

2004 Survey of Future Connecticut Manufacturing Jobs

2004 Manufacturer's Survey of Current and Future Jobs

Vital Statistics: 7,019 surveys sent/ returned 623 of which **365** were manufacturers
 9% or **5%** response rate with a margin of error of plus or minus 4% or **5%**.

PRE-QUALIFYING QUESTION

1. Does your company currently manufacture products, or perform research and development on manufactured products in Connecticut?

Yes	58%
No	42%

EDUCATION

2a. Do you hire graduates with degrees (e.g. high school, college, graduate) from educational institutions within Connecticut?

Yes	63%
No	38%

2b. If yes, in 2003, what percentage of your employees did you hire from educational institutions in Connecticut?

0%	39%
1-9%	9%
10-24%	11%
25-49%	4%
50-74%	11%
75-99%	13%
100%	14%

3. What educational institutions do you usually hire your employees from? (Check all that apply)

Vocational-Technical High School	27%
Community College-6 months/1-year Certificate	8%
Community College-Associates' Degree	11%
Private Occupational School	4%
UCONN	7%
CT State Universities	10%
Private 4-year College/University	10%
Other: High School	4%
Other	1%

4. How satisfied are you with the graduates that you hired from the educational institutions you selected in question 3?

	Poor	Fair	Average	Good	Excellent
Vocational-Technical High School	5%	9%	24%	55%	7%
Community College-6 months/ 1-year Certificate	2%	4%	32%	56%	6%
Community College-AS	0%	5%	22%	57%	17%
Private Occupational School	0%	4%	23%	65%	8%
UCONN	2%	2%	19%	51%	26%
CT State Universities	0%	7%	14%	62%	17%
Private 4-year College/University	2%	2%	10%	59%	28%
Other	3%	3%	38%	48%	7%

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5. Which educational institution listed in question 3 do you most often use to fill employee vacancies for the following positions?

A. Engineers:	Private 4-year College/University (30%), UCONN (17%)
B. Entry-level workers:	Vocational-Technical High School (54%), High School (28%)
C. Highly skilled production workers:	Vocational-Technical High School (62%), High School (13%)
D. Managerial workers:	Private 4-year College/University (26%), College-general (19%)

6a. Do you currently use, or are you willing to use, an apprenticeship/internship program?

Yes	51%
No	49%

6b. If you use apprenticeship/interns, do you hire a majority of them?

Yes	73%
No	27%

7. Do you recruit from out-of-state educational institutions?

Yes	9%
No	91%

8. List below the out-of-state institutions that you most frequently recruit from, and the major (e.g. engineering, mathematics, chemistry) and degree (e.g. AS, BA, BS, MA, Ph.D) that those graduates typically hold.

Percentage that named:	Most-often cited:
A. Institution	6% RPI, MIT, Penn State, WPI
B. Major	5% Engineering
C. Degree Earned	6% BS, MS, PhD

9. How would you describe the job readiness of recent college graduates that you have hired?

Poor	Fair	Average	Good	Excellent
4%	7%	38%	46%	5%

10. Currently, what is the single-most critical skill shortage in your company?

Manufacturing	60%
Right people for position	10%
Engineer	9%
Marketing/Sales	6%
Other	5%
IT	3%
Critical thinking/Problem solving	3%
Math	2%
Written communication	1%
Office Staff	1%
ESL	1%
Verbal communication	0%
Reading skills	0%

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11. In Connecticut, what is your best estimate of your company's current number of employees for the following positions?
2005? 2007? 2010?

CURRENT

	Total	Mean	Minimum	Maximum
A. Entry-level production workers	4669	19	1	400
B. Welders	249.5	3	1	18
C. CNC/Programmers	296	3	1	28
D. CAD/CAM workers	255	3	1	40
E. Tool & Die makers	481	5	1	75
F. Engineers	3838	29	1	3166
G. Technical sales staff	527	4	1	100
H. Production managers/ Supervisors/Team leaders	720	3	1	70
I. Plant managers	180	1	1	4
J. R&D Staff	146	3	1	20
K. Technical trainers	46	2	1	5
L. Technicians	355	5	1	84
M. Other	3345	25	1	2519
Largest other: Production Trades	2519			

2005

	Total	Mean	Minimum	Maximum
A. Entry-level production workers	4238	19	1	400
B. Welders	249	4	1	25
C. CNC/Programmers	345	4	1	33
D. CAD/CAM workers	256	3	1	20
E. Tool & Die makers	439	6	1	80
F. Engineers	3003	27	1	2418
G. Technical sales staff	469	4	1	100
H. Production managers/ Supervisors/Team leaders	667	4	1	70
I. Plant managers	174	1	1	4
J. R&D Staff	139	3	1	20
K. Technical trainers	52	2	1	8
L. Technicians	321	5	1	87
M. Other	2965	24	1	2080
Largest other: Production Trades	2080			

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11. In Connecticut, what is your best estimate of your company's current number of employees for the following positions?
2005? 2007? 2010? (continued)

2007

	Total	Mean	Minimum	Maximum
A. Entry-level production workers	4150	22	1	500
B. Welders	213	4	1	30
C. CNC/Programmers	292	4	1	35
D. CAD/CAM workers	253	3	1	42
E. Tool & Die makers	332	5	1	32
F. Engineers	2686	29	1	2222
G. Technical sales staff	464	4	1	115
H. Production managers/ Supervisors/Team leaders	604	4	1	75
I. Plant managers	139	1	1	5
J. R&D Staff	110	3	1	25
K. Technical trainers	64	2	1	10
L. Technicians	276	5	1	40
M. Other	1675	21	1	1190
Largest other: Production Trades	1190			

2010

	Total	Mean	Minimum	Maximum
A. Entry-level production workers	4577	26	1	600
B. Welders	227	5	1	40
C. CNC/Programmers	289	4	1	40
D. CAD/CAM workers	246	3	1	16
E. Tool & Die makers	345	6	1	34
F. Engineers	2721	30	1	2200
G. Technical sales staff	506	5	1	120
H. Production managers/ Supervisors/Team leaders	636	5	1	80
I. Plant managers	144	1	1	5
J. R&D Staff	151	4	1	30
K. Technical trainers	78	2	1	12
L. Technicians	356	6	1	50
M. Other	1801	24	1	1279
Largest other: Production Trades	1279			

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12. On a scale of 1 to 5, how much difficulty have you had in filling each of the following positions?

	Extremely difficult	Very difficult	Somewhat difficult	Not too much difficulty	No difficulty at all
A. Entry-level production workers	8%	11%	30%	27%	24%
B. Welders	14%	18%	29%	22%	17%
C. CNC/Programmers	27%	24%	28%	12%	9%
D. CAD/CAM workers	19%	25%	26%	21%	9%
E. Tool & Die makers	30%	24%	29%	10%	7%
F. Engineers	19%	26%	25%	22%	8%
G. Technical sales staff	14%	29%	31%	18%	9%
H. Production managers/	16%	21%	28%	24%	11%
I. Plant managers	17%	25%	22%	20%	16%
J. R&D Staff	14%	18%	39%	20%	8%
K. Technical trainers	15%	18%	30%	27%	9%
L. Technicians	11%	17%	33%	28%	11%
M. Other	25%	36%	19%	15%	5%

13a. Do you anticipate eliminating any positions in the next five years?

Yes 9%
 No 91%

13b. If yes, please list any such positions and the reason for their elimination.

Most often-cited positions eliminated: Entry-level, Machinists, Production workers
 Most often-cited reasons for job elimination: Less business, Better technology, Outsourcing, Retirement

14. What percentage of your current workforce do you believe you will need to replace over the next five years because of attrition or retirement?

0% 28%
 1-9% 15%
 10-24% 37%
 25-49% 13%
 50-74% 5%
 75-99% 1%
 100% 1%

15. By what percentage will your workforce need to increase within Connecticut over the next five years because of new products, sales or expansion?

0% 20%
 1-9% 11%
 10-24% 38%
 25-49% 17%
 50-74% 7%
 75-99% 1%
 100% 6%

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16. What technical skills do your employees currently need? In five years?

	Priority skills in demand NOW				
	1st	2nd	3rd	4th	5th
A. Lean manufacturing	46%	21%	12%	13%	8%
B. Six sigma	3%	39%	22%	17%	19%
C. Green technologies	14%	14%	29%	21%	21%
D. Team building/Problem Solving	24%	30%	23%	16%	7%
E. CAD/CAM	22%	21%	22%	18%	18%
F. CNC Programming	27%	23%	22%	18%	10%
G. Blueprint reading	21%	29%	21%	17%	13%
H. Geometric Dimensions/Tolerancing	17%	19%	21%	21%	22%
I. Laser optics	9%	0%	27%	18%	46%
J. Fuel cell technology	0%	17%	0%	50%	33%
K. Computer/IT	15%	18%	32%	22%	13%
L. Advanced computer operation	21%	21%	24%	9%	24%
M. Engineering	27%	23%	16%	21%	14%
N. Sales/Customer service	20%	19%	20%	20%	21%
O. Equipment operation	29%	19%	18%	19%	15%
P. Other	30%	22%	19%	16%	14%

	Priority skills in demand IN 5 YEARS				
	1st	2nd	3rd	4th	5th
A. Lean manufacturing	42%	19%	15%	13%	11%
B. Six sigma	5%	42%	14%	21%	19%
C. Green technologies	15%	39%	15%	8%	23%
D. Team building/Problem Solving	21%	31%	24%	13%	10%
E. CAD/CAM	30%	13%	28%	21%	8%
F. CNC Programming	31%	20%	17%	19%	13%
G. Blueprint reading	26%	30%	13%	15%	16%
H. Geometric Dimensions/Tolerancing	5%	30%	23%	12%	30%
I. Laser optics	8%	8%	17%	42%	25%
J. Fuel cell technology	14%	0%	14%	57%	14%
K. Computer/IT	13%	14%	30%	27%	17%
L. Advanced computer operation	18%	18%	21%	18%	24%
M. Engineering	31%	17%	20%	11%	20%
N. Sales/Customer service	22%	22%	18%	18%	21%
O. Equipment operation	30%	13%	17%	28%	13%
P. Other	31%	23%	15%	12%	19%

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EMPLOYEE TRAINING

17. Do you provide assistance to employees to help them transition to more senior positions in your company?

Yes	71%
No	29%

18. Do you provide tuition reimbursement for off-site employee training or job-related education?

Yes	52%
No	48%

19a. Do you currently use any of the services of Connecticut's "One-Stop" workforce system?

Yes	5%
No	95%

19b. If yes, what services do you use? (Check all that apply)

Recruitment	2%
Training	1%
Downsizing	0.3%
Tax credits	1%
Labor market information	1%
General business information	1%

20. CBIA may have access to or may initiate grants or other funding opportunities for employee training. Would you be interested in being contacted regarding these opportunities?

Yes	54%
No	47%

21. CBIA has many contacts with qualified education and training vendors. Would you be interested in being contacted regarding these opportunities?

Yes	30%
No	70%

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22. What question do you think we should have asked concerning workforce needs, education or training?

1 Are community/state institutions responsive to the needs of local manufactures?

Are people sufficiently skilled/trained in organization, prioritization, problem-solving, business writing (incl. spelling!) understanding how to behave in a business environment?

3 Are you able to obtain information regarding grant programs for training and business expansion?

4 As more companies implement lean strategies, how will the workforce be handled to preserve jobs?

5 Did your company attempt to hire from schools w/in CT? Why was your attempt unsuccessful?

6 Do Conn. Kids receive a decent HS education?

7 Do you experience language barriers w/your workforce

Do you give preference in hiring to holder of nation wide recognized skill level certification (e.g. ASE, AEA,

8 AWS, NIMS and others)?

9 Do you plan on expanding?

10 Do you think the wage scale is too high? (Starting with min. wage)

11 Do you use temp? Have you hired temp?

12 Economic stimulation in CT?

How can the state & local got help you to compete while you are still located in CT? My answer: the state

13 should partner w/business in investing in capitol equipment. It will create jobs

14 How can you (the state) make it easier to find skilled labor?

15 How do small manufactures access work off load from high tech larger companies?

16 How do you make-find employees with self respect ethic, handwriting ethic, and team participant ethic.

17 How important is personal health training?

18 How many jobs do we plan on moving overseas, because of the cost of doing business in the state of CT?

19 How often do you normally hire/fire?

20 How to reduce taxes in CT to make more business friendly emp?

21 How to stop the ingmenous loss of mfg jobs to China?

Impact of outsourcing and need for personnel skilled in manufacturing, when manufacturers have left this
22 state!

23 In question 2a you should have asked if a degree is a criteria to being hired, not simply if I do.

Is there a specific function not begin addressed by state universities? -answer yes more manufacturing related
24 studies

25 Languages? Chinese

26 Let's redo our education system. What is wrong that a H.S. graduate cannot read a tape measure?

27 Need more info on state grants to fund growth

Pay/salary for ea. Of the position (I.e. sales, machine operations, etc) what are the appropriate levels of
28 compensation? Etc.

29 Retention & recruitment of tool & die makers from foreign countries.

30 Something related to English as a primary language

31 These surveys should be more geared to industry segments.

32 Use of day labor, what cost prohibit us from hiring more people.

33 We need blue collar, production people- where are they? Working in factory is negatively viewed in CT.

We really need to take a look at secondary schools what is happening to those who are not college bound?

34 What skills are offered to these students?

35 What deficiencies do employers see emerging in current graduates?

36 What is the greatest challenge for workforce needs now and in the immediate future?

37 What kind of products our company develops?

38 What particular skills are needed for my company?

39 What percent of the workforce are U.S. citizens?

40 Whether transportation is available for line workers? (it's not)

41 Why are we having difficulty in filling positions (question 13)?

42 Will manufacturing survive the current trend of shifting business and products to Asia?

You should have asked if we were satisfied with the effort the state of CT is expending for business-friendly

43 activities-training, financing, tax structure, promotion, etc.

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DEMOGRAPHICS

23. In which Connecticut is your firm located?

Fairfield	28%
Litchfield	4%
New Haven	24%
Tolland	7%
Hartford	25%
Middlesex	4%
New London	4%
Windham	4%

24. Which of the following describes your company? (Check all that apply)

Minority-owned	1%
Family-owned	25%
Privately held	25%
Foreign-owned	2%
Woman-owned	8%
Publicly held	1%
Incorporated	26%
Limited liability corporation	6%

25. How many years has your company been in operation?

Less than 1 year	1%
1-10 years	11%
11-49 years	58%
50-99 years	24%
100 years	1%
101 years or more	6%