

Oklahoma Department of Career and Technology Education

*career*tech

Innovative Programs, Research and Development

June 2013

Western Technology Center Agriculture, Food & Natural Resources Career Cluster Report



Region Info - Western Technology Center

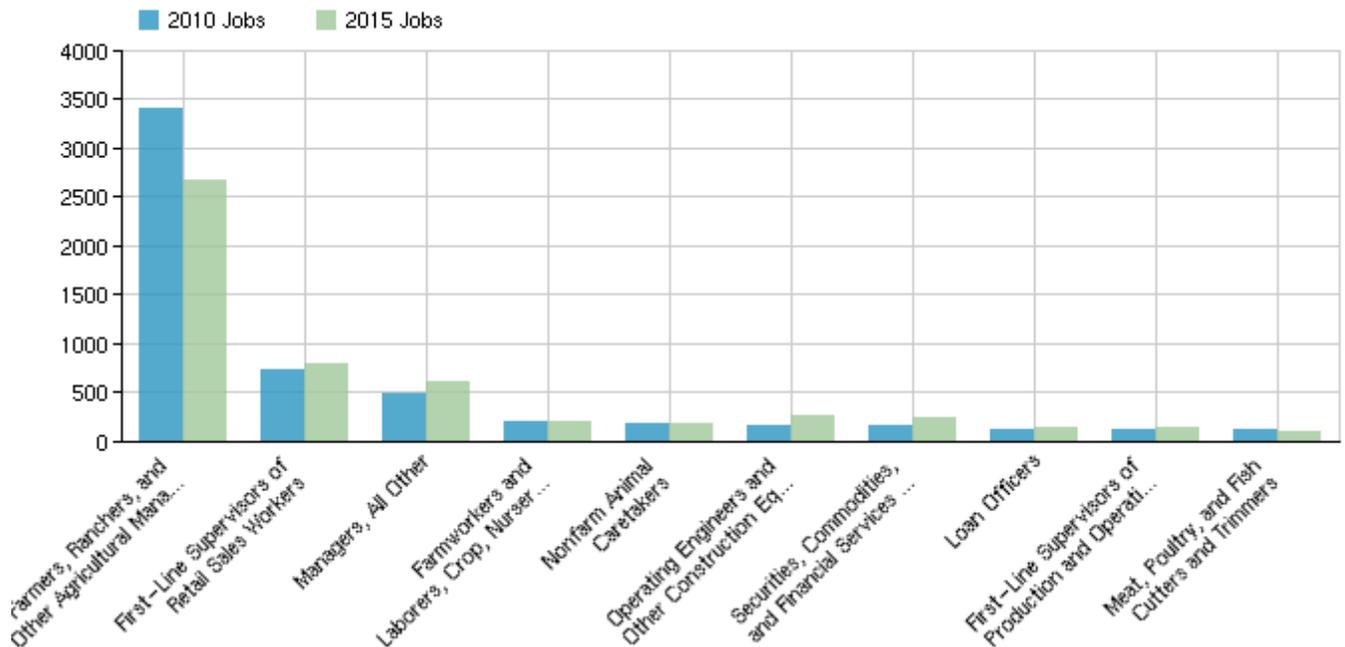
County Areas	Beckham, OK (40009), Custer, OK (40039), Kiowa, OK (40075), Roger Mills, OK (40129), Washita, OK (40149)
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Executive Summary for Agriculture, Food & Natural Resources Career Cluster (Bachelor_degree and below)

Education	2010 Jobs	2015 Jobs	Change	Annual Openings	2012 Hourly Earnings
Short-term on-the-job training	753	769	16	37	\$11.69
Moderate-term on-the-job training	470	609	139	46	\$16.76
Long-term on-the-job training	3,683	3,033	-650	88	\$8.53
Work experience in a related occupation	1,485	1,734	249	86	\$17.47
Postsecondary non-degree award	110	156	46	13	\$16.06
Associate's degree	197	230	33	14	\$19.87
Bachelor's degree	412	538	126	39	\$21.27
Total	7,110	7,068	-42	323	\$12.81

Source: EMSI Complete Employment - 2012.3

Largest Occupations



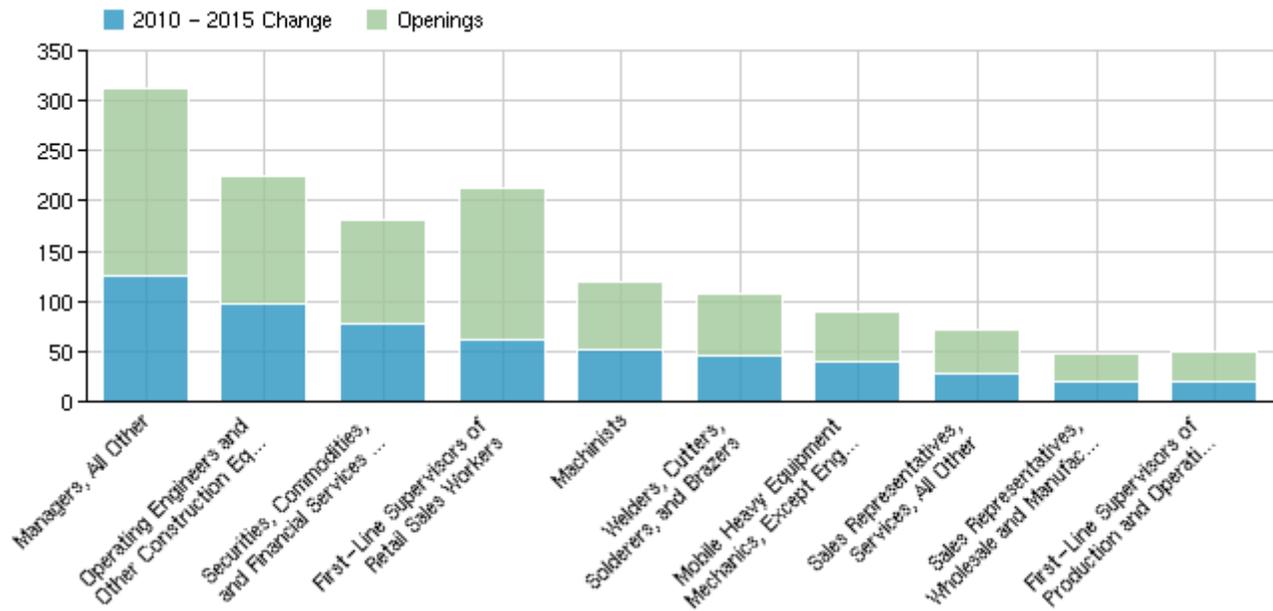
SOC Code	Description	2010 Jobs	2015 Jobs	Change	2012 Hourly Earnings	Education
11-9013	Farmers, Ranchers, and Other Agricultural Managers	3,417	2,683	-734	\$7.85	Long-term on-the-job training
41-1011	First-Line Supervisors of Retail Sales Workers	726	788	62	\$13.95	Work experience in a related occupation
11-9199	Managers, All Other	496	622	126	\$20.47	Work experience in a related occupation
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	200	211	11	\$8.87	Short-term on-the-job training
39-2021	Nonfarm Animal Caretakers	180	181	1	\$9.57	Short-term on-the-job training
47-2073	Operating Engineers and Other Construction Equipment Operators	173	270	97	\$17.32	Moderate-term on-the-job training
41-3031	Securities, Commodities, and Financial Services Sales Agents	169	246	77	\$17.49	Bachelor's degree
13-2072	Loan Officers	131	149	18	\$19.83	Moderate-term on-the-job training
51-1011	First-Line Supervisors of Production and Operating Workers	125	144	19	\$21.05	Work experience in a related occupation
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	113	93	-20	\$12.89	Short-term on-the-job training
15-1159	Computer Support Specialists	112	128	16	\$19.04	Associate's degree
51-4121	Welders, Cutters, Solderers, and Brazers	98	143	45	\$15.94	Postsecondary non-degree award
51-4041	Machinists	96	148	52	\$14.08	Long-term on-the-job training
41-3099	Sales Representatives, Services, All Other	92	120	28	\$21.51	Short-term on-the-job training
41-2022	Parts Salespersons	86	100	14	\$13.62	Moderate-term on-the-job training
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	71	67	-4	\$9.61	Short-term on-the-job training
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	63	102	39	\$19.11	Long-term on-the-job training
51-8031	Water and Wastewater Treatment Plant and System Operators	57	59	2	\$11.63	Long-term on-the-job training
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	52	72	20	\$24.84	Bachelor's degree
15-1121	Computer Systems Analysts	40	48	8	\$31.68	Bachelor's degree
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	40	58	18	\$23.14	Work experience in a related occupation
51-3021	Butchers and Meat Cutters	39	32	-7	\$14.00	Long-term on-the-job training
53-7032	Excavating and Loading Machine and Dragline Operators	36	52	16	\$15.46	Moderate-term on-the-job training
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	35	31	-4	\$9.51	Short-term on-the-job training
19-4021	Biological Technicians	31	34	3	\$11.93	Bachelor's degree
37-1012	First-Line Supervisors of	30	37	7	\$11.31	Work experience in a

SOC Code	Description	2010 Jobs	2015 Jobs	Change	2012 Hourly Earnings	Education
	Landscaping, Lawn Service, and Groundskeeping Workers					related occupation
29-2056	Veterinary Technologists and Technicians	28	29	1	\$10.65	Associate's degree
51-3023	Slaughterers and Meat Packers	26	23	-3	\$10.99	Moderate-term on-the-job training
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	24	33	9	\$21.88	Work experience in a related occupation
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	24	25	1	\$17.10	Work experience in a related occupation
19-4041	Geological and Petroleum Technicians	23	33	10	\$23.50	Associate's degree
11-9151	Social and Community Service Managers	22	25	3	\$21.50	Bachelor's degree
45-2091	Agricultural Equipment Operators	21	21	0	\$11.91	Short-term on-the-job training
27-3022	Reporters and Correspondents	21	25	4	\$10.70	Bachelor's degree
29-1031	Dietitians and Nutritionists	18	20	2	\$19.35	Bachelor's degree
17-2112	Industrial Engineers	18	21	3	\$32.32	Bachelor's degree
11-3071	Transportation, Storage, and Distribution Managers	18	25	7	\$29.96	Work experience in a related occupation
17-3023	Electrical and Electronics Engineering Technicians	15	20	5	\$34.48	Associate's degree
37-3013	Tree Trimmers and Pruners	13	15	2	\$9.85	Short-term on-the-job training
51-3092	Food Batchmakers	11	<10	--	--	Short-term on-the-job training
13-1021	Buyers and Purchasing Agents, Farm Products	<10	<10	--	--	Long-term on-the-job training
27-4011	Audio and Video Equipment Technicians	<10	10	--	--	Postsecondary non-degree award
53-5011	Sailors and Marine Oilers	<10	11	--	--	Short-term on-the-job training
15-1141	Database Administrators	<10	<10	--	--	Bachelor's degree
19-4091	Environmental Science and Protection Technicians, Including Health	<10	10	--	--	Associate's degree
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	<10	<10	--	--	Moderate-term on-the-job training
19-1031	Conservation Scientists	<10	<10	--	--	Bachelor's degree
19-1032	Foresters	<10	<10	--	--	Bachelor's degree
45-3011	Fishers and Related Fishing Workers	<10	<10	--	--	Moderate-term on-the-job training
27-4012	Broadcast Technicians	<10	<10	--	--	Associate's degree
45-2099	Agricultural Workers, All Other	<10	<10	--	--	Short-term on-the-job training
19-4093	Forest and Conservation Technicians	<10	<10	--	--	Associate's degree
17-2081	Environmental Engineers	<10	<10	--	--	Bachelor's degree
27-4014	Sound Engineering Technicians	<10	<10	--	--	Postsecondary non-degree award
45-4022	Logging Equipment Operators	<10	<10	--	--	Moderate-term

SOC Code	Description	2010 Jobs	2015 Jobs	Change	2012 Hourly Earnings	Education
						on-the-job training
19-1013	Soil and Plant Scientists	<10	<10	--	--	Bachelor's degree
25-9021	Farm and Home Management Advisors	<10	<10	--	--	Bachelor's degree
19-1023	Zoologists and Wildlife Biologists	<10	<10	--	--	Bachelor's degree
19-1012	Food Scientists and Technologists	<10	<10	--	--	Bachelor's degree
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	<10	<10	--	--	Bachelor's degree
45-2021	Animal Breeders	<10	<10	--	--	Work experience in a related occupation
51-3093	Food Cooking Machine Operators and Tenders	<10	<10	--	--	Short-term on-the-job training
33-3031	Fish and Game Wardens	<10	<10	--	--	Associate's degree
27-4013	Radio Operators	<10	<10	--	--	Short-term on-the-job training
17-1021	Cartographers and Photogrammetrists	<10	<10	--	--	Bachelor's degree
45-2011	Agricultural Inspectors	<10	<10	--	--	Bachelor's degree
47-4041	Hazardous Materials Removal Workers	<10	<10	--	--	Moderate-term on-the-job training
45-4021	Fallers	<10	<10	--	--	Moderate-term on-the-job training
17-2021	Agricultural Engineers	<10	<10	--	--	Bachelor's degree
45-4023	Log Graders and Scalers	<10	<10	--	--	Moderate-term on-the-job training

Source: EMSI Complete Employment - 2012.3

Largest Growth



SOC Code	Description	2010 - 2015 Change	Openings	Annual Openings	2012 Hourly Earnings	Education
11-9199	Managers, All Other	126	187	37	\$20.47	Work experience in a related occupation
47-2073	Operating Engineers and Other Construction Equipment Operators	97	129	26	\$17.32	Moderate-term on-the-job training
41-3031	Securities, Commodities, and Financial Services Sales Agents	77	104	21	\$17.49	Bachelor's degree
41-1011	First-Line Supervisors of Retail Sales Workers	62	151	30	\$13.95	Work experience in a related occupation
51-4041	Machinists	52	67	13	\$14.08	Long-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	45	62	12	\$15.94	Postsecondary non-degree award
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	39	50	10	\$19.11	Long-term on-the-job training
41-3099	Sales Representatives, Services, All Other	28	43	9	\$21.51	Short-term on-the-job training
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	20	28	6	\$24.84	Bachelor's degree
51-1011	First-Line Supervisors of	19	30	6	\$21.05	Work experience in

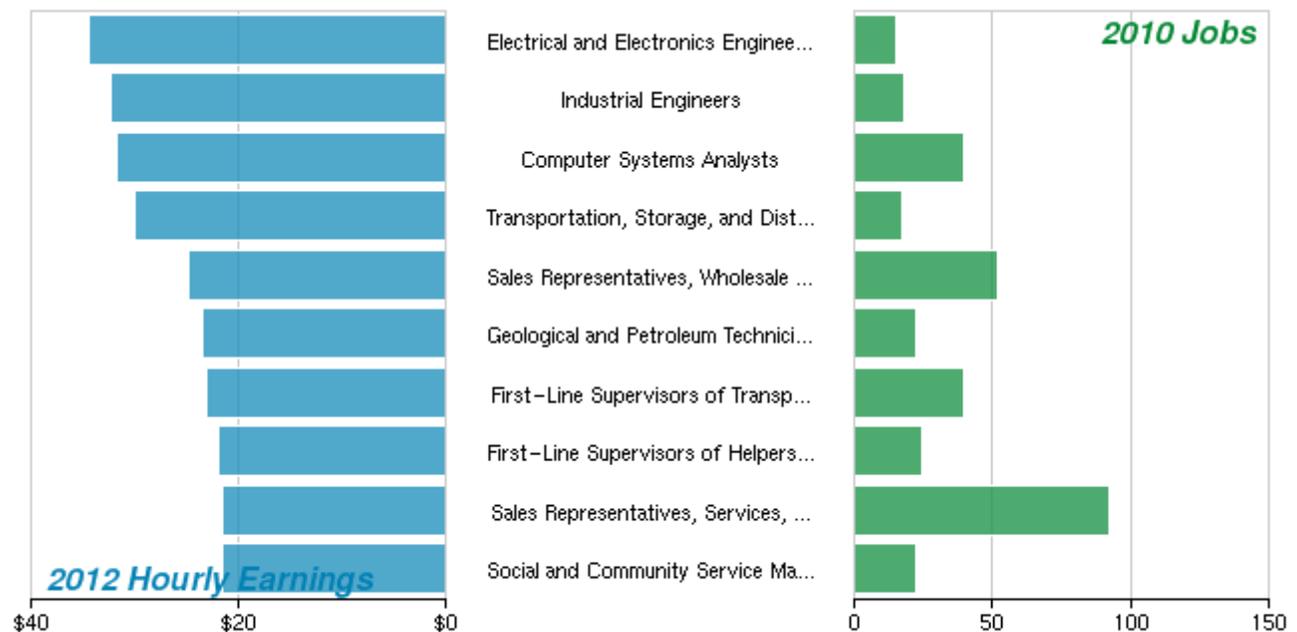
SOC Code	Description	2010 - 2015 Change	Openings	Annual Openings	2012 Hourly Earnings	Education
	Production and Operating Workers					a related occupation
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	18	24	5	\$23.14	Work experience in a related occupation
13-2072	Loan Officers	18	36	7	\$19.83	Moderate-term on-the-job training
53-7032	Excavating and Loading Machine and Dragline Operators	16	25	5	\$15.46	Moderate-term on-the-job training
15-1159	Computer Support Specialists	16	32	6	\$19.04	Associate's degree
41-2022	Parts Salespersons	14	33	7	\$13.62	Moderate-term on-the-job training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	11	53	11	\$8.87	Short-term on-the-job training
19-4041	Geological and Petroleum Technicians	10	16	3	\$23.50	Associate's degree
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	9	12	2	\$21.88	Work experience in a related occupation
15-1121	Computer Systems Analysts	8	12	2	\$31.68	Bachelor's degree
11-3071	Transportation, Storage, and Distribution Managers	7	10	2	\$29.96	Work experience in a related occupation
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	7	10	2	\$11.31	Work experience in a related occupation
17-3023	Electrical and Electronics Engineering Technicians	5	6	1	\$34.48	Associate's degree
27-3022	Reporters and Correspondents	4	9	2	\$10.70	Bachelor's degree
53-5011	Sailors and Marine Oilers	4	6	1	\$12.69	Short-term on-the-job training
11-9151	Social and Community Service Managers	3	6	1	\$21.50	Bachelor's degree
17-2112	Industrial Engineers	3	7	1	\$32.32	Bachelor's degree
19-4091	Environmental Science and Protection Technicians, Including Health	3	5	1	\$20.54	Associate's degree
19-4021	Biological Technicians	3	9	2	\$11.93	Bachelor's degree
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	2	2	0	\$57.32	Bachelor's degree
17-2081	Environmental Engineers	2	2	0	\$46.28	Bachelor's degree
15-1141	Database Administrators	2	2	0	\$32.27	Bachelor's degree
37-3013	Tree Trimmers and Pruners	2	4	1	\$9.85	Short-term on-the-job training
29-1031	Dietitians and Nutritionists	2	6	1	\$19.35	Bachelor's degree
51-8031	Water and Wastewater Treatment Plant and System	2	12	2	\$11.63	Long-term on-the-job training

SOC Code	Description	2010 - 2015 Change	Openings	Annual Openings	2012 Hourly Earnings	Education
	Operators					
25-9021	Farm and Home Management Advisors	1	1	0	\$19.82	Bachelor's degree
45-2099	Agricultural Workers, All Other	1	1	0	\$9.67	Short-term on-the-job training
19-1031	Conservation Scientists	1	2	0	\$28.14	Bachelor's degree
19-1023	Zoologists and Wildlife Biologists	1	1	0	\$25.06	Bachelor's degree
39-2021	Nonfarm Animal Caretakers	1	32	6	\$9.57	Short-term on-the-job training
17-2021	Agricultural Engineers	1	0	0	\$0.00	Bachelor's degree
17-1021	Cartographers and Photogrammetrists	1	1	0	\$31.34	Bachelor's degree
27-4013	Radio Operators	1	1	0	\$17.03	Short-term on-the-job training
19-4093	Forest and Conservation Technicians	1	1	0	\$15.16	Associate's degree
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	1	6	1	\$17.10	Work experience in a related occupation
27-4011	Audio and Video Equipment Technicians	1	4	1	\$16.91	Postsecondary non-degree award
29-2056	Veterinary Technologists and Technicians	1	7	1	\$10.65	Associate's degree
33-3031	Fish and Game Wardens	0	0	0	\$22.05	Associate's degree
51-3093	Food Cooking Machine Operators and Tenders	0	1	0	\$14.71	Short-term on-the-job training
19-1013	Soil and Plant Scientists	0	1	0	\$21.50	Bachelor's degree
45-2091	Agricultural Equipment Operators	0	5	1	\$11.91	Short-term on-the-job training
45-2021	Animal Breeders	0	0	0	\$11.36	Work experience in a related occupation
45-2011	Agricultural Inspectors	0	0	0	\$14.18	Bachelor's degree
45-4021	Fallers	0	0	0	\$11.43	Moderate-term on-the-job training
45-4023	Log Graders and Scalers	0	0	0	\$0.00	Moderate-term on-the-job training
19-1032	Foresters	0	1	0	\$20.38	Bachelor's degree
45-3011	Fishers and Related Fishing Workers	0	1	0	\$10.07	Moderate-term on-the-job training
47-4041	Hazardous Materials Removal Workers	0	0	0	\$10.83	Moderate-term on-the-job training
19-1012	Food Scientists and Technologists	0	1	0	\$22.23	Bachelor's degree
51-3092	Food Batchmakers	-1	2	0	\$14.72	Short-term on-the-job training
27-4012	Broadcast Technicians	-1	1	0	\$13.29	Associate's degree
27-4014	Sound Engineering Technicians	-1	1	0	\$18.49	Postsecondary non-degree award
45-4022	Logging Equipment Operators	-1	1	0	\$10.33	Moderate-term

SOC Code	Description	2010 - 2015 Change	Openings	Annual Openings	2012 Hourly Earnings	Education
						on-the-job training
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	-1	1	0	\$14.94	Moderate-term on-the-job training
13-1021	Buyers and Purchasing Agents, Farm Products	-2	1	0	\$17.96	Long-term on-the-job training
51-3023	Slaughterers and Meat Packers	-3	4	1	\$10.99	Moderate-term on-the-job training
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	-4	5	1	\$9.51	Short-term on-the-job training
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	-4	16	3	\$9.61	Short-term on-the-job training
51-3021	Butchers and Meat Cutters	-7	6	1	\$14.00	Long-term on-the-job training
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	-20	14	3	\$12.89	Short-term on-the-job training
11-9013	Farmers, Ranchers, and Other Agricultural Managers	-734	307	61	\$7.85	Long-term on-the-job training

Source: EMSI Complete Employment - 2012.3

Highest Earnings



SOC Code	Description	2012 Hourly Earnings	2010 Jobs	2010 - 2015 Change	Annual Openings	Education
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SOC Code	Description	2012 Hourly Earnings	2010 Jobs	2010 - 2015 Change	Annual Openings	Education
17-3023	Electrical and Electronics Engineering Technicians	\$34.48	15	5	1	Associate's degree
17-2112	Industrial Engineers	\$32.32	18	3	1	Bachelor's degree
15-1121	Computer Systems Analysts	\$31.68	40	8	2	Bachelor's degree
11-3071	Transportation, Storage, and Distribution Managers	\$29.96	18	7	2	Work experience in a related occupation
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$24.84	52	20	6	Bachelor's degree
19-4041	Geological and Petroleum Technicians	\$23.50	23	10	3	Associate's degree
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	\$23.14	40	18	5	Work experience in a related occupation
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	\$21.88	24	9	2	Work experience in a related occupation
41-3099	Sales Representatives, Services, All Other	\$21.51	92	28	9	Short-term on-the-job training
11-9151	Social and Community Service Managers	\$21.50	22	3	1	Bachelor's degree
51-1011	First-Line Supervisors of Production and Operating Workers	\$21.05	125	19	6	Work experience in a related occupation
11-9199	Managers, All Other	\$20.47	496	126	37	Work experience in a related occupation
13-2072	Loan Officers	\$19.83	131	18	7	Moderate-term on-the-job training
29-1031	Dietitians and Nutritionists	\$19.35	18	2	1	Bachelor's degree
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	\$19.11	63	39	10	Long-term on-the-job training
15-1159	Computer Support Specialists	\$19.04	112	16	6	Associate's degree
41-3031	Securities, Commodities, and Financial Services Sales Agents	\$17.49	169	77	21	Bachelor's degree
47-2073	Operating Engineers and Other Construction Equipment Operators	\$17.32	173	97	26	Moderate-term on-the-job training
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	\$17.10	24	1	1	Work experience in a related occupation
51-4121	Welders, Cutters, Solderers, and Brazers	\$15.94	98	45	12	Postsecondary non-degree award
53-7032	Excavating and Loading Machine and Dragline Operators	\$15.46	36	16	5	Moderate-term on-the-job training
51-4041	Machinists	\$14.08	96	52	13	Long-term on-the-job training
51-3021	Butchers and Meat Cutters	\$14.00	39	-7	1	Long-term on-the-job training
41-1011	First-Line Supervisors of Retail Sales Workers	\$13.95	726	62	30	Work experience in a related occupation

SOC Code	Description	2012 Hourly Earnings	2010 Jobs	2010 - 2015 Change	Annual Openings	Education
41-2022	Parts Salespersons	\$13.62	86	14	7	Moderate-term on-the-job training
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	\$12.89	113	-20	3	Short-term on-the-job training
19-4021	Biological Technicians	\$11.93	31	3	2	Bachelor's degree
45-2091	Agricultural Equipment Operators	\$11.91	21	0	1	Short-term on-the-job training
51-8031	Water and Wastewater Treatment Plant and System Operators	\$11.63	57	2	2	Long-term on-the-job training
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	\$11.31	30	7	2	Work experience in a related occupation
51-3023	Slaughterers and Meat Packers	\$10.99	26	-3	1	Moderate-term on-the-job training
27-3022	Reporters and Correspondents	\$10.70	21	4	2	Bachelor's degree
29-2056	Veterinary Technologists and Technicians	\$10.65	28	1	1	Associate's degree
37-3013	Tree Trimmers and Pruners	\$9.85	13	2	1	Short-term on-the-job training
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	\$9.61	71	-4	3	Short-term on-the-job training
39-2021	Nonfarm Animal Caretakers	\$9.57	180	1	6	Short-term on-the-job training
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	\$9.51	35	-4	1	Short-term on-the-job training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	\$8.87	200	11	11	Short-term on-the-job training
11-9013	Farmers, Ranchers, and Other Agricultural Managers	\$7.85	3,417	-734	61	Long-term on-the-job training

Source: EMSI Complete Employment - 2012.3

*Note: Occupations with fewer than 10 employees are not shown.

Career Cluster Data

Career clusters and pathways are collections of standard occupation (SOC) codes. They are defined by the States' Career Cluster Initiative.

Occupation Data

Organizing regional employment information by occupation provides a workforce-oriented view of the regional economy. EMSI's occupation data are based on EMSI's industry data and regional staffing patterns taken from the Occupational Employment Statistics program (U.S. Bureau of Labor Statistics). Wage information is partially derived from the American Community Survey. The occupation-to-program (SOC-to-CIP) crosswalk is based on one from the U.S. Department of Education, with customizations by EMSI.

State Data Sources

This report uses state data from the following agencies: Oklahoma Employment Security Commission.