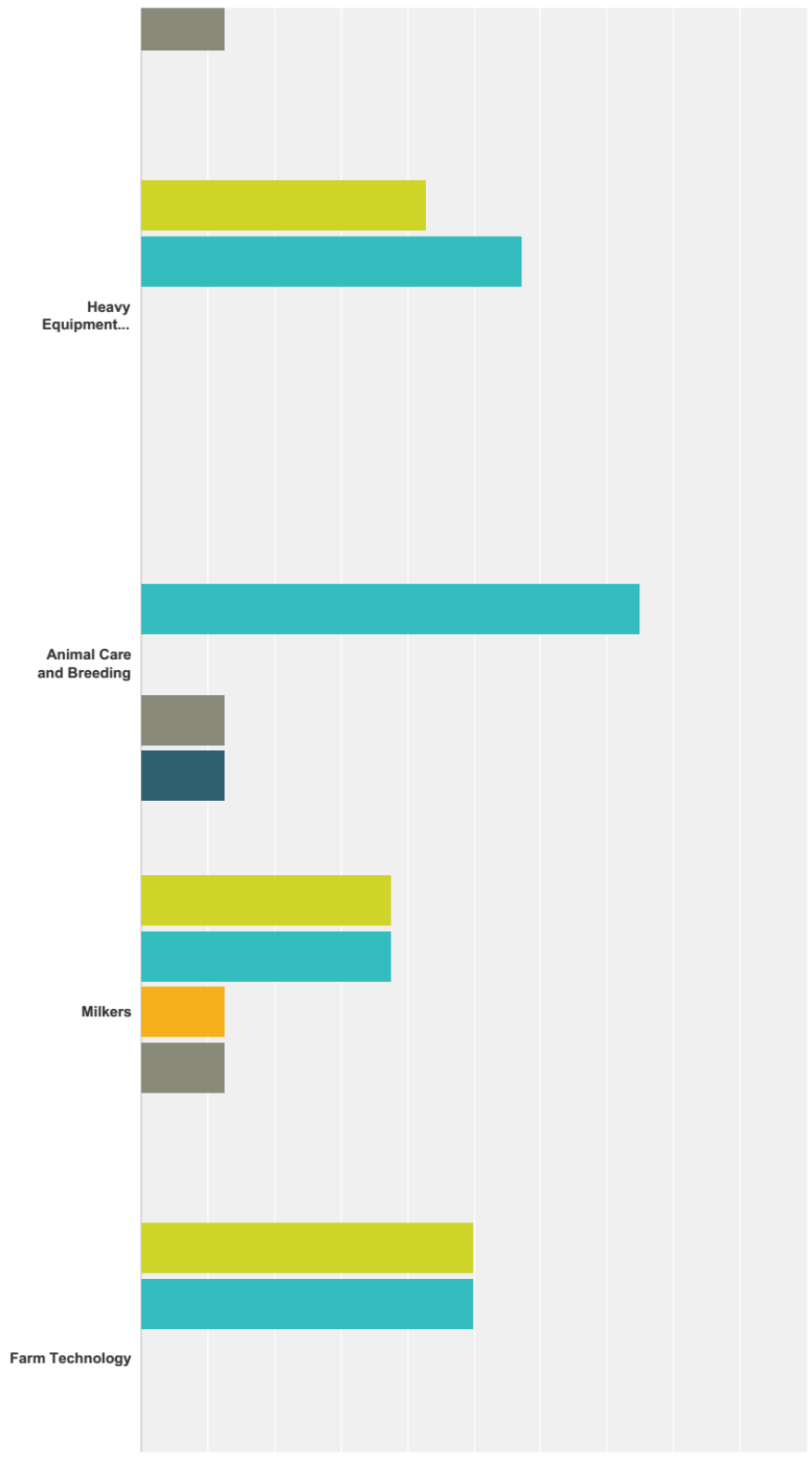## Q1 What Industry are you in?

Answered: 50   Skipped: 0
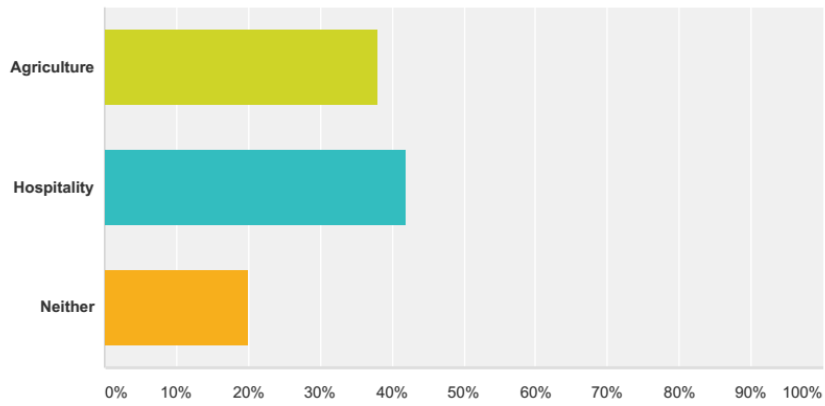
Answer Choices	Responses	
Agriculture	38.00%	19
Hospitality	42.00%	21
Neither	20.00%	10
Total		50

Q2 AGRICULTURE INDUSTRY: For each job title, please indicate the number of positions currently in your organization

Answered: 11   Skipped: 39

Heavy Equipment...

Animal Care and Breeding

Milkers

Farm Technology

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

■ 0   ■ 1-5   ■ 6-10   ■ >10   ■ I am having trouble filling the position(s)

	0	1-5	6-10	>10	I am having trouble filling the position(s)	Total
Crop Managers	37.50% 3	50.00% 4	0.00% 0	0.00% 0	12.50% 1	8
Feed and Supply	37.50% 3	50.00% 4	0.00% 0	12.50% 1	0.00% 0	8
Field Men (people)	37.50% 3	50.00% 4	0.00% 0	0.00% 0	12.50% 1	8
Heavy Equipment Maintenance	37.50% 3	50.00% 4	0.00% 0	12.50% 1	0.00% 0	8
Heavy Equipment Operators	42.86% 3	57.14% 4	0.00% 0	0.00% 0	0.00% 0	7
Animal Care and Breeding	0.00% 0	75.00% 6	0.00% 0	12.50% 1	12.50% 1	8
Milkers	37.50% 3	37.50% 3	12.50% 1	12.50% 1	0.00% 0	8
Farm Technology	50.00% 4	50.00% 4	0.00% 0	0.00% 0	0.00% 0	8

| #	Other (please specify)	Date
1	parts (7) and sales (3)	7/11/2017 8:55 AM
2	custom meat cutting	7/10/2017 7:21 PM
3	Apple Packers	7/10/2017 3:03 PM

Q3 Company Size

Answered: 11   Skipped: 39

Large (>30 employees)
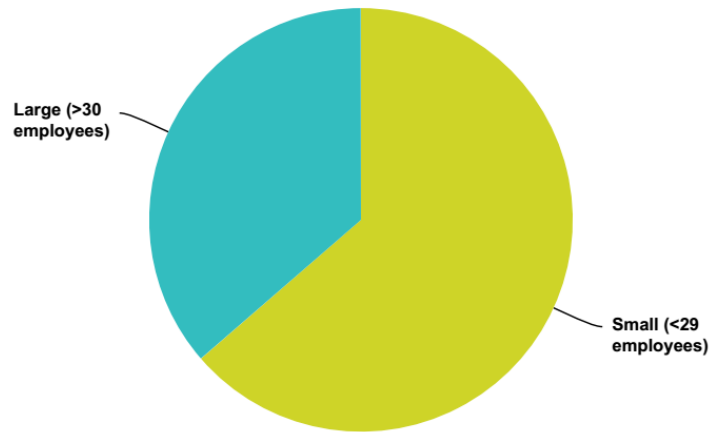
Small (<29 employees)

Answer Choices	Responses	
Small (<29 employees)	63.64%	7
Large (>30 employees)	36.36%	4
Total		11

Q4 For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:

Answered: 11   Skipped: 39
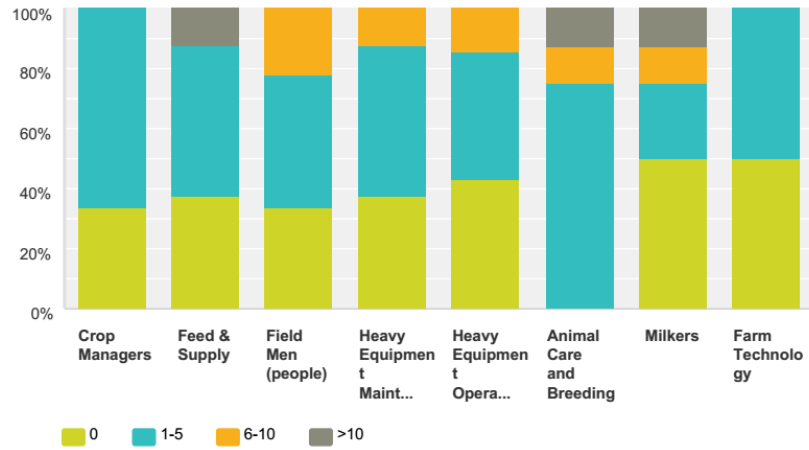
	0	1-5	6-10	>10	Total
Crop Managers	33.33% 3	66.67% 6	0.00% 0	0.00% 0	9
Feed & Supply	37.50% 3	50.00% 4	0.00% 0	12.50% 1	8
Field Men (people)	33.33% 3	44.44% 4	22.22% 2	0.00% 0	9
Heavy Equipment Maintenance	37.50% 3	50.00% 4	12.50% 1	0.00% 0	8
Heavy Equipment Operators	42.86% 3	42.86% 3	14.29% 1	0.00% 0	7
Animal Care and Breeding	0.00% 0	75.00% 6	12.50% 1	12.50% 1	8
Milkers	50.00% 4	25.00% 2	12.50% 1	12.50% 1	8
Farm Technology	50.00% 4	50.00% 4	0.00% 0	0.00% 0	8

#	Other (please specify)	Date
1	parts - 3, sales 3	7/11/2017 8:55 AM

## Q5 Please indicate the level of education required to be hired by your organization.

Answered: 10   Skipped: 40
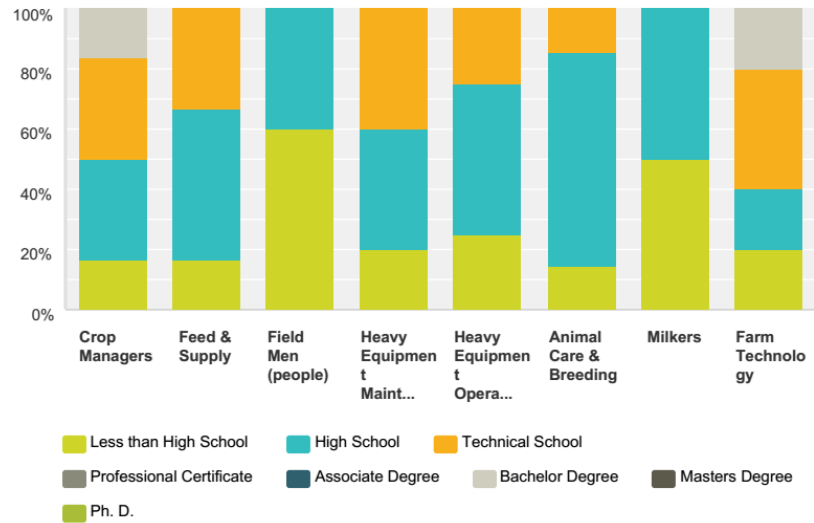
	Less than High School	High School	Technical School	Professional Certificate	Associate Degree	Bachelor Degree	Masters Degree	Ph. D.	Total
Crop Managers	16.67% 1	33.33% 2	33.33% 2	0.00% 0	0.00% 0	16.67% 1	0.00% 0	0.00% 0	6
Feed & Supply	16.67% 1	50.00% 3	33.33% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	6
Field Men (people)	60.00% 3	40.00% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	5
Heavy Equipment Maintenance	20.00% 1	40.00% 2	40.00% 2	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	5
Heavy Equipment Operators	25.00% 1	50.00% 2	25.00% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	4
Animal Care & Breeding	14.29% 1	71.43% 5	14.29% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	7
Milkers	50.00% 3	50.00% 3	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	6
Farm Technology	20.00% 1	20.00% 1	40.00% 2	0.00% 0	0.00% 0	20.00% 1	0.00% 0	0.00% 0	5

Q6 Please indicate the amount of experience required to be hired by your organization.

Answered: 10   Skipped: 40
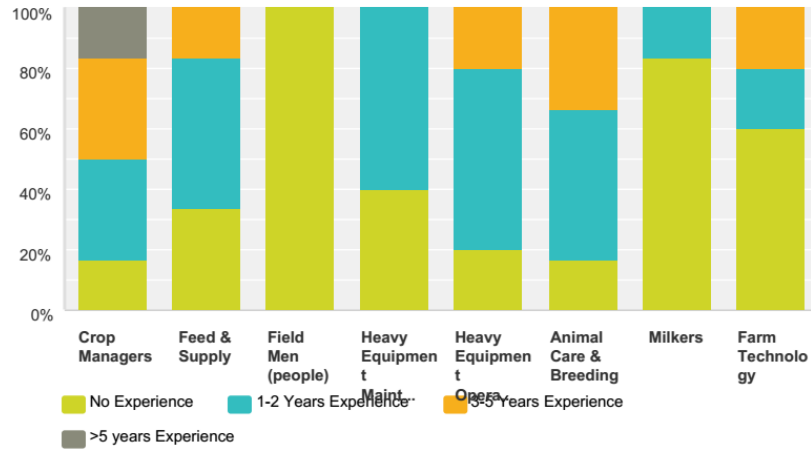
	No Experience	1-2 Years Experience	3-5 Years Experience	>5 years Experience	Total
Crop Managers	16.67% 1	33.33% 2	33.33% 2	16.67% 1	6
Feed & Supply	33.33% 2	50.00% 3	16.67% 1	0.00% 0	6
Field Men (people)	100.00% 5	0.00% 0	0.00% 0	0.00% 0	5
Heavy Equipment Maintenance	40.00% 2	60.00% 3	0.00% 0	0.00% 0	5
Heavy Equipment Operators	20.00% 1	60.00% 3	20.00% 1	0.00% 0	5
Animal Care & Breeding	16.67% 1	50.00% 3	33.33% 2	0.00% 0	6
Milkers	83.33% 5	16.67% 1	0.00% 0	0.00% 0	6
Farm Technology	60.00% 3	20.00% 1	20.00% 1	0.00% 0	5

34

Q7 What training resources does your organization currently use to meet the skills needs of its workforce?

Answered: 11   Skipped: 39
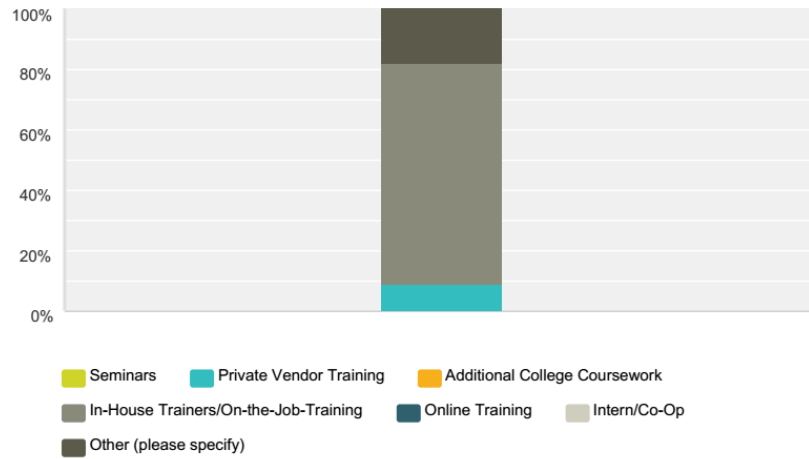
Answer Choices	Responses	
Seminars	**0.00%**	0
Private Vendor Training	**9.09%**	1
Additional College Coursework	**0.00%**	0
In-House Trainers/On-the-Job-Training	**72.73%**	8
Online Training	**0.00%**	0
Intern/Co-Op	**0.00%**	0
Other (please specify)	**18.18%**	2
Total		11

#	Other (please specify)	Date
1	we utulize all of the above	7/11/2017 8:55 AM
2	on job training	7/10/2017 7:21 PM

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Q8 How often do you use the services of the following?

Answered: 11   Skipped: 39

Legend: Never, Sometimes, Usually, Always

	Never	Sometimes	Usually	Always	Total
Workforce Development Board (WDB)	100.00% 11	0.00% 0	0.00% 0	0.00% 0	11
Workforce Development Institute	100.00% 11	0.00% 0	0.00% 0	0.00% 0	11
CITEC	100.00% 10	0.00% 0	0.00% 0	0.00% 0	10
Manufacturers Association of Central New York (MACNY)	90.91% 10	9.09% 1	0.00% 0	0.00% 0	11

Q9 Please indicate the primary reason(s) applicants are rejected for the positions above.

Answered: 10   Skipped: 40

Legend: Rarely, Occasionally, Frequently
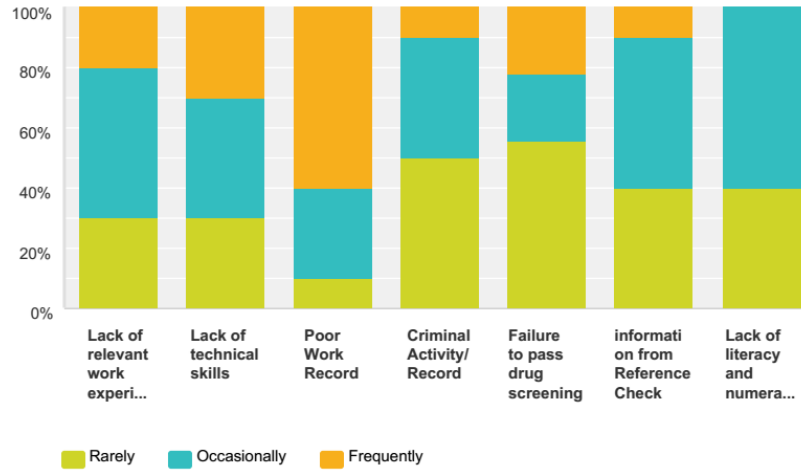
	Rarely	Occasionally	Frequently	Total
Lack of relevant work experience	30.00% 3	50.00% 5	20.00% 2	10
Lack of technical skills	30.00% 3	40.00% 4	30.00% 3	10
Poor Work Record	10.00% 1	30.00% 3	60.00% 6	10
Criminal Activity/Record	50.00% 5	40.00% 4	10.00% 1	10
Failure to pass drug screening	55.56% 5	22.22% 2	22.22% 2	9
information from Reference Check	40.00% 4	50.00% 5	10.00% 1	10
Lack of literacy and numeracy skills	40.00% 4	60.00% 6	0.00% 0	10

Q10 Please indicate the primary reason(s) that existing employees are dismissed/fired.

Answered: 10   Skipped: 40
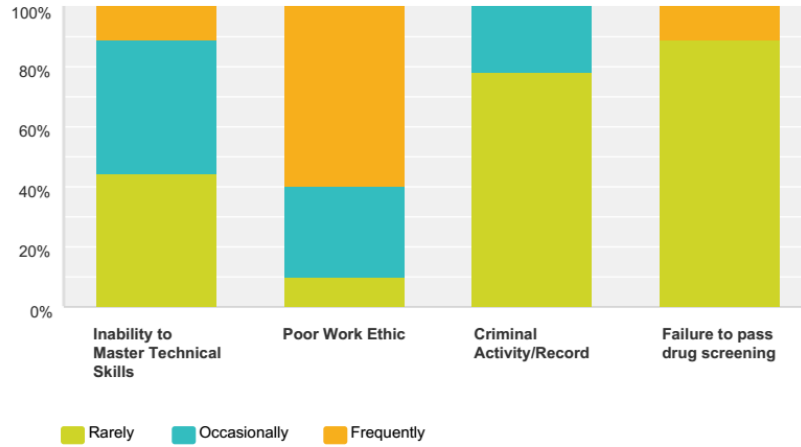
	Rarely	Occasionally	Frequently	Total
Inability to Master Technical Skills	44.44% 4	44.44% 4	11.11% 1	9
Poor Work Ethic	10.00% 1	30.00% 3	60.00% 6	10
Criminal Activity/Record	77.78% 7	22.22% 2	0.00% 0	9
Failure to pass drug screening	88.89% 8	0.00% 0	11.11% 1	9

#	Other (please specify)	Date
1	family farm - none of this applies	7/11/2017 5:43 PM

38

Q11 HOSPITALITY INDUSTRY: For each job title, please indicate the number of positions currently in your organization.

Answered: 14   Skipped: 36
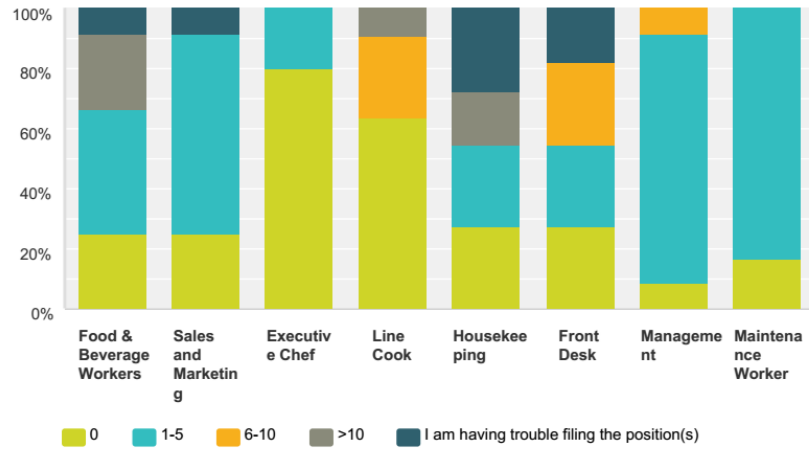
	0	1-5	6-10	>10	I am having trouble filing the position(s)	Total
Food & Beverage Workers	25.00% 3	41.67% 5	0.00% 0	25.00% 3	8.33% 1	12
Sales and Marketing	25.00% 3	66.67% 8	0.00% 0	0.00% 0	8.33% 1	12
Executive Chef	80.00% 8	20.00% 2	0.00% 0	0.00% 0	0.00% 0	10
Line Cook	63.64% 7	0.00% 0	27.27% 3	9.09% 1	0.00% 0	11
Housekeeping	27.27% 3	27.27% 3	0.00% 0	18.18% 2	27.27% 3	11
Front Desk	27.27% 3	27.27% 3	27.27% 3	0.00% 0	18.18% 2	11
Management	8.33% 1	83.33% 10	8.33% 1	0.00% 0	0.00% 0	12
Maintenance Worker	16.67% 2	83.33% 10	0.00% 0	0.00% 0	0.00% 0	12

Q12 Company Size

Large (>30 employees)
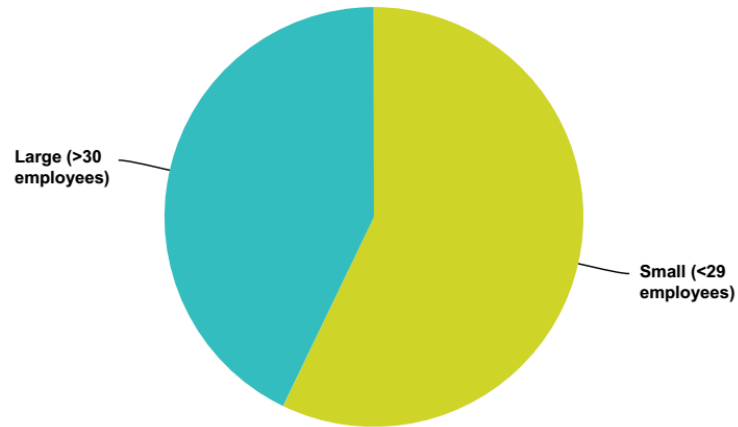
Small (<29 employees)

Answer Choices	Responses	
Small (<29 employees)	**57.14%**	8
Large (>30 employees)	**42.86%**	6
Total		**14**

Q13 For each job title, please indicate the anticipated number of positions in your organization five (5) years from now:

Answered: 14   Skipped: 36
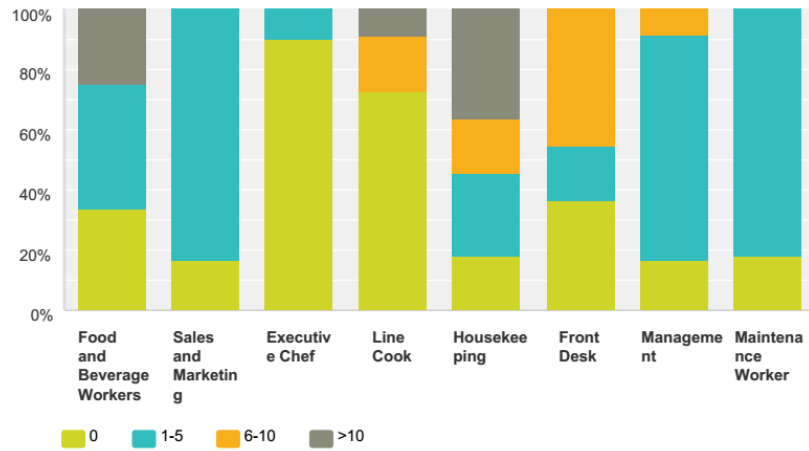
	0	1-5	6-10	>10	Total
Food and Beverage Workers	33.33% 4	41.67% 5	0.00% 0	25.00% 3	12
Sales and Marketing	16.67% 2	83.33% 10	0.00% 0	0.00% 0	12
Executive Chef	90.00% 9	10.00% 1	0.00% 0	0.00% 0	10
Line Cook	72.73% 8	0.00% 0	18.18% 2	9.09% 1	11
Housekeeping	18.18% 2	27.27% 3	18.18% 2	36.36% 4	11
Front Desk	36.36% 4	18.18% 2	45.45% 5	0.00% 0	11
Management	16.67% 2	75.00% 9	8.33% 1	0.00% 0	12
Maintenance Worker	18.18% 2	81.82% 9	0.00% 0	0.00% 0	11

#	Other (please specify)	Date
	There are no responses.	

41

## Q14 Please indicate the level of education required to be hired by your organization.

Answered: 14   Skipped: 36
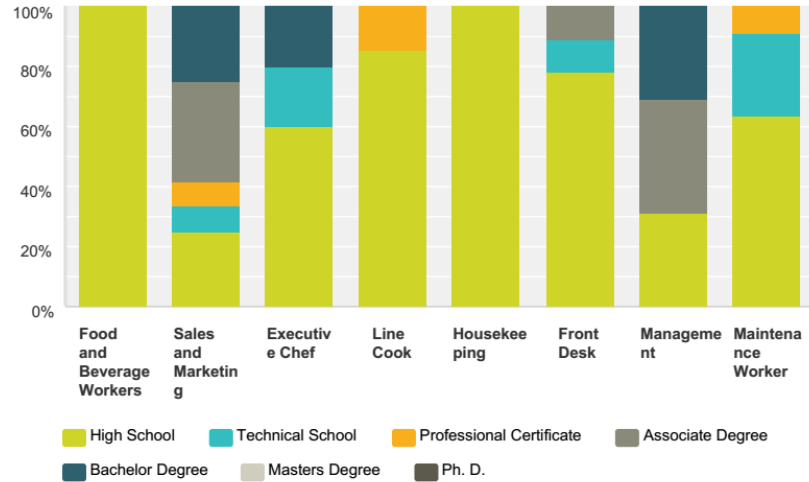
	High School	Technical School	Professional Certificate	Associate Degree	Bachelor Degree	Masters Degree	Ph. D.	Total
Food and Beverage Workers	100.00% 11	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	11
Sales and Marketing	25.00% 3	8.33% 1	8.33% 1	33.33% 4	25.00% 3	0.00% 0	0.00% 0	12
Executive Chef	60.00% 3	20.00% 1	0.00% 0	0.00% 0	20.00% 1	0.00% 0	0.00% 0	5
Line Cook	85.71% 6	0.00% 0	14.29% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	7
Housekeeping	100.00% 9	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	0.00% 0	9
Front Desk	77.78% 7	11.11% 1	0.00% 0	11.11% 1	0.00% 0	0.00% 0	0.00% 0	9
Management	30.77% 4	0.00% 0	0.00% 0	38.46% 5	30.77% 4	0.00% 0	0.00% 0	13
Maintenance Worker	63.64% 7	27.27% 3	9.09% 1	0.00% 0	0.00% 0	0.00% 0	0.00% 0	11

42

## Q15 Please indicate the amount of experience required to be hired by your organization.

Answered: 14   Skipped: 36
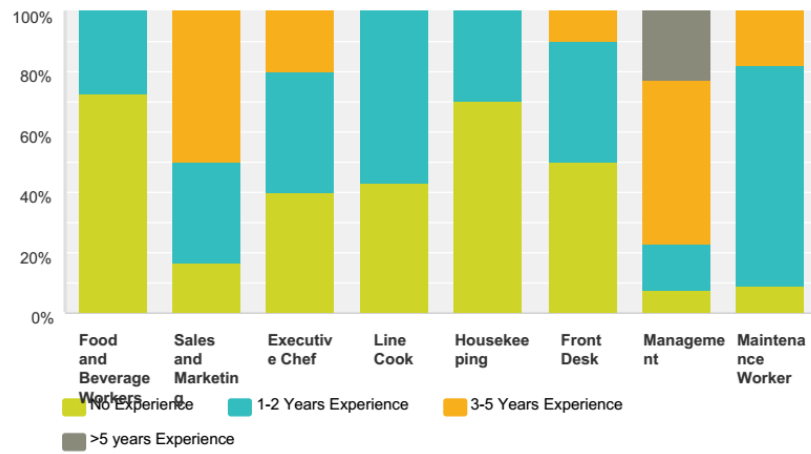
	No Experience	1-2 Years Experience	3-5 Years Experience	>5 years Experience	Total
Food and Beverage Workers	72.73% 8	27.27% 3	0.00% 0	0.00% 0	11
Sales and Marketing	16.67% 2	33.33% 4	50.00% 6	0.00% 0	12
Executive Chef	40.00% 2	40.00% 2	20.00% 1	0.00% 0	5
Line Cook	42.86% 3	57.14% 4	0.00% 0	0.00% 0	7
Housekeeping	70.00% 7	30.00% 3	0.00% 0	0.00% 0	10
Front Desk	50.00% 5	40.00% 4	10.00% 1	0.00% 0	10
Management	7.69% 1	15.38% 2	53.85% 7	23.08% 3	13
Maintenance Worker	9.09% 1	72.73% 8	18.18% 2	0.00% 0	11

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Q16 What training resources does your organization currently use to meet the skills needs of its workforce?

Answered: 13   Skipped: 37
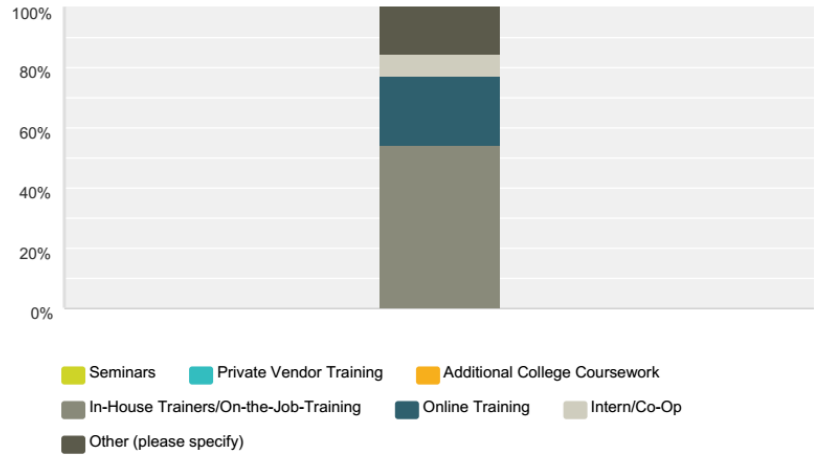
Answer Choices	Responses	
Seminars	**0.00%**	0
Private Vendor Training	**0.00%**	0
Additional College Coursework	**0.00%**	0
In-House Trainers/On-the-Job-Training	**53.85%**	7
Online Training	**23.08%**	3
Intern/Co-Op	**7.69%**	1
Other (please specify)	**15.38%**	2
Total		**13**

#	Other (please specify)	Date
1	On Line training,In house training and Intern training	7/10/2017 8:21 PM
2	Options not working all of they above.	7/10/2017 1:43 PM

Q17 How often do you use the services of the following?

Answered: 14   Skipped: 36

Legend: Never, Sometimes, Usually, Always
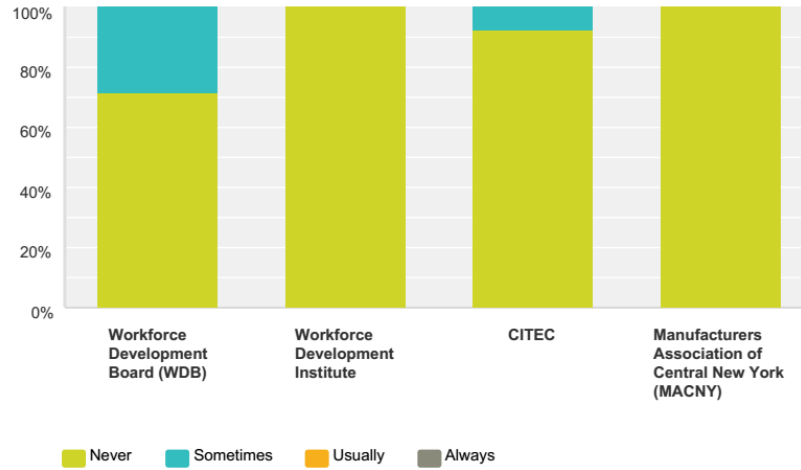
	Never	Sometimes	Usually	Always	Total
Workforce Development Board (WDB)	71.43% 10	28.57% 4	0.00% 0	0.00% 0	14
Workforce Development Institute	100.00% 13	0.00% 0	0.00% 0	0.00% 0	13
CITEC	92.31% 12	7.69% 1	0.00% 0	0.00% 0	13
Manufacturers Association of Central New York (MACNY)	100.00% 13	0.00% 0	0.00% 0	0.00% 0	13

Q18 Please indicate the primary reason(s) applicants are rejected for the positions above.

Answered: 14   Skipped: 36
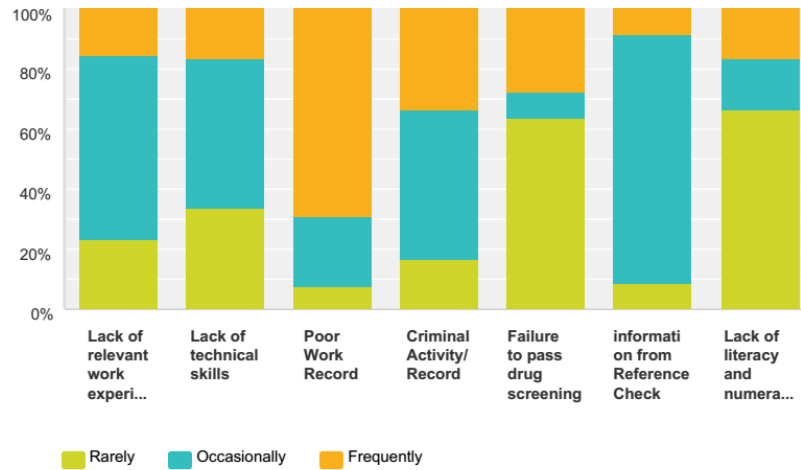
	Rarely	Occasionally	Frequently	Total
Lack of relevant work experience	23.08% 3	61.54% 8	15.38% 2	13
Lack of technical skills	33.33% 4	50.00% 6	16.67% 2	12
Poor Work Record	7.69% 1	23.08% 3	69.23% 9	13
Criminal Activity/Record	16.67% 2	50.00% 6	33.33% 4	12
Failure to pass drug screening	63.64% 7	9.09% 1	27.27% 3	11
information from Reference Check	8.33% 1	83.33% 10	8.33% 1	12
Lack of literacy and numeracy skills	66.67% 8	16.67% 2	16.67% 2	12

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Q19 Please indicate the primary reason(s) that existing employees are dismissed/fired.

Answered: 13   Skipped: 37

Legend: Rarely (green), Occasionally (teal), Frequently (orange)
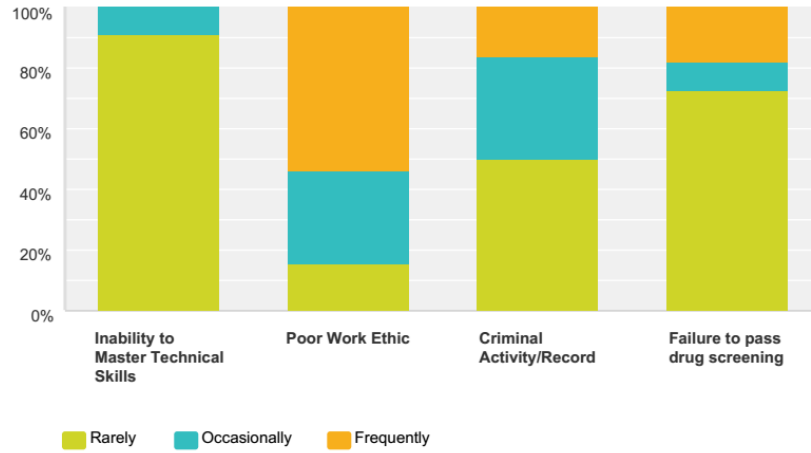
	Rarely	Occasionally	Frequently	Total
Inability to Master Technical Skills	90.91% 10	9.09% 1	0.00% 0	11
Poor Work Ethic	15.38% 2	30.77% 4	53.85% 7	13
Criminal Activity/Record	50.00% 6	33.33% 4	16.67% 2	12
Failure to pass drug screening	72.73% 8	9.09% 1	18.18% 2	11

#	Other (please specify)	Date
1	NO show/No Call	7/11/2017 9:58 AM
2	Must come to this position with a lot of life skills.	7/10/2017 8:21 PM
3	Attendance issues and lack of product quaility	7/10/2017 1:43 PM

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List of Companies that Participated in the Survey

Afgritech, LLC
Allen Vanguard
APG-Neuros Corp
Barrett Paving Materials Inc.
Bestway of New York, Inc.
Carthage Fibre Drum, Inc.
CEM Machine, Inc.
Clayton Distillery
Climax Manufacturing Company
Conroy & Conroy Contractors, Inc.
Corning
Coughlin Printing
Coyote Moon
Current Applications, Inc.
Curtis Furniture
DeFelsko Corporation
FiberMark North America, Inc. (multiple locations)
Florelle Tissue
Fujitsu
Hoosier Magnetics, Inc.
Jefferson Concrete Corp.
Jeffords Steel and Engineering Co
Metal Man Services
MetalCraft Marine, US
Monaghan Medical Corp.
New York Air Brake
Omniafiltra, LLC
Otis Products, Inc.
Pepsi Cola Ogdensburg Bottlers
Plattco Corp
Purcell Construction Corp.
Qubica AMF
ReEnergy Black River, LLC
Schluter Systems L.P.
Spencerarl NY, Inc.
Taylor Concrete Products, Inc.
Timeless Frames
Trudeau Institute
Vanderbilt Minerals, LLC – Gouverneur Mineral Division
Water Works
Watertown Concrete
(*Agricultural and Hospitality/Tourism companies were surveyed anonymously.*)

Job Categories with O*Net Codes, Degree Requirements and Local Educational Opportunities

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Animal Breeders	45-2021.00	Minimum: High School Diploma or Equivalent	**CV-TEC:** Animal Science/Veterinary Assistant **Jeff-Lewis BOCES:** Veterinary Practices **SUNY Canton:** Veterinary Science Technology A.A.S. **SUNY Jefferson:** Animal/Livestock Husbandry and Production *(**Morrisville State College**: Horse Husbandry/Equine Science and Management)
Assemblers and Fabricators, All Other	51-2099.00	Minimum: High School Diploma or Equivalent	**CV-TEC:** Assembly Industry Manufacturing Education **Jeff-Lewis BOCES:** Auto Body Repair, Welding Technology **St. Lawrence-Lewis BOCES:** Metalworking Technology **SUNY Canton:** General Technology A.A.S.
Bartenders	35-3011.00	Minimum: Less than High School Diploma	**Jeff-Lewis BOCES:** Introduction to Trades, Hospitality Services **SUNY Jefferson:** Hospitality & Tourism Certificate **SUNY Plattsburgh:** Hotel, Restaurant, & Tourism Management **Paul Smith's College:** Hotel & Restaurant Management A.A.S., Hotel, Resort & Tourism Management B.S.
Bookkeeping, Accounting, and Auditing Clerks	43-3031.00	Depending on the company and position, minimums range from a High School Diploma to a Master's Degree, plus Certifications.	**CV-TEC:** Professional Bookkeeping, Accounting Principles **Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business **St. Lawrence-Lewis BOCES:** Computer & Business Technology **Clinton Community College:** Business Accounting A.A.S., Payroll Certificate **North Country Community College:** Business Administration A.A.S./A.S. **SUNY Jefferson:** Accounting A.A.S., Accounting A.S., Accounting Certificate, Office Technology Certificate, Office Technology: Administrative Assistant A.A.S. **SUNY Canton:** Finance B.B.A., Accounting A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration **SUNY Plattsburgh:** Accounting B.S., Accounting Minor **Clarkson University:** Business Administration B.S. **Paul Smith's College:** Business Management & Entrepreneurial Studies

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Chefs and Head Cooks	35-1011.00	Depending on the company and position, minimums range from a High School Diploma, or equivalent, to an Associate's Degree.	**CV-TEC:** Culinary Arts Management **FEH BOCES:** Culinary Arts **Jeff-Lewis BOCES:** Culinary Arts/Baking **St. Lawrence-Lewis BOCES:** Culinary Arts **Paul Smith's College:** Culinary Arts/Chef Training, Baking and Pastry Arts/Baker/Pastry Chef **SUNY Jefferson:** Hospitality and Tourism A.A.S Culinary Arts Concentration, Hospitality & Tourism Certificate **SUNY Plattsburgh:** Hotel, Restaurant, & Tourism Management **Paul Smith's College:** Baking & Pastry Arts A.A.S., Culinary Arts A.A.S., Baking Arts & Service Management B.S., Culinary Arts & Service Management B.S., Food Service & Beverage Management B.S.
Chemical Engineers	17-2041.00	Minimum: Bachelor's Degree	**St. Lawrence-Lewis BOCES:** Pre-Engineering **North Country Community College:** Liberal Arts & Sciences: Math & Science A.S. **SUNY Jefferson:** Engineering Science A.S. **SUNY Canton:** Engineering Science A.S. **SUNY Empire:** Associate of Science, Bachelor of Science **Clarkson University:** Chemical Engineering B.S.
Commercial and Industrial Designers	27-1021.00	Minimum: Bachelor's Degree	**Jeff-Lewis BOCES:** Computer-Aided Drafting & Design **St. Lawrence-Lewis BOCES:** Computer & Business Technology, Graphic Communications **North Country Community College:** Computer Graphics & Design A.A.S., Computer Graphics & Design Certificate **SUNY Canton:** Graphic & Multimedia Design B. Tech **SUNY Empire:** Associate of Arts, Bachelor of Arts
Computer Programmers and Machine Programmers	15-1131.00	Minimum: Bachelor's Degree	**St. Lawrence-Lewis BOCES:** Computer & Business Technology **Clinton Community College:** Computer Information Systems A.A.S., Computer Technology A.A.S., Computer Support Certificate **North Country Community College:** Computer Graphics & Design A.A.S., Computer Graphics & Design Certificate, Office Technology Certificate **SUNY Jefferson:** Computer Information Systems A.S., Computer Information Technology A.A.S., Computer Science. A.S. **SUNY Canton:** Information Technology B. Tech, Computer Information Systems A.A.S. **SUNY Plattsburgh:** Computer Science B.A., B.S. **SUNY Potsdam:** Computer Science B.S. **Clarkson University:** Computer Programming B.S., Electrical Engineering B.S.

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Computer User Support Specialists	15-1151.00	Minimum: Associate's Degree	**Jeff-Lewis BOCES:** Office Technology, Electronic & Computer Technology **St. Lawrence-Lewis BOCES:** Computer & Business Technology **Clinton Community College:** Computer Support Certificate, Computer Information Systems A.A.S., Computer Technology Systems A.A.S. **North Country Community College:** Office Technology Certificate **SUNY Jefferson:** Computer Information Systems A.S., Computer Information Technology A.A.S., Computer Science, A.S., Office Technology Certificate, Office Technology: Office Assistant A.A.S., Business Administration A.S./A.A.S. **SUNY Canton:** Information Technology B. Tech, Computer Information Systems. A.A.S. **Clarkson University:** Computer Programming B.S.
Cooks, Fast Food	35-2011.00	Minimum: Less than High School Diploma	**CV-TEC:** Culinary Arts Management **FEH BOCES:** Culinary Arts **Jeff-Lewis BOCES:** Culinary Arts/Baking **St. Lawrence-Lewis BOCES:** Culinary Arts **SUNY Jefferson:** Hospitality and Tourism A.A.S Culinary Arts Concentration, Hospitality & Tourism Certificate **SUNY Plattsburgh:** Hotel, Restaurant, & Tourism Management **Paul Smith's College:** Baking & Pastry Arts A.A.S., Culinary Arts A.A.S., Baking Arts & Service Management B.S., Culinary Arts & Service Management B.S., Food Service & Beverage Management B.S.
Customer Service Representatives	43-4051.00	Minimum: High School Diploma or Equivalent	**CV-TEC:** National Retail Federation Certification **Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business **Clinton Community College:** Business Administration A.A.S./A.S. **North Country Community College:** Business: Office Technology A.A.S. **SUNY Canton:** Individual Studies Business A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Database Administrators	15-1141.00	Minimum: Bachelor's Degree	**CV-TEC:** Introduction to Database Administration **Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business, Electronic & Computer Technology **St. Lawrence-Lewis BOCES:** Computer & Business Technology **Clinton Community College:** Computer Information Systems A.A.S., Computer Technology A.A.S., Computer Support Certificate **North Country Community College:** Business Administration A.A.S., Office Technology Certificate, Business: Office Technology A.A.S. **SUNY Canton:** Information Technology B. Tech, Computer Information Systems A.A.S. **SUNY Jefferson:** Computer Information Systems A.S., Computer Information Technology A.A.S., Computer Science, A.S., Office Technology Certificate, Office Technology: Administrative Assistant A.A.S.**SUNY** **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration, Associate of Science, Bachelor of Science **SUNY Plattsburgh:** Information Technology B.S. **SUNY Potsdam:** Computer Science **Clarkson University:** Computer Science B.S., Financial Systems & Business Processes B.S.
Electrical Engineers	17-2071.00	Minimum: Bachelor's Degree	**Jeff-Lewis BOCES:** Electrical Wiring Technology, Electronic & Computer Technology **St. Lawrence-Lewis BOCES:** Electronics **Clinton Community College:** Electrical Technology: Electronics A.A.S. **North Country Community College:** Liberal Arts & Sciences: Math & Science A.S. **SUNY Jefferson:** Engineering Science A.S. **SUNY Canton:** Electrical Technology B. Tech, Electrical Engineering Technology A.A.S., Electrical Construction & Maintenance Certificate **SUNY Empire:** Associate of Science, Bachelor of Science **Clarkson University:** Electrical Engineering B.S.

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Electricians	47-2111.00	Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship	**CV-TEC:** Electrical Design, Installation & Alternative Energy **Jeff-Lewis BOCES:** Electrical Wiring Technology **St. Lawrence-Lewis BOCES:** Electronics **Clinton Community College:** Electronic Technology: Electronics A.A.S. **SUNY Canton:** Electrical Technology B. Tech, Electrical Engineering Technology A.A.S., Electrical Construction & Maintenance Certificate **IBEW Local Union 910**: Electrical Registered Apprenticeship
Environmental Engineers	17-2081.00	Minimum: Bachelor's Degree, Preferred: Master's Degree	**CV-TEC:** Environmental Conservation & Forestry, Natural Resources Management **FEH BOCES:** Natural Resources Sciences **Jeff-Lewis BOCES:** New Vision Alternative Energy, Environmental Conservation & Forestry **St. Lawrence-Lewis BOCES:** Environmental Technology, Pre-Engineering **Clinton Community College:** Environmental Technology A.A.S., Renewable Energy Technologies Certificate, Renewable Energy Technologies A.A.S. **North Country Community College:** Environmental Science A.S., Liberal Arts & Sciences: Math & Science A.S. **SUNY Jefferson:** Engineering Science A.S., Renewable Energy Management Certificate **SUNY Canton:** Alternative & Renewable Energy Systems, Engineering Science A.S. **SUNY Empire:** Associate of Science, Bachelor of Science **SUNY Plattsburgh:** Environmental Science B.A./B.S., Ecology Study Option B.S., Environmental Planning & Management Option B.A., Applied Geographic Information Systems Minor, Environmental Studies Minor, Environmental Studies B.A., Perspectives on the Environment Minor **Clarkson University:** Environmental Engineering B.S. **Paul Smith's College:** Environmental Sciences B.A., Environmental Studies B.S.

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Farm Equipment Mechanics and Service Technicians	49-3041.00	Depending on the company & position, minimum is High School Diploma or equivalent, plus Certifications.	**CV-TEC:** Heavy Equipment/Diesel Mechanics **FEH BOCES:** Heavy Equipment Repair & Operation **Jeff-Lewis BOCES:** Heavy Equipment Operations ***(SUNY College of Agriculture and Technology at Cobleskill:** Agriculture Mechanization, General**)** ***(Morrisville State College:** Agriculture Mechanics and Equipment/Machine Technology**)**
Farmworkers and Laborers, Crop, Nursery, and Greenhouse	45-2092.00	N/A	**CV-TEC:** Environmental Conservation/Forestry Program **FEH BOCES:** Natural Resource Conservation, 21st Century Agricultural Science **Jeff-Lewis BOCES:** Environmental Conservation and Forestry **North Country Community College:** Environmental Science
Financial Managers	11-3031.00	Depending on the company & position, minimums range from an Associate's Degree to a Master's Degree, plus Certifications.	**Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business **St. Lawrence-Lewis BOCES:** Computer & Business Technology **Clinton Community College:** Business Accounting A.A.S., Payroll Certificate, Business Administration A.A.S./A.S. **North Country Community College:** Business Administration A.A.S., Business: Office Technology A.A.S. **SUNY Jefferson:** Accounting A.A.S., Accounting A.S., Accounting Certificate, Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Technology Certificate, Office Technology: Office Assistant A.A.S. **SUNY Canton:** Finance B.B.A., Accounting A.A.S., Individual Studies Business A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration **SUNY Plattsburgh:** Finance B.S. **SUNY Potsdam:** Business Administration B.S. **Clarkson University:** Financial Information & Analysis B.S. , Financial Systems & Business Processes B.S. **Paul Smith's College:** Business Management & Entrepreneurial Studies

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
General and Operations Managers	11-1021.00	Depending on the company & position, minimums range from an Associate's Degree to a Bachelor's Degree, plus Certifications.	**Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business **Clinton Community College:** Business Administration A.A.S./A.S. **North Country Community College:** Business Administration A.A.S., Business: Office Technology A.A.S. **SUNY Jefferson:** Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S. **SUNY Canton:** Management B.B.A., Individual Studies Business A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration **SUNY Plattsburgh:** Management B.S. **Clarkson University:** Engineering & Management B.S., Global Supply Chain Management B.S. **Paul Smith's College:** Business Management B.S.
Graphic Designers	27-1024.00	Minimum: Bachelor's Degree	**CV-TEC:** Arts, Audio, Video Technology & Communications Cluster, Digital Art Design, Graphic Design & Communications **Jeff-Lewis BOCES:** Visual Communication, Virtual Business **St. Lawrence-Lewis BOCES:** Graphic Communications **North Country Community College:** Computer Graphics & Design A.A.S., Computer Graphics & Design Certificate **SUNY Jefferson:** Computer Information Systems A.S., Computer Information Technology A.S. **SUNY Canton:** Graphic and Multimedia Design **SUNY Empire:** Associate of Arts, Bachelor of Arts **Clarkson University:** Digital Arts & Science B.S.
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	17-2111.01	Minimum: Bachelor's Degree	**St. Lawrence-Lewis BOCES:** Pre-Engineering **Clinton Community College:** Liberal Arts: Math & Science A.S. **North Country Community College:** Liberal Arts & Sciences: Math & Science **SUNY Jefferson:** Engineering Science A.S. **SUNY Canton:** Engineering Science A.S., Mechanical Engineering Technology A.A.S., Civil Engineering Technology A.A.S. **SUNY Empire:** Associate of Science, Bachelor of Science **Clarkson University:** Environmental Engineering B.S.

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	49-9021.00	Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship	**FEH BOCES:** Heating, Ventilation & Air Conditioning **Jeff-Lewis BOCES:** Plumbing, Heating, & Air Conditioning, Welding Technology **St. Lawrence-Lewis BOCES:** HVAC/R **SUNY Canton:** Air Conditioning Engineering Technology A.A.S., Apprentice Training: Industrial Trades A.A.S., Air Conditioning Maintenance & Repair Certificate, Heating & Plumbing Service Certificate **Sheet Metal Workers Local Union 58:** Registered Apprenticeship
Hotel, Motel, and Resort Desk Clerks	43-4081.00	Minimum: Less than High School Diploma	**Jeff-Lewis BOCES:** Introduction to Trades, Hospitality Services **SUNY Jefferson:** Hospitality and Tourism A.A.S. Hotel/Restaurant Management Concentration **SUNY Plattsburgh**: Hotel, Restaurant, & Tourism Management B.S. **Paul Smith's College:** Hotel & Restaurant Management A.A.S., Hotel, Resort and Tourism Management B.S.
Human Resources Specialists	13-1071.00	Minimum: Associate's Degree to MBA	**Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business **Clinton Community College:** Business Administration A.A.S./A.S. **North Country Community College:** Business Administration A.A.S., Business: Office Technology A.A.S., Office Technology Certificate **SUNY Jefferson:** Business Administration A.A.S., Business Administration A.S., Office Technology Certification, Office Technologies: Administrative Assistant A.A.S. **SUNY Canton:** Management B.B.A., Business Administration A.S./A.A.S., Individual Studies Business A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration **SUNY Potsdam:** Business Administration B.S. **Clarkson University:** Human Resource Management B.S.
Industrial Engineers	17-2112.00	Minimum: Bachelor's Degree	**St. Lawrence-Lewis BOCES:** Pre-Engineering **Clinton Community College:** Liberal Arts: Math & Science A.S. **North Country Community College:** Liberal Arts & Sciences: Math & Science **SUNY Canton:** Industrial Technology Management, Apprentice Training: Industrial Trades A.A.S. **SUNY Potsdam:** Computer Science B.S. **Clarkson University:** Computer Programming B.S., Electrical Engineering B.S., Engineering and Management B.S., Mechanical Engineering B.S., Chemical Engineering B.S., Process Engineering B.S., Supply Chain Management B.S.

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Industrial Machinery Mechanics	49.9041.00	Minimum: High School Diploma or Equivalent with certification	**CV-TEC:** Heavy Equipment/Diesel Mechanics, Electrical Design, Installation, Alternative Energy **Jeff-Lewis BOCES:** Building Maintenance, Welding Technology **Clinton Community College:** Industrial Technology A.A.S. **SUNY Canton:** Industrial Technology Management, Apprentice Training: Industrial Trades A.A.S.
Industrial Production Managers	11-3051.00	Minimum: Bachelor's Degree	**Clinton Community College:** Industrial Technology A.A.S. **North Country Community College:** Business Administration A.A.S./A.S. **SUNY Canton:** Industrial Technology Management B. Tech **SUNY Plattsburgh:** Management B.S., Global Supply Chain Management B.S. **Clarkson University:** Engineering and Management B.S.
Machinists	51-4041.00	Minimum: High School Diploma with Apprenticeship	**Jeff-Lewis BOCES:** Manufacturing Technology **Clinton Community College:** Industrial Technology A.A.S. **SUNY Canton:** General Technology A.A.S. **On-the-Job Training**
Maids and Housekeeping Cleaners	37-2012.00	Minimum: Less than High School Diploma	**Jeff-Lewis BOCES:** Introduction to Trades, Hospitality Services
Maintenance and Repair Workers, General	49-9071.00	Minimum: Less than High School Diploma	**CV-TEC:** Auto Collison Repair, Pre-CTE Automotive Service, Automotive Tech, Construction Trades, Small Engines & Marine Technology FEH BOCES: Auto Technology; Building Trades; Heating, Ventilation and Air Conditioning **Jeff-Lewis BOCES:** Auto Body Repair; Automotive Technology; Gas/Diesel Mechanics; Motorcycle, Marine and Power Sports; Welding Technology St. Lawrence-Lewis BOCES: Automotive Technology, Building Trades, HVAC/R, Metalworking Technology, Multi Occupations

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Marketing Managers and Sales Managers	11-2021.00; 11-2022.00	Minimum: Bachelor's Degree	**Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business **Clinton Community College:** Business Accounting A.A.S., Business Administration A.A.S./A.S., Payroll Certificate **North Country Community College:** Liberal Arts & Sciences: Math & Science **SUNY Jefferson:** Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Studies Certificate, Office Technologies A.A.S. **SUNY Canton:** Management B.B.A, Accounting A.A.S., Individual Studies Business A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration **SUNY Plattsburgh:** Management B.S., Management Information Systems B.S., Business Analysis Minor, Marketing B.S., Marketing Minor **SUNY Potsdam:** Business Administration B.S. **Clarkson University:** Communications B.S., Digital Arts and Sciences B.S., Business Administration B.S., Supply Chain Management B.S. **Paul Smith's College:** Food Service & Beverage Management, Hotel Resort and Tourism Management
Materials Engineers	17-2131.00	Minimum: Bachelor's Degree	**St. Lawrence-Lewis BOCES:** Pre-Engineering **Clinton Community College:** Liberal Arts: Math & Science A.S. **North Country Community College:** Liberal Arts & Sciences: Math & Science A.S. **SUNY Canton:** Engineering Science A.S. **Clarkson University:** Material Science in all Engineering degree programs
Mechanical Engineers	17-2141.00	Minimum: Bachelor's Degree	**Jeff-Lewis BOCES:** Plumbing, Heating, & Air Conditioning, Computer-Aided Drafting & Design, Gas/Diesel Mechanics, Welding Technology **St. Lawrence-Lewis BOCES:** Pre-Engineering **North Country Community College:** Liberal Arts & Sciences: Math & Science A.S. **SUNY Jefferson:** Engineering Science A.S. **SUNY Canton:** Engineering Science A.S. **SUNY Empire:** Associate of Science, Bachelor of Science **Clarkson University:** Aeronautical and Mechanical Engineering B.S.

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Motor Vehicle Operators, All Other	53-3099.00	Minimum: High School Diploma or Equivalent with Specified Driver's License and Certifications	**CV-TEC:** CDL Training **Jeff-Lewis BOCES:** Automotive Technology, Gas/Diesel Mechanics, Heavy Equipment **SUNY Canton:** Mechanical Technology B. Tech
Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	51-4081.00	Minimum: High School Diploma with Apprenticeship	**Jeff-Lewis BOCES:** Manufacturing Technology **Clinton Community College:** Industrial Technology A.A.S. **SUNY Canton:** General Technology A.A.S. **On-the-Job Training**
Office and Administrative Support Workers, All Other	43-9199.00	Minimum: High School Diploma or Equivalent Preferred: Certifications	**Jeff-Lewis BOCES:** Applied Business Technology, Office Technology, Virtual Business **St. Lawrence-Lewis BOCES:** Computer & Business Technology **Clinton Community College:** Business Administration A.A.S./A.S., Computer Technology A.A.S., Computer Information Systems A.A.S. **North Country Community College:** Business Administration A.A.S./A.S., Office Technology Certification, Business: Office Technology A.A.S. **SUNY Jefferson:** Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Studies Certificate, Office Technologies: Administrative Assistant A.A.S. **SUNY Canton:** Business Administration A.S./A.A.S., Individual Studies Business A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration
Occupational Health and Safety Specialists	29-9011.00	Minimum: Bachelor's Degree	**CV-TEC:** AIME Training: OSHA 10 **Clinton Community College:** Liberal Arts: Math & Science A.S. **North Country Community College:** Liberal Arts & Sciences: Math & Science A.S. **SUNY Jefferson:** Mathematics & Science A.A.S. **SUNY Empire:** Associate of Science, Bachelor of Science
Packers and Packagers, Hand	53-7064.00	Minimum: High School Diploma or Equivalent, Preferred: Certifications	**Jeff-Lewis BOCES:** Visual Communication **St. Lawrence-Lewis BOCES:** Graphic Communications **On-the-Job Training**

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Plumbers, Pipe Fitters, and Steamfitters	47-2152.00	Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship	**Jeff-Lewis BOCES:** Plumbing, Heating & Air Conditioning, Welding Technology **St. Lawrence-Lewis BOCES:** HVAC/R **SUNY Canton:** General Technology A.A.S., Heating & Plumbing Service Certificate **United Association of Plumbers Local Union 73 and Local Union 773:** Registered Apprenticeship programs for Plumbing, Pipefitters, Welders and HVAC Techs
Public Relations Specialists	27-3031.00	Minimum: Bachelor's Degree	**Jeff-Lewis BOCES:** Visual Communication, Applied Business Technology, Office Technology, Virtual Business **Clinton Community College:** Business Administration A.A.S./A.S. **North Country Community College:** Business Administration A.A.S./A.S. **SUNY Jefferson:** Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Studies Certificate, Office Technologies: Administrative Assistant A.A.S. **SUNY Empire:** Bachelor of Professional Studies, Master of Business Administration **SUNY Plattsburgh:** Public Relations B.A./B.S. **SUNY Potsdam:** Communications, B.A.
Purchasing Managers	11-3061.00	Minimum: High School Diploma or Equivalent, Preferred: Some College	**Jeff-Lewis BOCES:** Applied Business Technology, Virtual Business **St. Lawrence-Lewis BOCES:** Computer & Business Technology **Clinton Community College:** Business Accounting A.A.S. **SUNY Canton:** Accounting A.A.S. **Clarkson University:** Global Supply Chain Management B.S.
Quality Control Analysts	19-4099.01	Minimum: Bachelor's Degree	**St. Lawrence-Lewis BOCES:** Pre-Engineering **Clinton Community College:** Liberal Arts: Math & Science A.A.S. **North Country Community College:** Liberal Arts & Sciences: Math & Science **SUNY Jefferson:** Mathematics & Science A.A.S., Engineering Science A.S. **SUNY Canton:** Engineering Science A.S. **SUNY Empire:** Associate of Science, Bachelor of Science
Stock Clerks and Order Fillers	43-5081.03	Minimum: High School Diploma or Equivalent	**CV-TEC:** AIME Training **On-the-Job Training**

Job Title	O*Net Codes	Degree Requirements	Local Educational Opportunities
Tool and Die Makers	51-4111.00	Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship	**St. Lawrence-Lewis BOCES:** Metalworking Technology **SUNY Canton:** Apprentice Training: Industrial Trades A.A.S. **On-the-Job Training**
Laborers and Freight, Stock, and Material Movers, Hand	53-7062.00	Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship	**CV-TEC:** Heavy Equipment/Diesel Mechanics, Marine & Outdoor Power Equipment Academy, Small Engines & Marine Tech, Aviation Tech **Jeff-Lewis BOCES:** Gas/Diesel Mechanics, Heavy Equipment **SUNY Canton:** Mechanical Technology B. Tech, General Technology A.A.S.
Transportation, Storage, and Distribution Managers	11-3071.00	Minimum: General Workers & Supervisors: High School Diploma or Equivalent Managers: Bachelor's Degree	**Jeff-Lewis BOCES:** Automotive Technology, Gas/Diesel Mechanics, Heavy Equipment
Waiters and Waitresses	35-3031.00	Minimum: Less than High School Diploma	**CV-TEC:** Culinary Arts Management **Jeff-Lewis BOCES:** Introduction to Trades, Hospitality Services
Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	51-4122.00	Minimum: High School Diploma with Apprenticeship	**CV-TEC:** Architecture & Construction Cluster, Welding **Jeff-Lewis BOCES:** Manufacturing Technology **Clinton Community College:** Industrial Technology A.A.S. **SUNY Canton:** General Technology A.A.S. **On-the-Job Training**
Woodworking Machine Setters, Operators, and Tenders, Except Sawing	51.7042.00	Minimum: High School Diploma with Apprenticeship	**Jeff-Lewis BOCES:** Manufacturing Technology **Clinton Community College:** Industrial Technology A.A.S. **SUNY Canton:** General Technology A.A.S. **On-the-Job Training**

Animal Breeders (45-2021.00)

Job Description
Select and breed animals according to their genealogy, characteristics, and offspring. May require knowledge of artificial insemination techniques and equipment use. May involve keeping records on heats, birth intervals, or pedigree.

Education Requirements
Depending on the company and position, minimums range from a High School diploma to Post-doctoral training, and/or certifications.

Sample of Reported Job Titles
Animal Technician, Artificial Insemination Technician (AI Technician), Breeder, Breeding Manager, Broodmare Foreman, Cat Breeder, Cattery Operator, Dog Breeder, Equine Breeder, Stallion Manager

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
7,000	6,900	-100	-2%	190

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country or New York State statistics for Animal Breeders. Therefore the data above reflects this field in the United States.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$33,230	$30,880	$26,280	$36,710

❖ There are no specific North Country or New York State statistics for Animal Breeders. Therefore the data above reflects the general Farming, Fishing, and Forestry Occupations in the North County.

Local Opportunities for Education
- CV-TEC**:** Animal Science/Veterinary Assistant
- Jeff-Lewis BOCES: Veterinary Practices
- SUNY Canton: Veterinary Science Technology A.A.S.
- SUNY Jefferson: Animal/Livestock Husbandry and Production
- *(Morrisville State College: Horse Husbandry/Equine Science and Management)

Assemblers and Fabricators, All Other (51-2099.00)

Job Description
Assemblers and fabricators assemble both finished products and the parts that go into them. They use tools, machines, and their hands to make engines, computers, aircraft, toys, electronic devices, and more.

Education Requirements
Minimum: High School Diploma or Equivalent

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
6,490	7,690	1,200	18%	260

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Assemblers and Fabricators, All Other. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$30,400	$28,020	$22,680	$34,260

Local Opportunities for Education
- CV-TEC: Assembly Industry Manufacturing Education
- Jeff-Lewis BOCES: Auto Body Repair, Welding Technology
- St. Lawrence-Lewis BOCES: Metalworking Technology
- SUNY Canton: General Technology A.A.S.

Bartenders (35-3011.00)

Job Description
Mix and serve drinks to patrons, directly or through waitstaff.

Education Requirements
Minimum: Less than High School Diploma

Sample of Reported Job Titles
Bar Captain, Bar Manager, Bartender, Bartender Extra, Mixologist

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
43,170	55,170	12,000	28%	2,820

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Bartenders. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$22,610	$20,180	$20,180	$23,980

Local Opportunities for Education
- Jeff-Lewis BOCES: Introduction to Trades, Hospitality Services
- SUNY Jefferson: Hospitality & Tourism Certificate
- SUNY Plattsburgh: Hotel, Restaurant, & Tourism Management
- Paul Smith's College: Hotel & Restaurant Management A.A.S., Hotel, Resort & Tourism Management B.S.

Bookkeeping, Accounting, and Auditing Clerks (43-3031.00)

Job Description
Compute, classify, and record numerical data to keep financial records complete. Perform any combination of routine calculating, posting, and verifying duties to obtain primary financial data for use in maintaining accounting records. Accountants may also check the accuracy of figures, calculations and postings pertaining to business transactions recorded by other workers.

Education Requirements
Depending on the company and position, minimums range from a High School diploma to a Master's degree, plus certifications.

Sample of Reported Job Titles
Account Clerk, Account Receivable Clerk, Accounting Assistant, Accounting Associate, Accounting Clerk, Accounts Payable Clerk, Accounts Payable Specialist, Accounts Payables Clerk, Accounts Receivable Clerk, Bookkeeper

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
126,840	124,630	-2,210	-2%	1,240

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
 ❖ There are no specific North Country statistics for Bookkeeping, Accounting, and Auditing Clerks. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$38,390	$37,850	$27,050	$44,060

Local Opportunities for Education
- CV-TEC: Professional Bookkeeping, Accounting Principles
- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business
- St. Lawrence-Lewis BOCES: Computer & Business Technology
- Clinton Community College: Business Accounting A.A.S., Payroll Certificate
- North Country Community College: Business Administration A.A.S./A.S.
- SUNY Jefferson: Accounting A.A.S., Accounting A.S., Accounting Certificate, Office Technology Certificate, Office Technology: Administrative Assistant A.A.S.
- SUNY Canton: Finance B.B.A., Accounting A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration
- SUNY Plattsburgh: Accounting B.S., Accounting Minor
- Clarkson University: Business Administration B.S.
- Paul Smith's College: Business Management & Entrepreneurial Studies

Chefs and Head Cooks (35-1011.00)

Job Description
Direct and may participate in the preparation, seasoning, and cooking of salads, soups, fish, meats, vegetables, desserts, or other foods. May plan and price menu items, order supplies, and keep records and accounts.

Education Requirements
Minimum: High School Diploma or Equivalent

Sample of Reported Job Titles
Banquet Chef; Certified Executive Chef (CEC); Chef; Chef, Instructor; Cook; Corporate Executive Chef; Executive Chef (Ex Chef); Executive Sous Chef; Head Cook; Line Cook

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
11,880	15,010	3,130	26%	490

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

- ❖ There are no specific North Country statistics for Chefs and Head Cooks. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$43,300	$40,220	$30,600	$49,650

- ❖ There are no specific North Country statistics for Chemical Engineers. Therefore the data above is for the general Engineers, All Other field in the North Country.

Local Opportunities for Education
- CV-TEC: Culinary Arts Management
- FEH BOCES: Culinary Arts
- Jeff-Lewis BOCES: Culinary Arts/Baking
- St. Lawrence-Lewis BOCES: Culinary Arts
- Paul Smith's College: Culinary Arts/Chef Training, Baking and Pastry Arts/Baker/Pastry Chef
- SUNY Jefferson: Hospitality and Tourism A.A.S Culinary Arts Concentration, Hospitality & Tourism Certificate
- SUNY Plattsburgh: Hotel, Restaurant, & Tourism Management
- Paul Smith's College: Baking & Pastry Arts A.A.S., Culinary Arts A.A.S., Baking Arts & Service Management B.S., Culinary Arts & Service Management B.S., Food Service & Beverage Management B.S.

Chemical Engineers (17-2041.00)

Job Description
Design chemical plant equipment and devise processes for manufacturing chemicals and products, such as gasoline, synthetic rubber, plastics, detergents, cement, paper, and pulp, by applying principles and technology of chemistry, physics, and engineering.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Chemical Engineer, Development Engineer, Engineer, Engineering Scientist, Process Control Engineer, Process Development Engineer, Process Engineer, Project Engineer, Refinery Process Engineer, Scientist

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
1,330	1,430	100	8%	50

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Chemical Engineers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$83,930	$82,730	$62,050	$94,870

❖ There are no specific North Country statistics for Chemical Engineers. Therefore the data above is for the general Engineers, All Other field in the North Country.

Local Opportunities for Education
- St. Lawrence-Lewis BOCES: Pre-Engineering
- North Country Community College: Liberal Arts & Sciences: Math & Science A.S.
- SUNY Jefferson: Engineering Science A.S.
- SUNY Canton: Engineering Science A.S.
- SUNY Empire: Associate of Science, Bachelor of Science
- Clarkson University: Chemical Engineering B.S.

Commercial and Industrial Designers (27-1021.00)

Job Description
Develop and design manufactured products, such as cars, home appliances, and children's toys. Combine artistic talent with research on product use, marketing, and materials to create the most functional and appealing product design.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Design Engineer, Designer, Engineer, Industrial Designer, Mechanical Designer, Product Design Engineer, Product Designer, Product Development Engineer, Product Engineer, Project Engineer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
3,150	3,510	360	12%	110

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Commercial/Industrial Designers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$81,600	$76,460	$56,700	$94,050

Local Opportunities for Education
- Jeff-Lewis BOCES: Computer-Aided Drafting & Design
- St. Lawrence-Lewis BOCES: Computer & Business Technology, Graphic Communications
- North Country Community College: Computer Graphics & Design A.A.S., Computer Graphics & Design Certificate
- SUNY Canton: Graphic & Multimedia Design B. Tech
- SUNY Empire: Associate of Arts, Bachelor of Arts

Computer Programmers and Machine Programmers (15-1131.00)

Job Description
Create, modify, and test the code, forms, and script that allow computer applications to run. Work from specifications drawn up by software developers or other individuals. Programmers may assist software developers by analyzing user needs and designing software solutions. May develop and write computer programs to store, locate, and retrieve specific documents, data, and information.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Analyst Programmer, Applications Developer, Computer Programmer, Computer Programmer Analyst, Internet Programmer, Java Developer, Programmer, Programmer Analyst, Software Developer, Web Programmer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
23,260	23,460	200	1%	590

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Computer Programmers and Machine Programmers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$66,130	$64,350	$47,260	$75,570

Local Opportunities for Education
- St. Lawrence-Lewis BOCES: Computer & Business Technology
- Clinton Community College: Computer Information Systems A.A.S., Computer Technology A.A.S., Computer Support Certificate
- North Country Community College: Computer Graphics & Design A.A.S., Computer Graphics & Design Certificate, Office Technology Certificate
- SUNY Jefferson: Computer Information Systems A.S., Computer Information Technology A.A.S., Computer Science. A.S.
- SUNY Canton: Information Technology B. Tech, Computer Information Systems A.A.S.
- SUNY Plattsburgh: Computer Science B.A., B.S.
- SUNY Potsdam: Computer Science B.S.
- Clarkson University: Computer Programming B.S., Electrical Engineering B.S.

Computer User Support Specialists (15-1151.00)

Job Description
Provide technical assistance to computer users. Answer questions or resolve computer problems for clients in person, or via telephone or electronically. Computer Support Specialists may provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems.

Education Requirements
Minimum: Associate's Degree

Sample of Reported Job Titles
Computer Specialist, Computer Support Specialist, Computer Technician, Electronic Data Processing Auditor (EDP Auditor), Help Desk Analyst, Information Technology Specialist (IT Specialist), Network Support Specialist, Network Technician, Support Specialist, Technical Support Specialist

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
39,950	47,860	7,910	20%	1,310

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Computer User Support Specialists. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$45,320	$44,870	$30,740	$52,600

Local Opportunities for Education
- Jeff-Lewis BOCES: Office Technology, Electronic & Computer Technology
- St. Lawrence-Lewis BOCES: Computer & Business Technology
- Clinton Community College: Computer Support Certificate, Computer Information Systems A.A.S., Computer Technology Systems A.A.S.
- North Country Community College: Office Technology Certificate
- SUNY Jefferson: Computer Information Systems A.S., Computer Information Technology A.A.S., Computer Science, A.S., Office Technology Certificate, Office Technology: Office Assistant A.A.S., Business Administration A.S./A.A.S.
- SUNY Canton: Information Technology B. Tech, Computer Information Systems. A.A.S.
- Clarkson University: Computer Programming B.S.

Cooks, Fast Food (35-2011.00)

Job Description
Prepare and cook food in a fast food restaurant with a limited menu. Duties of these cooks are limited to preparation of a few basic items and normally involve operating large-volume single-purpose cooking equipment.

Education Requirements
Minimum: Less than High School Diploma

Sample of Reported Job Titles
Cook, Crew Member, Crew Person, Crew Trainer, Fry Cook, Grill Cook, Line Cook, Pizza Cook, Pizza Maker, Prep Cook

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
21,390	21,610	220	1%	590

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
   ❖ There are no specific North Country statistics for Cooks, Fast Food. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$22,120	$20,390	$20,180	$23,200

Local Opportunities for Education
- CV-TEC: Culinary Arts Management
- FEH BOCES: Culinary Arts
- Jeff-Lewis BOCES: Culinary Arts/Baking
- St. Lawrence-Lewis BOCES: Culinary Arts
- SUNY Jefferson: Hospitality and Tourism A.A.S Culinary Arts Concentration, Hospitality & Tourism Certificate
- SUNY Plattsburgh: Hotel, Restaurant, & Tourism Management
- Paul Smith's College: Baking & Pastry Arts A.A.S., Culinary Arts A.A.S., Baking Arts & Service Management B.S., Culinary Arts & Service Management B.S., Food Service & Beverage Management B.S.

Customer Service Representatives (43-4051.00)

Job Description
Interact with customers to provide information in response to inquiries about products and services and to handle and resolve complaints.

Education Requirements
Minimum: High School Diploma or Equivalent

Sample of Reported Job Titles
Account Manager, Account Representative, Call Center Representative, Client Services Representative, Customer Care Representative (CCR), Customer Service Agent, Customer Service Representative (Customer Service Rep), Customer Service Specialist, Member Services Representative, Sales Facilitator

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
154,070	175,630	21,560	14%	5,950

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Customer Service Representatives. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$29,410	$26,110	$21,640	$33,300

Local Opportunities for Education
- CV-TEC: National Retail Federation Certification
- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business
- Clinton Community College: Business Administration A.A.S./A.S.
- North Country Community College: Business: Office Technology A.A.S.
- SUNY Canton: Individual Studies Business A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration

Database Administrators (15-1141.00)

Job Description
Administer, test, and implement computer databases, applying knowledge of database management systems. Coordinate changes to computer databases. May plan, coordinate, and implement security measures to safeguard computer databases.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Data Architect, Database Administration Manager, Database Administrator (DBA), Database Analyst, Database Coordinator, Database Developer, Database Programmer, Information Systems Manager, Management Information Systems Director (MIS Director), System Administrator

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
7,320	8,580	1,260	17%	280

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Database/Systems Administrators. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$53,730	$55,170	$36,960	$62,110

Local Opportunities for education
- CV-TEC: Introduction to Database Administration
- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business, Electronic & Computer Technology
- St. Lawrence-Lewis BOCES: Computer & Business Technology
- Clinton Community College: Computer Information Systems A.A.S., Computer Technology A.A.S., Computer Support Certificate
- North Country Community College: Business Administration A.A.S., Office Technology Certificate, Business: Office Technology A.A.S.
- SUNY Canton: Information Technology B. Tech, Computer Information Systems A.A.S.
- SUNY Jefferson: Computer Information Systems A.S., Computer Information Technology A.A.S., Computer Science, A.S., Office Technology Certificate, Office Technology: Administrative Assistant A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration, Associate of Science, Bachelor of Science
- SUNY Plattsburgh: Information Technology B.S.
- SUNY Potsdam: Computer Science
- Clarkson University: Computer Science B.S., Financial Systems & Business Processes B.S.

Electrical Engineers (17-2071.00)

Job Description
Research, design, develop, test, or supervise the manufacturing and installation of electrical equipment, components, or systems for commercial, industrial, military, or scientific use.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Circuits Engineer, Design Engineer, Electrical Controls Engineer, Electrical Design Engineer, Electrical Engineer, Electrical Project Engineer, Instrumentation and Electrical Reliability Engineer (I&E Reliability Engineer), Power Systems Engineer, Project Engineer, Test Engineer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
11,450	12,590	1,140	10%	370

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Electrical Engineers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$77,600	$74,470	$58,530	$87,140

Local Opportunities for Education
- Jeff-Lewis BOCES: Electrical Wiring Technology, Electronic & Computer Technology
- St. Lawrence-Lewis BOCES: Electronics
- Clinton Community College: Electrical Technology: Electronics A.A.S.
- North Country Community College: Liberal Arts & Sciences: Math & Science A.S.
- SUNY Jefferson: Engineering Science A.S.
- SUNY Canton: Electrical Technology B. Tech, Electrical Engineering Technology A.A.S., Electrical Construction & Maintenance Certificate
- SUNY Empire: Associate of Science, Bachelor of Science
- Clarkson University: Electrical Engineering B.S.

Electricians (47-2111.00)

Job Description

Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.

Education Requirements

Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship

Sample of Reported Job Titles

Chief Electrician; Control Electrician; Electrician; Industrial Electrician; Inside Wireman; Journeyman Electrician; Journeyman Wireman; Maintenance Electrician; Mechanical Trades Specialist, Electrician; Qualified Craft Worker, Electrician (QCW, Electrician)

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
40,900	50,300	9,400	23%	1,560

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Electricians. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$58,530	$28,480	$42,540	$66,530

Local Opportunities for Education

- CV-TEC: Electrical Design, Installation & Alternative Energy
- Jeff-Lewis BOCES: Electrical Wiring Technology
- St. Lawrence-Lewis BOCES: Electronics
- Clinton Community College: Electronic Technology: Electronics A.A.S.
- SUNY Canton: Electrical Technology B. Tech, Electrical Engineering Technology A.A.S., Electrical Construction & Maintenance Certificate
- IBEW Local Union 910: Electrical Registered Apprenticeship

Environmental Engineers (17-2081.00)

Job Description
Research, design, plan, or perform engineering duties in the prevention, control, and remediation of environmental hazards using various engineering disciplines. Work may include waste treatment, site remediation, or pollution control technology.

Education Requirements
Minimum: Bachelor's Degree, Preferred: Master's Degree

Sample of Reported Job Titles
Air Pollution Control Engineer; Chief, Pesticides and Toxic Substances Branch; Environmental Analyst; Environmental Engineer; Environmental Remediation Specialist; Global Director Air and Climate Change; Hazardous Substances Engineer; Marine Engineer CPVEC (Marine Engineer Commercial Passenger Vessel Environmental Compliance); Regulatory Environmental Compliance Manager; Sanitary Engineer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Average Job Openings*
2014	2024			
3,430	4,140	710	21%	170

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Environmental Engineers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$72,000	$68,760	$47,680	$84,160

Local Opportunities for Education
- CV-TEC: Environmental Conservation & Forestry, Natural Resources Management
- FEH BOCES: Natural Resources Sciences
- Jeff-Lewis BOCES: New Vision Alternative Energy, Environmental Conservation & Forestry
- St. Lawrence-Lewis BOCES: Environmental Technology, Pre-Engineering
- Clinton Community College: Environmental Technology A.A.S., Renewable Energy Technologies Certificate, Renewable Energy Technologies A.A.S.
- North Country Community College: Environmental Science A.S., Liberal Arts & Sciences: Math & Science A.S.
- SUNY Jefferson: Engineering Science A.S., Renewable Energy Management Certificate
- SUNY Canton: Alternative & Renewable Energy Systems, Engineering Science A.S.
- SUNY Empire: Associate of Science, Bachelor of Science
- SUNY Plattsburgh: Environmental Science B.A./B.S., Ecology Study Option B.S., Environmental Planning & Management Option B.A., Applied Geographic Information Systems Minor, Environmental Studies Minor, Environmental Studies B.A., Perspectives on the Environment Minor
- Clarkson University: Environmental Engineering B.S.
- Paul Smith's College: Environmental Sciences B.A., Environmental Studies B.S.

Farm Equipment Mechanics and Service Technicians (49-3041.00)

Job Description
Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.

Education Requirements
Minimum: High School Diploma or Equivalent

Sample of Reported Job Titles
Agricultural Mechanic, Agricultural Technician, Agriculture Mechanic, Farm Equipment Mechanic, Farm Equipment Service Technician, Field Technician, Mechanic, Service Technician, Tractor Mechanic, Tractor Technician

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
920	1,020	100	11%	30

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Farm Equipment Mechanics and Service Technicians. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$36,150	$37,060	$24,650	$41,900

Local Opportunities for Education
- CV-TEC: Heavy Equipment/Diesel Mechanics
- FEH BOCES: Heavy Equipment Repair & Operation
- Jeff-Lewis BOCES: Heavy Equipment Operations
- *(SUNY College of Agriculture and Technology at Cobleskill: Agriculture Mechanization, General)
- *(Morrisville State College: Agriculture Mechanics and Equipment/Machine Technology)

Farmworkers and Laborers, Crop, Nursery, and Greenhouse (45-2092.00)

Job Description
Manually plant, cultivate, and harvest vegetables, fruits, nuts, horticultural specialties, and field crops. Use hand tools, such as shovels, trowels, hoes, tampers, pruning hooks, shears, and knives. Duties may include tilling soil and applying fertilizers; transplanting, weeding, thinning, or pruning crops; applying pesticides; or cleaning, grading, sorting, packing, and loading harvested products. May construct trellises, repair fences and farm buildings, or participate in irrigation activities.

Education Requirements
Minimum: Less than High School Diploma

Sample of Reported Job Titles
Gardener, Greenhouse Staff, Greenhouse Worker, Grower, Harvester, Nursery Worker, Packer, Plant Production Worker, Propagation Worker, Transplant Worker, Farm Laborer, Farm Worker, Field Irrigation Worker, Field Worker, Harvester, Hired Hand, Hoe Worker, Irrigator, Orchard Worker, Picker

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
10,520	11,300	780	7%	360

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Farmworkers and Laborers, Crop, Nursey, and Greenhouse. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$28,510	$26,300	$22,130	$31,700

Local Opportunities for Education
- CV-TEC: Environmental Conservation/Forestry Program
- FEH BOCES: Natural Resource Conservation, 21st Century Agricultural Science
- Jeff-Lewis BOCES: Environmental Conservation and Forestry
- North Country Community College: Environmental Science

Financial Managers (11-3031.00)

Job Description
Plan, direct, or coordinate accounting, investing, banking, insurance, securities, and other financial activities of a branch, office, or department of an establishment.

Education Requirements
Depending on the location, minimums range from Associate's Degree to a Master's Degree, plus certifications.

Sample of Reported Job Titles
Chief Financial Officer (CFO), Chief School Finance Officer, Comptroller, Controller, Director of Finance, Finance Director, Finance Manager, Finance Vice President, School Treasurer, Treasurer, Assistant Manager, Assistant Vice President (AVP), Banking Center Manager (BCM), Banking Officer, Branch Manager, Credit Administration Manager, Financial Center Manager, Regional Manager, Service Center Manager, Vice President

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
40,880	45,420	4,540	11%	1,420

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
 ❖ There are no specific North Country statistics for Financial Managers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$99,200	$87,320	$56,320	$120,650

Local Opportunities for Education
- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business
- St. Lawrence-Lewis BOCES: Computer & Business Technology
- Clinton Community College: Business Accounting A.A.S., Payroll Certificate, Business Administration A.A.S./A.S.
- North Country Community College: Business Administration A.A.S., Business: Office Technology A.A.S.
- SUNY Jefferson: Accounting A.A.S., Accounting A.S., Accounting Certificate, Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Technology Certificate, Office Technology: Office Assistant A.A.S.
- SUNY Canton: Finance B.B.A., Accounting A.A.S., Individual Studies Business A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration
- SUNY Plattsburgh: Finance B.S.
- SUNY Potsdam: Business Administration B.S.
- Clarkson University: Financial Information & Analysis B.S. , Financial Systems & Business Processes B.S.
- Paul Smith's College: Business Management & Entrepreneurial Studies

General and Operations Managers (11-1021.00)

Job Description
Plan, direct, or coordinate the operations of public or private sector organizations. Duties and responsibilities include formulating policies, managing daily operations, and planning the use of materials and human resources, but are too diverse and general in nature to be classified in any one functional area of management or administration, such as personnel, purchasing, or administrative services.

Education Requirements
Depending on the location, minimums range from Associate's Degree to a Bachelor's Degree, plus certifications.

Sample of Reported Job Titles
Business Manager, Facilities Manager, Facility Manager, General Manager (GM), Operations Director, Operations Manager, Plant Manager, Plant Superintendent, Production Manager, Store Manager

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
153,190	179,450	26,260	17%	6,500

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for General and Operations Managers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$86,080	$71,510	$42,900	$107,670

Local Opportunities for Education
- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business
- Clinton Community College: Business Administration A.A.S./A.S.
- North Country Community College: Business Administration A.A.S., Business: Office Technology A.A.S.
- SUNY Jefferson: Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S.
- SUNY Canton: Management B.B.A., Individual Studies Business A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration
- SUNY Plattsburgh: Management B.S.
- Clarkson University: Engineering & Management B.S., Global Supply Chain Management B.S.
- Paul Smith's College: Business Management B.S.

Graphic Designers (27-1024.00)

Job Description
Design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. Graphic Designers may use a variety of mediums to achieve artistic or decorative effects.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Artist, Creative Director, Creative Manager, Design Director, Designer, Graphic Artist, Graphic Designer, Online Producer, Production Artist, Publications Designer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
23,660	25,810	2,150	9%	780

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Graphic Designers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$37,900	$35,490	$28,600	$42,550

Local Opportunities for Education:
- CV-TEC: Arts, Audio, Video Technology & Communications Cluster, Digital Art Design, Graphic Design & Communications
- Jeff-Lewis BOCES: Visual Communication, Virtual Business
- St. Lawrence-Lewis BOCES: Graphic Communications
- North Country Community College: Computer Graphics & Design A.A.S., Computer Graphics & Design Certificate
- SUNY Jefferson: Computer Information Systems A.S., Computer Information Technology A.S.
- SUNY Canton: Graphic and Multimedia Design
- SUNY Empire: Associate of Arts, Bachelor of Arts
- Clarkson University: Digital Arts & Science B.S.

Health and Safety Engineers,
Except Mining Safety Engineers and Inspectors (17-2111.00)

Job Description
Plan, implement, and coordinate safety programs, requiring application of engineering principles and technology, to prevent or correct unsafe environmental working conditions.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Chief Security and Safety Officer (CSO); Corporate Health, Safety, and Occupational Toxicology Director; Corporate Health, Safety, and Security Manager; Environmental Affairs, Safety, and Security Manager; Environmental Health and Safety Director (EHS Director); Environmental Safety Specialist; Health and Safety Manager; Health, Safety, and Environment Manager; Safety and Health Consultant; Safety, Health, and Environment Vice President, Chief Engineer, Consulting Engineer, Design Director, Engineer, Fire Protection Engineer, Fire Protection Engineer and Code Consultant (FP Engineer and Code Consultant), Lead Fire Protection Engineer, Loss Control Manager, Senior Engineer, Senior Fire Protection Engineer, Extra Vehicular Activity Safety Engineer (EVA Engineer), Product Safety and Standards Engineer, Product Safety Consultant, Product Safety Coordinator, Product Safety Engineer, Product Safety Manager, Product Safety Officer, Risk Control Product Liability Director, Service Loss Control Consultant, System Safety Engineer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
1,560	1,860	300	19%	80

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

- ❖ There are no specific North Country statistics for Health and Safety Engineers, Except Mining Safety Engineers and Inspectors. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$62,220	$60,330	$48,590	$69,040

Local Opportunities for Education
- St. Lawrence-Lewis BOCES: Pre-Engineering
- Clinton Community College: Liberal Arts: Math & Science A.S.
- North Country Community College: Liberal Arts & Sciences: Math & Science
- SUNY Jefferson: Engineering Science A.S.
- SUNY Canton: Engineering Science A.S., Mechanical Engineering Technology A.A.S., Civil Engineering Technology A.A.S.
- SUNY Empire: Associate of Science, Bachelor of Science
- Clarkson University: Environmental Engineering B.S.

Heating, Air Conditioning, and
Refrigeration Mechanics and Installers (49-9021.00)

Job Description
Install or repair heating, central air conditioning, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.

Education Requirements
Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship

Sample of reported job titles
A/C Tech (Air Conditioning Technician); HVAC Installer (Heating, Ventilation, Air Conditioning Installer); HVAC Mechanic (Heating, Ventilation, Air Conditioning Mechanic); HVAC Service Tech (Heating, Ventilation, Air Conditioning Service Technician); HVAC Service Technician (Heating, Ventilation, Air Conditioning Service Technician); HVAC Specialist (Heating, Ventilation, and Air Conditioning Specialist); HVAC Technician (Heating, Ventilation, Air Conditioning Technician); HVAC Technician (Heating, Ventilation, and Air Conditioning Technician); Service Technician; Systems Mechanic, Ammonia Refrigeration Technician; Heating, Ventilation, Air Conditioning / Refrigeration Technician (HVAC / R Technician); Heating, Ventilation, Air Conditioning Service Technician (HVAC Service Technician); Heating, Ventilation, Air Conditioning Technician (HVAC Technician); HVAC/R Service Technician (Heating, Ventilation, and Air Conditioning/Refrigeration Service Technician); Refrigeration Mechanic; Refrigeration Operator; Refrigeration Technician; Service Technician; Transportation Refrigeration Technician

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
14,480	18,320	3,840	27%	610

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
   ❖ There are no specific North Country statistics for Heating, Air Conditioning, and Refrigeration Mechanics and Installers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$45,230	$45,180	$34,150	$50,770

Local Opportunities for Education
   ▪ FEH BOCES: Heating, Ventilation & Air Conditioning
   ▪ Jeff-Lewis BOCES: Plumbing, Heating, & Air Conditioning, Welding Technology
   ▪ St. Lawrence-Lewis BOCES: HVAC/R
   ▪ SUNY Canton: Air Conditioning Engineering Technology A.A.S., Apprentice Training: Industrial Trades A.A.S., Air Conditioning Maintenance & Repair Certificate, Heating & Plumbing Service Certificate
   ▪ Sheet Metal Workers Local Union 58: Registered Apprenticeship

Hotel, Motel, and Resort Desk Clerks (43-4081.00)

Job Description
Accommodate hotel, motel, and resort patrons by registering and assigning rooms to guests, issuing room keys or cards, transmitting and receiving messages, keeping records of occupied rooms and guests' accounts, making and confirming reservations, and presenting statements to and collecting payments from departing guests

Education Requirements
Minimum: Less than High School Diploma

Sample of Reported Job Titles
Desk Clerk, Front Desk Agent, Front Desk Associate, Front Desk Attendant, Front Desk Clerk, Front Desk Supervisor, Front Office Agent, Guest Service Representative, Guest Services Agent (GSA), Night Auditor

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
9,070	10,940	1,870	21%	660

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Hotel, Motel, and Resort Desk Clerks. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$26,480	$24,030	$21,820	$28,800

Local Opportunities for Education
- Jeff-Lewis BOCES: Introduction to Trades, Hospitality Services
- SUNY Jefferson: Hospitality and Tourism A.A.S. Hotel/Restaurant Management Concentration
- SUNY Plattsburgh: Hotel, Restaurant, & Tourism Management B.S.
- Paul Smith's College: Hotel & Restaurant Management A.A.S., Hotel, Resort and Tourism Management B.S.

Human Resources Specialists (13-1071.00)

Job Description
Perform activities in the human resource area. This includes employment specialists who screen, recruit, interview, and place workers.

Education Requirements
Minimum: Associate's Degree to MBA

Sample of Reported Job Titles
Corporate Recruiter, Employment Coordinator, Employment Representative, Employment Specialist, Human Resources Coordinator, Human Resources HR Generalist, Human Resources Specialist (HR Specialist), Personnel Coordinator, Recruiter, Technical Recruiter

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
31,230	35,250	4,020	13%	1,160

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Human Resources Specialists. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$63,260	$60,470	$43,010	$73,390

Local Opportunities for Education
- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business
- Clinton Community College: Business Administration A.A.S./A.S.
- North Country Community College: Business Administration A.A.S., Business: Office Technology A.A.S., Office Technology Certificate
- SUNY Jefferson: Business Administration A.A.S., Business Administration A.S., Office Technology Certification, Office Technologies: Administrative Assistant A.A.S.
- SUNY Canton: Management B.B.A., Business Administration A.S./A.A.S., Individual Studies Business A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration
- SUNY Potsdam: Business Administration B.S.
- Clarkson University: Human Resource Management B.S.

Industrial Engineers (17-2112.00)

Job Description
Design, develop, test, and evaluate integrated systems for managing industrial production processes, including human work factors, quality control, inventory control, logistics and material flow, cost analysis, and production coordination.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Engineer, Engineering Manager, Industrial Engineer, Manufacturing Specialist, Operations Engineer, Plant Engineer, Process Engineer, Production Engineer, Supply Chain Engineer, Tool Engineer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
8,600	9,450	850	10%	340

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
- ❖ There are no specific North Country statistics for Industrial Engineers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$81,570	$81,020	$57,860	$93,420

Local Opportunities for Education
- St. Lawrence-Lewis BOCES: Pre-Engineering
- Clinton Community College: Liberal Arts: Math & Science A.S.
- North Country Community College: Liberal Arts & Sciences: Math & Science
- SUNY Canton: Industrial Technology Management, Apprentice Training: Industrial Trades A.A.S.
- SUNY Potsdam: Computer Science B.S.
- Clarkson University: Computer Programming B.S., Electrical Engineering B.S., Engineering and Management B.S., Mechanical Engineering B.S., Chemical Engineering B.S., Process Engineering B.S., Supply Chain Management B.S.

Industrial Machinery Mechanics (49-9041.00)

Job Description
Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.

Education Requirements
Minimum: Bachelor's Degree, Preferred: Master's Degree

Sample of Reported Job Titles
Fixer, Industrial Machinery Mechanic, Industrial Mechanic, Loom Fixer, Machine Adjuster, Maintenance Mechanic, Maintenance Technician, Master Mechanic, Mechanic, Overhauler

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
10,950	13,300	2,350	22%	520

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
  ❖ There are no specific North Country statistics for Industrial Machinery Mechanics. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$47,020	$46,110	$37,200	$51,940

Local Opportunities for Education
- CV-TEC: Heavy Equipment/Diesel Mechanics, Electrical Design, Installation, Alternative Energy
- Jeff-Lewis BOCES: Building Maintenance, Welding Technology
- Clinton Community College: Industrial Technology A.A.S.
- SUNY Canton: Industrial Technology Management, Apprentice Training: Industrial Trades A.A.S.

Industrial Production Managers (11-3051.00)

Job Description
Plan, direct, or coordinate the work activities and resources necessary for manufacturing products in accordance with cost, quality, and quantity specifications.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Area Plant Manager, General Production Manager, Manufacturing Coordinator, Manufacturing Manager, Plant Manager, Plant Senior Manager, Product Line Manager, Production Control Manager, Production Manager, Sub Plant Manager

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
5,050	5,260	210	4%	160

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
  ❖ There are no specific North Country statistics for Industrial Production Managers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$105,430	$97,080	$72,580	$121,860

Local Opportunities for Education
- Clinton Community College: Industrial Technology A.A.S.
- North Country Community College: Business Administration A.A.S./A.S.
- SUNY Canton: Industrial Technology Management B. Tech
- SUNY Plattsburgh: Management B.S., Global Supply Chain Management B.S.
- Clarkson University: Engineering and Management B.S.

Laborers and Freight, Stock, and Material Movers, Hand (53-7062.00)

Job Description
Manually move freight, stock, or other materials or perform other general labor. Includes all manual laborers not elsewhere classified.

Education Requirements
Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship

Sample of Reported Job Titles
Dock Worker, Laborer, Line Tender, Loader, Material Handler, Merchandise Pickup/Receiving Associate, Receiver, Receiving Associate, Shipping and Receiving Materials Handler, Warehouse Worker

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
101,430	113,690	12,260	12%	4,250

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
  ❖ There are no specific North Country statistics for Laborers and Freight, Stock, and Material Movers, Hand. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$28,260	$25,690	$21,250	$31,770

Local Opportunities for Education
  ▪ CV-TEC: Heavy Equipment/Diesel Mechanics, Marine & Outdoor Power Equipment Academy, Small Engines & Marine Tech, Aviation Tech
  ▪ Jeff-Lewis BOCES: Gas/Diesel Mechanics, Heavy Equipment
  ▪ SUNY Canton: Mechanical Technology B. Tech, General Technology A.A.S.

Machinists (51-4041.00)

Job Description

Set up and operate a variety of machine tools to produce precision parts and instruments. This category includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

Education Requirements

Minimum: High School Diploma with Apprenticeship

Sample of Reported Job Titles

Gear Machinist, Journeyman Machinist, Machine Operator, Machine Repair Person, Machinist, Maintenance Machinist, Maintenance Specialist, Production Machinist, Set-Up Machinist, Tool Room Machinist

Projected Job Growth

Employment		Net	Percent	Projected Annual
2014	2024	Change	Change	Job Openings*
13,970	15,940	1,970	14%	600

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Machinists. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$47,550	$47,420	$38,040	$52,310

Local Opportunities for Education

- Jeff-Lewis BOCES: Manufacturing Technology
- Clinton Community College: Industrial Technology A.A.S.
- SUNY Canton: General Technology A.A.S.
- On-the-Job Training

Maids and Housekeeping Cleaners (37-2012.00)

Job Description
Perform any combination of light cleaning duties to maintain private households or commercial establishments, such as hotels and hospitals, in a clean and orderly manner. Duties may include making beds, replenishing linens, cleaning rooms and halls, and vacuuming.

Education Requirements
Minimum: Less than High School Diploma

Sample of Reported Job Titles
Breakfast and Room Attendant, Cottage Attendant, Environmental Services Aide, Environmental Services Worker, Housekeeper, Housekeeping, Housekeeping Aide, Housekeeping Laundry Worker, Room Attendant, Room Cleaner

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
79,170	91,750	12,580	16%	3,150

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Maids and Housekeeping Cleaners. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$25,080	$23,390	$20,360	$27,440

Local Opportunities for Education
▪ Jeff-Lewis BOCES: Introduction to Trades, Hospitality Services

Maintenance and Repair Workers, General (49-9071.00)

Job Description
Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs.

Education Requirements
Minimum: Less than High School Diploma

Sample of Reported Job Titles
Building Maintenance Mechanic, Building Mechanic, Equipment Engineering Technician, Facilities Manager, Maintenance Engineer, Maintenance Man, Maintenance Mechanic, Maintenance Supervisor, Maintenance Technician, Maintenance Worker

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
102,020	117,300	15,280	15%	4,200

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Maintenance and Repair Workers, General. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$39,060	$38,800	$26,620	$45,280

Local Opportunities for Education
- CV-TEC: Auto Collison Repair, Pre-CTE Automotive Service, Automotive Tech, Construction Trades, Small Engines & Marine Technology
- FEH BOCES: Auto Technology; Building Trades; Heating, Ventilation and Air Conditioning
- Jeff-Lewis BOCES: Auto Body Repair; Automotive Technology; Gas/Diesel Mechanics; Motorcycle, Marine and Power Sports; Welding Technology
- St. Lawrence-Lewis BOCES: Automotive Technology, Building Trades, HVAC/R, Metalworking Technology, Multi Occupations

Marketing Managers (11-2021.00) and Sales Managers (11-2022.00)

Job Description

Plan, direct, or coordinate marketing policies and programs, such as determining the demand for products and services offered by a firm and its competitors, and identify potential customers. Develop pricing strategies with the goal of maximizing the firm's profits or share of the market while ensuring the firm's customers are satisfied. Oversee product development or monitor trends that indicate the need for new products and services.

Education Requirements

Minimum: Bachelor's Degree

Sample of Reported Job Titles

Account Supervisor, Brand Manager, Business Development Director, Business Development Manager, Commercial Lines Manager, Market Development Executive, Marketing Coordinator, Marketing Director, Marketing Manager, Product Manager, District Sales Manager, National Sales Manager, Regional Sales Manager, Sales and Marketing Vice President, Sales Director, Sales Manager, Sales Representative, Sales Supervisor, Sales Vice President, Store Manager

Projected Job Growth

Title	Employment		Net Change	Percent Change	Projected Annual Job Openings*
	2014	2024			
Marketing Managers	12,960	15,090	2,130	16%	520
Sales Managers	18,650	20,260	1,610	9%	600

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Marketing Managers and Sales Managers. Therefore the data above reflects this field in New York State.

Wage Data

Title	Annual Wages ($)			
	Mean	Median	Entry Level	Experienced
Marketing Managers	$106,690	$84,390	$74,200	$122,930
Sales Managers	$137,950	$114,710	$70,290	$171,780

Local Opportunities for Education

- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business Clinton Community College: Business Accounting A.A.S., Business Administration A.A.S./A.S., Payroll Certificate
- North Country Community College: Liberal Arts & Sciences: Math & Science
- SUNY Jefferson: Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Studies Certificate, Office Technologies A.A.S.
- SUNY Canton: Management B.B.A, Accounting A.A.S., Individual Studies Business A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration
- SUNY Plattsburgh: Management B.S., Management Information Systems B.S., Business Analysis Minor, Marketing B.S., Marketing Minor
- SUNY Potsdam: Business Administration B.S.
- Clarkson University: Communications B.S., Digital Arts and Sciences B.S., Business Administration B.S., Supply Chain Management B.S.
- Paul Smith's College: Food Service & Beverage Management, Hotel Resort and Tourism Management

Materials Engineers (17-2131.00)

Job Description
Evaluate materials and develop machinery and processes to manufacture materials for use in products that must meet specialized design and performance specifications. Develop new uses for known materials. Materials Engineers include those engineers working with composite materials or specializing in one type of material, such as graphite, metal and metal alloys, ceramics and glass, plastics and polymers, and naturally occurring materials. This category also includes metallurgists and metallurgical engineers, ceramic engineers, and welding engineers.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Materials and Processes Manager, Materials Branch Chief, Materials Development Engineer, Materials Engineer, Materials Research Engineer, Metallurgical Engineer, Metallurgist, Process Engineer, Research Engineer, Test Engineer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
1,590	1,870	280	18%	80

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Materials Engineers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$96,310	$86,820	$73,870	$107,530

Local Opportunities for Education
- St. Lawrence-Lewis BOCES: Pre-Engineering
- Clinton Community College: Liberal Arts: Math & Science A.S.
- North Country Community College: Liberal Arts & Sciences: Math & Science A.S.
- SUNY Canton: Engineering Science A.S.
- Clarkson University: Material Science in all Engineering degree programs

Mechanical Engineers (17-2141.00)

Job Description

Perform engineering duties in planning and designing tools, engines, machines, and other mechanically functioning equipment. Oversee installation, operation, maintenance, and repair of equipment such as centralized heat, gas, water, and steam systems.

Education Requirements

Minimum: Bachelor's Degree

Sample of Reported Job Titles

Application Engineer, Design Engineer, Design Maintenance Engineer, Equipment Engineer, Mechanical Design Engineer, Mechanical Engineer, Process Engineer, Product Engineer, Project Engineer, Test Engineer

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
10,520	11,670	1,150	11%	450

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Mechanical Engineers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$76,310	$72,840	$58,120	$85,400

Local Opportunities for Education

- Jeff-Lewis BOCES: Plumbing, Heating, & Air Conditioning, Computer-Aided Drafting & Design, Gas/Diesel Mechanics, Welding Technology
- St. Lawrence-Lewis BOCES: Pre-Engineering
- North Country Community College: Liberal Arts & Sciences: Math & Science A.S.
- SUNY Jefferson: Engineering Science A.S.
- SUNY Canton: Engineering Science A.S.
- SUNY Empire: Associate of Science, Bachelor of Science
- Clarkson University: Aeronautical and Mechanical Engineering B.S.

Motor Vehicle Operators, All Other (53-3099.00)

Job Description
Motor Vehicle Operators, under supervision, operate motor vehicles such as passenger cars, ambulances, vans, hearses, trucks, wreckers, forklifts, tractor-trailer trucks and sign-erecting trucks.

Education Requirements
Minimum: Minimum: High School Diploma or Equivalent with Specified Driver's License and Certifications

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
4,330	4,750	420	10%	180

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
- ❖ There are no specific North Country statistics for Motor Vehicle Operators, All Other. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$41,920	$41,950	$34,940	$45,410

Local Opportunities for Education
- **CV-TEC:** CDL Training
- **Jeff-Lewis BOCES:** Automotive Technology, Gas/Diesel Mechanics, Heavy Equipment
- **SUNY Canton**: Mechanical Technology B. Tech

Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic (51-4081.00)

Job Description
Set up, operate, or tend more than one type of cutting or forming machine tool or robot.

Education Requirements
Minimum: High School Diploma with Apprenticeship

Sample of Reported Job Titles
Cell Technician, CNC Machine Setter (Computer Numerically Controlled Machine Setter), CNC Machinist (Computer Numerically Controlled Machinist), CNC Operator (Computer Numerically Controlled Operator), Die Setter, Machine Operator, Machine Technician, Machinist, Operator, Set-Up Person

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
1,990	2,100	110	5%	50

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
 ❖ There are no specific North Country statistics for Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$38,730	$37,280	$24,520	$45,840

 ❖ There are no specific North Country or New York State statistics for Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic. Therefore the data above reflects the general Production Occupations in the North County.

Local Opportunities for Education
 ▪ Jeff-Lewis BOCES: Manufacturing Technology
 ▪ Clinton Community College: Industrial Technology A.A.S.
 ▪ SUNY Canton: General Technology A.A.S.
 ▪ On-the-Job Training

Office and Administrative Support Workers, All Other (43-9199.00)

Job Description
The Office Support Worker is responsible for providing secretarial, clerical and administrative support in order to ensure that municipal services are provided in an effective and efficient manner.

Education Requirements
Minimum: High School Diploma or Equivalent Preferred: Certifications

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
24,260	26,080	1,820	8%	830

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Office and Administrative Support Workers, All Other. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$35,130	$33,680	$20,680	$42,350

Local Opportunities for Education
- Jeff-Lewis BOCES: Applied Business Technology, Office Technology, Virtual Business St. Lawrence-Lewis BOCES: Computer & Business Technology
- Clinton Community College: Business Administration A.A.S./A.S., Computer Technology A.A.S., Computer Information Systems A.A.S.
- North Country Community College: Business Administration A.A.S./A.S., Office Technology Certification, Business: Office Technology A.A.S.
- SUNY Jefferson: Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Studies Certificate, Office Technologies: Administrative Assistant A.A.S.
- SUNY Canton: Business Administration A.S./A.A.S., Individual Studies Business A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration

Occupational Health and Safety Specialists (29-9011.00)

Job Description
Review, evaluate, and analyze work environments and design programs and procedures to control, eliminate, and prevent disease or injury caused by chemical, physical, and biological agents or ergonomic factors. May conduct inspections and enforce adherence to laws and regulations governing the health and safety of individuals. OSHA Generalists may be employed in the public or private sector. This category also includes environmental protection officers.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Certified Industrial Hygienist; Chief Safety Officer; Corporate Safety Director; Director Employee Safety and Health; Environmental Health and Safety Manager; Environmental, Health, and Safety EHS Officer; Health and Safety Manager; Risk Control Consultant; Safety Consultant; Safety Specialist

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
3,520	3,720	200	6%	90

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Occupational Health and Safety Specialists. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$67,000	$64,000	$46,520	$77,240

Local Opportunities for Education
- CV-TEC: AIME Training: OSHA 10
- Clinton Community College: Liberal Arts: Math & Science A.S.
- North Country Community College: Liberal Arts & Sciences: Math & Science A.S.
- SUNY Jefferson: Mathematics & Science A.A.S.
- SUNY Empire: Associate of Science, Bachelor of Science

Packers and Packagers, Hand (53-7064.00)

Job Description
Pack or package by hand a wide variety of products and materials.

Education Requirements
Minimum: High School Diploma or Equivalent, Preferred: Certifications

Sample of Reported Job Titles
Bagger, Inspector Packer, Mini Shifter, Pack Out Operator, Packager, Packer, Picker and Packer, Sacker, Selector Packer, Shipping Clerk

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
29,110	32,790	3,680	13%	1,140

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Packers and Packagers, Hand. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$23,740	$21,500	$20,180	$25,620

Local Opportunities for Education
- Jeff-Lewis BOCES: Visual Communication
- St. Lawrence-Lewis BOCES: Graphic Communications
- On-the-Job Training

Plumbers, Pipe Fitters, and Steamfitters (47-2152.00)

Job Description
Assemble, install, alter, and repair pipelines or pipe systems that carry water, steam, air, or other liquids or gases. These positions may install heating and cooling equipment and mechanical control systems, and also includes sprinkler fitters.

Education Requirements
Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship

Sample of Reported Job Titles
Equipment Service Associate (ESA), Fire Sprinkler Service Technician, Journeyman Pipe Fitter, Journeyman Pipefitter, Machine Repairman, Pipe Fitter, Pipe Welder, Pipefitter, Sprinkler Fitter, Steamfitter, Commercial Plumber; Drain Cleaner, Plumber; Drain Technician; Journeyman Plumber; Master Plumber; Plumber; Plumber Gasfitter; Plumbing and Heating Mechanic; Residential Plumber; Service Plumber

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
28,040	35,280	7,240	26%	1,090

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
 ❖ There are no specific North Country statistics for Plumbers, Pipe Fitters, and Steamfitters. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$50,930	$49,230	$41,810	$55,490

Local Opportunities for Education
 - Jeff-Lewis BOCES: Plumbing, Heating & Air Conditioning, Welding Technology
 - St. Lawrence-Lewis BOCES: HVAC/R
 - SUNY Canton: General Technology A.A.S., Heating & Plumbing Service Certificate
 - Union Apprenticeship Programs
 - United Association of Plumbers Local Union 73 and Local Union 773: Registered Apprenticeship programs for Plumbing, Pipefitters, Welders and HVAC Techs

Public Relations Specialists (27-3031.00)

Job Description
Engage in promoting or creating an intended public image for individuals, groups, or organizations. May write or select material for release to various communications media.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Account Executive, Communications Director, Communications Specialist, Corporate Communications Specialist, Media Relations Specialist, Public Affairs Specialist, Public Information Officer, Public Information Specialist, Public Relations Coordinator, Public Relations Specialist (PR Specialist)

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
29,350	34,700	5,350	18%	890

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Public Relations Specialists. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$47,610	$45,000	$30,620	$56,100

Local Opportunities for Education
- Jeff-Lewis BOCES: Visual Communication, Applied Business Technology, Office Technology, Virtual Business
- Clinton Community College: Business Administration A.A.S./A.S.
- North Country Community College: Business Administration A.A.S./A.S.
- SUNY Jefferson: Business Administration A.A.S., Business Administration A.S., Computer Information Systems A.S., Computer Information Technology A.S., Office Studies Certificate, Office Technologies: Administrative Assistant A.A.S.
- SUNY Empire: Bachelor of Professional Studies, Master of Business Administration
- SUNY Plattsburgh: Public Relations B.A./B.S.
- SUNY Potsdam: Communications, B.A.

Purchasing Managers (11-3061.00)

Job Description

Plan, direct, or coordinate the activities of buyers, purchasing officers, and related workers involved in purchasing materials, products, and services. This category also includes wholesale or retail trade merchandising managers and procurement managers.

Education Requirements

Minimum: High School Diploma or Equivalent, Preferred: Some College

Sample of Reported Job Titles

Commodity Manager, Director of Materials, Director of Purchasing, Director of Strategic Sourcing, Materials Manager, Procurement Manager, Procurement Officer, Purchasing Director, Purchasing Manager, Purchasing Supervisor

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
4,490	4,970	480	11%	150

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Purchasing Managers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$80,790	$75,200	$53,520	$94,430

Local Opportunities for Education

- Jeff-Lewis BOCES: Applied Business Technology, Virtual Business
- St. Lawrence-Lewis BOCES: Computer & Business Technology
- Clinton Community College: Business Accounting A.A.S.
- SUNY Canton: Accounting A.A.S.
- Clarkson University: Global Supply Chain Management B.S.

Quality Control Analysts (19-4099.01)

Job Description
Conduct tests to determine quality of raw materials, bulk intermediate and finished products. Quality Control Inspectors may conduct stability sample tests.

Education Requirements
Minimum: Bachelor's Degree

Sample of Reported Job Titles
Analyst Microbiology Lab, Analytical Lab Analyst, Ethanol Quality Leader, Lab Tech, Lab Technician, Laboratory Analyst, Micro Lab Analyst, Quality Assurance Technician, Quality Control Analyst, Quality Control Technician

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
6,940	8,010	1,070	16%	400

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Quality Control Analysts. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$55,830	$54,540	$42,340	$62,570

❖ There are no specific North Country or New York State statistics for Quality Control Analysts. Therefore the data above reflects the general Life, Physical, and Social Science Technicians, All Other in the North County.

Local Opportunities for Education
- St. Lawrence-Lewis BOCES: Pre-Engineering
- Clinton Community College: Liberal Arts: Math & Science A.A.S.
- North Country Community College: Liberal Arts & Sciences: Math & Science
- SUNY Jefferson: Mathematics & Science A.A.S., Engineering Science A.S.
- SUNY Canton: Engineering Science A.S.
  SUNY Empire: Associate of Science, Bachelor of Science

Stock Clerks and Order Fillers (43-5081.00)

Job Description
Receive, store, and issue sales floor merchandise, materials, equipment, and other items from stockroom, warehouse, or storage yard to fill shelves, racks, tables, or customers' orders. May mark prices on merchandise and set up sales displays.

Education Requirements
Minimum: High School Diploma or Equivalent

Sample of Reported Job Titles
Sales Floor; Marking Clerks; Stock Clerks – Stockroom, Warehouse, or Storage Yard; Order Fillers, Wholesale and Retail Sales

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
123,410	134,620	11,210	9%	5,040

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.
❖ There are no specific North Country statistics for Stock Clerks and Order Fillers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$24,970	$21,950	$20,180	$27,550

Local Opportunities for Education
- CV-TEC: AIME Training
- On-the-Job Training

Tool and Die Makers (51-4111.00)

Job Description
Analyze specifications, lay out metal stock, set up and operate machine tools, and fit and assemble parts to make and repair dies, cutting tools, jigs, fixtures, gauges, and machinists' hand tools.

Education Requirements
Minimum: High School Diploma or Equivalent with Trade School or Apprenticeship

Sample of Reported Job Titles
Aircraft Tool Maker, Carbide Tool Die Maker, Die Maker, Jig and Fixture Builder, Jig and Fixture Repairer, Tool and Die Machinist, Tool and Die Maker, Tool Repairer, Toolmaker, Trim Die Maker

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
2,720	2,390	-330	-12%	10

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Tool and Die Makers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$38,730	$37,280	$24,520	$45,840

❖ There are no specific North Country or New York State statistics for Tool and Die Makers. Therefore the data above reflects the general Production Occupations in the North County.

Local Opportunities for Education
- St. Lawrence-Lewis BOCES: Metalworking Technology
- SUNY Canton: Apprentice Training: Industrial Trades A.A.S.
- On-the-Job Training

Transportation, Storage, and Distribution Managers (11-3071.00)

Job Description
Plan, direct, or coordinate transportation, storage, or distribution activities in accordance with organizational policies and applicable government laws or regulations. This category includes logistics managers.

Education Requirements
Minimum: Managers: Bachelor's Degree
              General Workers & Supervisors: High School Diploma or equivalent

Sample of Reported Job Titles
Transportation Managers, Storage and Distribution Managers, Logistics Managers

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
3,960	4,360	400	10%	130

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Transportation, Storage, and Distribution Managers. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$83,980	$77,460	$56,100	$97,920

Local Opportunities for Education
▪ Jeff-Lewis BOCES: Automotive Technology, Gas/Diesel Mechanics, Heavy Equipment

Waiters and Waitresses (35-3031.00)

Job Description
Take orders and serve food and beverages to patrons at tables in dining establishment.

Education Requirements
Minimum: Less than High School Diploma

Sample of Reported Job Titles
Banquet Server, Cocktail Server, Food Runner, Food Server, Restaurant Server, Room Service Server, Server, Waiter, Waitress, Waitstaff

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
152,730	171,610	18,880	12%	9,240

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Waiters and Waitresses. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$23,950	$20,260	$20,180	$25,970

Local Opportunities for Education
- CV-TEC: Culinary Arts Management
- Jeff-Lewis BOCES: Introduction to Trades, Hospitality Services

Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders (51-4122.00)

Job Description
Set up, operate, or tend welding, soldering, or brazing machines or robots that weld, braze, solder, or heat treat metal products, components, or assemblies. This category includes workers who operate laser cutters or laser-beam machines.

Education Requirements
Minimum: High School Diploma with Apprenticeship

Sample of Reported Job Titles
Braze Operator, Fabricator, Finishing Technician, Fitter-Welder, Machine Operator, Mig Welder, Operator, Robot Operator, Spot Welder, Technical Associate (TA)

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
1,170	980	-190	-16%	30

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$34,270	$32,490	$24,800	$39,000

Local Opportunities for Education
- CV-TEC: Architecture & Construction Cluster, Welding
- Jeff-Lewis BOCES: Manufacturing Technology
- Clinton Community College: Industrial Technology A.A.S.
- SUNY Canton: General Technology A.A.S.
- On-the-Job Training

Woodworking Machine Setters, Operators, and Tenders, Except Sawing (51-7042.00)

Job Description

Set up, operate, or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood nailing machines. These positions may operate CNC equipment.

Education Requirements

Minimum: High School Diploma with Apprenticeship

Sample of Reported Job Titles

Boring Machine Operator, Cabinet Maker, Computer Numerical Control Operator (CNC Operator), Knot Saw Operator, Lathe Operator, Machine Operator, Molder Operator, Router Operator, Sander, Sander Operator

Projected Job Growth

Employment		Net Change	Percent Change	Projected Annual Job Openings*
2014	2024			
2,690	2,910	220	8%	70

*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

❖ There are no specific North Country statistics for Woodworking Machine Setters, Operators, and Tenders, Except Sawing. Therefore the data above reflects this field in New York State.

Wage Data

Annual Wages ($)			
Mean	Median	Entry Level	Experienced
$29,570	$28,780	$26,770	$30,970

Local Opportunities for Education

- Jeff-Lewis BOCES: Manufacturing Technology
- Clinton Community College: Industrial Technology A.A.S.
- SUNY Canton: General Technology A.A.S.
- On-the-Job Training

Educational Provider Summary
Sorted by Type of Education Required

	High School & Certificate			
	CV-TEC	FEH BOCES	Jeff-Lewis BOCES	St. Lawrence-Lewis BOCES
Accounting	Certificate		Certificate	
Animal Care/Veterinary	Certificate		Certificate	Certificate
Assembler & Fabricator	Certificate		Certificate	Certificate
Chemical Engineer				Certificate
Commercial/Industrial Designer			Certificate	Certificate
Computer Programmer & Machine Programmer				Certificate
Computer Support Specialist			Certificate	Certificate
Crop Managers				Certificate
Culinary Arts	Certificate		Certificate	
Customer Service Representative	Certificate		Certificate	
Database/Systems Administrator	Certificate		Certificate	Certificate
Electrical Engineer			Certificate	Certificate
Electrician	Certificate		Certificate	Certificate
Environmental Engineer	Certificate	Certificate	Certificate	Certificate
Financial Manager			Certificate	Certificate
General & Operations Manager			Certificate	
Graphic Designer	Certificate		Certificate	Certificate
Health & Safety Engineer				Certificate

	High School & Certificate			
	CV-TEC	**FEH BOCES**	**Jeff-Lewis BOCES**	**St. Lawrence-Lewis BOCES**
Heating, Air Conditioning, & Refrigeration Mechanic & Installer		Certificate	Certificate	Certificate
Heavy Equipment	Certificate		Certificate	Certificate
Hospitality Services			Certificate	
Human Resources			Certificate	
Industrial Engineer				
Industrial Machinery, Installation, Repair, & Maintenance Worker	Certificate		Certificate	
Industrial Production Manager				
Inspector, Quality Control				Certificate
Machine Setter, Operator, & Tender for Metal & Plastic			Certificate	
Machine Setters, Operators, & Tenders for Welding	Certificate		Certificate	
Machine Setter, Operator, & Tender for Woodworking			Certificate	
Machinist			Certificate	
Marketing & Sales Manager			Certificate	
Materials Engineer				Certificate
Mechanical Engineer			Certificate	Certificate
Motor Vehicle Operator	Certificate		Certificate	Certificate
Office & Administrative Support			Certificate	Certificate
OSHA Generalist	Certificate			
Packager			Certificate	Certificate
Plumber, Pipefitter, & Steamfitter			Certificate	Certificate

	High School & Certificate			
	CV-TEC	**FEH BOCES**	**Jeff-Lewis BOCES**	**St. Lawrence-Lewis BOCES**
Public Relations			Certificate	
Purchasing			Certificate	Certificate
Shipping, Receiving, & Warehouse	Certificate			
Tool & Die Maker				Certificate
Tow Motor/Forklift Operator	Certificate		Certificate	
Transportation, Storage, & Distribution			Certificate	

	Two Year Degree Programs		
	Clinton Community College	**North Country Community College**	**SUNY Jefferson**
Accounting	Associate Certificate	Associate	Certificate Associate
Agri-Business			Associate
Assembler & Fabricator			
Chemical Engineer		Associate	Associate
Commercial/Industrial Designer		Associate Certificate	
Computer Programmer & Machine Programmer	Associate Certificate	Associate Certificate	
Computer Support Specialist	Associate Certificate	Certificate	Certificate Associate
Culinary Arts			Associate
Customer Service Representative	Associate	Associate	
Database/Systems Administrator	Associate Certificate	Associate Certificate	Certificate Associate
Electrical Engineer	Associate	Associate	Associate
Electrician	Associate Certificate	Associate	
Environmental Engineer	Associate Certificate	Associate	Certificate Associate
Financial Manager	Associate Certificate	Associate	Certificate Associate
General & Operations Manager	Associate	Associate	Associate
Graphic Designer		Associate Certificate	Associate
Health & Safety Engineer	Associate	Associate	Associate
Heating, Air Conditioning, & Refrigeration Mechanic & Installer			
Hospitality Tourism Hotel/Restaurant Management			Certificate
Hospitality Winery Management			Associate

	Two Year Degree Programs		
	Clinton Community College	North Country Community College	SUNY Jefferson
Human Resources	Associate	Associate Certificate	Certificate Associate
Industrial Engineer	Associate	Associate	
Industrial Machinery, Installation, Repair, & Maintenance Worker	Associate		
Industrial Production Manager	Associate	Associate	
Inspector, Quality Control	Associate	Associate	Associate
Machine Setter, Operator, & Tender for Metal & Plastic	Associate		
Machine Setters, Operators, & Tenders for Welding	Associate		
Machine Setter, Operator, & Tender for Woodworking	Associate		
Machinist	Associate		
Marketing & Sales Manager	Associate Certificate	Associate	Certificate Associate
Materials Engineer	Associate	Associate	
Mechanical Engineer		Associate	Associate
Motor Vehicle Operator			
Office & Administrative Support	Associate	Associate Certificate	Certificate Associate
OSHA Generalist	Associate	Associate	Associate
Packager			
Plumber, Pipefitter, & Steamfitter			
Public Relations	Associate	Associate	Certificate Associate
Purchasing	Associate		
Shipping, Receiving, & Warehouse			

	Two Year Degree Programs		
	Clinton Community College	North Country Community College	SUNY Jefferson
Tool & Die Maker			
Tow Motor/Forklift Operator			
Transportation, Storage, & Distribution			

	Four Year or Higher Degree Programs					
	SUNY Canton	**SUNY Empire**	**SUNY Plattsburgh**	**SUNY Potsdam**	**Clarkson University**	**Paul Smith's College**
Accounting	Associate Bachelor	Bachelor Master	Bachelor		Bachelor	Bachelor
Agri-Business	Bachelor					
Assembler & Fabricator						
Chemical Engineer	Associate	Associate Bachelor			Bachelor	
Commercial/Industrial Designer	Bachelor	Associate Bachelor				
Computer Programmer & Machine Programmer	Associate Bachelor		Bachelor	Bachelor	Bachelor	
Computer Support Specialist	Associate Bachelor				Bachelor	
Customer Service Representative		Bachelor Master				
Database/Systems Administrator	Associate Bachelor	Bachelor Master	Bachelor	Bachelor	Bachelor	
Electrical Engineer	Associate Bachelor	Associate Bachelor			Bachelor	
Electrician	Certificate					
Environmental Engineer	Associate	Associate Bachelor	Bachelor		Bachelor	Bachelor
Financial Manager	Associate Bachelor	Bachelor Master	Bachelor	Bachelor	Bachelor	Bachelor
General & Operations Manager	Associate Bachelor	Bachelor Master	Bachelor		Bachelor	Bachelor
Graphic Designer	Bachelor	Associate Bachelor			Bachelor	
Health & Safety Engineer	Associate	Associate Bachelor			Bachelor	
Heating, Air Conditioning, & Refrigeration Mechanic & Installer	Certificate Associate					
Hotel & Restaurant Management		Bachelor				
Human Resources	Associate Bachelor	Bachelor Master		Bachelor	Bachelor	

	Four Year or Higher Degree Programs					
	SUNY Canton	**SUNY Empire**	**SUNY Plattsburgh**	**SUNY Potsdam**	**Clarkson University**	**Paul Smith's College**
Industrial Engineer	Associate			Bachelor	Bachelor	
Industrial Machinery, Installation, Repair, & Maintenance Worker						
Industrial Production Manager	Bachelor		Bachelor		Bachelor	
Inspector, Quality Control		Associate Bachelor				
Machine Setter, Operator, & Tender for Metal & Plastic	Associate					
Machine Setters, Operators, & Tenders for Welding	Associate					
Machine Setter, Operator, & Tender for Woodworking	Associate					
Machinist	Associate					
Maintenance	Certificate					
Management		Bachelor				
Marketing & Sales Manager	Associate Bachelor	Bachelor Master	Bachelor	Bachelor	Bachelor	Bachelor
Materials Engineer	Associate				Bachelor	
Mechanical Engineer	Associate Bachelor	Associate Bachelor			Bachelor	
Motor Vehicle Operator						
Office & Administrative Support	Associate	Bachelor Master				
OSHA Generalist		Associate Bachelor				
Packager						
Plumber, Pipefitter, & Steamfitter	Certificate					

	Four Year or Higher Degree Programs					
	SUNY Canton	**SUNY Empire**	**SUNY Plattsburgh**	**SUNY Potsdam**	**Clarkson University**	**Paul Smith's College**
Public Relations	Associate Bachelor	Bachelor Master	Bachelor	Bachelor		
Purchasing	Associate				Bachelor	
Shipping, Receiving, & Warehouse						
Tool & Die Maker	Associate					
Tow Motor/Forklift Operator	Bachelors Associate					
Transportation, Storage, & Distribution						
Veterinary Service Administration	Associate Bachelor					
Veterinary Technology	Bachelor					

Registered Apprenticeship Programs		
Name	**Trade**	**Address**
Associated Builders and Contractors	Various Trades	6369 Collamer Dr. East Syracuse NY 13057
Associated Builders and Contractors	Various Trades	21A Railroad Avenue Albany NY 12205
Bricklayers and Allied Craftworkers LU #2	Bricklayer Mason and Plasterer	7705 Maltlage Drive Liverpool, NY13090
Bricklayers and Allied Craftworkers LU #2	Bricklayer Mason and Plasterer	302 Centre Drive Albany, NY12203
Empire State Merit Apprenticeship Alliance	Carpenters	6369 Collamer Drive E. Syracuse, NY13057
Empire State Carpenters Apprenticeship Com JATC #747	Carpenters	3195 Vickery Road North Syracuse, NY13212
Empire State Carpenters Apprenticeship of Albany LU #370	Carpenters	27 Warehouse Row Albany, NY12205
IBEW LU #910	Electrical Workers	25001 Water St Watertown, NY 13601
Iron Workers JAC LU #60	Iron Workers	500 West Genesee Street Syracuse, NY13204
Iron Workers JAC of Albany LU #12	Iron Workers	890 Third Street, Ste 2 Albany, NY12206
Ironworkers JAC District 2 - LU #440	Iron Workers	801 Varick Street Utica, NY13502
Insulation-Asbestos Workers JAC of Albany LU# 40	Insulation and Asbestos Workers	890 Third Street Albany, NY12206
Heat-Frost Insulators-Allied Workers LU # 30	Insulation and Asbestos Workers	107 Twin Oaks Drive Syracuse, NY13206
Finishing Trades Institute of NY at Albany LU #201	Painter, Decorator and Paperhanger	348 Duanesburg Road Rotterdam, NY12306
United Association of Plumbers LU #73	Plumber and Steamfitter	PO Box 911 Oswego, NY13126
Plumbers and Steamfitters LU #773	Plumber and Steamfitter	P.O. Box 312 S. Glens Falls, NY12801
Roofers and Waterproofers Local #195 JAC	Roofing	6200 State Route 31 Cicero, NY13039
Roofers JAC of the Capital District LU #241	Roofing	890 Third Street Albany, NY12206
Sheet Metal Workers Local Union 58	Sheet Metal Workers	301 Pulaski Street Syracuse, NY13204
Empire State Merit Apprenticeship Alliance	Skilled Construction Laborers	6369 Collamer Drive E. Syracuse, NY13057
LIUNA Local Union #186 JAC	Skilled Construction Laborers	PO Box 928 Plattsburgh, NY 12901

Registered Apprenticeship Programs		
Name	**Trade**	**Address**
LIUNA LU #322 JAC Massena	Skilled Construction Laborers	PO Box 361 Massena, NY13662
Operating Engineers LU #158	Skilled Construction Laborers	44 Hannay Lane Glenmont, NY 12077
Operating Engineers LU #158	Skilled Construction Laborers	127 East Glen Avenue Syracuse, NY 13205

Acknowledgements

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