















#### August 2008

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"Without the work of scientists, technicians, engineers, mathematicians, and other skilled workers, most new products and discoveries would never be developed."

"STEM Occupations" by Nicholas Terrell
Occupational Outlook Quarterly, spring 2007, Bureau of Labor Statistics



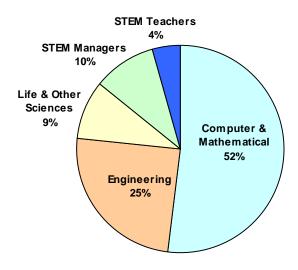
**Economic competition** in the U.S. and across the globe has not only fueled the demand for technical skills and creative talent, but also highlights the need to increase the quality and depth of math and science courses taught in our schools, and to encourage more students to select these subjects.

The latest efforts focus on these four major disciplines: Science, Technology, Engineering, and Mathematics, or STEM. There is a growing realization among workforce professionals, educators, and businesses that preparation for these STEM fields ought to begin during the early years of education through high school, with the goal of preparing students for work as well as for college and higher degrees.

While there are many occupations and career paths that require education in STEM disciplines, the Occupational Information Network (O\*NET) separates them into eight different categories (or disciplines): Chemistry, Computer Science, Engineering, Environmental Science, Geosciences, Life Sciences, Mathematics, and Physics/Astronomy. Within each discipline, O\*NET provides a list of relevant occupations. There are over 100 unique occupations, including managerial and teaching occupations in STEM fields (See Appendix Table 1). You can also access O\*NET at: <a href="http://online.onetcenter.org/find/stem">http://online.onetcenter.org/find/stem</a>.

**In Connecticut**, employment in STEM occupations requiring an associate's degree or higher totaled 137,740 in 2004<sup>1</sup>, or nearly eight percent of the State's total employment. As shown in the chart below, over half (71,390) of Connecticut's STEM employment is found in computer and mathematical occupations, which include *accountants and auditors*, *computer systems analysts*, *computer support specialists*, *computer programmers*, *and computer software engineers*. Engineering occupations (34,170) comprise 25 percent of Connecticut's STEM employment, and include *mechanical engineers*, *aerospace engineers*, *industrial engineers*, *and civil engineers*.

#### Computer and mathematical occupations comprised over half of Connecticut's STEM employment in 2004



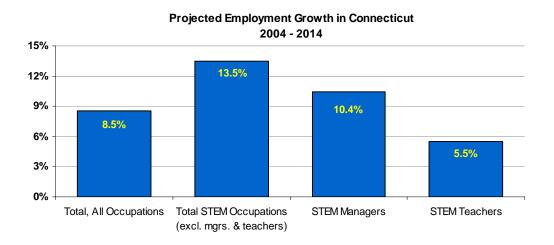
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Connecticut Department of Labor Office of Research-Labor Market Information

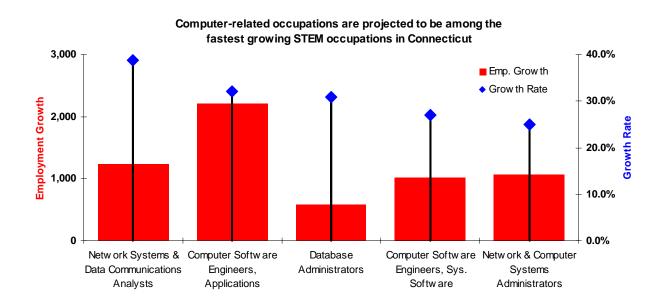
<sup>&</sup>lt;sup>1</sup> Occupations requiring less than an associate's degree have been excluded from this report. Examples include: *Automotive service technicians and mechanics, electromechanical equipment assemblers,* and *cooks, institution and cafeteria.* 

Life sciences occupations, such as *medical scientists*, *biological technicians*, *microbiologists*, and *dietitians and nutritionists*, and other sciences (chemistry, environmental science, geosciences, and physics/astronomy) which include *chemists*, *biochemists and biophysicists*, *chemical technicians*, *environmental scientists and specialists*, *geoscientists*, and *physicists* account for nine percent (12,760). In addition, managers in STEM fields (13,280) comprise ten percent, and STEM discipline teachers (6,140) account for four percent of the total.

**Growth** in STEM occupations (excluding managers and teachers) is projected at 13.5 percent, compared with Connecticut's overall projected employment increase of 8.5 percent, from 2004 to 2014. An increase of 10.4 percent is projected for STEM managerial occupations, while employment of teachers in STEM disciplines is forecast to rise by a lower 5.5 percent.



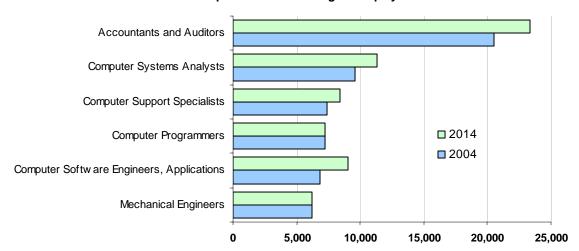
Computer-related occupations top the list of the fastest growing STEM occupations in Connecticut, and include *Network Systems and Data Communications Analysts* (+38.9%); *Computer Software Engineers, Applications* (+32.2%); and *Database Administrators* (+30.9%).



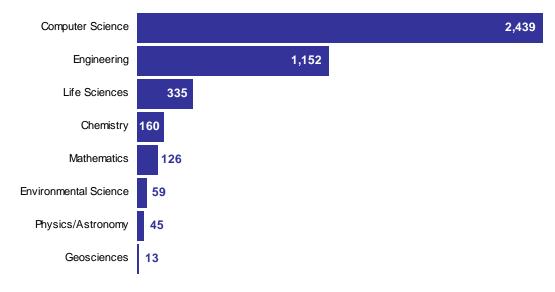


The largest employment gains (new jobs created) over the ten-year period are forecast for *Accountants and Auditors* (+2,850), *Computer Software Engineers, Applications* (+2,200), and *Computer Systems Analysts* (+1,750). By 2014, the largest number of workers employed in STEM occupations will be *Accountants and Auditors* (23,370) and *Computer Systems Analysts* (11,350).

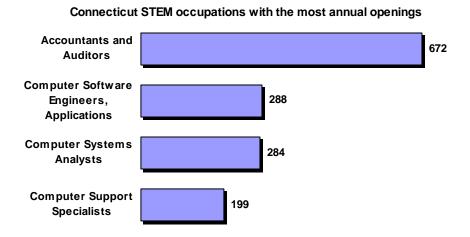
#### STEM Occupations with the Largest Employment in Connecticut



#### The highest number of annual openings in STEM occupations are projected in the computer science and engineering fields

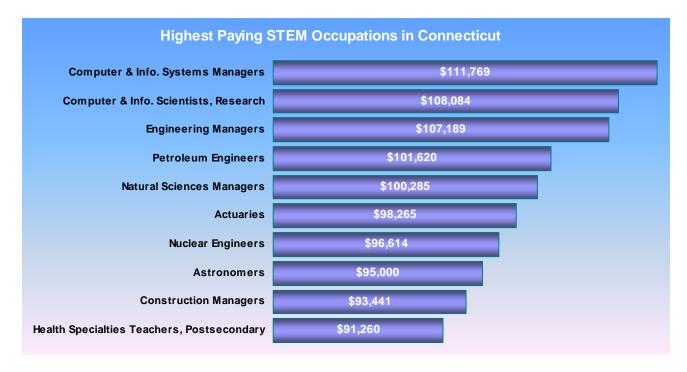


Additionally, annual openings to fill new jobs and replace workers who leave existing positions are forecast to be greatest for *Accountants and Auditors* (672), and other computer-related occupations such as *Software Engineers* (288) and *Systems Analysts* (284).

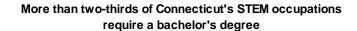


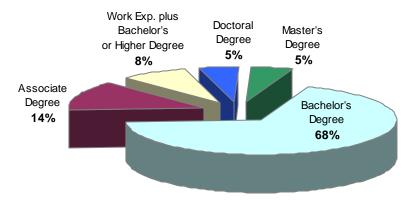
A complete list of STEM occupations, by STEM discipline, showing employment levels, annual openings, average wages, and most commonly required education and training, is provided in Table 2 of the Appendix.

**Wages** for STEM occupations are generally higher than for non-STEM jobs, in part due to the higher levels of education required. In Connecticut, *Computer and Information Systems Managers, Computer and Information Research Scientists, and Engineering Managers* averaged the highest wages among STEM occupations—above \$107,000 per year. Four of the ten highest paying (over \$90,000) STEM occupations were at the management level.

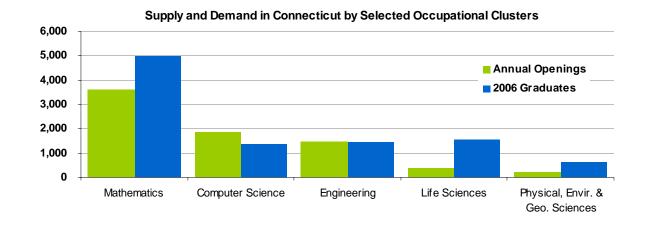


**Education and training** for most STEM disciplines requires degrees beyond the postsecondary school level. In 2004, over two-thirds (68%) of Connecticut's STEM employment was centered in occupations that require a bachelor's degree. While a bachelor's degree alone is by far the most common entry to STEM careers, eight percent of STEM employment required additional work experience, and master's or doctoral degrees were the requirement for ten percent. An additional 14 percent of STEM employment was found in occupations that require an associate's degree.





**Matching the supply** of Connecticut graduates with the occupational demand in STEM fields is a complex process, even when an educational program seems readily identifiable with an occupational field, such as engineering, for example. Educational data is collected within occupational clusters. The annual projected openings (**demand**) for occupations within the *engineering* cluster, from 2004 to 2014, was estimated at 1,474 openings. Data on the **supply** of graduates (with an associate's degree or higher) in the *engineering* cluster, showed a total of 1,440 graduates in that cluster, as of 2006. Among these graduates, the largest number (670) had a bachelor's degree; those with postgraduate degrees numbered 621; and there were 149 who graduated with an associate's degree.



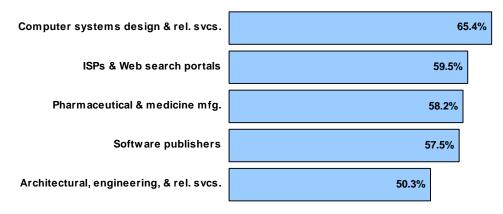
Additional information is needed to effectively evaluate this data, much of which is not readily available. For example, we do not know—from the data at hand—how many of those graduating with higher degrees are already employed in the field, or how many do not plan to remain in Connecticut after graduation. For that matter, it would be difficult to try to determine how many graduates from out-of-state schools plan to find work in Connecticut. There may appear to be a slight undersupply of graduates in this cluster, but these data do not indicate whether there are more graduates than needed in one engineering specialty, and too few in another. Additional knowledge is needed in order to enable a more precise matching of supply with demand, and the only available source may be personal contacts or intermittent surveys, where they have been made by professional associations or others. As a starting point, we can provide the above chart, as well as a summary of the available supply-demand data in Table 3 of the Appendix to this report. Some factors that should be taken into consideration when interpreting supply data are also provided.

#### **STEM Employment by Industry**

According to the U.S. Department of Labor's Employment and Training Administration (ETA), "STEM-related industries have been identified by the National Science Foundation as producing almost 50 percent of U.S. economic growth during the last 50 years."

The average proportion of STEM employment across all Connecticut industries equaled 7.61% in 2004, and industries were selected based upon STEM employment concentration of at least twice the state's average, or 15.22%. Eight industries posted more than five times the state's concentration of STEM jobs. The chart below shows five of these industries where STEM occupations accounted for over half of the total employment. A more complete list is shown in Table 4 of the Appendix.

#### These five industries had the highest concentration of STEM employment in Connecticut



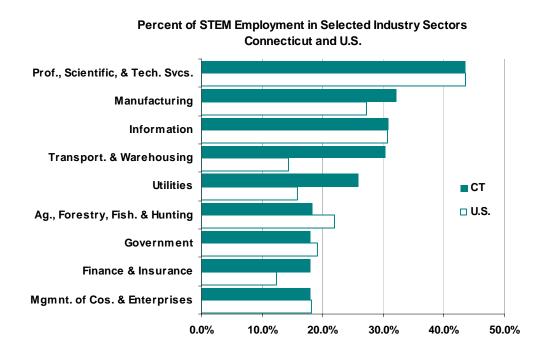
By far, the *computer systems design and related services* industry had the largest STEM employment (12,055) as well as the highest percentage of STEM jobs. Table 4 provides a list of 37 Connecticut industries with high concentrations of STEM jobs, from those with more than five times the state's overall STEM employment level (Level 1) down to those with STEM employment of between two and three times the statewide level (Level 3). STEM employment is projected to increase by 2014 in three out of four of these industries.



STEM jobs comprise about six percent of U.S. industry employment, lower than Connecticut's eight percent concentration. In order to compare Connecticut's data with national STEM employment concentrations, the U.S. average of six percent (5.97%) was applied to Connecticut industries. In addition to the 37 Connecticut industries identified in Table 4, fourteen additional industries met the criteria when the U.S. STEM levels were applied. Compared with the U.S. list of 39 industries with high STEM concentrations, there were 51 Connecticut industries that recorded STEM concentrations of 11.93 percent or above, and 14 of these industries had STEM employment of more than 30 percent (Level 1). (See Table 6 in the Appendix.)

The Computer systems design and related services industry topped the list for both Connecticut and the U.S. However, the concentration of STEM jobs in that industry was higher in Connecticut, with 65.4 percent versus 63.0 percent in the U.S. Among comparable industries that recorded Level 1 STEM employment concentrations, three additional Connecticut industries that had STEM employment above that of the U.S. included: Internet service providers and Web search portals (59.5% in CT and 43.9% in the U.S.); accounting, tax preparation, bookkeeping, and payroll services (39.7%/34.3%), and aerospace product and parts manufacturing (36.2%/31.4%). The U.S. share of STEM employment was higher than Connecticut's in the software publishers (57.5% in CT and 58.6% in the U.S.), data processing, hosting, and related services (33.0%/40.4%), and the computer and peripheral equipment manufacturing (31.4%/46.9%) industries.

A comparison by industry sector shows that Connecticut had a higher percentage of STEM jobs than the U.S. in six of the nine selected industry sectors. (See chart below.) In the manufacturing sector, 19 Connecticut manufacturing industries met the criteria for high STEM concentration, evidence of the advanced technologies, knowledge and skills being used in Connecticut manufacturing. Together, STEM occupations accounted for 32.1-percent of the employment in these industries. This was nearly five-percentage points ahead of the U.S. STEM concentration (27.2%) for the 14 manufacturing industries listed. (See tables 7 and 8 in the Appendix.)



"The technology that is coming in the near-future is remarkable. Our lives will be transformed in ways that most of us have not yet imagined."

The scientific and technical advances that have taken place during the last ten years are most likely just a small tip of the iceberg for the 21<sup>st</sup> century. With nano-technology, fuel-cell, robotics and other scientific endeavors emerging, this State and this nation will most likely need to focus on educating today's students for the next 50 years of scientific and technological advances.



<sup>&</sup>lt;sup>2</sup> "Herman Trend Alert: Innovations That Will Change Our World," January 9, 2008, http://www.hermangroup.com/alert/archive\_1-09-2008.html.

**Table 1. Occupations by STEM Discipline** 

O*NET code	Occupation
	CHEMISTRY - 11 occupations
11-9041.00	Engineering Managers
11-9121.00	Natural Sciences Managers
17-2041.00	Chemical Engineers
19-1013.00	Soil and Plant Scientists
19-1021.00	Biochemists and Biophysicists
19-2031.00	Chemists
19-4031.00	Chemical Technicians
25-1032.00	Engineering Teachers, Postsecondary
25-1052.00	Chemistry Teachers, Postsecondary
	COMPUTER SCIENCE - 24 occupations
11-3021.00	Computer and Information Systems Managers
11-9041.00	Engineering Managers
11-9121.00	Natural Sciences Managers
13-2011.01	Accountants
13-2011.02	Auditors
15-1011.00	Computer and Information Scientists, Research
15-1021.00	Computer Programmers
15-1031.00	Computer Software Engineers, Applications
15-1032.00	Computer Software Engineers, Systems Software
15-1041.00	Computer Support Specialists
15-1051.00	Computer Systems Analysts
15-1061.00	Database Administrators
15-1071.01	Computer Security Specialists
15-1081.00	Network Systems and Data Communications Analysts
15-1099.99	Computer Specialists, All Other
15-2031.00	Operations Research Analysts
17-2061.00 17-3023.01	Computer Hardware Engineers
17-3023.01	Electronics Engineering Technicians
25-1011.00	Electrical Engineering Technicians Business Teachers, Postsecondary
25-1011.00	Computer Science Teachers, Postsecondary
25-1021.00	Engineering Teachers, Postsecondary
27-1024.00	Graphic Designers
	ENGINEERING - 50 occupations
11-9021.00	Construction Managers
11-9041.00	Engineering Managers
11-9121.00	Natural Sciences Managers
15-1031.00	Computer Software Engineers, Applications
15-1032.00	Computer Software Engineers, Systems Software
17-1011.00	Architects, Except Landscape and Naval
17-2011.00	Aerospace Engineers
17-2021.00	Agricultural Engineers
17-2031.00	Biomedical Engineers
17-2041.00	Chemical Engineers
17-2051.00	Civil Engineers
17-2061.00	Computer Hardware Engineers
17-2071.00	Electrical Engineers
17-2072.00	Electronics Engineers, Except Computer
17-2081.00	Environmental Engineers

Table 1. Occupations by STEM Discipline (continued)

O*NET code	Occupation
	•
17-2111.01	Industrial Safety and Health Engineers
17-2111.02	Fire-Prevention and Protection Engineers
17-2111.03	Product Safety Engineers
17-2112.00	Industrial Engineers
17-2121.01	Marine Engineers
17-2121.02	Marine Architects
17-2131.00	Materials Engineers
17-2141.00	Mechanical Engineers
17-2151.00	Mining and Geological Engineers, Including Mining Safety Engineers
17-2161.00	Nuclear Engineers
17-2171.00	Petroleum Engineers
17-2199.99	Engineers, All Other
17-3021.00	Aerospace Engineering and Operations Technicians
17-3022.00	Civil Engineering Technicians
17-3023.01	Electronics Engineering Technicians
17-3023.03	Electrical Engineering Technicians
17-3025.00	Environmental Engineering Technicians
17-3026.00	Industrial Engineering Technicians
17-3027.00	Mechanical Engineering Technicians
17-3029.99	Engineering Technicians, Except Drafters, All Other
19-1032.00	Foresters
19-2032.00	Materials Scientists
19-2099.99	Physical Scientists, All Other
19-4051.01	Nuclear Equipment Operation Technicians
19-4051.02	Nuclear Monitoring Technicians
25-1031.00	Architecture Teachers, Postsecondary
25-1032.00	Engineering Teachers, Postsecondary
	ENVIRONMENTAL SCIENCE - 4 occupations
19-2041.00	Environmental Scientists and Specialists, Including Health
19-4091.00	Environmental Science and Protection Technicians, Including Health
19-4099.99	Life, Physical, and Social Science Technicians, All Other
25-1053.00	Environmental Science Teachers, Postsecondary
	GEOSCIENCES - 8 occupations
11-9041.00	Engineering Managers
11-9121.00	Natural Sciences Managers
17-2199.99	Engineers, All Other
19-2042.00	Geoscientists, Except Hydrologists and Geographers
19-2043.00	Hydrologists
25-1032.00	Engineering Teachers, Postsecondary
25-1051.00	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary
25-1052.00	Chemistry Teachers, Postsecondary
	LIFE SCIENCES - 50 occupations
11-9011.01	Nursery and Greenhouse Managers
11-9011.02	Crop and Livestock Managers
11-9041.00	Engineering Managers
11-9121.00	Natural Sciences Managers
13-1041.01	Environmental Compliance Inspectors
15-2041.00	Statisticians
17-2021.00	Agricultural Engineers
Department of Labor	



**Table 1. Occupations by STEM Discipline** (continued)

O*NET code	Occupation
O NET COUR	Occupation
19-1011.00	Animal Scientists
19-1012.00	Food Scientists and Technologists
19-1013.00	Soil and Plant Scientists
19-1020.01	Biologists
19-1021.00	Biochemists and Biophysicists
19-1022.00	Microbiologists
19-1023.00	Zoologists and Wildlife Biologists
19-1029.99	Biological Scientists, All Other
19-1031.01	Soil and Water Conservationists
19-1031.02	Range Managers
19-1031.03	Park Naturalists
19-1032.00	Foresters
19-1041.00	Epidemiologists
19-1042.00	Medical Scientists, Except Epidemiologists
19-1099.99	Life Scientists, All Other
19-2099.99	Physical Scientists, All Other
19-4011.01	Agricultural Technicians
19-4011.02	Food Science Technicians
19-4021.00	Biological Technicians
19-4031.00	Chemical Technicians
19-4093.00	Forest and Conservation Technicians
25-1032.00	Engineering Teachers, Postsecondary
25-1041.00	Agricultural Sciences Teachers, Postsecondary
25-1042.00	Biological Science Teachers, Postsecondary
25-1071.00	Health Specialties Teachers, Postsecondary
25-1192.00	Home Economics Teachers, Postsecondary
25-9021.00	Farm and Home Management Advisors
29-1031.00	Dietitians and Nutritionists
33-3031.00	Fish and Game Wardens
	MATHEMATICS - 12 occupations
11-9121.00	Natural Sciences Managers
15-2011.00	Actuaries
15-2021.00	Mathematicians
	Operations Research Analysts
15-2041.00	Statisticians
15-2091.00	Mathematical Technicians
15-2099.99	Mathematical Science Occupations, All Other
19-2012.00	Physicists
25-1011.00	Business Teachers, Postsecondary
25-1051.00	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary
25-1054.00	Physics Teachers, Postsecondary
	PHYSICS/ASTRONOMY - 15 occupations
11-9041.00	Engineering Managers
11-9121.00	Natural Sciences Managers
19-1013.00	Soil and Plant Scientists
19-1021.00	Biochemists and Biophysicists
19-2011.00	Astronomers
19-2012.00	Physicists
19-2021.00	Atmospheric and Space Scientists
19-2031.00	Chemists
cut Department of Labor	

Table 1. Occupations by STEM Discipline (continued)

O*NET code	Occupation
19-4051.01	Nuclear Equipment Operation Technicians
19-4051.02	Nuclear Monitoring Technicians
25-1032.00	Engineering Teachers, Postsecondary
25-1022.00	Mathematical Science Teachers, Postsecondary
25-1051.00	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary
25-1054.00	Physics Teachers, Postsecondary
25-1071.00	Health Specialties Teachers, Postsecondary
29-2033.00	Nuclear Medicine Technologists

Source: Occupational Information Network (O\*NET - http://online.onetcenter.org/)

Table 2. Connecticut Employment & Wages in STEM Occupations - by STEM Discipline

Coccupational Title   1,760,691   1,910,869   150,178   8.5%   57,533           Total STEM Occupations in CT   137,742   155,413   17,671   12.8%   4,329         Total STEM Occupations in CT   137,742   155,413   17,671   12.8%   4,329       Biochemists & Biophysicists   1,404   1,539   135   9.5%   67   855,267       Biochemists & Biophysicists   1,808   1,942     1,008   1,938     1,008       Chemists   1,808   1,942     1,008     1,008     1,008       Chemical Technicians   805   880   75   9.3%   6.78   38,388       Chemistry Teachers. PS   197   214   17   8.6%   6.78   3,388       Chemistry Teachers. PS                 Computer & Information Systems Managers   4.519   5,174   6.55   14.5%   148   \$111,769       Computer & Information Systems Managers   4.519   5,174   6.55   14.5%   148   \$111,769       Computer & Information Systems Menagers   4.519   5,174   6.55   14.5%   148   \$111,769       Computer Rogrammers   2,0522   23,372   2,850   13,9%   672   \$70,278       Computer Programmers   7,213		Emplo	Employment		nange	Annual	Ann. Avg.	Ed/			
Total All Occupations	Occupational Title				_			Trng			
Total STEM Occupations in CT	<b>'</b>			**							
Bilochemists & Biophysicists											
Biochemists & Biophysicists											
Chemists         1,868         1,942         74         4.0%         69         \$71,619           Chemical Technicians         805         880         75         9.3%         28         \$43,888           Chemistry Teachers, PS         197         214         17         8,6%         6         576,238           COMPUTER SCIENCE           Computer & Information Systems Managers         4,519         5,174         655         14,5%         148         \$111,769           Computer & Information Scientists, Research         346         422         76         22,0%         12         \$108,084           Computer Forgrammers         7,213         7,254         41         0.6%         174         \$80,074           Computer Software Engineers, Applications         6,845         9,047         2,020         32,2%         288         \$87,373           Computer Systems Analysts         9,600         11,352         1,752         1,47%         199         \$52,932           Computer Systems Analysts         9,600         11,352         1,752         1,378         2,481         3,78         3,93         3,77         \$75,872           Network Sys. & Data Communications Analysts         3,194         4,435	Biochemists & Biophysicists			135	9.6%	57	\$85.267	2			
Chemical Technicians		•						5			
Chemistry Teachers, PS								6			
Computer & Information Systems Managers								2			
Accountants & Auditors  Computer & Information Scientists, Research  Accomputer Software Engineers, Applications  Computer Software Engineers, Applications  Computer Software Engineers, Systems Software  Accomputer Software Engineers, Systems Software  Accomputer Support Specialists  Accomputer Specialis		OMPUTER SO	CIENCE				. ,				
Accountants & Auditors   20,522   23,372   2,850   13,9%   672   \$70,278   Computer & Information Scientists, Research   346   422   76   22,0%   12 \$108,084	Computer & Information Systems Managers	4,519	5,174	655	14.5%	148	\$111,769	4			
Computer & Information Scientists, Research         346         422         76         22.0%         12         \$108,084           Computer Programmers         7,213         7,254         41         0.0%         174         \$80,074           Computer Software Engineers, Applications         6,845         9,047         2,202         32.2%         288         \$87,373           Computer Software Engineers, Systems Software         3,804         4,831         1,027         27.0%         140         \$867,662           Computer Systems Analysts         9,600         11,352         17.52         18.3%         284         \$79,816           Database Administrators         1,873         2,451         578         30,9%         77         \$75,872           Network & Computer Systems Administrators         4,246         5,308         1,062         25.0%         153         \$69,162           Network & Computer Systems Administrators         1,146         1,305         159         13.9%         162         \$70,607           Computer Systems Administrators         3,141         4,335         1,241         39.9%         162         \$70,607           Computer Systems Administrators         3,21         352         31         9.7%         8 756,636	· · · · · · · · · · · · · · · · · · ·	20,522	23,372	2,850	13.9%	672	\$70,278	5			
Computer Programmers         7,213         7,254         41         0.6%         174         \$80,074           Computer Software Engineers, Applications         6,845         9,047         2,202         32,2%         288         \$87,373           Computer Software Engineers, Systems Software         3,804         4,831         1,027         27.0%         140         \$87,662           Computer Support Specialists         7,356         8,441         1,085         14.7%         199         \$52,932           Computer Systems Analysts         9,600         11,352         1,752         18.3%         284         \$79,816         1           Network Sometry Systems Administrators         1,873         2,451         578         30.9%         77         \$75,872           Network Systems Administrators         4,246         5,308         1,062         25.0%         153         \$69,162           Network Sys. & Data Communications Analysts         3,194         4,435         1,241         39.9%         162         \$70,607           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838           Computer Specialists, All Other         1,146         1,305         159         13.9% <t< td=""><td>Computer &amp; Information Scientists, Research</td><td>346</td><td></td><td>76</td><td>22.0%</td><td>12</td><td>\$108,084</td><td>2</td></t<>	Computer & Information Scientists, Research	346		76	22.0%	12	\$108,084	2			
Computer Software Engineers, Systems Software         3,804         4,831         1,027         27.0%         140         \$87,662           Computer Support Specialists         7,356         8,441         1,085         14.7%         199         \$52,932         2           Computer Systems Analysts         9,600         11,352         1,752         18.3%         284         \$79,816         3           Database Administrators         1,873         2,451         578         30.9%         77         \$75,872           Network & Computer Systems Administrators         4,246         5,308         1,062         25.0%         153         \$69,162           Network Sys. & Data Communications Analysts         3,194         4,435         1,241         38.9%         162         \$70,807           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838           Computer Science Teachers, PS         511         535         24         4.7%         14         \$69,172           Graphic Designers         3,451         3,738         287         8.3%         91         \$93,441           Engineering Managers         3,422         3,630         28         6.1%         89	Computer Programmers	7,213	7,254	41	0.6%	174	\$80,074	5			
Computer Support Specialists         7,356         8,441         1,085         14.7%         199         \$52,932           Computer Systems Analysts         9,600         11,352         1,752         18.3%         284         \$79,816         1           Network & Computer Systems Administrators         4,246         5,308         1,062         \$25.0%         153         \$69,162         1           Network Sys. & Data Communications Analysts         3,194         4,435         1,241         38.9%         162         \$70,607         2           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838         1           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838         1           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838         2         \$70,607         1         4         4,475         1,4         \$69,172         3         1         9,7%         8         \$76,636         2         3         1         9,7%         8         \$76,636         2         2         8         5,617         2         8         1,7	Computer Software Engineers, Applications	6,845	9,047	2,202	32.2%	288	\$87,373	5			
Computer Systems Analysts         9,600         11,352         1,752         18.3%         284         \$79,816           Database Administrators         1,873         2,451         578         30.9%         77         \$75,872           Network & Computer Systems Administrators         4,246         5,308         1,062         25.0%         153         \$69,162           Network Sys. & Data Communications Analysts         3,194         4,435         1,241         38.9%         162         \$70,607           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838           Computer Hardware Engineers         321         352         31         9.7%         8         \$76,636           Computer Science Teachers, PS         511         535         24         4.7%         14         \$69,172           ENGINEERING           ENGINEERING           ENGINEERING           Engineering Managers         3,451         3,738         287         8.3%         91         \$93,441           Engineering Managers         3,422         3,630         208         6.1%         89         \$107,189           Architects, Except Landscape	Computer Software Engineers, Systems Software	3,804	4,831	1,027	27.0%	140	\$87,662	5			
Database Administrators         1,873         2,451         578         30.9%         77         \$75,872           Network & Computer Systems Administrators         4,246         5,308         1,062         25.0%         153         \$69,162           Network Sys. & Data Communications Analysts         3,194         4,435         1,241         38.9%         162         \$70,607           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838           Computer Hardware Engineers         321         352         31         9,7%         8         \$76,636           Computer Science Teachers, PS         511         535         24         4.7%         14         \$69,172           Graphic Designers         2,985         3,375         390         13.1%         79         \$49,122           ENGINEERING           Construction Managers         3,451         3,630         208         6.1%         89         \$107,189           Architects, Except Landscape & Naval         1,696         2,023         327         19.3%         52         \$81,891           Aerisigneers         3,567         3,635         68         1.9%         95         \$75,	Computer Support Specialists	7,356	8,441	1,085	14.7%	199	\$52,932	6			
Network & Computer Systems Administrators         4,246         5,308         1,062         25.0%         153         \$69,162           Network Sys. & Data Communications Analysts         3,194         4,435         1,241         38.9%         162         \$70,607           Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838           Computer Hardware Engineers         321         352         31         9.7%         8         \$76,636           Computer Science Teachers, PS         511         535         24         4.7%         14         \$69,172           Graphic Designers         2,985         3,375         390         13.1%         79         \$49,122           ENGINEERING           Engineering Managers           A,451         3,738         287         8.3%         91         \$93,441           Engineering Managers         3,451         3,738         287         8.3%         91         \$93,441           Engineers A,451         3,635         68         1.9%         95         \$75,728           Agricultural Engineers         3,567         3,635         68         1.9% <td< td=""><td>Computer Systems Analysts</td><td>9,600</td><td>11,352</td><td>1,752</td><td>18.3%</td><td>284</td><td>\$79,816</td><td>5</td></td<>	Computer Systems Analysts	9,600	11,352	1,752	18.3%	284	\$79,816	5			
Network Sys. & Data Communications Analysts  3,194  4,435  1,241  38.9%  162  \$70,607  Computer Specialists, All Other  1,146  1,305  159  13.9%  29  \$73,838  Computer Hardware Engineers  321  352  31  9.7%  8  \$76,636  Computer Science Teachers, PS  511  535  24  4.7%  14  \$69,172  Graphic Designers  2,985  3,375  390  13.1%  79  \$49,122   ENGINEERING  Construction Managers  3,451  3,738  287  8.3%  91  \$93,441  Engineering Managers  3,452  3,630  208  6.1%  89  \$107,189  Architects, Except Landscape & Naval  Alerospace Engineers  451  516  65  14.4%  20  \$84,772  Civil Engineers  2,179  2,355  176  8.1%  60  \$78,567  Electronics Engineers, Except Computer  Electronics Engineers, Except Computer  1,622  1,770  148  9.1%  47  \$78,298  Environmental Engineers  744  922  178  23.9%  31  \$75,408  Health & Safety Engineers, Exc. Mining Safety  Marine Engineers  887  920  3,490  3,507  3,607  3,607  3,607  3,607  3,607  3,607  3,607  48  49  40  40  40  40  40  40  40  40  40	Database Administrators	1,873	2,451	578	30.9%	77	\$75,872	5			
Computer Specialists, All Other         1,146         1,305         159         13.9%         29         \$73,838           Computer Hardware Engineers         321         352         31         9.7%         8         \$76,636           Computer Science Teachers, PS         511         535         24         4.7%         14         \$69,172           Graphic Designers         2,985         3,375         390         13.1%         79         \$49,122           ENGINEERING           ENGINEERING           ENGINEERING           Construction Managers         3,451         3,738         287         8.3%         91         \$93,441           Engineering Managers         3,422         3,630         208         6.1%         89         \$107,189           Architects, Except Landscape & Naval         1,696         2,023         327         19.3%         52         \$81,891           Acerospace Engineers         3,567         3,635         68         1.9%         95         \$75,728           Agricultural Engineers         2         106         14         15.2%         3         \$83,223           Chemical Engineers         451         516         65 <td>Network &amp; Computer Systems Administrators</td> <td>4,246</td> <td>5,308</td> <td>1,062</td> <td>25.0%</td> <td>153</td> <td>\$69,162</td> <td>5</td>	Network & Computer Systems Administrators	4,246	5,308	1,062	25.0%	153	\$69,162	5			
Computer Hardware Engineers         321         352         31         9.7%         8         \$76,636           Computer Science Teachers, PS         511         535         24         4.7%         14         \$69,172           Graphic Designers         2,985         3,375         390         13.1%         79         \$49,122           ENGINEERING           A,451         3,738         287         8.3%         91         \$93,441           Engineers         3,429         3,630         208         6.1%         89         \$107,189           Architects, Except Landscape & Naval         1,696         2,023         327         19.3%         52         \$81,891           Architects, Except Landscape & Naval         1,696         2,023         327         19.3%         52         <	Network Sys. & Data Communications Analysts	3,194	4,435	1,241	38.9%	162	\$70,607	5			
Computer Science Teachers, PS         511         535         24         4.7%         14         \$69,172           Graphic Designers         2,985         3,375         390         13.1%         79         \$49,122           ENGINEERING           ENGINEERING           ENGINEERING           ENGINEERING           Construction Managers         3,451         3,738         287         8.3%         91         \$93,441           Engineering Managers         3,451         3,738         287         8.3%         91         \$93,441           Engineering Managers         3,451         3,738         287         8.3%         91         \$91,7189           Architects, Except Landscape & Naval         1,696         2,023         327         19.3%         52         \$81,891           Aerospace Engineers         3,567         3,635         68         1.9%         95         \$75,728           Agricultural Engineers         3,249         3,657         665         14.4%         20         \$84,772           Biomedical Engineers         4,10         3,249         3,520         271         8.3%         79         \$76,554           Electrical Engineers	Computer Specialists, All Other	1,146	1,305	159	13.9%	29	\$73,838	6			
Construction Managers   2,985   3,375   390   13.1%   79   \$49,122   19   19   19   19   19   19   19	Computer Hardware Engineers	321	352	31	9.7%	8	\$76,636	5			
Semily	Computer Science Teachers, PS	511	535	24	4.7%	14	\$69,172	3			
Construction Managers 3,451 3,738 287 8.3% 91 \$93,441 Engineering Managers 3,422 3,630 208 6.1% 89 \$107,189 Architects, Except Landscape & Naval 1,696 2,023 327 19.3% 52 \$81,891 Aerospace Engineers 3,567 3,635 68 1.9% 95 \$75,728 Agricultural Engineers * * * * * * * * * * * * * * * * * * *	Graphic Designers	2,985	3,375	390	13.1%	79	\$49,122	5			
Engineering Managers 3,422 3,630 208 6.1% 89 \$107,189 Architects, Except Landscape & Naval 1,696 2,023 327 19.3% 52 \$81,891 Aerospace Engineers 3,567 3,635 68 1.9% 95 \$75,728 Agricultural Engineers * * * * * * * * * * * * * * * * * * *		ENGINEER	ING								
Architects, Except Landscape & Naval  Aerospace Engineers  3,567 3,635 68 1.9% 95 \$75,728  Agricultural Engineers  * * * * * * * * * * * * * * * * * * *	Construction Managers	3,451	3,738	287	8.3%	91	\$93,441	5			
Aerospace Engineers       3,567       3,635       68       1.9%       95       \$75,728       4       4       *	Engineering Managers	3,422	3,630	208	6.1%	89	\$107,189	4			
Agricultural Engineers	Architects, Except Landscape & Naval	1,696	2,023	327	19.3%	52	\$81,891	5			
Biomedical Engineers 92 106 14 15.2% 3 \$83,223 2 Chemical Engineers 451 516 65 14.4% 20 \$84,772 2 Civil Engineers 3,249 3,520 271 8.3% 79 \$76,554 2 Electrical Engineers 2,179 2,355 176 8.1% 60 \$78,567 2 Electronics Engineers, Except Computer 1,622 1,770 148 9.1% 47 \$78,298 2 Environmental Engineers 744 922 178 23.9% 31 \$75,408 2 Engineers Exc. Mining Safety 322 348 26 8.1% 10 \$72,878 2 Endustrial Engineers 3,419 3,667 248 7.3% 108 \$75,614 2 Engineers & Naval Architects 308 300 -8 -2.6% 15 \$75,400 2 Engineers 8 Naval Architects 308 300 -8 -2.6% 15 \$75,400 2 Engineers 8 Engineers 6,204 6,227 23 0.4% 172 \$72,455 2 Engineers 8 Engineers 10.0 Mining & Geological Engineers, Inc. Mining Safety 10.0 Mining & Geological Engineers 10.0 10.0 Mining & Geological	Aerospace Engineers	3,567	3,635	68	1.9%	95	\$75,728	5			
Chemical Engineers       451       516       65       14.4%       20       \$84,772       584,772         Civil Engineers       3,249       3,520       271       8.3%       79       \$76,554         Electrical Engineers       2,179       2,355       176       8.1%       60       \$78,567         Electronics Engineers, Except Computer       1,622       1,770       148       9.1%       47       \$78,298         Environmental Engineers       744       922       178       23.9%       31       \$75,408         Health & Safety Engineers, Exc. Mining Safety       322       348       26       8.1%       10       \$72,878         Industrial Engineers       3,419       3,667       248       7.3%       108       \$75,614         Marine Engineers & Naval Architects       308       300       -8       -2.6%       15       \$75,400         Materials Engineers       887       920       33       3.7%       27       \$82,160         Mechanical Engineers       6,204       6,227       23       0.4%       172       \$72,455         Mining & Geological Engineers, Inc. Mining Safety       *       *       *       *       *       *       *       * <td>Agricultural Engineers</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> <td>*</td> <td>\$67,810</td> <td>5</td>	Agricultural Engineers	*	*	*	*	*	\$67,810	5			
Civil Engineers       3,249       3,520       271       8.3%       79       \$76,554         Electrical Engineers       2,179       2,355       176       8.1%       60       \$78,567         Electronics Engineers, Except Computer       1,622       1,770       148       9.1%       47       \$78,298         Environmental Engineers       744       922       178       23.9%       31       \$75,408         Health & Safety Engineers, Exc. Mining Safety       322       348       26       8.1%       10       \$72,878         Industrial Engineers       3,419       3,667       248       7.3%       108       \$75,614         Marine Engineers & Naval Architects       308       300       -8       -2.6%       15       \$75,400         Materials Engineers       887       920       33       3.7%       27       \$82,160         Mechanical Engineers       6,204       6,227       23       0.4%       172       \$72,455         Mining & Geological Engineers, Inc. Mining Safety       *       *       *       *       *       *       *       *       *       *       *       *       *       *       *       *       *       *       *	Biomedical Engineers	92	106	14	15.2%	3	\$83,223	5			
Electrical Engineers       2,179       2,355       176       8.1%       60       \$78,567         Electronics Engineers, Except Computer       1,622       1,770       148       9.1%       47       \$78,298         Environmental Engineers       744       922       178       23.9%       31       \$75,408         Health & Safety Engineers, Exc. Mining Safety       322       348       26       8.1%       10       \$72,878         Industrial Engineers       3,419       3,667       248       7.3%       108       \$75,614         Marine Engineers & Naval Architects       308       300       -8       -2.6%       15       \$75,400         Materials Engineers       887       920       33       3.7%       27       \$82,160         Mechanical Engineers       6,204       6,227       23       0.4%       172       \$72,455         Mining & Geological Engineers, Inc. Mining Safety       *       *       *       *       *       *       *       *       *       \$77,620       *         Nuclear Engineers       416       436       20       4.8%       14       \$96,614       *         Petroleum Engineers, All Other       1,485       1,557       72 </td <td>Chemical Engineers</td> <td>451</td> <td>516</td> <td>65</td> <td>14.4%</td> <td>20</td> <td>\$84,772</td> <td>5</td>	Chemical Engineers	451	516	65	14.4%	20	\$84,772	5			
Electronics Engineers, Except Computer       1,622       1,770       148       9.1%       47       \$78,298         Environmental Engineers       744       922       178       23.9%       31       \$75,408         Health & Safety Engineers, Exc. Mining Safety       322       348       26       8.1%       10       \$72,878         Industrial Engineers       3,419       3,667       248       7.3%       108       \$75,614         Marine Engineers & Naval Architects       308       300       -8       -2.6%       15       \$75,400         Materials Engineers       887       920       33       3.7%       27       \$82,160         Mechanical Engineers       6,204       6,227       23       0.4%       172       \$72,455         Mining & Geological Engineers, Inc. Mining Safety       *       *       *       *       *       *       *       *       *       *       \$77,620       *         Nuclear Engineers       416       436       20       4.8%       14       \$96,614       *         Petroleum Engineers       *       *       *       *       *       *       *       *       *       *       *       *       *	Civil Engineers	3,249	3,520	271	8.3%	79	\$76,554	5			
Environmental Engineers       744       922       178       23.9%       31       \$75,408         Health & Safety Engineers, Exc. Mining Safety       322       348       26       8.1%       10       \$72,878         Industrial Engineers       3,419       3,667       248       7.3%       108       \$75,614         Marine Engineers & Naval Architects       308       300       -8       -2.6%       15       \$75,400         Materials Engineers       887       920       33       3.7%       27       \$82,160         Mechanical Engineers       6,204       6,227       23       0.4%       172       \$72,455         Mining & Geological Engineers, Inc. Mining Safety       *       *       *       *       *       *       *       *       *       *       *       *       *       \$77,620       *         Nuclear Engineers       416       436       20       4.8%       14       \$96,614       *         Petroleum Engineers       * <td>Electrical Engineers</td> <td>2,179</td> <td>2,355</td> <td>176</td> <td>8.1%</td> <td>60</td> <td>\$78,567</td> <td>5</td>	Electrical Engineers	2,179	2,355	176	8.1%	60	\$78,567	5			
Health & Safety Engineers, Exc. Mining Safety       322       348       26       8.1%       10       \$72,878       108       \$75,614       10       \$72,878       108       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       10       \$75,614       11       10       \$75,614       11       10       \$75,614       11       10       \$75,614       11       10       \$75,614       12       11       10       \$75,614       12       11       10 <td< td=""><td>Electronics Engineers, Except Computer</td><td>1,622</td><td>1,770</td><td>148</td><td>9.1%</td><td>47</td><td>\$78,298</td><td>5</td></td<>	Electronics Engineers, Except Computer	1,622	1,770	148	9.1%	47	\$78,298	5			
Industrial Engineers       3,419       3,667       248       7.3%       108       \$75,614         Marine Engineers & Naval Architects       308       300       -8       -2.6%       15       \$75,400         Materials Engineers       887       920       33       3.7%       27       \$82,160         Mechanical Engineers       6,204       6,227       23       0.4%       172       \$72,455         Mining & Geological Engineers, Inc. Mining Safety       *       *       *       *       *       *       *       *       \$77,620         Nuclear Engineers       416       436       20       4.8%       14       \$96,614       *         Petroleum Engineers       * <td>Environmental Engineers</td> <td>744</td> <td>922</td> <td>178</td> <td>23.9%</td> <td>31</td> <td>\$75,408</td> <td>5</td>	Environmental Engineers	744	922	178	23.9%	31	\$75,408	5			
Marine Engineers & Naval Architects       308       300       -8       -2.6%       15       \$75,400       90         Materials Engineers       887       920       33       3.7%       27       \$82,160       90       90       90       90       918       9       1.0%       20       \$49,267       90       918       9       1.0%       20       \$49,267       90       918       9       1.0%       20       \$49,267       90       918       9       1.0%       20       \$49,267       90       918       9       1.0%       20       \$49,267       90       918       9       1.0%       20       \$49,267       90       918       9       1.0%       20       \$49,267       90       90       918       9       1.0%       20       \$49,267       90       90       918       9       1.0%       20       \$49,267       90	Health & Safety Engineers, Exc. Mining Safety	322	348	26	8.1%	10	\$72,878	5			
Materials Engineers       887       920       33       3.7%       27       \$82,160       982,160	Industrial Engineers	3,419	3,667	248	7.3%	108	\$75,614	5			
Mechanical Engineers       6,204       6,227       23       0.4%       172       \$72,455       577,620	Marine Engineers & Naval Architects	308	300	-8	-2.6%	15	\$75,400	5			
Mining & Geological Engineers, Inc. Mining Safety       *	Materials Engineers	887	920	33	3.7%	27	\$82,160	5			
Nuclear Engineers 416 436 20 4.8% 14 \$96,614 50 50 50 50 50 50 50 50 50 50 50 50 50	Mechanical Engineers	6,204	6,227	23	0.4%	172	\$72,455	5			
Petroleum Engineers       *	Mining & Geological Engineers, Inc. Mining Safety	*	*	*	*	*	\$77,620	5			
Engineers, All Other 1,485 1,557 72 4.8% 36 \$77,648 8  Aerospace Engineering & Operations Technicians 909 918 9 1.0% 20 \$49,267  Civil Engineering Technicians 435 468 33 7.6% 12 \$61,357		416			4.8%	14		5			
Aerospace Engineering & Operations Technicians         909         918         9         1.0%         20         \$49,267           Civil Engineering Technicians         435         468         33         7.6%         12         \$61,357	Petroleum Engineers	*	*	*	*	*	\$101,620	5			
Civil Engineering Technicians 435 468 33 7.6% 12 \$61,357	Engineers, All Other	1,485	1,557	72	4.8%	36	\$77,648	5			
		909	918	9	1.0%	20	\$49,267	6			
Electrical & Electronic Engineering Technicians 2,279 2,366 87 3.8% 56 \$54,873		435	468	33	7.6%	12	\$61,357	6			
	Electrical & Electronic Engineering Technicians	2,279	2,366	87	3.8%	56	\$54,873	6			

 Table 2. Connecticut Employment & Wages in STEM Occupations - by STEM Discipline (continued)

	Emplo	yment	Emp. Cl	nange	Annual	Ann. Avg.	Ed/					
Occupational Title	2004	2004 2014		%	Opngs.	Wages**	Trng					
Total, All Occupations	1,760,691	1,910,869	150,178	8.5%	57,533							
Total STEM Occupations in CT	137,742	155,413	17,671	12.8%	4,329							
Environmental Engineering Technicians	214	257	43	20.1%	9	\$46,201	6					
Industrial Engineering Technicians	953	991	38	4.0%	24	\$54,481	6					
Mechanical Engineering Technicians	1,290	1,330	40	3.1%	31	\$50,206	6					
Engineering Technicians, Except Drafters, All Other	836	898	62	7.4%	26	\$55,823	6					
Materials Scientists	207	232	25	12.1%	9	\$77,751	5					
Architecture Teachers, PS	*	*	*	*	*	\$67,390	2					
Engineering Teachers, PS	294	323	29	9.9%	10	\$82,080	2					
	ONMENTAL	SCIENCE										
Environmental Scientists & Specialists, Incl. Health												
Environ. Science & Protection Techs., Incl. Health	391	432	41	10.5%	13	\$49,762	6					
Life, Physical, & Social Science Techs., All Other	739	828	89	12.0%	26	\$47,987	6					
Environmental Science Teachers, PS	*	*	*	*	*	\$70,504	2					
	GEOSCIENO	CES										
Geoscientists, Except Hydrologists & Geographers	179	199	20	11.2%	5	\$61,532	3					
Hydrologists	*	*	*	*	*	\$57,753	3					
Atmosph., Earth, Marine, & Space Sci. Teachers, PS	129	142	13	10.1%	4	\$74,880	2					
	LIFE SCIEN	CES										
Farm, Ranch, & Other Agricultural Managers	909	1,045	136	15.0%	29	\$86,854	4					
Natural Sciences Managers	980	1,081	101	10.3%	29	\$100,285	4					
Animal Scientists	*	*	*	*	*	\$53,230	5					
Food Scientists & Technologists	133	152	19	14.3%	4	\$47,925	2					
Soil & Plant Scientists	*	*	*	*	*	\$74,819	5					
Microbiologists	917	989	72	7.9%	36	\$58,001	2					
Zoologists & Wildlife Biologists	*	*	*	*	*	\$72,589	5					
Biological Scientists, All Other	*	*	*	*	*	\$63,560	5					
Conservation Scientists	*	*	*	*	*	\$75,645	5					
Foresters	*	*	*	*	*	\$62,100	5					
Epidemiologists	210	223	13	6.2%	5	\$73,921	3					
Medical Scientists, Except Epidemiologists	1,794	2,128	334	18.6%	65	\$88,241	2					
Life Scientists, All Other	123	134	11	8.9%	3	\$66,921	5					
Physical Scientists, All Other	122	132	10	8.2%	4	\$77,978	5					
Agricultural & Food Science Technicians	*	*	*	*	*	\$42,205	6					
Biological Technicians	1,009	1,126	117	11.6%	29	\$48,586	6					
Forest & Conservation Technicians	129	128	-1	-0.8%	3	\$67,685	6					
Agricultural Sciences Teachers, PS	*	*	*	*	*	\$77,190	2					
Biological Science Teachers, PS	828	895	67	8.1%	25	\$82,110	2					
Health Specialties Teachers, PS	2,300	2,396	96	4.2%	62	\$91,260	3					
Home Economics Teachers, PS	*	*	*	*	*	\$60,630	3					
Farm & Home Management Advisors	*	*	*	*	*	\$46,990	5					
Dietitians & Nutritionists	567	617	50	8.8%	20	\$60,572	5					
Fish & Game Wardens	129	134	5	3.9%	4	\$43,792	6					
Actuacia	MATHEMAT			7.00/	4.5	<b>#</b> 00 00=						
Actuaries	956	1,031	75 *	7.8%	48	\$98,265	4					
Mathematicians	*	*	*	*	*	\$88,685	2					

Table 2. Connecticut Employment & Wages in STEM Occupations - by STEM Discipline (continued)

	Emplo	yment	Emp. C	hange	Annual	Ann. Avg.	Ed/
Occupational Title	2004	2014	#	%	Opngs.	Wages**	Trng
Total, All Occupations	1,760,691	1,910,869	150,178	8.5%	57,533		
Total STEM Occupations in CT	137,742	155,413	17,671	12.8%	4,329		
Operations Research Analysts	881	944	63	7.2%	26	\$73,302	3
Statisticians	333	346	13	3.9%	10	\$86,775	3
Mathematical Technicians	*	*	*	*	*	\$46,010	3
Mathematical Science Occupations, All Other	*	*	*	*	*	\$63,132	3
Business Teachers, PS	1,027	1,047	20	1.9%	25	\$84,658	3
Mathematical Science Teachers, PS	468	504	36	7.7%	14	\$61,336	3
P	HYSICS/ASTR	ONOMY					
Astronomers	*	*	*	*	*	\$95,000	2
Physicists	335	374	39	11.6%	15	\$78,288	2
Atmospheric & Space Scientists	*	*	*	*	*	\$72,187	5
Nuclear Technicians	226	231	5	2.2%	7	\$64,760	6
Physics Teachers, PS	203	221	18	8.9%	6	\$74,650	2
Nuclear Medicine Technologists	335	393	58	17.3%	12	\$71,103	6

<sup>\*</sup>Table provides data for occupations that require an associate's degree or higher, with 2004 employment of 100 or more.

PS-Postsecondary

#### **Education & Training Codes:**

- 1 First Professional Degree
- 2 Doctoral Degree
- 3 Master's Degree
- 4 Work experience plus bachelor's or higher degree
- 5 Bachelor's Degree
- 6 Associate Degree



<sup>\*\*</sup>National (May 2006, BLS) wages used where Connecticut (1st Qtr. 2007) wages are not available.

**Table 3. Supply/Demand: STEM Employment Projections and Graduates** (associate's degree or higher) **by Occupational Cluster** 

		DEMAND		SUPPLY				
Occupational Cluster	Employment Annual			2006 Graduates, by Degree				
	2004	2014	Openings	Assoc	Bach	Grad	Total	
TOTAL	243,788	273,476	7,497	1,212	5,012	3,735	9,959	
COMPUTER SCIENCE	57,846	67,933	1,845	472	600	287	1,359	
Systems Analysis & Administration	34,938	43,555	1,278	73	443	228	744	
Computer Support & Programming	17,523	18,388	441	219	51	56	326	
Design	5,385	5,990	126	180	106	3	289	
ENGINEERING	50,517	53,760	1,474	149	670	621	1,440	
Architecture	1,776	2,111	55	0	33	68	101	
Electrical/Electronic Engineering	7,282	7,855	224	1	75	124	200	
Electrical/Electronic Engineering Tech.	2,279	2,366	56	71	7	0	78	
Computer Engineering	321	352	8	0	63	57	120	
Mechanical Engineering	7,944	8,092	230	2	117	132	251	
Aerospace Engineering	3,567	3,635	95	0	0	0	0	
Marine Engineering/Naval Architecture	308	300	15	0	24	0	24	
Nuclear Engineering	416	436	14	0	0	0	0	
Mechanical Engineering Technology	1,290	1,330	31	10	34	0	44	
Aerospace Engineering Technology	909	918	20	0	0	0	0	
Industrial Engineering	7,163	7,645	207	0	16	53	69	
Industrial Engineering Technology	953	991	24	6	61	0	67	
Civil Engineering	3,249	3,520	79	0	68	18	86	
Civil Engineering Technology	490	526	14	19	26	0	45	
Construction Management	3,451	3,738	91	0	20	0	20	
Metallurgical & Materials Engineering	887	920	27	0	7	15	22	
Chemical Engineering	451	516	20	0	24	45	69	
Chemical Technology	2,026	2,131	70	0	0	0	0	
Other Engineering Specialties	4,429	4,929	156	0	37	37	74	
Other Engineering Tech. Specialties	1,234	1,343	35	40	0	5	45	
Biomedical Engineering	92	106	3	0	58	67	125	
MATHEMATICS	118,521	133,142	3,597	501	2,480	1,996	4,977	
Accounting & Financial Mgmt.	48,493	55,216	1,489	43	1,014	151	1,208	
Mathematical Specialties	1,850	1,974	75	0	239	120	359	
Operations & Management Research	881	944	26	0	28	33	61	
Business Administration & Mgmt.	67,297	75,008	2,007	458	1,199	1,692	3,349	
ENVIRONMENTAL SCIENCE	2,334	2,516	80	5	71	165	241	
Env., Forest & Conservation Sciences	2,334	2,516	80	5	71	165	241	
GEOSCIENCES	61	74	4	0	5	0	5	
Atmospheric & Space Science	61	74	4	0	5	0	5	
LIFE SCIENCES	11,320	12,686	380	82	1,021	469	1,572	
Biological/Life Sciences	4,423	4,817	156	6	799	354	1,159	
Earth Sciences	300	355	11	0	65	17	82	
Other Physical Sciences	251	274	8	0	0	0	0	
Agricultural & Food Science	401	440	9	10	96	15	121	
Farm & Ranch Management	934	1,071	29	14	4	0	18	
Medical Science & Epidemiology	2,004	2,351	70	0	21	5	26	
Dietetics	924	1,031	30	29	35	76	140	
Biomedical/Biotechnology	1,009	1,126	29	9	1	2	12	
Other Science-Related Technologies	739	828	26	6	0	0	6	
Nuclear Medical Technology	335	393	12	8	0	0	8	
PHYSICAL SCIENCES	3,189	3,365	117	3	165	197	365	
Physics/Astronomy	549	608	22	0	63	91	154	
Nuclear Technology	368	369	11	3	0	0	3	
Chemistry	2,065	2,156	75	0	102	88	190	
Materials Science	207	232	9	0	0	18	18	

#### **General Questions/Considerations Regarding Occupational Supply Reflected by Graduates of Educational and Training Programs**

- Many of those getting advanced degrees are already employed in that field.
- Not all programs in a cluster will match with all occupations, but they are related with some overlap.
  - o For example, the Computer Engineering cluster includes four programs: Computer Engineering-General, Computer Hardware Engineering, Computer Software Engineering, and Computer Engineering-Other. However, the *computer hardware engineers* occupation does not match the Computer Software Engineering program; and the *computer software engineers*, *applications* and *systems software* occupations do not match the Computer Hardware Engineering program. However, these occupations match both the Computer Engineering-General and Computer Engineering-Other programs.
- Clusters may include several levels of related occupations that require different amounts of education and training: therapists (bachelor's or above), technologists (associate degree), technicians (certificate), assistants (certificate or OJT), aides (OJT).
- Even within a cluster, care needs to be taken to match the right level of graduates to openings. For example, in Pharmacy 97 openings match with 88 Pharmacy Degree grads and 12 MS/PhD grads in Pharmaceutics. Of the 105 pre-pharmacy grads, most go on in Pharmacy, but others go into other sciences such as biology or chemistry.
- For some occupations, a graduate degree is generally needed for employment, but students receiving degrees at lower levels may go into other occupations as well as further their education.
- Those with undergraduate degrees in various sciences may go on to medical or dental school rather than continue in biology, chemistry or other sciences.
- For national programs, especially at the graduate level, students from other states may return to their home states.
- Connecticut students may have to go out of state for some programs not offered in Connecticut, such as veterinary medicine, and do not appear in Connecticut graduate supply data.
- Supply data includes only graduates of formal training programs. There are other sources of training for many of the occupations. Graduates of training programs that do not report to a central collection point, in general, are also not included.

**Table 4. Connecticut STEM Employment by Industry of Highest Concentration** 

NAICS		All Industry			ST			STEM %	Level	
Sector	Industry Description		yment	%	Emplo	Ĭ.	, %			*
		2004	2014	Change	2004	2014	Change	2004	2014	
	Total, All industry employment	1,760,691	1,910,869	8.5%	137,742	155,413	12.8%	7.8%	8.1%	
54	Computer systems design & rel. svcs.	18,437	22,133	20.0%	12,055	14,776	22.6%	65.4%	66.8%	1
51	ISPs & Web search portals	1,223	1,683	37.6%	728	1,045	43.5%	59.5%	62.1%	1
32	Pharmaceutical & medicine mfg.	9,858	10,594	7.5%	5,740	6,325	10.2%	58.2%	59.7%	1
51	Software publishers	1,573	1,873	19.1%	904	1,121	24.0%	57.5%	59.9%	1
54	Architectural, engineering, & rel. svcs.	12,295	14,021	14.0%	6,187	7,326	18.4%	50.3%	52.3%	1
54	Scientific research & develop. svcs.	5,480	6,278	14.6%	2,722	3,213	18.0%	49.7%	51.2%	1
33	Other transportation equipment mfg. (part)	8,108	6,964	-14.1%	3,286	2,995	-8.9%	40.5%	43.0%	1
54	Acctng., tax prep., bkkpg., & payroll svcs.	9,880	11,278	14.1%	3,921	5,041	28.6%	39.7%	44.7%	1
33	Aerospace product & parts mfg.	29,893	30,203	1.0%	10,831	11,118	2.6%	36.2%	36.8%	2
33	Commercial & svc. industry machinery mfg.	6,608	5,661	-14.3%	2,305	2,103	-8.8%	34.9%	37.1%	2
51	Data processing, hosting, & rel. svcs.	2,967	3,351	12.9%	978	1,306	33.5%	33.0%	39.0%	2
33	Computer & peripheral equipment mfg.	656	555	-15.4%	206	192	-6.8%	31.4%	34.6%	2
48	Pipeline transportation of natural gas	135	166	23.0%	41	52	26.8%	30.4%	31.3%	2
54	Specialized design svcs.	1,359	1,380	1.5%	410	407	-0.7%	30.2%	29.5%	2
33	Communications equipment mfg.	2,278	1,443	-36.7%	669	552	-17.5%	29.4%	38.3%	2
51	Internet publishing & broadcasting	619	807	30.4%	167	234	40.1%	27.0%	29.0%	2
32	Other chemical product & prep. mfg.	1,682	2,047	21.7%	437	565	29.3%	26.0%	27.6%	2
22	Electric power gen., transmission & distrib.	6,514	6,373	-2.2%	1,692	1,740	2.8%	26.0%	27.3%	2
51	Wired telecommunications carriers	7,602	7,122	-6.3%	1,971	2,071	5.1%	25.9%	29.1%	2
61	Bus. schools & computer & mgmnt. training	936	900	-3.8%	229	212	-7.4%	24.5%	23.6%	2
32	Paint, coating, & adhesive mfg.	1,008	1,220	21.0%	246	313	27.2%	24.4%	25.7%	2
33	Navig., meas., electromed., & control instr. mfg.	7,685	7,996	4.0%	1,767	2,023	14.5%	23.0%	25.3%	2
11	Animal production	852	795	-6.7%	195	199	2.1%	22.9%	25.0%	2
11	Forestry & logging	27	20	-25.9%	6	7	16.7%	22.2%	35.0%	3
61	Colleges, universities, & professional schools	35,621	39,310	10.4%	7,823	8,470	8.3%	22.0%	21.5%	3
54	Mgmnt., scientific, & tech. consulting svcs.	11,147	14,164	27.1%	2,380	3,196	34.3%	21.4%	22.6%	3
52	Insurance carriers, benefit & investment funds	57,992	60,028	3.5%	11,154	12,617	13.1%	19.2%	21.0%	3
33	Electrical equipment mfg.	2,390	2,425	1.5%	455	496	9.0%	19.0%	20.5%	3
32	Basic chemical mfg.	975	758	-22.3%	181	147	-18.8%	18.6%	19.4%	3
33	Audio & video equipment mfg.	164	40	-75.6%	30	9	-70.0%	18.3%	22.5%	3
91	Federal government, excl. postal service	9,185	9,100	-0.9%	1,654	1,664	0.6%	18.0%	18.3%	3
33	Other electrical equip. & component mfg.	5,861	5,023	-14.3%	1,055	1,004	-4.8%	18.0%	20.0%	3
55	Management of companies & enterprises	25,490	26,641	4.5%	4,578	5,046	10.2%	18.0%	18.9%	3
61	Junior colleges	4,713	5,159	9.5%	844	872	3.3%	17.9%	16.9%	3
11	Crop production	4,091	4,313	5.4%	717	841	17.3%	17.5%	19.5%	3
32	Soap, cleaning compound, & toilet prep. mfg.	2,526	2,402	-4.9%	418	420	0.5%	16.5%	17.5%	3
33	Industrial machinery mfg.	1,855	1,339	-27.8%	305	243	-20.3%	16.4%	18.1%	3

Note: The average proportion of STEM employment across all Connecticut industries equals 7.61%. This table includes industries where STEM employment is at least twice the average, or 15.22%.



<sup>\*</sup>Level 1 industries are those with STEM employment constituting more than 5 times the statewide industry percent.

<sup>\*</sup>Level 2 industries are those with STEM employment between 3 and 5 times the statewide industry percent.

<sup>\*</sup>Level 3 industries are those with STEM employment between 2 and 3 times the statewide industry percent.

Table 5. U.S. STEM Employment by Industry of Highest Concentration

NAICS		Employment			STEM En	STEM %	Level			
Sector	Industry Description	i .	, 1	%			%		•	*
		2006	2016	Change	2006	2016	Change	2006	2016	
	Total, All industries	150,620,175	166,220,300	10.4%	9,157,857	10,706,200	16.9%	6.1%	6.4%	
54	Computer systems design & rel. svcs.	1,278,200	1,767,600	38.3%	804,960	1,135,504	41.1%	63.0%	64.2%	1
51	Software publishers	243,400	321,300	32.0%	142,613	192,760	35.2%	58.6%	60.0%	1
54	Testing laboratories	145,900	182,000	24.7%	78,581	100,243	27.6%	53.9%	55.1%	1
54	Research & dev. in physical, engineering, & life sci.	529,400	581,300	9.8%	271,323	306,708	13.0%	51.3%	52.8%	1
33	Computer & peripheral equipment mfg.	198,800	132,300	-33.5%	93,174	65,474	-29.7%	46.9%	49.5%	1
51	ISPs & Web search portals	121,700	89,000	-26.9%	53,400	40,657	-23.9%	43.9%	45.7%	1
51	Data processing, hosting, & rel. svcs.	261,600	348,000	33.0%	105,799	152,369	44.0%	40.4%	43.8%	1
33	Navig., meas., electromedical, & control instr. mfg.	437,500	417,800	-4.5%	156,218	157,238	0.7%	35.7%	37.6%	1
33	Communications equipment mfg.	144,400	145,000	0.4%	50,828	54,409	7.0%	35.2%	37.5%	1
54	Acctng., tax prep., bkkpg., & payroll services	889,300	1,072,200	20.6%	304,651	395,091	29.7%	34.3%	36.8%	1
51	Internet publishing & broadcasting	34,500	49,700	44.1%	11,667	17,561	50.5%	33.8%	35.3%	1
33	Aerospace product & parts mfg.	471,600	496,900	5.4%	148,288	161,711	9.1%	31.4%	32.5%	1
32	Pharmaceutical & medicine mfg.	292,400	361,800	23.7%	82,958	104,826	26.4%	28.4%	29.0%	2
11	Animal production	458,634	454,800	-0.8%	121,415	123,396	1.6%	26.5%	27.1%	2
54	Specialized design services	135,800	179,300	32.0%	34,659	42,901	23.8%	25.5%	23.9%	2
21	Oil & gas extraction	135,900	133,600	-1.7%	32,391	33,697	4.0%	23.8%	25.2%	2
33	Semiconductor & other electronic comp. mfg.	462,800	399,200	-13.7%	109,062	99,466	-8.8%	23.6%	24.9%	2
54	Management, scientific, & tech. consulting svcs.	920,900	1,638,700	77.9%	204,312	383,019	87.5%	22.2%	23.4%	2
11	Forestry	14,199	13,300	-6.3%	2,958	2,817	-4.8%	20.8%	21.2%	2
33	Mfg.& reproducing magnetic & optical media	41,100	39,600	-3.6%	8,488	8,748	3.1%	20.7%	22.1%	2
33	Audio & video equipment mfg.	31,700	25,000	-21.1%	6,278	5,255	-16.3%	19.8%	21.0%	2
11	Crop production	538,515	440,500	-18.2%	104,759	98,219	-6.2%	19.5%	22.3%	2
91	Federal government, excluding postal service	1,958,200	1,868,500	-4.6%	373,596	358,789	-4.0%	19.1%	19.2%	2
33	Commercial & service industry machinery mfg.	111,000	96,900	-12.7%	20,792	19,239	-7.5%	18.7%	19.9%	2
51	Wired telecommunications carriers	477,900	378,500	-20.8%	89,124	77,244	-13.3%	18.6%	20.4%	2
55	Management of companies & enterprises	1,809,400	2,079,600	14.9%	328,841	405,657	23.4%	18.2%	19.5%	2
51	Telecommunications resellers	128,500	133,700	4.0%	22,190	25,018	12.7%	17.3%	18.7%	3
42	Prof. & commercial equip. & supplies merchant whsle.	653,800	750,100	14.7%	111,732	134,282	20.2%	17.1%	17.9%	3
52	Monetary authorities - central bank	21,500	19,400	-9.8%	3,584	3,395	-5.3%	16.7%	17.5%	3
32	Basic chemical mfg.	147,500	124,200	-15.8%	24,119	20,794	-13.8%	16.4%	16.7%	3
22	Electric power gen., transmission & distrib.	397,000	376,100	-5.3%	62,838	60,994	-2.9%	15.8%	16.2%	3
11	Support activities for agriculture & forestry	117,888	130,300	10.5%	18,236	20,692	13.5%	15.5%	15.9%	3
33	Industrial machinery mfg.	122,900	100,800	-18.0%	18,643	16,317	-12.5%	15.2%	16.2%	3
48	Pipeline transportation	39,000	26,500	-32.1%	5,585	3,840	-31.2%	14.3%	14.5%	3
51	Wireless telecomm. carriers (exc. satellite)	200,100	281,900	40.9%	26,478	38,487	45.4%	13.2%	13.7%	3
33	Electrical equipment mfg.	155,600	126,300	-18.8%	19,807	17,518	-11.6%	12.7%	13.9%	3
32	Resin/syn. rubber/artificial syn. fibers & filaments mfg.	105,100	83,700	-20.4%	13,244	10,929	-17.5%	12.6%	13.1%	3
32	Paint, coating, & adhesive mfg.	67,400	62,100	-7.9%	8,309	7,945	-4.4%	12.3%	12.8%	3
52	Other financial investment activities	306,600	449,500	46.6%	36,860	56,091	52.2%	12.0%	12.5%	3

Note: The average proportion of STEM employment across all U.S. industries equals 5.97%. Industries included in this table are those where STEM employment is at least twice the average, or 11.93%.



Level 1 industries are those with STEM employment constituting more than 5 times the statewide industry percent.

Level 2 industries are those with STEM employment between 3 and 5 times the statewide industry percent.

Level 3 industries are those with STEM employment between 2 and 3 times the statewide industry percent.

Table 6. Connecticut STEM Employment by Industry of Highest Concentration (U.S. average applied)

	Table 6. Connecticut STEM Employment by Industry of Hignest Concentration (U.S. average applied)									
NAICS	Industry Description		istry syment	0/		EM yment	%	STEM %	of Emp.	Level
Sector	Industry Description	2004	2014	% Change	2004	2014	% Change	2004	2014	*
	Total All industry ampleyment			_						
<b>5</b> 4	Total, All industry employment	1,760,691	1,910,869	8.5%	137,742	155,413	12.8%	7.8%	8.1%	
54	Computer systems design & rel. svcs.	18,437	22,133	20.0%	12,055	14,776	22.6%	65.4%	66.8%	1
51	ISPs & Web search portals	1,223	1,683	37.6%	728	1,045	43.5%	59.5%	62.1%	1
32	Pharmaceutical & medicine mfg.	9,858	10,594	7.5%	5,740	6,325	10.2%	58.2%	59.7%	1
51	Software publishers	1,573	1,873	19.1%	904	1,121	24.0%	57.5%	59.9%	1
54	Architectural, engineering, & rel. svcs.	12,295	14,021	14.0%	6,187	7,326	18.4%	50.3%	52.3%	1
54	Scientific research & develop. svcs.	5,480	6,278	14.6%	2,722	3,213	18.0%	49.7%	51.2%	1
33	Other transportation equipment mfg. (part)	8,108	6,964	-14.1%	3,286	2,995	-8.9%	40.5%	43.0%	1
54	Acctng., tax prep., bkkpg., & payroll svcs.	9,880	11,278	14.1%	3,921	5,041	28.6%	39.7%	44.7%	1
33	Aerospace product & parts mfg.	29,893	30,203	1.0%	10,831	11,118	2.6%	36.2%	36.8%	1
33	Commercial & service industry mach. mfg	6,608	5,661	-14.3%	2,305	2,103	-8.8%	34.9%	37.1%	1
51	Data processing, hosting, & rel. svcs.	2,967	3,351	12.9%	978	1,306	33.5%	33.0%	39.0%	1
33	Computer & peripheral equipment mfg.	656	555	-15.4%	206	192	-6.8%	31.4%	34.6%	1
48	Pipeline transportation of natural gas	135	166	23.0%	41	52	26.8%	30.4%	31.3%	1
54	Specialized design svcs.	1,359	1,380	1.5%	410	407	-0.7%	30.2%	29.5%	1
33	Communications equipment mfg.	2,278	1,443	-36.7%	669	552	-17.5%	29.4%	38.3%	2
51	Internet publishing & broadcasting	619	807	30.4%	167	234	40.1%	27.0%	29.0%	2
32	Other chemical product & prep. mfg.	1,682	2,047	21.7%	437	565	29.3%	26.0%	27.6%	2
22	Electric power gen., transmission & distrib.	6,514	6,373	-2.2%	1,692	1,740	2.8%	26.0%	27.3%	2
51	Wired telecommunications carriers	7,602	7,122	-6.3%	1,971	2,071	5.1%	25.9%	29.1%	2
61	Bus. schools & computer & mgmnt. training	936	900	-3.8%	229	212	-7.4%	24.5%	23.6%	2
32	Paint, coating, & adhesive mfg.	1,008	1,220	21.0%	246	313	27.2%	24.4%	25.7%	2
33	Navig., meas., electromed., & control instr. mfg.	7,685	7,996	4.0%	1,767	2,023	14.5%	23.0%	25.3%	2
11	Animal production	852	795	-6.7%	195	199	2.1%	22.9%	25.0%	2
11	Forestry & logging	27	20	-25.9%	6	7	16.7%	22.2%	35.0%	2
61	Colleges, universities, & professional schools	35,621	39,310	10.4%	7,823	8,470	8.3%	22.0%	21.5%	2
54	Mgmnt., scientific, & tech. consulting svcs.	11,147	14,164	27.1%	2,380	3,196	34.3%	21.4%	22.6%	2
52	Insurance carriers, benefit & investment funds	57,992	60,028	3.5%	11,154	12,617	13.1%	19.2%	21.0%	2
33	Electrical equipment mfg.	2,390	2,425	1.5%	455	496	9.0%	19.0%	20.5%	2
32	Basic chemical mfg.	975	758	-22.3%	181	147	-18.8%	18.6%	19.4%	2
33	Audio & video equipment mfg.	164	40	-75.6%	30	9	-70.0%	18.3%	22.5%	2
91	Federal government, excl. postal service	9,185	9,100	-0.9%	1,654	1,664	0.6%	18.0%	18.3%	2
33	Other electrical equip. & component mfg.	5,861	5,023	-14.3%	1,055	1,004	-4.8%	18.0%	20.0%	2
55	Management of companies & enterprises	25,490	26,641	4.5%	4,578	5,046	10.2%	18.0%	18.9%	2
61	Junior colleges	4,713	5,159	9.5%	844	872	3.3%	17.9%	16.9%	2
11	Crop production	4,091	4,313	5.4%	717	841	17.3%	17.5%	19.5%	3
32	Soap, cleaning compound, & toilet prep. mfg.	2,526	2,402	-4.9%	418	420	0.5%	16.5%	17.5%	3
33	Industrial machinery mfg.	1,855	1,339	-27.8%	305	243	-20.3%	16.4%	18.1%	3
33	Ag., construction, & mining mach. mfg.	146	144	-1.4%	22	23	4.5%	15.1%	16.0%	3
54	Advertising & related services	7,400	8,177	10.5%	1,111	1,331	19.8%	15.0%	16.3%	3
56	Office administrative services	4,678	5,529	18.2%	702	925	31.8%	15.0%	16.7%	3
33	Other general purpose machinery mfg.	2,218	2,427	9.4%	331	380	14.8%	14.9%	15.7%	3
33	Engine, turbine, & power transmission equip. mfg.	2,460	2,041	-17.0%	363	336	-7.4%	14.8%	16.5%	3
23	Nonresidential building construction	5,866	5,953	1.5%	856	888	3.7%	14.6%	14.9%	3
52	Other financial investment activities	7,097	9,228	30.0%	1,020	1,391	36.4%	14.4%	15.1%	3
51	Cable & other subscription programming	2,597	3,432	32.2%	364	526	44.5%	14.0%	15.3%	3
42	Prof. & comm. equip. & supplies merch. Wholes.	6,974	7,199	3.2%	957	1,095	14.4%	13.7%	15.2%	3
32	Resin, syn. rubber, & artif. fibers & filaments mfg.	1,141	917	-19.6%	145	122	-15.9%	12.7%	13.3%	3
53	Comm. & indust. mach. & equip. rental & leasing	796	873	9.7%	101	127	25.7%	12.7%	14.5%	3
52	Nondepository credit intermediation	8,559	9,860	15.2%	1,085	1,387	27.8%	12.7%	14.1%	3
42	Electrical & electronic goods merch. wholesalers	4,061	4,147	2.1%	496	540	8.9%	12.2%	13.0%	3
11	Fishing, hunting & trapping	58	58	0.0%	7	7	0.0%	12.1%	12.1%	3

Note: Industries included in this table are those where Connecticut STEM employment is at least twice the U.S. average, or 11.93%.



Table 7. Connecticut Industries with Highest STEM Employment, by Industry Sector

NAICS		Industry			ЕМ		STEM %	Level		
Sector	Industry Description		yment	%	-	yment	%			*
		2004	2014	Change	2004	2014	Change	2004	2014	
	Total, All industry employment	1,760,691	1,910,869	8.5%	137,742	155,413	12.8%	7.8%	8.1%	
11	Agriculture, Forestry, Fishing and Hunting	5,028	5,186	3.1%	925	1,054	13.9%	18.4%	20.3%	
	Animal production	852	795	-6.7%	195	199	2.1%	22.9%	25.0%	2
	Forestry & logging	27	20	-25.9%	6	7	16.7%	22.2%	35.0%	2
	Crop production	4,091	4,313	5.4%	717	841	17.3%	17.5%	19.5%	3
	Fishing, hunting & trapping	58	58	0.0%	7	7	0.0%	12.1%	12.1%	3
22	Utilities	6,514	6,373	-2.2%	1,692	1,740	2.8%	26.0%	27.3%	
	Electric power gen., transmission & distrib.	6,514	6,373	-2.2%	1,692	1,740	2.8%	26.0%	27.3%	2
23	Construction	5,866	5,953	1.5%	856	888	3.7%	14.6%	14.9%	
	Nonresidential building construction	5,866	5,953	1.5%	856	888	3.7%	14.6%	14.9%	3
31-33	Manufacturing	86,371	83,282	-3.6%	28,647	29,244	2.1%	33.2%	35.1%	
	Pharmaceutical & medicine mfg.	9,858	10,594	7.5%	5,740	6,325	10.2%	58.2%	59.7%	1
	Other transportation equipment mfg. (part)	8,108	6,964	-14.1%	3,286	2,995	-8.9%	40.5%	43.0%	1
	Aerospace product & parts mfg.	29,893	30,203	1.0%	10,831	11,118	2.6%	36.2%	36.8%	1
	Commercial & service industry mach. mfg	6,608	5,661	-14.3%	2,305	2,103	-8.8%	34.9%	37.1%	1
	Computer & peripheral equipment mfg.	656	555	-15.4%	206	192	-6.8%	31.4%	34.6%	1
	Communications equipment mfg.	2,278	1,443	-36.7%	669	552	-17.5%	29.4%	38.3%	2
	Other chemical product & prep. mfg.	1,682	2,047	21.7%	437	565	29.3%	26.0%	27.6%	2
	Paint, coating, & adhesive mfg.	1,008	1,220	21.0%	246	313	27.2%	24.4%	25.7%	2
	Navig., meas., electromed., & control instr. mfg.	7,685	7,996	4.0%	1,767	2,023	14.5%	23.0%	25.3%	2
	Electrical equipment mfg.	2,390	2,425	1.5%	455	496	9.0%	19.0%	20.5%	2
	Basic chemical mfg.	975	758	-22.3%	181	147	-18.8%	18.6%	19.4%	2
	Audio & video equipment mfg.	164	40	-75.6%	30	9	-70.0%	18.3%	22.5%	2
	Other electrical equip. & component mfg.	5,861	5,023	-14.3%	1,055	1,004	-4.8%	18.0%	20.0%	2
	Soap, cleaning compound, & toilet prep. mfg.	2,526	2,402	-4.9%	418	420	0.5%	16.5%	17.5%	3
	Industrial machinery mfg.	1,855	1,339	-27.8%	305	243	-20.3%	16.4%	18.1%	3
	Ag., construction, & mining mach. mfg.	146	144	-1.4%	22	23	4.5%	15.1%	16.0%	3
	Other general purpose machinery mfg.	2,218	2,427	9.4%	331	380	14.8%	14.9%	15.7%	3
	Engine, turbine, & power transmission equip. mfg.	2,460	2,041	-17.0%	363	336	-7.4%	14.8%	16.5%	3
	Resin, syn. rubber, & artif. fibers & filaments mfg.	1,141	917	-19.6%	145	122	-15.9%	12.7%	13.3%	3
42	Wholesale Trade	11,035	11,346	2.8%	1,453	1,635	12.5%	13.2%	14.4%	
	Prof. & comm. equip. & supplies merch. whls.	6,974	7,199	3.2%	957	1,095	14.4%	13.7%	15.2%	3
	Electrical & electronic goods merch. whls.	4,061	4,147	2.1%	496	540	8.9%	12.2%	13.0%	3
48-49	Transportation and Warehousing	135	166	23.0%	41	52	26.8%	30.4%	31.3%	
	Pipeline transportation of natural gas	135	166	23.0%	41	52	26.8%	30.4%	31.3%	1
51	Information	16,581	18,268	10.2%	5,112	6,303	23.3%	30.8%	34.5%	
	ISPs & Web search portals	1,223	1,683	37.6%	728	1,045	43.5%	59.5%	62.1%	1
	Software publishers	1,573	1,873	19.1%	904	1,121	24.0%	57.5%	59.9%	1
	Data processing, hosting, & rel. svcs.	2,967	3,351	12.9%	978	1,306	33.5%	33.0%	39.0%	1
	Internet publishing & broadcasting	619	807	30.4%	167	234	40.1%	27.0%	29.0%	2
	Wired telecommunications carriers	7,602	7,122	-6.3%	1,971	2,071	5.1%	25.9%	29.1%	2
	Cable & other subscription programming	2,597	3,432	32.2%	364	526	44.5%	14.0%	15.3%	3
52	Finance and Insurance	73,648	79,116	7.4%	13,259	15,395	16.1%	18.0%	19.5%	
	Insurance carriers, benefit & investment funds	57,992	60,028	3.5%	11,154	12,617	13.1%	19.2%	21.0%	2
	Other financial investment activities	7,097	9,228	30.0%	1,020	1,391	36.4%	14.4%	15.1%	3
	Nondepository credit intermediation	8,559	9,860	15.2%	1,085	1,387	27.8%	12.7%	14.1%	3
53	Real Estate and Rental and Leasing	796	873	9.7%	101	127	25.7%	12.7%	14.5%	
	Comm. & indust. mach. & equip. rental & leasing	796	873	9.7%	101	127	25.7%	12.7%	14.5%	3
54	Professional, Scientific, and Technical Services	65,998	77,431	17.3%	28,786	35,290	22.6%	43.6%	45.6%	
	Computer systems design & rel. svcs.	18,437	22,133	20.0%	12,055	14,776	22.6%	65.4%	66.8%	1
	Architectural, engineering, & rel. svcs.	12,295	14,021	14.0%	6,187	7,326	18.4%	50.3%	52.3%	1

Table 7. Connecticut Industries with Highest STEM Employment, by Industry Sector (continued)

NAICS Sector	Industry Description	Industry Employment %		STEM Employment %			STEM % of Emp.		Level	
Sector		2004	2014	Change	2004	2014	Change	2004	2014	
	Total, All industry employment	1,760,691	1,910,869	8.5%	137,742	155,413	12.8%	7.8%	8.1%	
	Scientific research & develop. svcs.	5,480	6,278	14.6%	2,722	3,213	18.0%	49.7%	51.2%	1
	Acctng., tax prep., bkkpg., & payroll svcs.	9,880	11,278	14.1%	3,921	5,041	28.6%	39.7%	44.7%	1
	Specialized design svcs.	1,359	1,380	1.5%	410	407	-0.7%	30.2%	29.5%	1
	Mgmnt., scientific, & tech. consulting svcs.	11,147	14,164	27.1%	2,380	3,196	34.3%	21.4%	22.6%	2
	Advertising & related services	7,400	8,177	10.5%	1,111	1,331	19.8%	15.0%	16.3%	3
55	Management of Companies and Enterprises	25,490	26,641	4.5%	4,578	5,046	10.2%	18.0%	18.9%	
	Management of companies & enterprises	25,490	26,641	4.5%	4,578	5,046	10.2%	18.0%	18.9%	2
56	Administrative and Support	4,678	5,529	18.2%	702	925	31.8%	15.0%	16.7%	
	Office administrative services	4,678	5,529	18.2%	702	925	31.8%	15.0%	16.7%	3
61	Educational Services	41,270	45,369	9.9%	8,896	9,554	7.4%	21.6%	21.1%	
	Bus. schools & computer & mgmnt. training	936	900	-3.8%	229	212	-7.4%	24.5%	23.6%	2
	Colleges, universities, & professional schools	35,621	39,310	10.4%	7,823	8,470	8.3%	22.0%	21.5%	2
	Junior colleges	4,713	5,159	9.5%	844	872	3.3%	17.9%	16.9%	2
	Government	9,185	9,100	-0.9%	1,654	1,664	0.6%	18.0%	18.3%	
	Federal government, excl. postal service	9,185	9,100	-0.9%	1,654	1,664	0.6%	18.0%	18.3%	2

Note: The average proportion of STEM employment across all U.S. industries equals 5.97%. Industries included in this table are those where STEM employment is at least twice the U.S. average, or 11.93%. *Industry sector totals are the sum of only those industries that are included in this table.* 

<sup>\*</sup>Level 1 industries are those with STEM employment constituting more than 5 times the U.S. industry percent.

<sup>\*</sup>Level 2 industries are those with STEM employment between 3 & 5 times the U.S. industry percent.

<sup>\*</sup>Level 3 industries are those with STEM employment between 2 & 3 times the U.S. industry percent.

Table 8. U.S. Industries with Highest STEM Employment, by Industry Sector

NAICS		Industry					STEM			
Sector	Industry Description		Employment %		-	oyment	%	STEM % of Emp.		Level *
		2006	2016	Change	2006	2016	Change	2006	2016	
	Total, All industries	150,620,175	166,220,300	10.4%	9,157,857	10,706,200	16.9%	6.1%	6.4%	-
11	Agriculture, Forestry, Fishing and Hunting	1,129,236	1,038,900	-8.0%	247,368	245,124	-0.9%	21.9%	23.6%	
	Animal production	458,634	454,800	-0.8%	121,415	123,396	1.6%	26.5%	27.1%	2
	Forestry	14,199	13,300	-6.3%	2,958	2,817	-4.8%	20.8%	21.2%	2
	Crop production	538,515	440,500	-18.2%	104,759	98,219	-6.2%	19.5%	22.3%	2
	Support activities for agriculture & forestry	117,888	130,300	10.5%	18,236	20,692	13.5%	15.5%	15.9%	3
21	Mining, Quarrying, & Oil & Gas Extraction	135,900	133,600	-1.7%	32,391	33,697	4.0%	23.8%	25.2%	
	Oil & gas extraction	135,900	133,600	-1.7%	32,391	33,697	4.0%	23.8%	25.2%	2
22	Utilities	397,000	376,100	-5.3%	62,838	60,994	-2.9%	15.8%	16.2%	
	Electric power gen., transmission & distrib.	397,000	376,100	-5.3%	62,838	60,994	-2.9%	15.8%	16.2%	3
31-33	Manufacturing	2,789,800	2,611,600	-6.4%	760,208	749,869	-1.4%	27.2%	28.7%	
	Computer & peripheral equipment mfg.	198,800	132,300	-33.5%	93,174	65,474	-29.7%	46.9%	49.5%	1
	Navig., meas., electromed., & control instr. mfg.	437,500	417,800	-4.5%	156,218	157,238	0.7%	35.7%	37.6%	1
	Communications equipment mfg.	144,400	145,000	0.4%	50,828	54,409	7.0%	35.2%	37.5%	1
	Aerospace product & parts mfg.	471,600	496,900	5.4%	148,288	161,711	9.1%	31.4%	32.5%	1
	Pharmaceutical & medicine mfg.	292,400	361,800	23.7%	82,958	104,826	26.4%	28.4%	29.0%	2
	Semiconductor & other electronic component mfg.	462,800	399,200	-13.7%	109,062	99,466	-8.8%	23.6%	24.9%	2
	Mfg.& reproducing magnetic & optical media	41,100	39,600	-3.6%	8,488	8,748	3.1%	20.7%	22.1%	2
	Audio & video equipment mfg.	31,700	25,000	-21.1%	6,278	5,255	-16.3%	19.8%	21.0%	2
	Commercial & service industry machinery mfg.	111,000	96,900	-12.7%	20,792	19,239	-7.5%	18.7%	19.9%	2
	Basic chemical mfg.	147,500	124,200	-15.8%	24,119	20,794	-13.8%	16.4%	16.7%	3
	Industrial machinery mfg.	122,900	100,800	-18.0%	18,643	16,317	-12.5%	15.2%	16.2%	3
	Electrical equipment mfg.	155,600	126,300	-18.8%	19,807	17,518	-11.6%	12.7%	13.9%	3
	Resin, syn. rubber, & artif. fibers & filaments mfg.	105,100	83,700	-20.4%	13,244	10,929	-17.5%	12.6%	13.1%	3
	Paint, coating, & adhesive mfg.	67,400	62,100	-7.9%	8,309	7,945	-4.4%	12.3%	12.8%	3
42	Wholesale Trade	653,800	750,100	14.7%	111,732	134,282	20.2%	17.1%	17.9%	
	Prof. & comm. equip. & supplies merch. whls.	653,800	750,100	14.7%	111,732	134,282	20.2%	17.1%	17.9%	3
48-49	Transportation and Warehousing	39,000	26,500	-32.1%	5,585	3,840	-31.2%	14.3%	14.5%	
	Pipeline transportation	39,000	26,500	-32.1%	5,585	3,840	-31.2%	14.3%	14.5%	3
51	Information	1,467,700	1,602,100	9.2%	451,271	544,096	20.6%	30.7%	34.0%	
	Software publishers	243,400	321,300	32.0%	142,613	192,760	35.2%	58.6%	60.0%	1
	Internet service providers & Web search portals	121,700	89,000	-26.9%	53,400	40,657	-23.9%	43.9%	45.7%	1
	Data processing, hosting, & related services	261,600	348,000	33.0%	105,799	152,369	44.0%	40.4%	43.8%	1
	Internet publishing & broadcasting	34,500	49,700	44.1%	11,667	17,561	50.5%	33.8%	35.3%	1
	Wired telecommunications carriers	477,900	378,500	-20.8%	89,124	77,244	-13.3%	18.6%	20.4%	2
	Telecommunications resellers Wireless telecomm. carriers (except satellite)	128,500 200,100	133,700 281,900	4.0% 40.9%	22,190	25,018 38,487	12.7% 45.4%	17.3% 13.2%	18.7% 13.7%	3
<b>5</b> 2	Finance and Insurance				26,478					3
52		328,100	468,900	42.9%	40,444	59,486	47.1%	12.3%	12.7%	
	Monetary authorities - central bank Other financial investment activities	21,500 306,600	19,400 449,500	-9.8% 46.6%	3,584 36,860	3,395 56,091	-5.3% 52.2%	16.7% 12.0%	17.5% 12.5%	3
54	Professional, Scientific, and Technical Services	3,899,500	5,421,100	39.0%	1,698,486	2,363,466	39.2%	43.6%	43.6%	
34	Computer systems design & related services	1,278,200	1,767,600	38.3%	804,960	1,135,504	41.1%	63.0%	64.2%	1
	Testing laboratories	1,278,200	182,000	24.7%	78,581	1,135,304	27.6%	53.9%	55.1%	1
	R & D in the physical, engineering, & life sciences	529,400	581,300	9.8%	271,323	306,708	13.0%	51.3%	52.8%	1
	Acctng., tax prep., bookkeeping, & payroll svcs.	889,300	1,072,200	20.6%	304,651	395,091	29.7%	34.3%	36.8%	1
	Specialized design services	135,800	179,300	32.0%	34,659	42,901	23.8%	25.5%	23.9%	2
	Management, scientific, & tech. consulting svcs.	920,900	1,638,700	77.9%	204,312	383,019	87.5%	22.2%	23.4%	2
55	Management of Companies and Enterprises	1,809,400	2,079,600	14.9%	328,841	405,657	23.4%	18.2%	19.5%	
"	Management of companies & enterprises	1,809,400	2,079,600	14.9%	328,841	405,657	23.4%	18.2%	19.5%	2
	Government	1,958,200	1,868,500	-4.6%	373,596	358,789	-4.0%	19.1%	19.2%	
				-4.6%			-4.0% -4.0%		19.2%	2
	Federal government, excl. postal service	1,958,200	1,868,500	-4.0%	373,596	358,789	-4.0%	19.1%	13.2%	

Note: The average proportion of STEM employment across all U.S. industries equals 5.97%. Industries included in this table are those where STEM employment is at least twice the average, or 11.93%. *Industry sector totals are the sum of only those industries that are included in this table*. (see Table 7 for explanation on Levels 1-3.)

