

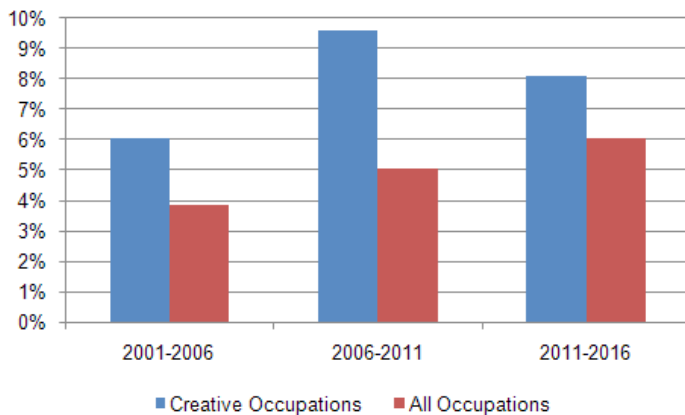


- Creative jobs grow at a faster rate than total employment, both during periods of economic expansion and contraction.
- Between 2001 and 2006, Oklahoma creative jobs grew by 6.0%, while average jobs grew by 3.9%. During the past five years, creative jobs in the state grew 9.6% while all occupations grew by 5.1%.
- In 2010, creative workers in Oklahoma earned \$53,851, while the state average was \$36,400. This 48% premium for creative workers compared to all workers is even more pronounced at the national level, where United States creative workers earn 60% more than average workers.
- More than 75% of creative occupations require a bachelor's degree or higher.

## CREATIVE JOBS - GROWING AND RESILIENT

Creative jobs consistently grow at a faster rate than average, both in Oklahoma and the United States. During times of economic prosperity and periods of economic downturn, creative occupations fare better than jobs on the whole. During the economic expansion of 2001 to 2006, Oklahoma creative jobs grew by 6.0%, while average jobs grew by 3.9%. During the time of economic contraction from 2006 to 2011, creative jobs in the state grew 9.6% while all occupations grew by 5.1%.

### % Job Growth in Oklahoma, Creative and All Jobs 2001-2016



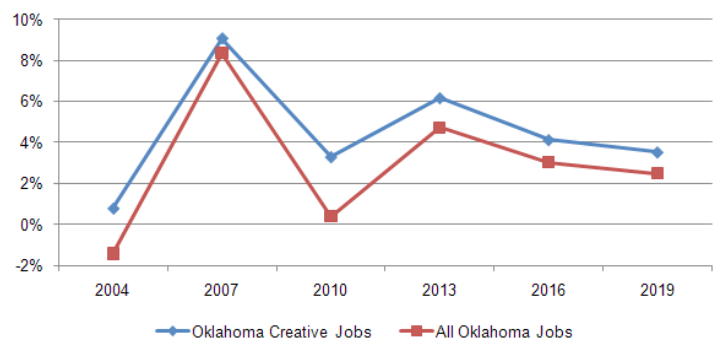
Source: EMSI Complete Employment - 1st Quarter 2011

Creative jobs are predicted to continue their high growth in the future. Creative occupations are expected to grow 8.1% from 2011 to 2016, and average occupations should expand by 6.0%.

This trend is even more pronounced at the national level. In the past five years, creative jobs in the United States have grown by 5.7%, while jobs on the whole have declined by -.02%. Looking ahead to 2016, creative jobs are expected to grow at 8.3% and all jobs should grow at 6.3%.

Oklahoma has fewer creative workers proportionately than the national average. Creative workers represent 8.8% of Oklahoma's workforce, compared to 10.8% for the United States. The percent of Oklahoma jobs that are in creative work has slowly risen from 8.26% in 2001, to 8.44% in 2006, to 8.80% in 2011. This proportion is expected to reach 8.97% by 2016.

### Creative Job Growth in Oklahoma, by three-year growth rate



Source: EMSI Complete Employment - 1st Quarter 2011

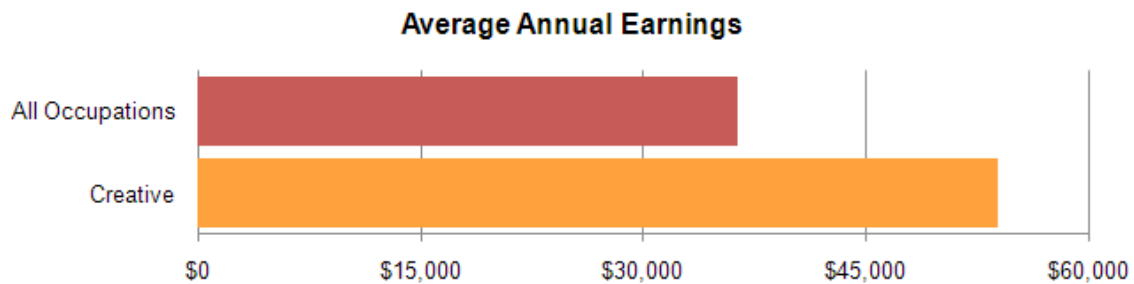
## Oklahoma and U.S. Job Growth, (2004-2010)

Creative jobs are consistently growing at a higher rate in Oklahoma than for the nation as a whole. Creative work is expected to continue to grow at a faster rate than total employment, both in Oklahoma and the United States.

	2001-2011	2010-2020	2001-2020
<b>OK Creative Jobs</b>	16%	16%	31%
<b>U.S. Creative Jobs</b>	13%	16%	27%
<b>OK All Jobs</b>	9%	11%	19%
<b>U.S. All Jobs</b>	6%	11%	16%

Source: EMSI Complete Employment - 1st Quarter 2011

## CREATIVE JOBS PAY MORE THAN AVERAGE



Source: EMSI Complete Employment - 1st Quarter 2011; Annual earnings based on 2010 average hourly earnings for 40 hours per week, 52 weeks per year.

In 2010, creative workers in Oklahoma earned \$53,851, while the state average was \$36,400. This 48% premium for creative workers compared to all workers is even more pronounced at the national level, where United States creative workers earn 60% more than average workers.

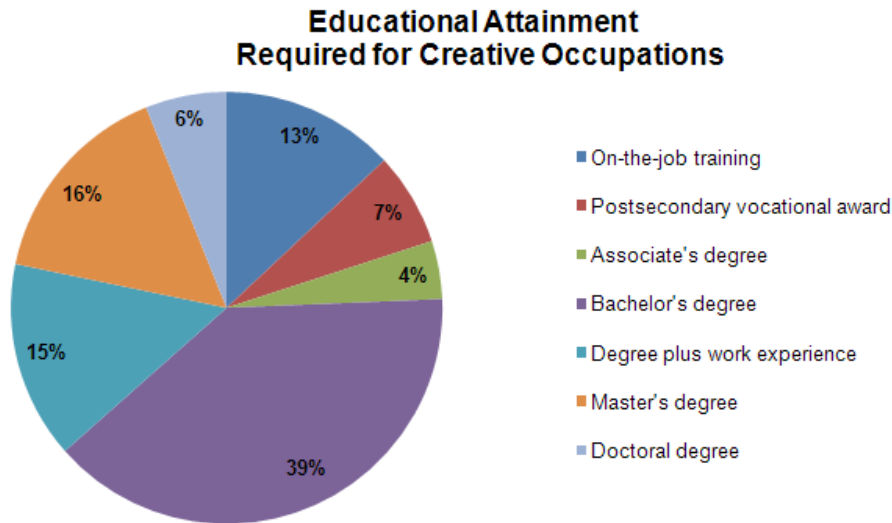
## Highest Paying Creative Jobs

Occupation	2010 Avg. Annual Earnings	2011 Jobs
Chemical Engineers	\$103,106	217
Engineering Managers	\$100,547	1,576
Geoscientists, except hydrologists and geographers	\$94,120	2,580
Sales Engineers	\$91,437	300
Chief Executives	\$89,149	13,528
Physicists	\$85,363	67
Electronics Engineers, except computer	\$80,288	1,620
Elementary and Secondary School Education Administrators	\$78,978	3,490
Actuaries	\$78,894	108
Computer and Information Systems Managers	\$78,021	2,373

Source: EMSI Complete Employment - 1st Quarter 2011; Annual earnings based on 2010 average hourly earnings for 40 hours per week, 52 weeks per year.

While the average earnings for creative workers are just over \$50,000 annually, several occupations earn more. Chemical engineers and engineering managers rank highest, with annual earnings of over \$100,000.

**EDUCATION FUELS CREATIVITY**



Source: EMSI Complete Employment - 1st Quarter 2011

More than 75% of creative occupations require a bachelor's degree or higher. In order to train a workforce skilled in creative thinking and problem solving, Oklahoma's higher education system will need to be expanded, promoted, and utilized.

**EDUCATION LEADS TO HIGHER EARNINGS**

On average, the more education a creative worker has, the more they earn. Oklahoma creative workers with a college degree average more than twice the earnings of those with only on-the-job training or a postsecondary vocational award.

Educational Attainment Required	Average Annual Earnings
On-the-job training	\$26,640
Postsecondary vocational award	\$25,836
Associate's degree	\$45,918
Bachelor's degree	\$54,456
Degree plus work experience	\$59,691
Doctoral degree	\$68,569

Source: EMSI Complete Employment - 1st Quarter 2011

**CREATIVE INDUSTRIES**

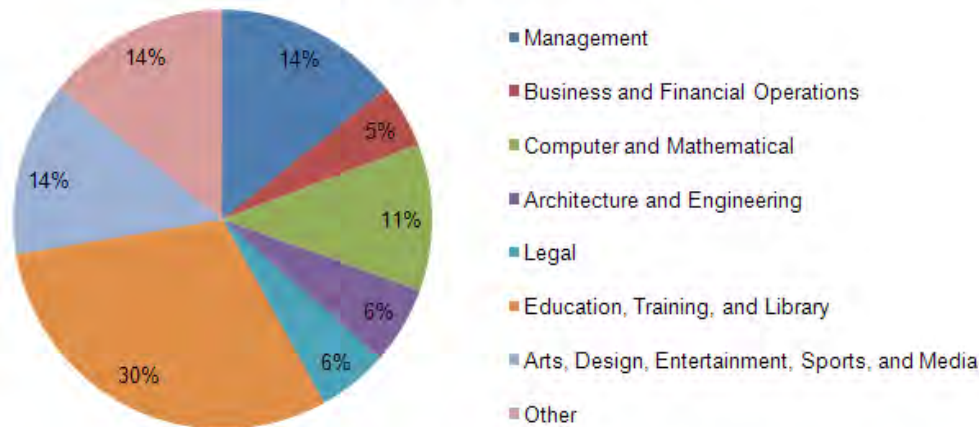
To identify "creative industries," the staffing patterns of the 115 creative occupations were analyzed. In Oklahoma, local government employs the largest portion of creative workers (22%) and state government employs the second most (10%). The ten industries with the highest 2011 employment are included in the table. Between 2006 and 2011, the percentage of creative workers employed by these leading industries grew from 24.6% to 26.3%.

Industry	% Creative Jobs	2006 Jobs	2011 Jobs	2016 Jobs
Religious Organizations	5.2%	9,481	10,028	10,363
Crude Petroleum and Natural Gas Extraction	3.9%	3,395	7,447	8,883
Offices of Lawyers	3.6%	6,479	6,836	7,164
Independent Artists, Writers, and Performers	2.8%	5,008	5,262	5,599
Federal Government, Civilian, except Postal Service	2.1%	3,843	4,051	4,225
Child Day Care Services	2.0%	3,438	3,827	4,162
Colleges, Universities, and Professional Schools	1.8%	2,865	3,415	3,665
Custom Computer Programming Services	1.8%	2,668	3,358	3,858
Engineering Services	1.6%	3,016	3,047	3,385
Beauty Salons	1.6%	2,686	2,971	3,306
<b>Total for these industries</b>	<b>26.3%</b>	<b>42,879</b>	<b>50,242</b>	<b>54,610</b>

Source: EMSI Complete Employment - 1st Quarter 2011

**CREATIVE JOBS ARE DIVERSE**

**Distribution of Creative Occupations, 2011**



Source: EMSI Complete Employment - 1st Quarter 2011

Creative workers are found in a variety of occupations. 30% of Oklahoma’s creative workers are involved in education, training and library occupations. The occupations traditionally thought of as creative (including arts, design, entertainment, sports, and media workers) represent only 14% of Oklahoma’s creative workers. A high percent of creative workers are found in management and computer/mathematical jobs (14% and 11%, respectively).

Half of Oklahoma’s creative workers are employed in ten occupations. Teachers make up over 25% of all creative jobs in Oklahoma. The following occupations hire the largest numbers of workers.

**Largest Growing Occupations**

Description	2011 Jobs
Elementary School Teachers	20,456
Postsecondary Teachers	16,416
Chief Executives	13,528
Lawyers	10,355
Middle School Teachers	8,791
Preschool Teachers	5,843
Clergy	5,461
Hairdressers and Cosmetologists	5,138
Computer Systems Analysts	4,374
Musicians and Singers	4,318

Source: EMSI Complete Employment - 1st Quarter 2011; Teachers exclude special and vocational education

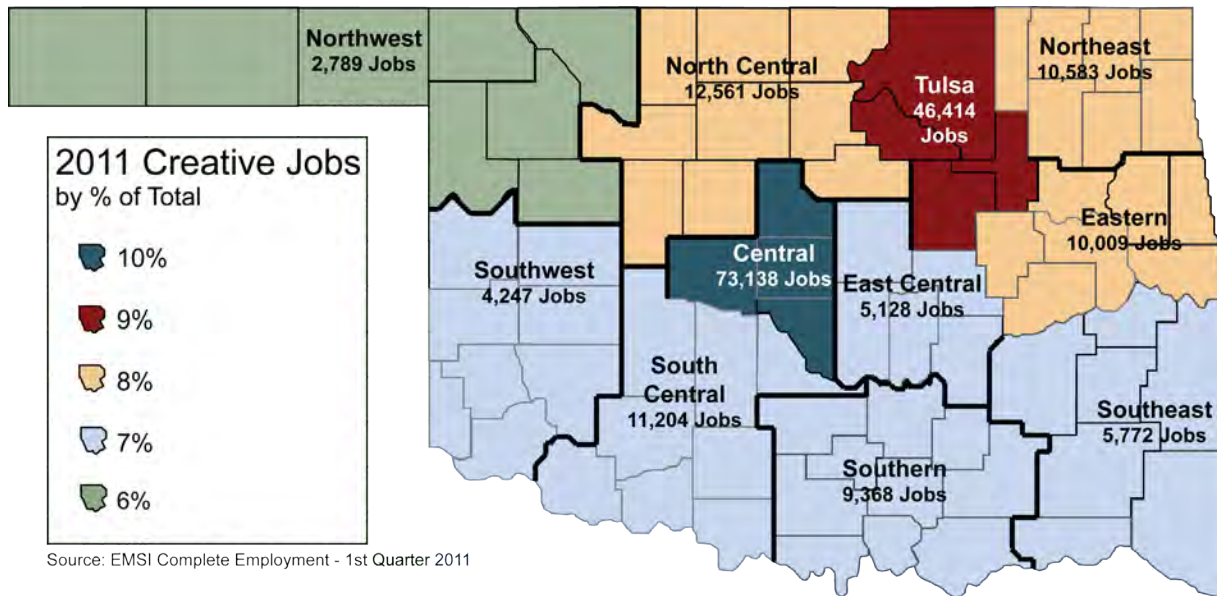
Among the largest occupations are many of the fastest growing occupations. Chief executives and elementary school teachers have grown the most in the past five years, with 2,412 and 1,813 new jobs, respectively. More than half of the new creative job growth since 2006 has occurred in the six jobs listed.

**Fastest Growing Creative Occupations**

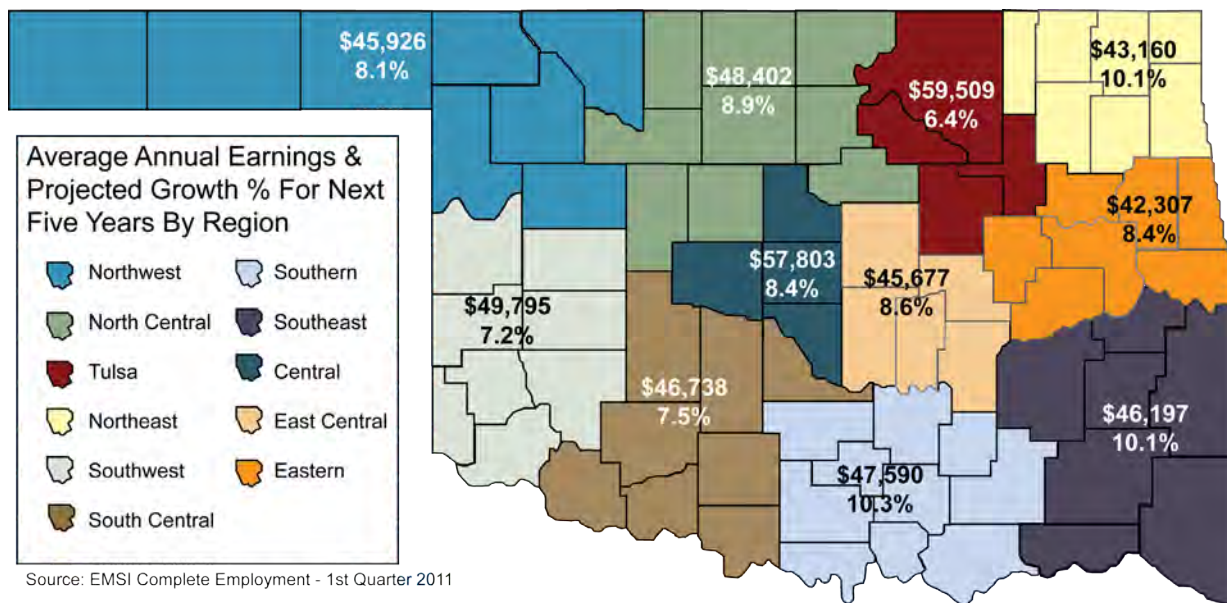
Occupation	2006 Jobs	2011 Jobs	Job Growth	% Growth
Chief executives	11,116	13,528	2,412	22%
Elementary school teachers	18,643	20,456	1,813	10%
Financial analysts	2,390	3,843	1,453	61%
Geoscientists	1,526	2,580	1,054	69%
Postsecondary teachers	15,400	16,416	1,016	7%
Middle school teachers	8,018	8,791	773	10%
<b>Total Creative Occupations</b>	<b>174,523</b>	<b>191,211</b>	<b>16,688</b>	<b>10%</b>

Source: EMSI Complete Employment - 1st Quarter 2011; Teachers exclude special and vocational education

**CREATIVE JOBS BY OKLAHOMA REGION**



The regions with Oklahoma’s largest cities (Oklahoma City, Tulsa, Norman) have a higher percentage of creative jobs than the more rural regions. The annual earnings for creative workers are approximately 20% higher than for those in less populated regions.



In the next five years, creative jobs are expected to grow at a faster rate in more rural regions. The creative occupations in the Northeast, Southern, and Southeast regions are predicted to grow by more than 10% by 2016. During the same time period, the largely-metropolitan Central and Tulsa regions are predicted to grow by 8.4% and 6.4%, respectively.

## APPENDIX A

The U.S. Department of Labor's O\*NET database was used to identify "creative workers"- those occupations that routinely require the highest levels of creative thinking. The Occupational Information Network Occupation Study has a particular item for "Thinking Creatively". Each occupation is rated both in the **importance** of thinking creatively and the **level** of thinking creatively required for that occupation.

To identify the occupations where the ability to think creatively is both important and of a high level, an index was created. The index score was derived by multiplying the "importance" score by the "level" score, a method which also created a wider variation in values. O\*NET analyzes 854 occupations and gives a "Thinking Creatively" score for 843 of them. This analysis examined the occupations with the top 20% of index scores.

This list of 170 occupations included seven for which EMSI data was not available. Because O\*NET classifies occupations by 8-digit codes while EMSI uses 6-digit codes, 23 occupations were condensed into 8 occupations with common 6-digit occupation codes. All post-secondary teachers, which O\*NET classifies by distinct 8-digit codes, were grouped within the EMSI 25-1011 code. Two occupations, astronomers and political scientists, had too few workers in Oklahoma (<10) to have complete data and were deleted from the list. This left a group of 115 occupations to comprise the Top 20% of Creative Occupations in Oklahoma (listed in Appendix B)

**APPENDIX B**

OKLAHOMA CREATIVE OCCUPATIONS, INCLUDING EDUCATION AND EARNINGS, 2006, 2011, 2016

SOC Code	Description	2006 Jobs	2011 Jobs	% Change	2016 Jobs	% Change	Education Level	2010 Avg Annual Earnings
11-1011	Chief executives	11,116	13,528	22%	14,663	8%	Degree plus work experience	\$89,149
11-2011	Advertising and promotions managers	626	573	-8%	538	-6%	Degree plus work experience	\$51,834
11-2021	Marketing managers	1,687	1,940	15%	2,124	9%	Degree plus work experience	\$74,339
11-2031	Public relations managers	774	1,228	59%	1,415	15%	Degree plus work experience	\$72,821
11-3021	Computer and information systems managers	2,237	2,373	6%	2,518	6%	Degree plus work experience	\$78,021
11-3042	Training and development managers	436	451	3%	477	6%	Degree plus work experience	\$61,610
11-9032	Education administrators, elementary and secondary school	3,261	3,490	7%	3,681	5%	Degree plus work experience	\$78,978
11-9033	Education administrators, postsecondary	896	915	2%	940	3%	Degree plus work experience	\$68,723
11-9041	Engineering managers	1,594	1,576	-1%	1,669	6%	Degree plus work experience	\$100,547
11-9151	Social and community service managers	1,087	1,189	9%	1,239	4%	Bachelor's degree	\$39,125
13-1011	Agents and business managers of artists, performers, and athletes	507	552	9%	593	7%	Degree plus work experience	\$23,878
13-1073	Training and development specialists	3,163	3,431	8%	3,780	10%	Bachelor's degree	\$41,080
13-2051	Financial analysts	2,390	3,843	61%	4,527	18%	Bachelor's degree	\$52,187
13-2061	Financial examiners	261	316	21%	377	19%	Bachelor's degree	\$77,542
13-2071	Loan counselors	1,088	1,271	17%	1,422	12%	Bachelor's degree	\$32,323
15-1011	Computer and information scientists, research	152	163	7%	173	6%	Doctoral degree	\$73,528
15-1021	Computer programmers	3,921	3,840	-2%	3,759	-2%	Bachelor's degree	\$52,000
15-1031	Computer software engineers, applications	2,782	3,102	12%	3,486	12%	Bachelor's degree	\$61,838
15-1032	Computer software engineers, systems software	1,970	2,110	7%	2,309	9%	Bachelor's degree	\$72,758
15-1051	Computer systems analysts	4,047	4,374	8%	4,661	7%	Bachelor's degree	\$60,653
15-1071	Network and computer systems administrators	2,648	2,792	5%	3,013	8%	Bachelor's degree	\$51,480
15-1081	Network systems and data communications analysts	2,564	2,958	15%	3,298	11%	Bachelor's degree	\$44,117
15-1099	Computer specialists, all other	1,400	1,584	13%	1,672	6%	Associate's degree	\$70,533
15-2011	Actuaries	96	108	13%	119	10%	Degree plus work experience	\$78,894
15-2021	Mathematicians	13	14	8%	15	7%	Doctoral degree	\$58,448
15-2031	Operations research analysts	427	463	8%	505	9%	Master's degree	\$62,296
15-2041	Statisticians	139	146	5%	154	5%	Master's degree	\$44,408
17-1011	Architects, except landscape and naval	1,225	1,212	-1%	1,284	6%	Bachelor's degree	\$52,042
17-1012	Landscape architects	190	199	5%	216	9%	Bachelor's degree	\$37,960
17-2021	Agricultural engineers	14	14	0%	15	7%	Bachelor's degree	\$64,688
17-2031	Biomedical engineers	30	37	23%	45	22%	Bachelor's degree	\$68,390
17-2041	Chemical engineers	200	217	9%	231	6%	Bachelor's degree	\$103,106
17-2051	Civil engineers	1,884	1,979	5%	2,170	10%	Bachelor's degree	\$67,642
17-2071	Electrical engineers	1,682	1,639	-3%	1,721	5%	Bachelor's degree	\$72,030
17-2072	Electronics engineers, except computer	1,703	1,620	-5%	1,662	3%	Bachelor's degree	\$80,288
17-2081	Environmental engineers	318	345	8%	393	14%	Bachelor's degree	\$77,397
17-2112	Industrial engineers	1,495	1,663	11%	1,890	14%	Bachelor's degree	\$71,240
17-2121	Marine engineers and naval architects	40	43	8%	46	7%	Bachelor's degree	\$50,086
17-2131	Materials engineers	174	183	5%	201	10%	Bachelor's degree	\$67,538
17-2161	Nuclear engineers	90	100	11%	107	7%	Bachelor's degree	\$70,262
17-2199	Engineers, all other	1,334	1,493	12%	1,598	7%	Bachelor's degree	\$73,278
17-3022	Civil engineering technicians	718	742	3%	808	9%	Associate's degree	\$44,990
19-1011	Animal scientists	57	63	11%	67	6%	Bachelor's degree	\$51,522
19-1012	Food scientists and technologists	161	177	10%	187	6%	Bachelor's degree	\$34,403
19-1013	Soil and plant Scientists	105	116	10%	125	8%	Bachelor's degree	\$41,454
19-1021	Biochemists and biophysicists	46	50	9%	55	10%	Doctoral degree	\$63,190

# CREATIVITY IN OKLAHOMA

SOC Code	Description	2006 Jobs	2011 Jobs	% Change	2016 Jobs	% Change	Education Level	2010 Avg Annual Earnings
19-1022	Microbiologists	64	66	3%	69	5%	Doctoral degree	\$58,344
19-1029	Biological scientists, all other	190	208	9%	224	8%	Bachelor's degree	\$66,914
19-1031	Conservation scientists	247	263	6%	275	5%	Bachelor's degree	\$59,259
19-1041	Epidemiologists	41	45	10%	49	9%	Master's degree	\$60,736
19-2012	Physicists	64	67	5%	70	4%	Doctoral degree	\$85,363
19-2032	Materials scientists	31	30	-3%	32	7%	Bachelor's degree	\$73,362
19-2042	Geoscientists, except hydrologists and geographers	1,526	2,580	69%	3,001	16%	Master's degree	\$94,120
19-2043	Hydrologists	58	60	3%	63	5%	Master's degree	\$70,013
19-3011	Economists	77	90	17%	97	8%	Master's degree	\$49,275
19-3032	Industrial-organizational psychologists	16	18	13%	18	0%	Master's degree	\$33,488
19-3041	Sociologists	20	21	5%	22	5%	Master's degree	\$48,838
19-3091	Anthropologists and archeologists	19	20	5%	22	10%	Master's degree	\$48,402
19-3092	Geographers	16	17	6%	19	12%	Master's degree	\$50,502
21-1013	Marriage and family therapists	380	416	9%	438	5%	Master's degree	\$33,758
21-1091	Health educators	712	767	8%	803	5%	Master's degree	\$43,680
21-2011	Clergy	5,136	5,461	6%	5,649	3%	Master's degree	\$18,907
23-1011	Lawyers	9,801	10,355	6%	11,017	6%	First professional degree	\$77,147
25-1099	Postsecondary teachers	15,400	16,416	7%	17,776	8%	Doctoral degree	\$63,960
25-2011	Preschool teachers, except special education	5,307	5,843	10%	6,282	8%	Postsecondary vocational award	\$24,586
25-2012	Kindergarten teachers, except special education	2,471	2,699	9%	2,914	8%	Bachelor's degree	\$49,629
25-2021	Elementary school teachers, except special education	18,643	20,456	10%	22,241	9%	Bachelor's degree	\$53,082
25-2022	Middle school teachers, except special and vocational education	8,018	8,791	10%	9,540	9%	Bachelor's degree	\$50,523
25-2032	Vocational education teachers, secondary school	1,312	1,402	7%	1,480	6%	Degree plus work experience	\$63,024
25-2042	Special education teachers, middle school	986	1,095	11%	1,202	10%	Bachelor's degree	\$54,787
25-4012	Curators	63	69	10%	74	7%	Master's degree	\$39,811
25-4013	Museum Technicians and Conservators	31	36	16%	40	11%	Master's degree	\$32,614
25-9031	Instructional coordinators	1,142	1,288	13%	1,437	12%	Master's degree	\$44,886
27-1011	Art directors	1,412	1,528	8%	1,635	7%	Degree plus work experience	\$25,210
27-1012	Craft artists	244	266	9%	284	7%	Long-term on-the-job training	\$17,160
27-1013	Fine artists, including painters, sculptors, and illustrators	422	468	11%	505	8%	Long-term on-the-job training	\$19,053
27-1014	Multi-media artists and animators	1,188	1,317	11%	1,426	8%	Bachelor's degree	\$21,029
27-1021	Commercial and industrial designers	671	633	-6%	676	7%	Bachelor's degree	\$45,406
27-1022	Fashion designers	124	127	2%	135	6%	Associate's degree	\$29,890
27-1024	Graphic designers	2,950	3,022	2%	3,266	8%	Bachelor's degree	\$33,114
27-1025	Interior designers	535	559	4%	616	10%	Associate's degree	\$38,126
27-1027	Set and exhibit designers	90	101	12%	111	10%	Bachelor's degree	\$21,299
27-2011	Actors	393	439	12%	480	9%	Long-term on-the-job training	\$23,650
27-2012	Producers and directors	797	763	-4%	789	3%	Degree plus work experience	\$35,963
27-2022	Coaches and scouts	2,439	2,830	16%	3,187	13%	Long-term on-the-job training	\$34,882
27-2031	Dancers	135	156	16%	171	10%	Long-term on-the-job training	\$25,938
27-2032	Choreographers	90	102	13%	111	9%	Work experience in a related field	\$19,781
27-2041	Music directors and composers	1,710	1,825	7%	1,921	5%	Degree plus work experience	\$19,198
27-2042	Musicians and singers	3,838	4,318	13%	4,657	8%	Long-term on-the-job training	\$17,472
27-3011	Radio and television announcers	1,068	984	-8%	1,025	4%	Long-term on-the-job training	\$32,822
27-3021	Broadcast news analysts	164	164	0%	176	7%	Degree plus work experience	\$61,360
27-3022	Reporters and correspondents	823	737	-10%	717	-3%	Degree plus work experience	\$31,200
27-3041	Editors	1,329	1,230	-7%	1,274	4%	Bachelor's degree	\$29,078
27-3043	Writers and authors	3,093	3,463	12%	3,746	8%	Bachelor's degree	\$21,112

# CREATIVITY IN OKLAHOMA

SOC Code	Description	2006 Jobs	2011 Jobs	% Change	2016 Jobs	% Change	Education Level	2010 Avg Annual Earnings
27-4014	Sound engineering technicians	116	111	-4%	110	-1%	Postsecondary vocational award	\$24,710
27-4031	Camera operators, television, video, and motion picture	292	294	1%	308	5%	Moderate-term on-the-job training	\$28,621
27-4032	Film and video editors	256	280	9%	308	10%	Bachelor's degree	\$25,605
29-1122	Occupational therapists	1,412	1,659	17%	1,831	10%	Master's degree	\$49,046
29-1125	Recreational therapists	343	367	7%	381	4%	Bachelor's degree	\$37,336
29-1127	Speech-language pathologists	1,597	1,865	17%	2,062	11%	Master's degree	\$52,811
29-2091	Orthotists and prosthetists	60	55	-8%	54	-2%	Bachelor's degree	\$49,109
31-2011	Occupational therapist assistants	437	518	19%	583	13%	Associate's degree	\$46,051
39-5012	Hairdressers, hairstylists, and cosmetologists	4,604	5,138	12%	5,839	14%	Postsecondary vocational award	\$29,619
39-5091	Makeup artists, theatrical and performance	24	26	8%	28	8%	Postsecondary vocational award	\$26,707
39-9031	Fitness trainers and aerobics instructors	2,714	2,950	9%	3,367	14%	Postsecondary vocational award	\$25,085
41-3011	Advertising sales agents	1,689	1,467	-13%	1,465	0%	Moderate-term on-the-job training	\$40,373
41-9031	Sales engineers	309	300	-3%	314	5%	Bachelor's degree	\$91,437
43-9031	Desktop publishers	266	225	-15%	218	-3%	Postsecondary vocational award	\$23,234
43-9081	Proofreaders and copy markers	216	200	-7%	204	2%	Short-term on-the-job training	\$23,026
49-2096	Electronic equipment installers and repairers, motor vehicles	259	260	0%	250	-4%	Postsecondary vocational award	\$26,957
51-6051	Sewers, hand	229	195	-15%	189	-3%	Short-term on-the-job training	\$21,986
51-6092	Fabric and apparel patternmakers	56	49	-13%	46	-6%	Long-term on-the-job training	\$32,802
51-7031	Model makers, wood	26	19	-27%	19	0%	Long-term on-the-job training	\$24,835
51-9071	Jewelers and precious stone and metal workers	757	729	-4%	748	3%	Postsecondary vocational award	\$25,792
51-9195	Molders, shapers, and casters, except metal and plastic	824	669	-19%	676	1%	Moderate-term on-the-job training	\$30,347
<b>Total</b>		<b>174,523</b>	<b>191,211</b>	<b>10%</b>	<b>206,709</b>	<b>8%</b>		<b>\$53,851</b>

Source: EMSI Complete Employment - 1st Quarter 2011