

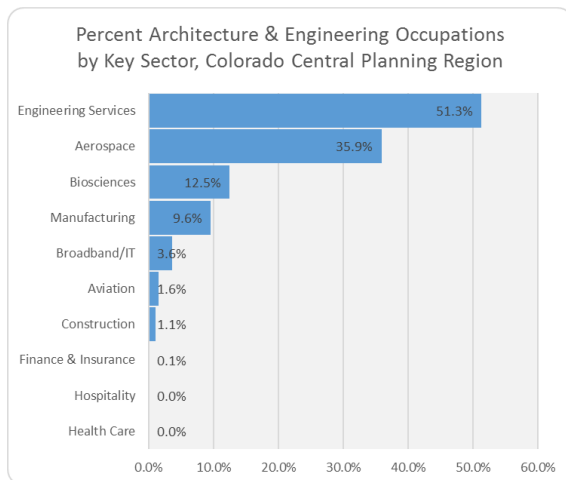
**Career Pathways
Core Business Group
Architecture & Engineering Occupations**

All industries are made up of three groups of people:

- The **core business group**, which produce the goods or provide the services
- The **business operations group**, which is charged with advertising, marketing, budgeting and sales
- The **administration & support** group, which performs tasks that support the core and business operations groups

Employment by Occupational Grouping, Colorado Central Planning Region					
SOC	Description	2015 Jobs	2020 Jobs	Change	Percent Change
17-1000	Architects, Surveyors, and Cartographers	4,433	4,931	498	11.2%
17-2000	Engineers	32,758	35,888	3,130	9.6%
17-3000	Drafters, Engineering Technicians, and Mapping Technicians	9,345	10,273	928	9.9%

Source: EMSI 2015.3 QCEW, Non-QCEW & Self-Employed Class of Worker



There are three distinct occupational groups in the Architecture and Engineering occupational family. Though the most numerous group are engineers, the occupational family offers numerous opportunities to those without a four-year degree in engineering. Approximately 18% of people employed in this occupational family have an associate's degree, and just over 2% a high school diploma or equivalent.

Architecture and engineering occupations make up about 2.6% of total employment in the region, but these skills are critical to several key industry sectors. The table shows that these occupations can be found in a variety of industry groups and which key sectors

employ the greatest number of people in the architecture and engineering occupational family.

**Arapahoe County
Centennial Workforce Center**
6964 S. Lima Street
Centennial, Colorado 80112
Phone: 303.636.1160
Fax: 303.636.1250

**Arapahoe County
Aurora Workforce Center**
15400 E. 14th Place
Aurora, Colorado 80011
Phone: 303.636.2013
Fax: 303.636.2020

www.adworks.org

Architecture & Engineering Occupations, Denver-Aurora-Lakewood MSA, Boulder & Larimer Counties						
SOC	Description	2016 Jobs	2020 Jobs	2016 - 2020 Change	2016 - 2020 % Change	Typical Entry Level Education
17-1011	Architects, Except Landscape and Naval	2,681	2,909	228	8.5%	Bachelor's degree
17-1012	Landscape Architects	499	535	36	7.2%	Bachelor's degree
17-1021	Cartographers and Photogrammetrists	567	624	57	10.1%	Bachelor's degree
17-1022	Surveyors	812	887	75	9.2%	Bachelor's degree
17-2011	Aerospace Engineers	2,175	2,326	151	6.9%	Bachelor's degree
17-2021	Agricultural Engineers	28	32	4	14.3%	Bachelor's degree
17-2031	Biomedical Engineers	463	524	61	13.2%	Bachelor's degree
17-2041	Chemical Engineers	554	609	55	9.9%	Bachelor's degree
17-2051	Civil Engineers	5,657	6,337	680	12.0%	Bachelor's degree
17-2061	Computer Hardware Engineers	2,892	2,722	(170)	(5.9%)	Bachelor's degree
17-2071	Electrical Engineers	3,074	3,287	213	6.9%	Bachelor's degree
17-2072	Electronics Engineers, Except Computer	4,093	4,167	74	1.8%	Bachelor's degree
17-2081	Environmental Engineers	1,801	1,959	158	8.8%	Bachelor's degree
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	334	365	31	9.3%	Bachelor's degree
17-2112	Industrial Engineers	2,327	2,551	224	9.6%	Bachelor's degree
17-2121	Marine Engineers and Naval Architects	48	63	15	31.3%	Bachelor's degree
17-2131	Materials Engineers	545	577	32	5.9%	Bachelor's degree
17-2141	Mechanical Engineers	5,511	5,920	409	7.4%	Bachelor's degree
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	467	519	52	11.1%	Bachelor's degree
17-2161	Nuclear Engineers	218	228	10	4.6%	Bachelor's degree
17-2171	Petroleum Engineers	1,607	1,965	358	22.3%	Bachelor's degree
17-2199	Engineers, All Other	1,522	1,638	116	7.6%	Bachelor's degree
17-3011	Architectural and Civil Drafters	1,552	1,649	97	6.3%	Associate's degree
17-3012	Electrical and Electronics Drafters	639	687	48	7.5%	Associate's degree
17-3013	Mechanical Drafters	819	866	47	5.7%	Associate's degree
17-3019	Drafters, All Other	247	269	22	8.9%	Associate's degree
17-3021	Aerospace Engineering and Operations Technicians	295	304	9	3.1%	Associate's degree
17-3022	Civil Engineering Technicians	782	854	72	9.2%	Associate's degree
17-3023	Electrical and Electronics Engineering Technicians	1,615	1,696	81	5.0%	Associate's degree
17-3024	Electro-Mechanical Technicians	108	123	15	13.9%	Associate's degree
17-3025	Environmental Engineering Technicians	463	511	48	10.4%	Associate's degree
17-3026	Industrial Engineering Technicians	335	364	29	8.7%	Associate's degree
17-3027	Mechanical Engineering Technicians	356	412	56	15.7%	Associate's degree
17-3029	Engineering Technicians, Except Drafters, All Other	1,247	1,332	85	6.8%	Associate's degree
17-3031	Surveying and Mapping Technicians	1,086	1,201	115	10.6%	High school diploma or equivalent
	Totals	47,416	51,010	3,594	7.6%	

Source: EMSI 2016.1 QCEW, Non-QCEW & Self-Employed Class of Worker

Architectural and engineering occupations are in steady demand throughout the region, and employment in these occupations is expected to grow 7.6% over the next five years.

How can I learn more about architectural and engineering career pathways?

Use the table below to access information on job descriptions, local wage information, training programs, credentials and apprenticeship opportunities. Simply click on each link for the information you need.

Occupation Information	Local Wage Information	Job Postings	Training Opportunities	Credentials	Apprenticeship Opportunities
Architects, Except Landscape & Naval	Local Wage	Jobs	Training	Credential	Apprenticeship
Landscape Architects	Local Wage	Jobs	Training	Credential	Apprenticeship
Cartographers & Photogrammetrists	Local Wage	Jobs	Training	Credential	Apprenticeship
Surveyors	Local Wage	Jobs	Training	Credential	Apprenticeship
Aerospace Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Agricultural Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Biomedical Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Chemical Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship

Occupation Information	Local Wage Information	Job Postings	Training Opportunities	Credentials	Apprenticeship Opportunities
Civil Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Computer Hardware Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Electrical Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Electronics Engineers, Except Computer	Local Wage	Jobs	Training	Credential	Apprenticeship
Environmental Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	Local Wage	Jobs	Training	Credential	Apprenticeship
Industrial Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Marine Engineers and Naval Architects	Local Wage	Jobs	Training	Credential	Apprenticeship
Materials Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Mechanical Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Mining and Geological Engineers, Including Mine Safety Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Nuclear Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Petroleum Engineers	Local Wage	Jobs	Training	Credential	Apprenticeship
Engineers, All Other	Local Wage	Jobs	Training	Credential	Apprenticeship
Architectural and Civil Drafters	Local Wage	Jobs	Training	Credential	Apprenticeship
Electrical and Electronics Drafters	Local Wage	Jobs	Training	Credential	Apprenticeship
Mechanical Drafters	Local Wage	Jobs	Training	Credential	Apprenticeship
Drafters, All Other	Local Wage	Jobs	Training	Credential	Apprenticeship
Aerospace Engineering and Operations Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship
Civil Engineering Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship
Electrical and Electronics Engineering Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship
Electro-Mechanical Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship
Environmental Engineering Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship
Industrial Engineering Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship
Mechanical Engineering Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship
Engineering Technicians, Except Drafters, All Other	Local Wage	Jobs	Training	Credential	Apprenticeship
Surveying and Mapping Technicians	Local Wage	Jobs	Training	Credential	Apprenticeship