

Workforce Availability

Emsi Q2 2022 Data Set

June 2022

Emsi Burning Glass



Parameters

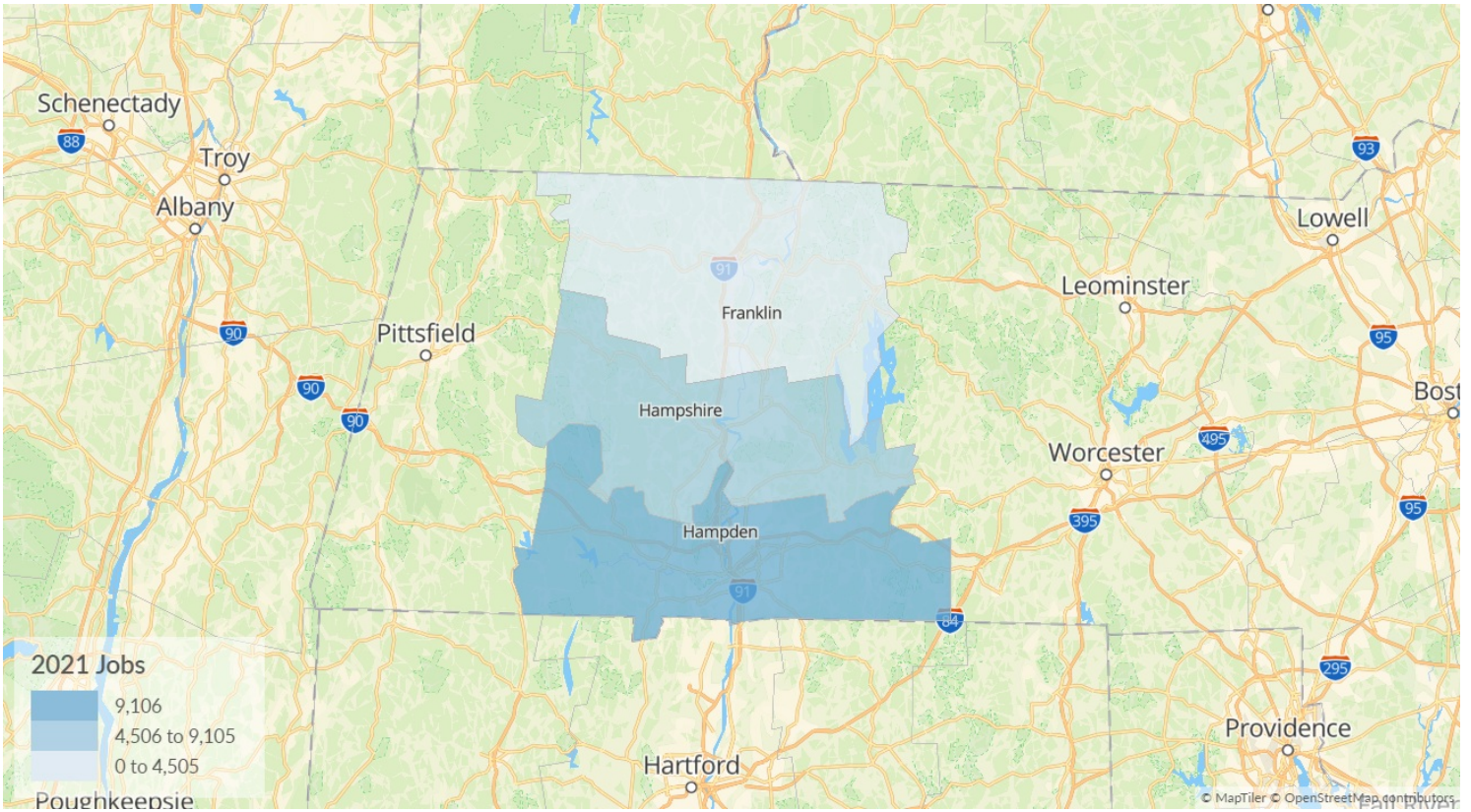
Occupations:

91 items selected. See Appendix A for details.

Regions:

Code	Description	Code	Description
25011	Franklin County, MA	25015	Hampshire County, MA
25013	Hampden County, MA		

Datarun: 2022.2 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors



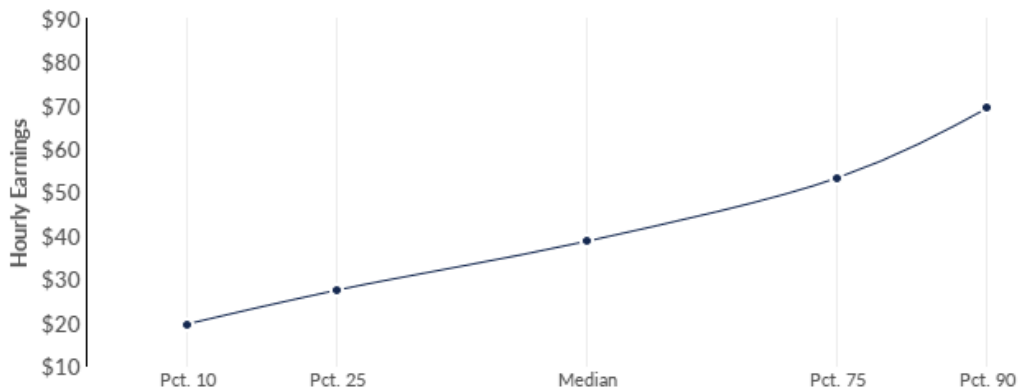
Executive Summary

<p style="text-align: center;">14,880</p> <p style="text-align: center;">Jobs</p> <p>Jobs decreased by 1,356 over the last 5 years. Projected to increase by 84 over the next 5 years.</p>	<p style="text-align: center;">0.77</p> <p style="text-align: center;">Concentration</p> <p>Regional job concentration per capita is 0.77 times the national job concentration.</p>	<p style="text-align: center;">\$38.71/hr</p> <p style="text-align: center;">Median Earnings</p> <p>Regional median earnings are \$1.97/hr below the national median earnings of \$40.68/hr.</p>	<p style="text-align: center;">12,918</p> <p style="text-align: center;">Educational Completions</p> <p>Related educational completions are produced by 16 institutions in the region.</p>
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- STEM Occupations decreased by 1,356 from 2016-2021 (-8.4%), less than the national growth rate of 6.5%. The occupations are projected to increase by 84 from 2021-2026 (0.6%), less than the national projected growth rate of 6.7%.
- Regional job concentration per capita for STEM Occupations is 0.77 times the national job concentration. In other words, there are 23% fewer STEM Occupations in this region than we would expect to find in the average region.
- Cost of labor in the region is below median. The median earnings for STEM Occupations in the region is \$38.71/hr, which is \$1.97/hr below the national median of \$40.68/hr.

Earnings

<p>\$42.97/hr</p> <p>Average Earnings</p>	<p>\$27.44/hr</p> <p>25th Percentile Earnings</p>	<p>\$38.71/hr</p> <p>Median Earnings</p>	<p>\$53.28/hr</p> <p>75th Percentile Earnings</p>
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Occupation	Average Earnings	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Computer Systems Analysts (15-1211)	\$45.46	\$33.27	\$42.66	\$54.75
Information Security Analysts (15-1212)	\$46.73	\$33.54	\$43.11	\$58.33
Computer and Information Research Scientists (15-1221)	\$51.99	\$40.38	\$52.49	\$61.43
Computer Network Support Specialists (15-1231)	\$38.57	\$26.51	\$36.42	\$49.18
Computer User Support Specialists (15-1232)	\$29.89	\$21.97	\$27.36	\$35.42
Computer Network Architects (15-1241)	\$57.67	\$44.75	\$56.88	\$70.84
Network and Computer Systems Administrators (15-1244)	\$42.04	\$30.93	\$40.19	\$50.73
Database Administrators and Architects (15-1245)	\$47.44	\$34.50	\$47.64	\$59.24
Computer Programmers (15-1251)	\$42.39	\$25.85	\$40.60	\$54.15
Software Developers and Software Quality Assurance Analysts and Testers (15-1256)	\$51.57	\$38.13	\$50.10	\$63.44
Web Developers and Digital Interface Designers (15-1257)	\$32.07	\$16.72	\$29.05	\$43.55
Computer Occupations, All Other (15-1299)	\$36.68	\$21.98	\$34.26	\$48.57
Actuaries (15-2011)	\$55.79	\$38.69	\$50.32	\$68.65

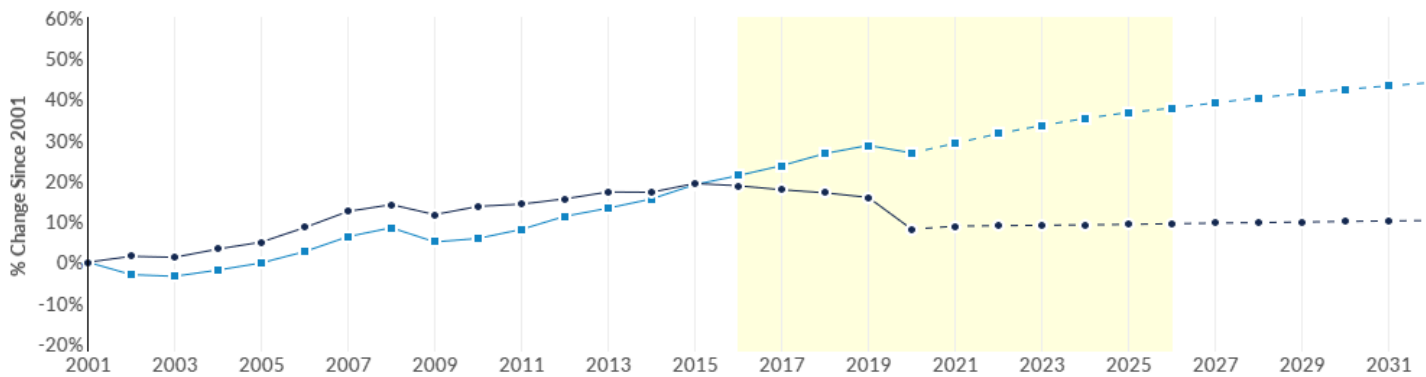
Mathematicians (15-2021)	\$41.51	\$23.45	\$32.42	\$53.75
Operations Research Analysts (15-2031)	\$40.15	\$28.38	\$36.52	\$47.71
Statisticians (15-2041)	\$49.42	\$34.60	\$46.29	\$61.79
Data Scientists and Mathematical Science Occupations, All Other (15-2098)	\$47.95	\$31.84	\$44.52	\$57.13
Aerospace Engineers (17-2011)	\$53.41	\$41.88	\$53.05	\$63.47
Agricultural Engineers (17-2021)	\$66.16	\$36.69	\$51.39	\$71.10
Bioengineers and Biomedical Engineers (17-2031)	\$53.72	\$38.19	\$46.63	\$59.45
Chemical Engineers (17-2041)	\$48.31	\$34.46	\$47.21	\$57.26
Civil Engineers (17-2051)	\$45.13	\$30.24	\$39.41	\$51.98
Computer Hardware Engineers (17-2061)	\$58.01	\$38.06	\$55.87	\$72.41
Electrical Engineers (17-2071)	\$49.96	\$36.92	\$48.87	\$61.53
Electronics Engineers, Except Computer (17-2072)	\$53.87	\$39.06	\$50.98	\$66.91
Environmental Engineers (17-2081)	\$43.83	\$32.82	\$41.27	\$50.83
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)	\$46.03	\$35.43	\$45.74	\$55.60
Industrial Engineers (17-2112)	\$45.03	\$34.89	\$43.24	\$53.59
Marine Engineers and Naval Architects (17-2121)	\$43.59	\$39.12	\$44.15	\$48.80
Materials Engineers (17-2131)	\$44.61	\$33.84	\$44.88	\$54.91
Mechanical Engineers (17-2141)	\$45.88	\$34.28	\$43.12	\$55.90
Mining and Geological Engineers, Including Mining Safety Engineers (17-2151)	\$40.62	\$37.04	\$42.05	\$45.38
Nuclear Engineers (17-2161)	\$64.61	\$36.55	\$55.72	\$80.25
Petroleum Engineers (17-2171)	\$70.64	\$46.97	\$62.10	\$87.10
Engineers, All Other (17-2199)	\$57.70	\$31.53	\$48.94	\$74.47
Architectural and Civil Drafters (17-3011)	\$26.85	\$21.09	\$25.89	\$30.68
Electrical and Electronics Drafters (17-3012)	\$31.18	\$20.54	\$27.73	\$39.36
Mechanical Drafters (17-3013)	\$28.14	\$21.38	\$26.17	\$32.79

Drafters, All Other (17-3019)	\$27.72	\$16.08	\$24.44	\$33.43
Aerospace Engineering and Operations Technologists and Technicians (17-3021)	\$30.85	\$21.18	\$28.58	\$36.68
Civil Engineering Technologists and Technicians (17-3022)	\$24.97	\$17.23	\$23.73	\$29.50
Electrical and Electronic Engineering Technologists and Technicians (17-3023)	\$30.28	\$22.51	\$29.39	\$35.41
Electro-Mechanical and Mechatronics Technologists and Technicians (17-3024)	\$27.88	\$20.88	\$27.65	\$33.78
Environmental Engineering Technologists and Technicians (17-3025)	\$27.52	\$17.30	\$23.64	\$30.63
Industrial Engineering Technologists and Technicians (17-3026)	\$27.48	\$21.39	\$26.26	\$32.48
Mechanical Engineering Technologists and Technicians (17-3027)	\$26.31	\$19.12	\$24.38	\$32.36
Surveying and Mapping Technicians (17-3031)	\$27.62	\$17.20	\$24.42	\$32.17
Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other (17-3098)	\$29.65	\$20.14	\$25.90	\$34.89
Animal Scientists (19-1011)	\$37.62	\$21.05	\$29.85	\$45.77
Food Scientists and Technologists (19-1012)	\$37.57	\$23.61	\$32.69	\$49.43
Soil and Plant Scientists (19-1013)	\$41.69	\$26.97	\$40.00	\$50.86
Biochemists and Biophysicists (19-1021)	\$48.01	\$28.82	\$43.60	\$62.03
Microbiologists (19-1022)	\$45.50	\$30.23	\$49.35	\$57.73
Zoologists and Wildlife Biologists (19-1023)	\$40.48	\$26.60	\$37.72	\$50.71
Biological Scientists, All Other (19-1029)	\$41.59	\$30.03	\$40.08	\$49.63
Conservation Scientists (19-1031)	\$30.95	\$19.81	\$28.41	\$39.30
Foresters (19-1032)	\$27.87	\$21.64	\$27.35	\$34.02
Epidemiologists (19-1041)	\$39.44	\$30.89	\$35.49	\$46.42
Medical Scientists, Except Epidemiologists (19-1042)	\$47.87	\$25.97	\$41.14	\$60.35
Life Scientists, All Other (19-1099)	\$43.09	\$32.48	\$40.67	\$50.60
Astronomers (19-2011)	\$54.95	\$34.79	\$52.10	\$72.53

Physicists (19-2012)	\$66.98	\$47.03	\$65.84	\$84.93
Atmospheric and Space Scientists (19-2021)	\$46.02	\$27.49	\$37.73	\$62.40
Chemists (19-2031)	\$43.48	\$30.52	\$40.74	\$53.74
Materials Scientists (19-2032)	\$39.95	\$28.38	\$38.86	\$48.01
Environmental Scientists and Specialists, Including Health (19-2041)	\$39.88	\$28.64	\$37.21	\$47.61
Geoscientists, Except Hydrologists and Geographers (19-2042)	\$51.99	\$30.25	\$42.85	\$63.53
Hydrologists (19-2043)	\$38.66	\$20.52	\$27.82	\$52.80
Physical Scientists, All Other (19-2099)	\$54.01	\$20.44	\$45.60	\$71.73
Economists (19-3011)	\$53.47	\$33.70	\$46.30	\$59.97
Survey Researchers (19-3022)	\$28.97	\$15.45	\$21.51	\$35.49
Clinical, Counseling, and School Psychologists (19-3031)	\$43.17	\$27.50	\$37.52	\$50.57
Industrial-Organizational Psychologists (19-3032)	\$60.79	\$28.38	\$46.00	\$74.04
Psychologists, All Other (19-3039)	\$57.55	\$25.78	\$44.61	\$69.33
Sociologists (19-3041)	\$41.02	\$26.18	\$35.82	\$50.73
Urban and Regional Planners (19-3051)	\$34.77	\$28.28	\$34.79	\$42.49
Anthropologists and Archeologists (19-3091)	\$29.76	\$11.56	\$23.60	\$37.22
Geographers (19-3092)	\$37.90	\$25.86	\$35.65	\$48.52
Historians (19-3093)	\$29.83	\$13.43	\$24.35	\$38.31
Political Scientists (19-3094)	\$53.43	\$27.87	\$48.40	\$68.41
Social Scientists and Related Workers, All Other (19-3099)	\$37.23	\$23.69	\$34.76	\$44.53
Agricultural and Food Science Technicians (19-4011)	\$23.82	\$17.90	\$23.27	\$27.96
Biological Technicians (19-4021)	\$25.95	\$18.00	\$23.74	\$31.31
Chemical Technicians (19-4031)	\$25.24	\$19.66	\$24.51	\$29.30
Environmental Science and Protection Technicians, Including Health (19-4042)	\$24.14	\$15.72	\$20.63	\$28.11

Geological and Hydrologic Technicians (19-4045)	\$20.98	\$16.34	\$20.00	\$24.38
Nuclear Technicians (19-4051)	\$43.74	\$36.51	\$43.32	\$51.98
Social Science Research Assistants (19-4061)	\$31.19	\$23.20	\$28.40	\$37.52
Forest and Conservation Technicians (19-4071)	\$23.65	\$18.35	\$23.40	\$28.12
Forensic Science Technicians (19-4092)	\$36.63	\$23.49	\$32.97	\$44.75
Life, Physical, and Social Science Technicians, All Other (19-4099)	\$29.32	\$18.08	\$23.43	\$33.63

Regional Trends



Region	2016 Jobs	2021 Jobs	2026 Jobs	Change	2016-2021 Growth %	2021-2026 Growth %
● 3 Massachusetts Counties	16,237	14,880	14,964	-1,273	-8.4%	0.6%
■ Nation	9,156,504	9,753,918	10,404,726	1,248,222	6.5%	6.7%

Job Growth by County

County	County Name	2016 Jobs	2021 Jobs	2016-2021 % Change	Avg. Hourly Earnings
25013	Hampden County, MA	10,059	9,106	-9%	\$42.87/hr
25015	Hampshire County, MA	4,834	4,506	-7%	\$43.18/hr
25011	Franklin County, MA	1,344	1,268	-6%	\$42.98/hr

Occupation Gender Breakdown



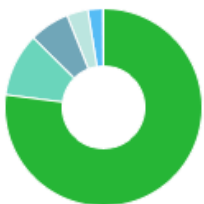
Gender	2021 Jobs	2021 Percent
Males	9,991	67.1%
Females	4,889	32.9%

Occupation Age Breakdown



Age	2021 Jobs	2021 Percent
14-18	34	0.2%
19-24	1,039	7.0%
25-34	3,542	23.8%
35-44	3,153	21.2%
45-54	3,027	20.3%
55-64	2,811	18.9%
65+	1,274	8.6%

Occupation Race/Ethnicity Breakdown



Race/Ethnicity	2021 Jobs	2021 Percent
White	11,460	77.0%
Asian	1,545	10.4%
Hispanic or Latino	977	6.6%
Black or African American	516	3.5%
Two or More Races	363	2.4%
American Indian or Alaska Native	11	0.1%
Native Hawaiian or Other Pacific Islander	7	0.0%

Educational Completions

222

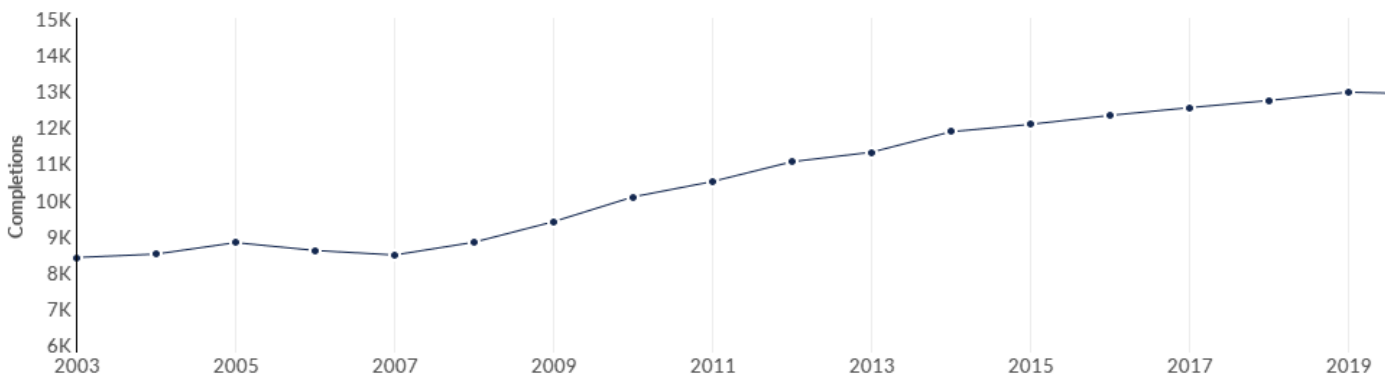
Programs (2020)

12,918

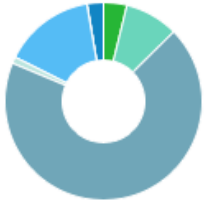
Completions (2020)

CIP Code	Program	Completions (2016)	Completions (2017)	Completions (2018)	Completions (2019)	Completions (2020)
52.0201	Business Administration and Management, General	1,008	925	921	908	945
42.0101	Psychology, General	992	821	868	810	792
24.0101	Liberal Arts and Sciences/Liberal Studies	1,052	945	839	803	737
11.0701	Computer Science	381	430	537	693	700
26.0101	Biology/Biological Sciences, General	544	556	545	599	577
27.0101	Mathematics, General	304	349	382	413	445
43.0104	Criminal Justice/Safety Studies	408	403	424	442	403
45.0601	Economics, General	501	501	498	403	374
51.2201	Public Health, General	347	375	408	425	358
45.1001	Political Science and Government, General	389	409	371	382	357

Completions Trend



Regional Completions by Award Level



Award Level	Completions (2020)	Percent
● Award of less than 1 academic year	494	3.8%
● Associate's Degree	1,132	8.8%
● Bachelor's Degree	8,876	68.7%
● Postbaccalaureate certificate	137	1.1%
● Master's Degree	1,927	14.9%
● Post-masters certificate	7	0.1%
● Doctor's Degree	345	2.7%
Award of at least 1 but less than 2 academic years	0	0.0%
Award of at least 2 but less than 4 academic years	0	0.0%

Regional Completions by Institution

Institution	Certificates (2020)	Degrees (2020)	Total Completions (2020)
University of Massachusetts-Amherst	346	6,387	6,733
Westfield State University	0	1,006	1,006
Smith College	18	719	737
Western New England University	160	583	743
Bay Path University	9	559	568
Mount Holyoke College	0	544	544
Amherst College	0	493	493
Holyoke Community College	3	488	491
Springfield Technical Community College	41	479	520
American International College	3	278	281
Springfield College	0	237	237
Greenfield Community College	17	150	167
Hampshire College	0	144	144
College of Our Lady of the Elms	41	141	182
Springfield College-Regional, Online, and Continuing Education	0	55	55
Conway School of Landscape Design	0	17	17
Sanford-Brown Institute	0	0	0
MASSACHUSETTS CAREER DEVELOPMENT INSTITUTE INC	0	0	0
Branford Hall Career Institute-Springfield Campus	0	0	0
American Career Institute-Springfield	0	0	0

Appendix A - Occupations

Code	Description
15-1211	Computer Systems Analysts
15-1212	Information Security Analysts
15-1221	Computer and Information Research Scientists
15-1231	Computer Network Support Specialists
15-1232	Computer User Support Specialists
15-1241	Computer Network Architects
15-1244	Network and Computer Systems Administrators
15-1245	Database Administrators and Architects
15-1251	Computer Programmers
15-1256	Software Developers and Software Quality Assurance Analysts and Testers
15-1257	Web Developers and Digital Interface Designers
15-1299	Computer Occupations, All Other
15-2011	Actuaries
15-2021	Mathematicians
15-2031	Operations Research Analysts
15-2041	Statisticians
15-2098	Data Scientists and Mathematical Science Occupations, All Other
17-2011	Aerospace Engineers

Code	Description
17-3031	Surveying and Mapping Technicians
17-3098	Calibration Technologists and Technicians and Engineering Technologists and Technicians, Except Drafters, All Other
19-1011	Animal Scientists
19-1012	Food Scientists and Technologists
19-1013	Soil and Plant Scientists
19-1021	Biochemists and Biophysicists
19-1022	Microbiologists
19-1023	Zoologists and Wildlife Biologists
19-1029	Biological Scientists, All Other
19-1031	Conservation Scientists
19-1032	Foresters
19-1041	Epidemiologists
19-1042	Medical Scientists, Except Epidemiologists
19-1099	Life Scientists, All Other
19-2011	Astronomers
19-2012	Physicists
19-2021	Atmospheric and Space Scientists
19-2031	Chemists

17-2021	Agricultural Engineers	19-2032	Materials Scientists
17-2031	Bioengineers and Biomedical Engineers	19-2041	Environmental Scientists and Specialists, Including Health
17-2041	Chemical Engineers	19-2042	Geoscientists, Except Hydrologists and Geographers
17-2051	Civil Engineers	19-2043	Hydrologists
17-2061	Computer Hardware Engineers	19-2099	Physical Scientists, All Other
17-2071	Electrical Engineers	19-3011	Economists
17-2072	Electronics Engineers, Except Computer	19-3022	Survey Researchers
17-2081	Environmental Engineers	19-3031	Clinical, Counseling, and School Psychologists
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	19-3032	Industrial-Organizational Psychologists
17-2112	Industrial Engineers	19-3039	Psychologists, All Other
17-2121	Marine Engineers and Naval Architects	19-3041	Sociologists
17-2131	Materials Engineers	19-3051	Urban and Regional Planners
17-2141	Mechanical Engineers	19-3091	Anthropologists and Archeologists
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	19-3092	Geographers
17-2161	Nuclear Engineers	19-3093	Historians
17-2171	Petroleum Engineers	19-3094	Political Scientists
17-2199	Engineers, All Other	19-3099	Social Scientists and Related Workers, All Other
17-3011	Architectural and Civil Drafters	19-4011	Agricultural and Food Science Technicians
17-3012	Electrical and Electronics Drafters	19-4021	Biological Technicians

17-3013	Mechanical Drafters	19-4031	Chemical Technicians
17-3019	Drafters, All Other	19-4042	Environmental Science and Protection Technicians, Including Health
17-3021	Aerospace Engineering and Operations Technologists and Technicians	19-4045	Geological and Hydrologic Technicians
17-3022	Civil Engineering Technologists and Technicians	19-4051	Nuclear Technicians
17-3023	Electrical and Electronic Engineering Technologists and Technicians	19-4061	Social Science Research Assistants
17-3024	Electro-Mechanical and Mechatronics Technologists and Technicians	19-4071	Forest and Conservation Technicians
17-3025	Environmental Engineering Technologists and Technicians	19-4092	Forensic Science Technicians
17-3026	Industrial Engineering Technologists and Technicians	19-4099	Life, Physical, and Social Science Technicians, All Other
17-3027	Mechanical Engineering Technologists and Technicians		

Appendix B

STEM Occupations in 3 Massachusetts Counties

Appendix C - Data Sources and Calculations

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Emsi earnings by industry.

State Data Sources

This report uses state data from the following agencies: Alabama Department of Labor; Alaska Department of Labor and Workforce Development; Arizona Commerce Authority; Arkansas Division of Workforce Services; California Employment Development Department; Colorado Department of Labor and Employment; Connecticut Department of Labor; Delaware Office of Occupational and Labor Market Information; District of Columbia Department of Employment Services; Florida Department of Economic Opportunity; Georgia Labor Market Explorer; Hawaii Workforce Infonet; Idaho Department of Labor; Illinois Department of Employment Security; Indiana Department of Workforce Development; Iowa Workforce Development; Kansas Department of Labor; Kentucky Center for Statistics; Louisiana Workforce Commission; Maine Department of Labor; Maryland Department of Labor; Commonwealth of Massachusetts, Mass.gov; Michigan Department of Technology, Management and Budget; Minnesota Department of Employment and Economic Development; Mississippi Department of Employment Security; Missouri Economic Research and Information Center; Montana Department of Labor and Industry; Nebraska Department of Labor, NEworks; Nevada Department of Employment, Training and Rehabilitation; New Hampshire Employment Security; New Jersey Department of Labor and Workforce Development; New Mexico Department of Workforce Solutions; New York Department of Labor; North Carolina Department of Commerce; North Dakota Job Service; Ohio Department of Job and Family Services; Oklahoma Employment Security Commission; Oregon Employment Department; Pennsylvania Department of Labor and Industry, Center for Workforce Information and Analysis; Rhode Island Department of Labor and Training; South Carolina Department of Employment and Workforce; South Dakota Department of Labor and Regulation; Tennessee Department of Labor & Workforce Development; Texas Workforce Commission; Utah Department of Workforce Services; Vermont Department of Labor; Virginia Employment Commission; Washington State Employment Security Department; West Virginia Department of Commerce; Wisconsin Department of Workforce Development; Wyoming Department of Workforce Services