

Career Pathways
Administration & Support Sector
Computer and Mathematical Occupations

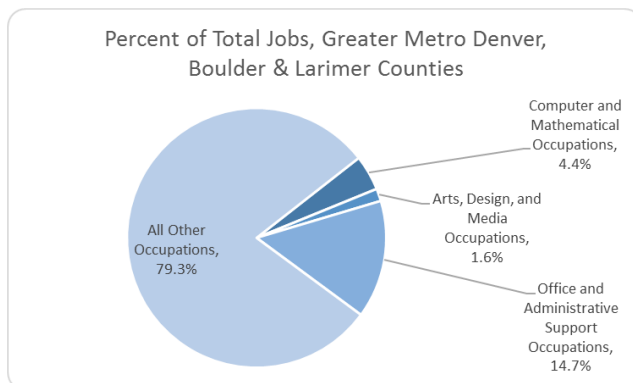
All industries are made up of three groups of people:

- 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

The **administration & support** occupational groups can perform the same basic functions across all industry groups or 'sectors.' For this reason, these occupations groups are 'sectors' in their own right. For instance, there are computer systems analysts in hospitals and in financial services companies because computer networks are necessary for all business. This table shows the number of jobs in each section of the **administration & support** occupational groups.

Administration & Support Occupational Groups, Greater Metro Denver, Boulder & Larimer Counties					
SOC	Description	2015 Jobs	2020 Jobs	2015 - 2020 Change	2015 - 2020 % Change
15-0000	Computer and Mathematical Occupations	81,942	90,660	8,718	10.6%
27-X000	Arts, Design, and Media Occupations	29,025	30,688	1,663	5.7%
43-0000	Office and Administrative Support Occupations	273,542	297,887	24,345	8.9%

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



The **administration & support** group of occupations makes up over one in five jobs (20.7%) of employment in greater metro Denver, Boulder and Larimer counties. The **computer and mathematical** occupational group makes up only 4.4% of total employment, but without these skilled workers, most industry sectors would cease to operate. Reader should note that information technology is an industry sector in its own right, but skilled computer workers are needed across virtually all industry groups.

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Computer occupations are in high demand throughout the region, and are expected to grow 10.6% over the next five years.

Selected Computer & Mathematical Occupations, Colorado Central Planning Region						
SOC	Description	2015 Jobs	2020 Jobs	2015 - 2020 Change	Change	Typical Entry Level Education
15-1121	Computer Systems Analysts	8,328	9,793	1,465	17.6%	Bachelor's degree
15-1122	Information Security Analysts	1,168	1,434	266	22.8%	Bachelor's degree
15-1131	Computer Programmers	3,786	4,260	474	12.5%	Bachelor's degree
15-1132	Software Developers, Applications	19,643	21,522	1,879	9.6%	Bachelor's degree
15-1133	Software Developers, Systems Software	9,971	10,726	755	7.6%	Bachelor's degree
15-1134	Web Developers	3,094	3,531	437	14.1%	Associate's degree
15-1141	Database Administrators	1,988	2,202	214	10.8%	Bachelor's degree
15-1142	Network and Computer Systems Administrators	8,154	8,818	664	8.1%	Bachelor's degree
15-1143	Computer Network Architects	3,435	3,666	231	6.7%	Bachelor's degree
15-1151	Computer User Support Specialists	10,900	12,359	1,459	13.4%	Some college, no degree
15-1152	Computer Network Support Specialists	3,129	3,313	184	5.9%	Associate's degree
15-1199	Computer Occupations, All Other	6,541	6,874	333	5.1%	Bachelor's degree
15-2011	Actuaries	460	533	73	15.9%	Bachelor's degree
15-2031	Operations Research Analysts	691	850	159	23.0%	Bachelor's degree
15-2041	Statisticians	462	548	86	18.6%	Master's degree

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

How can I learn more about computer and mathematical 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
Computer Systems Analysts	Local Wage	Jobs	Training	Credential	Apprenticeship
Information Security Analysts	Local Wage	Jobs	Training	Credential	Apprenticeship
Computer Programmers	Local Wage	Jobs	Training	Credential	Apprenticeship
Software Developers, Applications	Local Wage	Jobs	Training	Credential	Apprenticeship
Software Developers, Systems Software	Local Wage	Jobs	Training	Credential	Apprenticeship
Web Developers	Local Wage	Jobs	Training	Credential	Apprenticeship
Database Administrators	Local Wage	Jobs	Training	Credential	Apprenticeship
Network and Computer Systems Administrators	Local Wage	Jobs	Training	Credential	Apprenticeship
Computer Network Architects	Local Wage	Jobs	Training	Credential	Apprenticeship
Computer User Support Specialists	Local Wage	Jobs	Training	Credential	Apprenticeship
Computer Network Support Specialists	Local Wage	Jobs	Training	Credential	Apprenticeship
Computer Occupations, All Other	Local Wage	Jobs	Training	Credential	Apprenticeship
Actuaries	Local Wage	Jobs	Training	Credential	Apprenticeship
Operations Research Analysts	Local Wage	Jobs	Training	Credential	Apprenticeship
Statisticians	Local Wage	Jobs	Training	Credential	Apprenticeship