

# Mathematics Occupation Report

## CIP 27.0101



Cochise, Pima, SC

### Mathematics, General







CIP 2010: A general program that focuses on the analysis of quantities, magnitudes, forms, and their relationships, using symbolic logic and language. Includes instruction in algebra, calculus, functional analysis, geometry, number theory, logic, topology and other mathematical specializations.

\* Program Description – Settings

### Occupation Gender Breakdown 2016

	Gender	Jobs	Percent
•	Males	191	58.2% 
•	Females	137	41.8% 

### Occupation Age Breakdown 2016

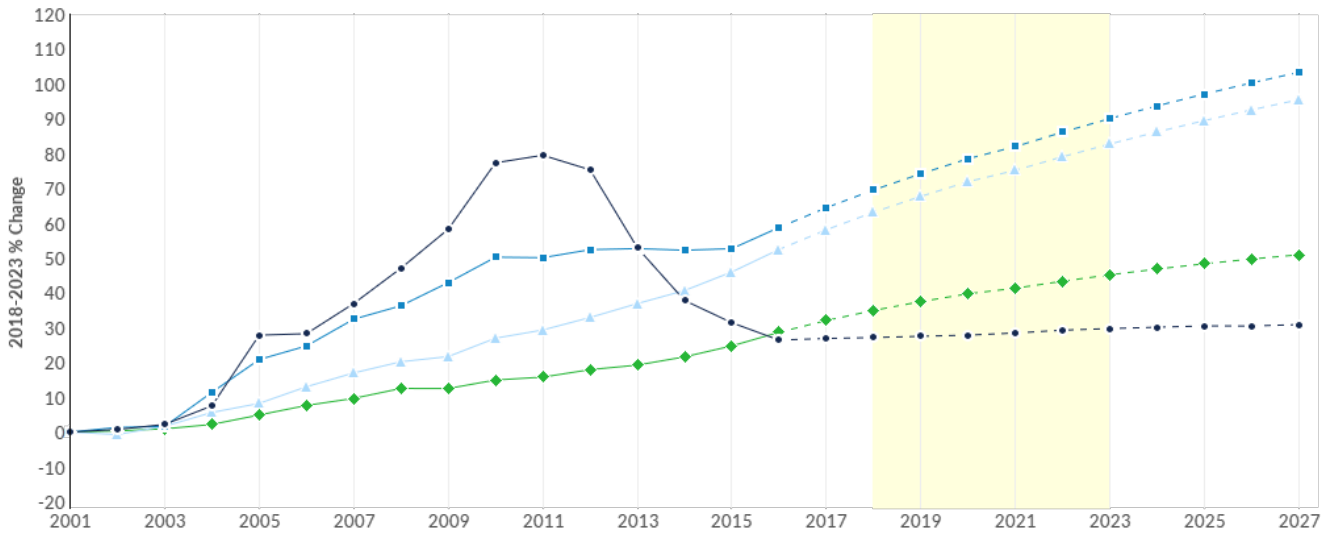
	Age	Jobs	Percent
•	14-18	0	0.0%
•	19-24	11	3.3% 
•	25-34	69	21.2% 
•	35-44	80	24.4% 
•	45-54	79	24.2% 
•	55-64	68	20.8% 
•	65+	20	6.0% 

### Occupation Summary for 27.0101

<b>328</b> Jobs (2016) 13% above National average	<b>12.0%</b> % Change (2018-2023) Nation: 7.6%	<b>\$43.34/hr</b> Median Hourly Earnings Nation: \$49.30/hr
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October 10, 2017

# Occupation Change Summary



Region	2018 Jobs	2023 Jobs	Change	% Change	Median Hourly Earnings
● Cochise County, AZ	34	34	0	0%	\$41.86
● Cochise, Pima, SC	350	392	42	12%	\$43.34
● Arizona (AZ)	2,006	2,247	241	12%	\$40.70
● United States	102,135	109,879	7,744	8%	\$49.30

SOC	Description	Typical Entry Level Education	Work Experience Required	Typical On-The-Job Training
11-9121	Natural Sciences Managers	Bachelor's degree	5 years or more	None
15-2021	Mathematicians	Master's degree	None	None
15-2041	Statisticians	Master's degree	None	None
15-2099	Mathematical Science Occupations, All Other	Bachelor's degree	None	None

## Occupation Breakdown - 2018 Jobs

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
11-9121	Natural Sciences Managers	16	192	1,022	57,738
15-2041	Statisticians	13	137	909	38,722
15-2099	Mathematical Science Occupations, All Other	<10	<10	34	2,359
15-2021	Mathematicians	<10	13	41	3,315
	Total	34	350	2,006	102,135

## Occupation Breakdown - 2023 Jobs

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
11-9121	Natural Sciences Managers	16	206	1,097	59,671
15-2041	Statisticians	14	163	1,067	44,159
15-2021	Mathematicians	<10	14	46	3,586
15-2099	Mathematical Science Occupations, All Other	<10	<10	37	2,462
	Total	34	392	2,247	109,879

## Occupation Breakdown - Change

Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
15-2041	Statisticians	1	26	158	5,437
15-2021	Mathematicians	--	1	5	271
11-9121	Natural Sciences Managers	0	14	75	1,933
15-2099	Mathematical Science Occupations, All Other	--	--	3	103
	Total	0	42	241	7,744

## Occupation Breakdown - Median Hourly Earnings








Occupation	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
15-2021	Mathematicians	--	\$65.50	\$64.52	\$50.91
11-9121	Natural Sciences Managers	\$43.09	\$49.49	\$45.64	\$57.62
15-2041	Statisticians	\$41.36	\$34.32	\$35.29	\$38.70
15-2099	Mathematical Science Occupations, All Other	--	--	\$31.23	\$31.27
	Total	\$43.94	\$44.03	\$41.21	\$49.84

## Top Industries – Change from 2018 - 2023

NAICS Code	Description	Cochise County, AZ	Cochise, Pima, SC	Arizona (AZ)	United States
901199	Federal Government, Civilian, Excluding Postal Service	1	10	21	323
902999	State Government, Excluding Education and Hospitals	--	2	7	451
541512	Computer Systems Design Services	--	--	4	197
622110	General Medical and Surgical Hospitals	--	--	12	275
541511	Custom Computer Programming Services	--	--	4	163
	Total	0	15	48	1,409

## National Educational Attainment

Natural Sciences Managers (11-9121)

Education Level	2016 Percent
Less than high school diploma	0.6% 
High school diploma or equivalent	1.4% 
Some college, no degree	4.0% 
Associate's degree	2.3% 
Bachelor's degree	33.2% 
Master's degree	31.4% 
Doctoral or professional degree	27.2% 

\* National Educational Attainment – Settings

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**National Educational Attainment**  
Mathematicians (15-2021)

	Education Level	2016 Percent
●	Less than high school diploma	0.0%
●	High school diploma or equivalent	0.1%
●	Some college, no degree	4.8% ■
●	Associate's degree	2.9% ■
●	Bachelor's degree	30.1% ■■
●	Master's degree	42.8% ■■■■
●	Doctoral or professional degree	19.3% ■■

\* National Educational Attainment – Settings

**National Educational Attainment**  
Statisticians (15-2041)

	Education Level	2016 Percent
●	Less than high school diploma	0.0%
●	High school diploma or equivalent	0.1%
●	Some college, no degree	4.8% ■
●	Associate's degree	2.9% ■
●	Bachelor's degree	30.1% ■■
●	Master's degree	42.8% ■■■■
●	Doctoral or professional degree	19.3% ■■

\* National Educational Attainment – Settings

**National Educational Attainment**  
Mathematical Science Occupations, All Other (15-2099)

	Education Level	2016 Percent
●	Less than high school diploma	0.0%
●	High school diploma or equivalent	0.1%
●	Some college, no degree	4.8% ■
●	Associate's degree	2.9% ■
●	Bachelor's degree	30.1% ■■
●	Master's degree	42.8% ■■■■
●	Doctoral or professional degree	19.3% ■■

\* National Educational Attainment – Settings

# 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