



Education Report

Mathematics, General

California



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Definition of Mathematics, General, CIP 27.0101

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.

Awards

The table below is a list of postsecondary awards in CIP 27.0101 that were granted by institutions located in California in the 2021 academic year.

Schools	Certs & 2yr Awards ¹	4yr Awards ²	Post-Grad Awards ³	Avg Net Price ⁴
University of California-Irvine		292	38	\$11,633
University of California-Riverside		187	21	\$13,502
University of California-Santa Barbara		167	22	\$17,333
Irvine Valley College	154			\$4,860
Mt San Antonio College	144			\$5,774
University of California-Berkeley		118	24	\$17,652
University of California-Santa Cruz		125	17	\$19,615
Pasadena City College	138			\$6,466
California State Polytechnic University-Pomona		120	16	\$12,942
California State University-Long Beach		105	30	\$9,171
University of California-Los Angeles		80	43	\$13,393
El Camino Community College District	116			\$13,296
College of the Canyons	111			\$6,400
University of California-Davis		88	19	\$16,640
California State University-Fullerton		87	17	\$4,939
Santa Barbara City College	94			\$14,000
University of California-San Diego		74	18	\$15,632
Sierra College	83			\$5,921
California State University-Sacramento		66	12	\$7,778
Los Angeles Pierce College	78			\$12,995
California State University-Northridge		62	14	\$8,708
California State University-San Bernardino		73	3	\$3,254
Stanford University		54	21	\$14,402
Moorpark College	74			\$4,856
Golden West College	71			\$5,433
Grossmont College	68			\$5,999
Cuyamaca College	65			\$6,460
Mt San Jacinto Community College District	64			\$7,704
Diablo Valley College	63			\$8,878

Schools	Certs & 2yr Awards ¹	4yr Awards ²	Post-Grad Awards ³	Avg Net Price ⁴
California Polytechnic State University-San Luis Obispo		56	6	\$20,708
Antelope Valley Community College District	60			\$6,203
College of San Mateo	60			\$5,427
East Los Angeles College	60			\$12,028
Saddleback College	60			\$7,918
De Anza College	55			\$8,236
Allan Hancock College	54			\$6,629
California State University-Los Angeles		43	11	\$2,695
Cypress College	52			\$7,951
Foothill College	52			\$9,820
Long Beach City College	52			\$6,550
San Diego Miramar College	52			\$7,880
Palomar College	51			\$6,659
Laney College	50			\$16,494
Orange Coast College	50			\$6,836
Riverside City College	49			\$7,161
Chabot College	48			\$8,576
California State University-Fresno		35	12	\$6,336
Fresno City College	46			\$6,391
Norco College	46			\$7,404
Santa Monica College	46			\$6,380
California State University-East Bay		29	16	\$12,631
Cabrillo College	44			\$18,139
Chaffey College	44			\$13,939
Clovis Community College	44			\$6,305
Glendale Community College	44			\$7,823
Santa Rosa Junior College	44			\$9,220
American River College	42			\$8,101
California State University-Dominguez Hills		41		\$4,500
Citrus College	41			\$8,852
City College of San Francisco	41			\$9,261
Fullerton College	41			\$11,191
California State University-Bakersfield		39		\$7,368
California State University-Channel Islands		31	8	\$14,493
Folsom Lake College	37			\$8,276

Schools	Certs & 2yr Awards ¹	4yr Awards ²	Post-Grad Awards ³	Avg Net Price ⁴
Los Angeles Valley College	37			\$11,833
San Francisco State University		26	11	\$13,641
Santiago Canyon College	37			\$5,879
Ventura College	37			\$3,971
Imperial Valley College	36			\$2,300
Ohlone College	36			\$12,787
Sacramento City College	36			\$7,788
San Diego State University		28	8	\$6,867
Los Medanos College	35			\$7,231
Reedley College	35			\$7,089
Bakersfield College	34			\$6,989
California State University-Stanislaus		34		\$7,230
Cerritos College	33			\$9,557
Los Angeles City College	33			\$10,898
West Valley College	33			\$6,890
Evergreen Valley College	32			\$15,650
San Jose City College	32			\$17,618
San Jose State University		24	8	\$14,603
Skyline College	32			\$4,885
California State University-Chico		31		\$13,749
Sonoma State University		31		\$7,055
University of Southern California		25	6	\$26,021
Crafton Hills College	30			\$20,456
Hartnell College	30			\$7,721
Merced College	30			\$13,426
San Diego Mesa College	30			\$7,663
College of Alameda	29			\$12,583
Cosumnes River College	28			\$7,223
Pomona College		27		\$17,000
San Joaquin Delta College	27			\$17,503
California State University-San Marcos		21	4	\$14,296
Cuesta College	25			\$14,586
Rio Hondo College	25			\$7,873
Southwestern College	25			\$6,789
Oxnard College	24			\$3,441
San Bernardino Valley College	23			\$9,621

Schools	Certs & 2yr Awards ¹	4yr Awards ²	Post-Grad Awards ³	Avg Net Price ⁴
Santa Ana College	23			\$6,351
Berkeley City College	22			\$13,556
California Institute of Technology		15	7	\$30,162
California State University-Monterey Bay		22		\$6,085
Mission College	22			\$6,727
Napa Valley College	22			\$18,440
University of San Diego		22		\$34,155
Claremont McKenna College		21		\$21,663
Los Angeles Harbor College	21			\$12,787
Victor Valley College	21			\$12,848
College of the Sequoias	20			\$5,205
Santa Clara University		20		\$48,469
Solano Community College	20			\$5,950
College of the Desert	19			\$14,179
Las Positas College	18			\$7,675
Loyola Marymount University		9	9	\$40,180
Butte College	17			\$10,736
California State Polytechnic University-Humboldt		17		\$13,904
Pepperdine University		17		\$40,945
Harvey Mudd College		16		\$33,838
Monterey Peninsula College	16			\$12,007
Occidental College		16		\$43,047
University of Redlands		14		\$21,578
Yuba College	14			\$5,503
California Baptist University		13		\$23,494
San Diego City College	13			\$8,370
Gavilan College	12			\$8,705
Los Angeles Trade Technical College	11			\$10,495
Merritt College	11			\$16,194
Whittier College		11		\$22,091
California Lutheran University		10		\$24,065
Los Angeles Southwest College	10			\$8,651
West Los Angeles College	10			\$10,259
Azusa Pacific University		9		\$27,112
Biola University		9		\$29,123
Claremont Graduate University			9	

Schools	Certs & 2yr Awards ¹	4yr Awards ²	Post-Grad Awards ³	Avg Net Price ⁴
Columbia College	9			\$10,735
Compton College	9			\$10,875
Concordia University-Irvine		9		\$25,640
Contra Costa College	9			\$9,405
National University		9		\$9,966
Modesto Junior College	8			\$14,421
Porterville College	8			\$5,757
Taft College	8			\$7,143
Coastline Community College	7			\$8,953
Los Angeles Mission College	7			\$12,798
Mendocino College	7			\$8,465
Moreno Valley College	7			\$4,899
Cerro Coso Community College	6			\$11,710
Chapman University		6		\$40,451
College of Marin	6			\$7,717
College of the Redwoods	6			\$8,618
Scripps College		6		\$44,770
University of San Francisco		6		\$39,825
West Hills College-Lemoore	6			\$13,571
Woodland Community College	6			\$7,480
Shasta College	5			\$7,973
University of the Pacific		5		\$21,311
Westmont College		5		\$33,554
Canada College	4			\$5,923
Madera Community College	4			
Vanguard University of Southern California		4		\$20,427
Lake Tahoe Community College	3			\$7,867
Point Loma Nazarene University		3		\$34,851
The Master's University and Seminary		3		\$30,748
William Jessup University		3		\$27,823
Pitzer College		2		\$19,153
Saint Mary's College of California		2		\$25,022
University of La Verne		2		\$22,538
College of the Siskiyous	1			\$11,340
Fresno Pacific University		1		\$15,350
La Sierra University		1		\$25,230

Schools	Certs & 2yr Awards ¹	4yr Awards ²	Post-Grad Awards ³	Avg Net Price ⁴
Mills College		1		\$25,283
MiraCosta College	1			\$6,946
Mount Saint Mary's University		1		\$24,508
Copper Mountain Community College				\$8,749
Feather River Community College District				\$11,415
Lassen Community College				\$11,495
Pacific Union College				\$22,767
Simpson University				\$25,311
West Hills College-Coalinga				\$11,458
Total	3,981	2,529	430	

1. Undergraduate certificates and associate's degrees

2. Bachelor's degrees and post-baccalaureates

3. Master's, post-master's, and doctorates

4. Average net price represents full-time beginning undergraduate students who paid the in-state or in-district tuition rate and were awarded grant or scholarship aid from federal, state or local governments, or the institution. Data as of the 2020-2021 academic year.

Awards data are per the National Center for Education Statistics (NCES) and JobsEQ for the 2021 academic year. Any programs shown here reflect only data reported to the NCES; reporting is required of all schools participating in any federal finance assistance program authorized by Title IV of the Higher Education Act of 1965, as amended—other training providers in the region that do not report data to the NCES are not reflected in the above.

Occupation Crosswalk

The below table lists all occupations linked with the program, Mathematics, General, CIP 27.0101.

		Education and Training Requirements			Educational Attainment				
		Typical Education Needed for Entry	Work Experience in a Related Occupation	Typical On-the-Job Training Needed to Attain Competency in the Occupation	No College	Some College, No Degree	Associate's Degree	Bachelor's Degree	Postgraduate Degree
11-9121	Natural Sciences Managers	Bachelor's degree	5 years or more	None	1%	2%	2%	31%	63%
15-2011	Actuaries	Bachelor's degree	None	Long-term on-the-job training	0%	1%	0%	61%	37%
15-2021	Mathematicians	Master's degree	None	None	2%	4%	3%	37%	55%
15-2041	Statisticians	Master's degree	None	None	2%	3%	2%	37%	56%
15-2051	Data Scientists	Bachelor's degree	None	None	1%	3%	2%	36%	57%
15-2099	Mathematical Science Occupations, All Other	Bachelor's degree	None	None	1%	3%	2%	36%	57%
25-1022	Mathematical Science Teachers, Postsecondary	Doctoral or professional degree	None	None	1%	1%	1%	14%	82%
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	Bachelor's degree	None	None	0%	2%	1%	41%	56%
43-9111	Statistical Assistants	Bachelor's degree	None	None	11%	17%	8%	42%	23%

Education and training requirements are from the Bureau of Labor Statistics (BLS); educational attainment mix are regional data modeled by Chmura using Census educational attainment data projected to 2022Q4 along with source data from the BLS

Definition of Natural Sciences Managers (11-9121)

Plan, direct, or coordinate activities in such fields as life sciences, physical sciences, mathematics, statistics, and research and development in these fields.

Definition of Actuaries (15-2011)

Analyze statistical data, such as mortality, accident, sickness, disability, and retirement rates and construct probability tables to forecast risk and liability for payment of future benefits. May ascertain insurance rates required and cash reserves necessary to ensure payment of future benefits.

Definition of Mathematicians (15-2021)

Conduct research in fundamental mathematics or in application of mathematical techniques to science, management, and other fields. Solve problems in various fields using mathematical methods.

Definition of Statisticians (15-2041)

Develop or apply mathematical or statistical theory and methods to collect, organize, interpret, and summarize numerical data to provide usable information. May specialize in fields such as biostatistics, agricultural statistics, business statistics, or economic statistics. Includes mathematical and survey statisticians.

Definition of Data Scientists (15-2051)

Develop and implement a set of techniques or analytics applications to transform raw data into meaningful information using data-oriented programming languages and visualization software. Apply data mining, data modeling, natural language processing, and machine learning to extract and analyze information from large structured and unstructured datasets. Visualize, interpret, and report data findings. May create dynamic data reports.

Definition of Mathematical Science Occupations, All Other (15-2099)

All mathematical scientists not listed separately.

Definition of Mathematical Science Teachers, Postsecondary (25-1022)

Teach courses pertaining to mathematical concepts, statistics, and actuarial science and to the application of original and standardized mathematical techniques in solving specific problems and situations. Includes both teachers primarily engaged in teaching and those who do a combination of teaching and research.

Definition of Secondary School Teachers, Except Special and Career/Technical Education (25-2031)

Teach one or more subjects to students at the secondary school level.

Definition of Statistical Assistants (43-9111)

Compile and compute data according to statistical formulas for use in statistical studies. May perform actuarial computations and compile charts and graphs for use by actuaries. Includes actuarial clerks.

Occupation Details

As of 2022Q4, total employment for occupations linked to Mathematics, General in California was 146,250. Over the past three years, linked occupations added 4,643 jobs in the region and are expected to need in aggregate approximately 81,531 newly trained workers over the next seven years.

Snapshot of Occupations Linked to Mathematics, General in California¹

SOC	Occupation	Current						3-Year History	7-Year Forecast				
		Empl	Mean Ann Wages ²	LQ	Unempl	Unempl Rate	Online Job Ads ³	Ann %	Total Demand	Exits	Transfers	Empl Growth	Avg Ann Growth %
25- 2031	Secondary School Teachers, Except Special and Career/Technical Education	105,321	\$100,400	0.85	2,531	2.4%	1,989	-1.0%	52,871	21,638	29,100	2,132	0.3%
15- 2051	Data Scientists	17,455	\$138,400	1.27	257	1.6%	619	14.1%	13,205	3,292	6,447	3,466	2.6%
11- 9121	Natural Sciences Managers	12,225	\$200,000	1.31	276	2.3%	1,059	6.5%	7,714	2,219	4,792	703	0.8%
25- 1022	Mathematical Science Teachers, Postsecondary	4,181	\$151,000	0.81	79	1.9%	315	-2.4%	2,560	1,335	1,127	98	0.3%
15- 2041	Statisticians	3,962	\$120,100	0.98	12	0.3%	372	3.7%	3,111	757	1,483	870	2.9%
15- 2011	Actuaries	1,940	\$121,200	0.66	2	0.1%	123	1.8%	1,215	288	576	351	2.4%
43- 9111	Statistical Assistants	529	\$66,300	0.63	13	2.5%	6	-7.2%	419	98	309	13	0.3%
15- 2099	Mathematical Science Occupations, All Other	406	\$84,200	0.79	6	1.7%	7	12.5%	309	77	151	80	2.6%
15- 2021	Mathematicians	231	\$128,300	0.98	15	6.3%	4	-9.4%	127	40	78	9	0.5%
Total - Linked Occupations		146,250	\$115,400	0.91	3,191	2.2%	4,494	1.1%	81,531	29,745	44,064	7,723	0.7%
Total - All Occupations		19,219,968	\$71,900	1.00	797,161	4.1%	547,112	0.6%	17,029,863	6,722,656	9,379,252	927,955	0.7%

Source: [JobsEQ®](#)

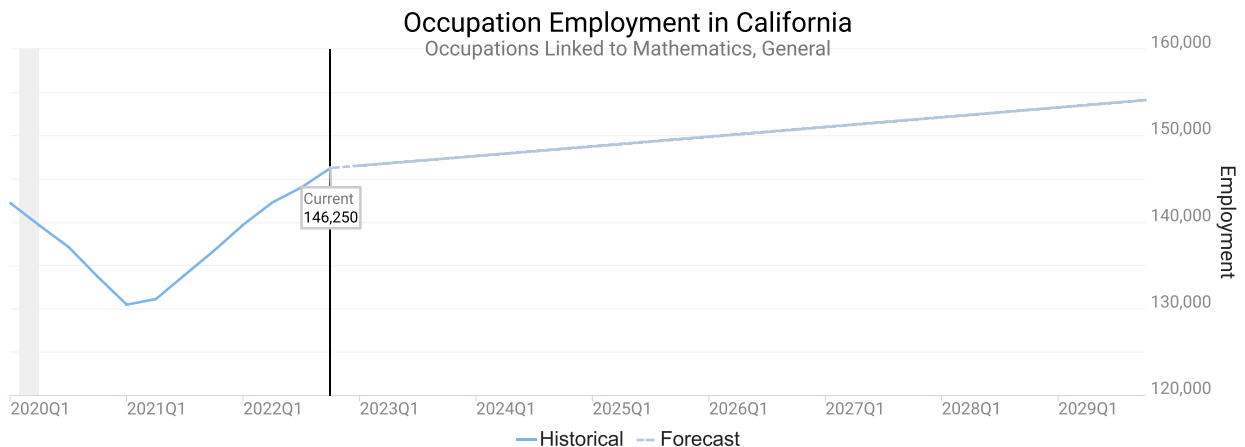
Data as of 2022Q4 unless noted otherwise

Note: Figures may not sum due to rounding.

1. Data based on a four-quarter moving average unless noted otherwise.

2. Wage data represent the average for all Covered Employment

3. Data represent found online ads active within the last thirty days in the selected region. Due to alternative county-assignment algorithms, ad counts in this analytic may not match that shown in RTI (nor in the popup window ad list). Ad counts for ZCTA-based regions are estimates.



Source: JobsEQ®, Data as of 2022Q4. The shaded areas of the graph represent national recessions.

Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2022Q3, imputed where necessary with preliminary estimates updated to 2022Q4. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns. Occupation unemployment figures are imputed by Chmura.

Employment by Industry

The table illustrates the industries in California which most employ occupations linked to Mathematics, General. The single industry most employing these occupations in the region is Elementary and Secondary Schools, NAICS 6111. This industry employs 103,839 workers in the linked occupations—employment which is expected to increase by 2,947 jobs over the next ten years; furthermore, 71,465 additional new workers in these linked occupations will be needed for this industry due to separation demand, that is, to replace workers in this occupation and industry that retire or move into a different occupation.

Industry Distribution for Occupations Linked to Mathematics, General in California

NAICS Code	Industry Title	Current			10-Year Demand		
		% of Occ Empl	Empl	Exits	Transfers	Empl Growth	Total Demand
6111	Elementary and Secondary Schools	71.0%	103,839	30,473	40,992	2,947	74,412
5417	Scientific Research and Development Services	6.7%	9,837	2,610	5,505	1,655	9,770
5415	Computer Systems Design and Related Services	2.3%	3,298	924	1,825	1,285	4,034
6113	Colleges, Universities, and Professional Schools	2.1%	3,086	1,209	1,388	385	2,982
6112	Junior Colleges	1.6%	2,296	1,019	874	-13	1,879
5416	Management, Scientific, and Technical Consulting Services	1.6%	2,276	603	1,213	725	2,542
5511	Management of Companies and Enterprises	1.4%	2,064	532	1,070	369	1,971
5241	Insurance Carriers	1.0%	1,398	334	676	377	1,386
5192	Web Search Portals, Libraries, Archives, and Other Information Services	0.7%	988	286	563	481	1,330
5419	Other Professional, Scientific, and Technical Services	0.7%	962	249	502	171	922
3254	Pharmaceutical and Medicine Manufacturing	0.6%	929	244	516	121	881
5132	Software Publishers	0.6%	922	242	474	219	935
6221	General Medical and Surgical Hospitals	0.6%	835	219	446	139	804
5242	Agencies, Brokerages, and Other Insurance Related Activities	0.5%	785	186	374	218	777
8131	Religious Organizations	0.5%	781	228	318	41	587
5613	Employment Services	0.5%	761	208	387	174	769
	All Others	7.7%	11,192	2,943	5,857	2,050	10,850

Source: JobsEQ®

Data as of 2022Q4 except wages which are as of 2021. Note that occupation-by-industry wages represent adjusted national data and may not be consistent with regional, all-industry occupation wages shown elsewhere in JobsEQ.

Note: Figures may not sum due to rounding.

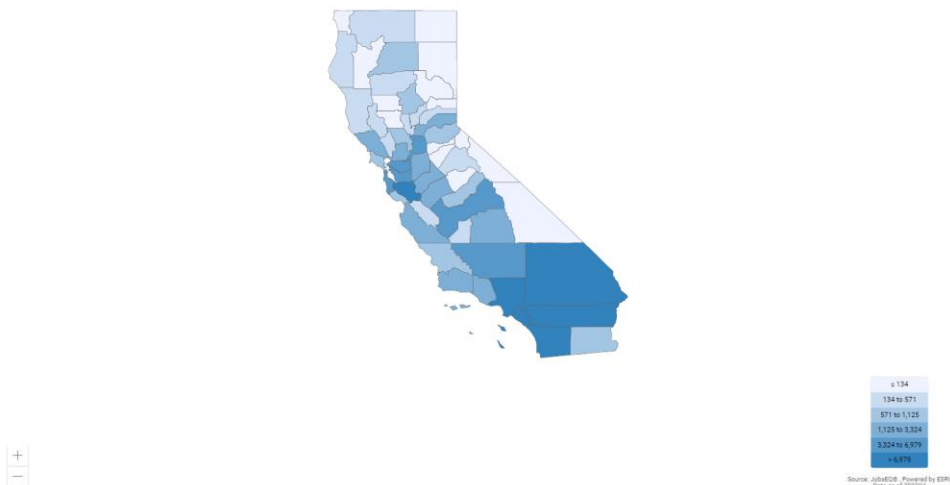
Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2022Q3, imputed where necessary with preliminary estimates updated to 2022Q4. Forecast employment growth uses national projections from the Bureau of Labor Statistics adapted for regional growth patterns.

Geographic Distribution

The map below illustrates the county-level distribution of employed workers in California in occupations linked to Mathematics, General. Employment is shown by place of work.

California, Occupation Concentration by Place of Work for Occupations Linked to Mathematics, General

export



Top Counties with Employment Linked to Mathematics, General, 2022Q4

Region	Employment
Los Angeles County, California	33,720
San Diego County, California	13,588
Orange County, California	11,403
Santa Clara County, California	9,349
Riverside County, California	7,028
San Bernardino County, California	6,980
Alameda County, California	6,822
Sacramento County, California	5,573
San Francisco County, California	4,842
San Mateo County, California	4,737

Source: JobsEQ®

Occupation employment data are estimated via industry employment data and the industry/occupation mix. Industry employment data are derived from the Quarterly Census of Employment and Wages, provided by the Bureau of Labor Statistics and currently updated through 2022Q3, imputed where necessary with preliminary estimates updated to 2022Q4.

Demographic Profile

The population in California was 39,346,023 per American Community Survey data for 2016-2020.

Of individuals 25 to 64 in California, 35.4% have a bachelor's degree or higher which compares with 34.3% in the nation. Per American Community Survey 2016-2020 estimates, the region has about 576,714 students enrolled in grade 12.

Summary¹

	Percent		Value	
	California	USA	California	USA
Demographics				
Population (ACS)	—	—	39,346,023	326,569,308
Male	49.7%	49.2%	19,562,882	160,818,530
Female	50.3%	50.8%	19,783,141	165,750,778
Median Age ²	—	—	36.7	38.2
Under 18 Years	22.8%	22.4%	8,956,641	73,296,738
18 to 24 Years	9.5%	9.3%	3,724,239	30,435,736
25 to 34 Years	15.3%	13.9%	6,007,913	45,485,165
35 to 44 Years	13.3%	12.7%	5,233,903	41,346,677
45 to 54 Years	12.8%	12.7%	5,039,155	41,540,736
55 to 64 Years	12.0%	12.9%	4,739,675	42,101,439
65 to 74 Years	8.3%	9.4%	3,270,380	30,547,950
Population Growth				
Population (Pop Estimates) ⁴	—	—	39,029,342	333,287,557
Population Annual Average Growth ⁴	0.3%	0.6%	108,479	1,940,990
People per Square Mile	—	—	250.4	94.3
Educational Attainment, Age 25-64				
No High School Diploma	15.2%	10.5%	3,199,850	17,929,220
High School Graduate	20.4%	25.4%	4,282,776	43,289,555
Some College, No Degree	21.0%	20.5%	4,412,172	34,959,338
Associate's Degree	8.0%	9.3%	1,678,082	15,776,790
Bachelor's Degree	22.6%	21.6%	4,741,354	36,888,244
Postgraduate Degree	12.9%	12.7%	2,706,412	21,630,870
Social				
Poverty Level (of all people)	12.6%	12.8%	4,853,434	40,910,326
Households Receiving Food Stamps/SNAP	9.0%	11.4%	1,183,873	13,892,407
Enrolled in Grade 12 (% of total population)	1.5%	1.3%	576,714	4,358,865
Disconnected Youth ³	1.9%	2.5%	38,451	433,164
Children in Single Parent Families (% of all children)	32.8%	34.0%	2,796,858	23,628,508
Uninsured	7.2%	8.7%	2,806,173	28,058,903
Speak English Less Than Very Well (population 5 yrs and over)	17.4%	8.2%	6,432,102	25,312,024

Source: [JobsEQ®](https://www.chmuraecon.com/jobseq)

1. American Community Survey 2016-2020, unless noted otherwise

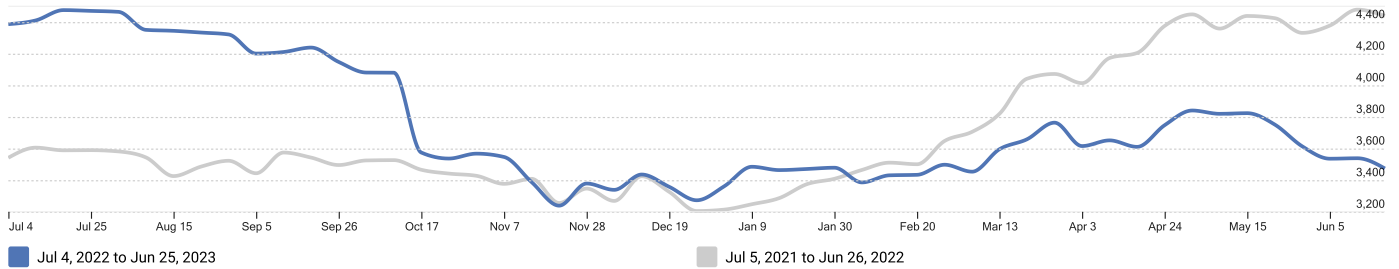
2. Median values for certain aggregate regions (such as MSAs) may be estimated as the weighted averages of the median values from the composing counties.

3. Disconnected Youth are 16-19 year olds who are (1) not in school, (2) not high school graduates, and (3) either unemployed or not in the labor force.

4. Census Population Estimate for 2022, annual average growth rate since 2012. Post-2019 data for Connecticut counties are imputed by Chmura.

RTI (Job Postings)

Active Job Ads by Date



Occupations

SOC	Occupation	Active Job Ads
25- 2031.00	Secondary School Teachers, Except Special and Career/Technical Education	7,721
11- 9121.01	Clinical Research Coordinators	4,986
15- 2051.01	Business Intelligence Analysts	2,847
15- 2041.00	Statisticians	1,519
25- 1022.00	Mathematical Science Teachers, Postsecondary	844
15- 2011.00	Actuaries	621
15- 2041.01	Biostatisticians	556
15- 2051.00	Data Scientists	401
11- 9121.02	Water Resource Specialists	379
15- 2051.02	Clinical Data Managers	194

Locations

Location	Active Job Ads
Los Angeles, California	1,050
University of California San Francisco	634
San Diego, California	609
San Francisco, California	544
Los Angeles, CA, 90095, US	455
Irvine, California	342

Locations

Location	Active Job Ads	
University of California Davis	327	
Sacramento, California	287	
San Jose, California	270	
University of Southern California (USC)	248	

Employers

Employer Name	Active Job Ads	
UCLA HEALTH	666	
San Francisco, California	636	
Oakland Unified School District	522	
Kaiser Permanente	437	
Cedars-Sinai	384	
Stanford University	281	
Los Angeles, California	275	
University of Southern California	208	
Davis, California	198	
Astra Zeneca	196	

Certifications

Certificate Name	Active Job Ads	
Driver's License	292	
Certification in Cardiopulmonary Resuscitation (CPR)	233	
First Aid Certification	232	
Certified Research Administrator (CRA)	190	
Associate of the Society of Actuaries (ASA)	120	
Certified Clinical Research Coordinator (CCRC)	100	
Basic Life Support (BLS)	99	
Fellow of the Society of Actuaries (FSA)	98	
National Phlebotomy Association Certified Phlebotomist	89	
Certified Clinical Research Associate (CCRA)	66	

Hard Skills

Skill Name	Active Job Ads	
Teaching/Training, School	5,557	
Clinical Research	3,448	
Structured Query Language (SQL)	3,222	
Microsoft Excel	2,813	
Statistics	2,386	
Computer Programming/Coding	2,178	
Tableau	2,042	
Data Analysis	2,028	
Microsoft Office	1,942	
Python	1,906	

Soft Skills

Skill Name	Active Job Ads	
Communication (Verbal and written skills)	10,138	
Cooperative/Team Player	6,318	
Organization	3,171	
Problem Solving	2,913	
Analytical	2,893	
Detail Oriented/Meticulous	2,535	
Interpersonal Relationships/Maintain Relationships	2,514	
Self-Motivated/Ability to Work Independently/Self Leadership	2,491	
Prioritize	1,891	
Supervision/Management	1,726	

Job Titles

Job Title	Active Job Ads	
Clinical Research Coordinator	372	
Data Analyst	190	
Intern I - High School	171	
Business Intelligence Analyst	146	
Assistant Clinical Research Coordinator	141	
English Teacher	114	
Research Coordinator I	100	
Clinical Research Associate	97	
Research Coordinator	78	
High School Teacher	69	

Job Types

Type	Active Job Ads	
Full-Time	10,825	
Part-Time	2,431	
Remote	1,744	
Temporary (unspecified)	1,550	
Permanent	1,207	
Temporary (long-term)	470	
Temporary (short-term)	143	
Temp-to-Hire	46	
Remote Not Indicated	18,651	

Programs

Program Name	Active Job Ads	
Statistics	2,068	
Mathematics	1,716	
Computer Science	1,613	
Science	697	
Biostatistics	654	
Engineering	610	
Biology	578	
Economics	546	
Business	384	
Finance	334	

Education Levels

Minimum Education Level	Active Job Ads	
Bachelor's degree	8,053	
Master's degree	1,459	
Associate's degree	797	
High school diploma or equivalent	611	
Doctoral or professional degree	469	
Unspecified/other	9,006	

California Regional Map



FAQ

What is CIP?

The 2010 Classification of Instructional Programs (CIP) is taxonomy of instructional program classifications and descriptions. It was developed and has been updated by the U.S. Department of Education's National Center for Education Statistics (NCES).

What is SOC?

The Standard Occupational Classification system (SOC) is used to classify workers into occupational categories. All workers are classified into one of over 804 occupations according to their occupational definition. To facilitate classification, occupations are combined to form 22 major groups, 95 minor groups, and 452 occupation groups. Each occupation group includes detailed occupations requiring similar job duties, skills, education, or experience.

What is the source of the job ads?

Job ads data are online job posts from the Real-Time Intelligence (RTI) data set, produced wholly by Chmura and gleaned from over 40,000 websites. Data reflect ads active during the last twelve month period ending 07/05/2023 and advertised for any Zip Code Tabulation Area in or intersecting with the region for which this report was produced. Historical ad volume is revised as additional data are made available and processed. Since many extraneous factors can affect short-term volume of online job postings, time-series data can be volatile and should be used with caution. All ad counts represent deduplicated figures.

What is the program-to-occupation crosswalk?

Training programs are classified according to the Classification of Instructional Programs (CIP codes). For relating training programs, this report uses a modified version of the CIP to SOC crosswalk from the National Center for Education Statistics (NCES). While this is a very helpful crosswalk for estimating occupation production from training program awards data, the crosswalk is neither perfect nor comprehensive. Indeed, it is hard to imagine such a crosswalk being perfect since many training program graduates for one reason or another do not end up employed in occupations that are most related to the training program from which they graduated. Therefore, the education program analyses should be considered in this light.

As an example of the many scenarios that may unfold, consider a journalism degree that crosswalks into three occupations: editors, writers, and postsecondary communications teachers. Graduates with a journalism degree may get a job in one of these occupations—and that may be the most-likely scenario—but a good number of these graduates may get a job in a different occupation altogether (the job may be somewhat related, such as a reporter, or the job may be totally unrelated, such as a real estate agent). Furthermore, a graduate may stay in school or go back to school for a degree that will lead to other occupation possibilities. Still another possibility includes the graduate not entering the labor market (maybe being unemployed, being a non-participant, or moving to another region).

What is separation demand?

Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. The total projected demand for an occupation is the sum of the separation demand and the growth

demand (which is the increase or decrease of jobs in an occupation expected due to expansion or contraction of the overall number of jobs in that occupation).

What is a location quotient?

A location quotient (LQ) is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an occupation (or industry) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

What is NAICS?

The North American Industry Classification System (NAICS) is used to classify business establishments according to the type of economic activity. The NAICS Code comprises six levels, from the “all industry” level to the 6-digit level. The first two digits define the top level category, known as the “sector,” which is the level examined in this report.

About This Report

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