Computer Information Systems
Occupation Report

CIP 11.0401

Cochise, Pima, SC

Information Science/Studies

CIP 2010: A program that focuses on the theory, organization, and process of information collection, transmission, and utilization in traditional and electronic forms. Includes instruction in information classification and organization; information storage and processing; transmission, transfer, and signaling; communications and networking; systems planning and design; human interfacing and use analysis; database development; information policy analysis; and related aspects of hardware, software, economics, social factors, and capacity.

Occupation Gender Breakdown 2016

	Gender	Jobs	Percent
●	Males	3,954	77.0%
●	Females	1,183	23.0%

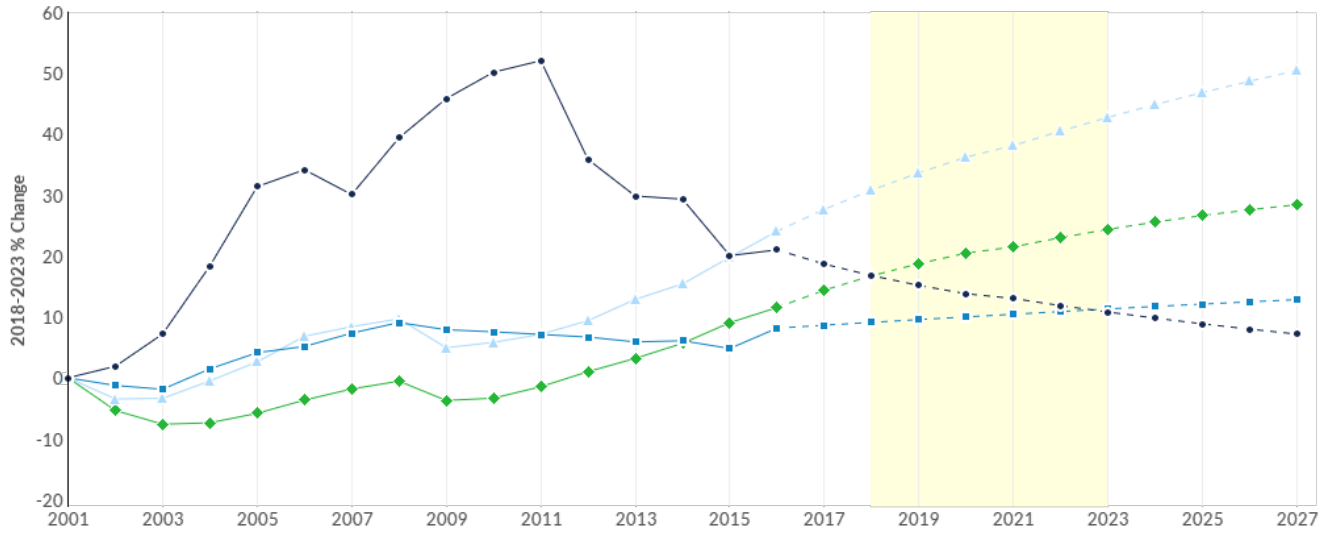
Occupation Age Breakdown 2016

	Age	Jobs	Percent
●	14-18	5	0.1%
●	19-24	187	3.6%
●	25-34	1,203	23.4%
●	35-44	1,500	29.2%
●	45-54	1,260	24.5%
●	55-64	839	16.3%
●	65+	142	2.8%

Occupation Summary for 11.0401

5,137	2.0%	$45.67/hr
Jobs (2016)	**% Change (2018-2023)**	**Median Hourly Earnings**
57% above National average	Nation: 6.5%	Nation: $52.21/hr

Occupation Change Summary



	Region	2018 Jobs	2023 Jobs	Change	% Change	Median Hourly Earnings
●	Cochise County, AZ	667	633	-34	-5%	$45.41
●	Cochise, Pima, SC	5,182	5,287	105	2%	$45.67
●	Arizona (AZ)	24,796	27,058	2,262	9%	$47.62
●	United States	1,149,739	1,224,832	75,093	7%	$52.21

SOC	Description	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
11-3021	Computer and Information Systems Managers	Bachelor's degree	5 years or more	None
15-1111	Computer and Information Research Scientists	Doctoral or professional degree	None	None
15-1133	Software Developers, Systems Software	Bachelor's degree	None	None
15-1199	Computer Occupations, All Other	Bachelor's degree	None	None

Occupation Breakdown - 2018 Jobs

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
15-1199	Computer Occupations, All Other	419	1,267	5,101	290,560
15-1133	Software Developers, Systems Software	124	2,965	12,041	443,593
11-3021	Computer and Information Systems Managers	90	873	7,411	386,267
15-1111	Computer and Information Research Scientists	34	77	244	29,320
	Total	667	5,182	24,796	1,149,739

Occupation Breakdown - 2023 Jobs

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
15-1199	Computer Occupations, All Other	400	1,296	5,519	301,557
15-1133	Software Developers, Systems Software	115	2,982	12,918	474,095
11-3021	Computer and Information Systems Managers	87	929	8,344	418,244
15-1111	Computer and Information Research Scientists	31	80	276	30,936
	Total	633	5,287	27,058	1,224,832

Occupation Breakdown - Change

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
11-3021	Computer and Information Systems Managers	-3	56	933	31,977
15-1111	Computer and Information Research Scientists	-3	3	32	1,616
15-1133	Software Developers, Systems Software	-9	17	877	30,502
15-1199	Computer Occupations, All Other	-19	29	418	10,997
	Total	-34	105	2,262	75,093

Occupation Breakdown - Median Hourly Earnings

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
15-1111	Computer and Information Research Scientists	$59.61	$59.18	$52.78	$53.77
15-1133	Software Developers, Systems Software	$46.61	$47.53	$46.98	$51.38
15-1199	Computer Occupations, All Other	$44.73	$38.85	$36.89	$40.89
11-3021	Computer and Information Systems Managers	$42.08	$48.59	$61.47	$65.29
	Total	$45.51	$45.76	$49.20	$53.38

Top Industries – Change from 2018 - 2023

NAICS Code	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
541330	Engineering Services	6	-19	-17	1,584
541513	Computer Facilities Management Services	-1	-2	167	1,282
541512	Computer Systems Design Services	-5	62	399	19,618
901199	Federal Government, Civilian, Excluding Postal Service	-15	11	36	-1,392
541511	Custom Computer Programming Services	-22	-10	382	16,331
	Total	-36	41	966	37,423

Source: QCEW Employees, Non-QCEW Employees & Self-Employed - Emsi 2017.3 Class of Worker

National Educational Attainment

Software Developers, Systems Software (15-1133)

	Education Level	2016 Percent
●	Less than high school diploma	0.4%
●	High school diploma or equivalent	2.2%
●	Some college, no degree	8.3%
●	Associate's degree	4.8%
●	Bachelor's degree	49.8%
●	Master's degree	30.6%
●	Doctoral or professional degree	4.0%

** National Educational Attainment - Settings*

National Educational Attainment

Computer and Information Systems Managers (11-3021)

Education Level	2016 Percent
Less than high school diploma	0.4%
High school diploma or equivalent	4.1%
Some college, no degree	14.8%
Associate's degree	7.8%
Bachelor's degree	46.6%
Master's degree	24.1%
Doctoral or professional degree	2.2%

** National Educational Attainment – Settings*

National Educational Attainment

Computer Occupations, All Other (15-1199)

Education Level	2016 Percent
Less than high school diploma	0.7%
High school diploma or equivalent	8.1%
Some college, no degree	22.4%
Associate's degree	14.5%
Bachelor's degree	38.8%
Master's degree	14.4%
Doctoral or professional degree	1.2%

** National Educational Attainment – Settings*

National Educational Attainment

Computer and Information Research Scientists (15-1111)

Education Level	2016 Percent
Less than high school diploma	0.0%
High school diploma or equivalent	1.1%
Some college, no degree	4.7%
Associate's degree	2.1%
Bachelor's degree	38.3%
Master's degree	28.0%

•	Doctoral or professional degree	25.9%

Appendix A - Data Sources and Calculations

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 also affected by county-level EMSI earnings by industry.

Completers Data

The completers 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.

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.

Industry Data

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

State Data Sources

This report uses state data from the following agencies: Arizona Department of Administration, Office of Employment and Population Statistics