



San Bernardino Community College District

Program Demand Gap Analysis:
Environmental Scan and
Review of Academic Programs

March 2021

Executive Summary

The San Bernardino Community College District (SBCCD) is one of the 72 community college districts which, together, provide affordable and accessible higher education to all Californians. SBCCD serves an area centered on the city of San Bernardino, along with the surrounding region of San Bernardino and Riverside Counties, referred to as the SBCCD Service Region. It provides its services primarily through two community colleges – San Bernardino Valley College and Crafton Hills College. This report outlines the region’s economy and provides a program demand gap analysis to determine how well SBCCD’s program offerings satisfy regional workforce demand. The following figures and tables display key findings of the analyses.

RECOMMENDATIONS

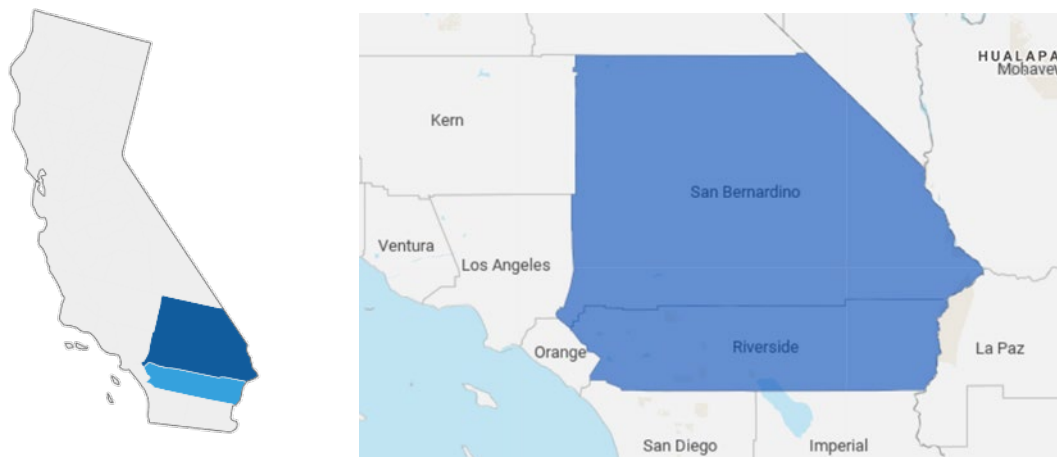
<p>HIGH DEMAND, LOW SUPPLY</p> <p><i>How can we expand these program opportunities?</i></p> <p>Cooking & Related Culinary Arts, General (CERT & ASSOC)</p> <p>Machine Tool Technology/Machinist (CERT & ASSOC)</p> <p>Real Estate (ASSOC)</p> <p>Electrical/Electronics Equipment Installation & Repair, General (ASSOC & T-T)</p>	<p>HIGH DEMAND, HIGH SUPPLY</p> <p><i>Can we maintain focus on program quality & student success?</i></p> <p>Welding Technology/Welder (CERT)</p> <p>Emergency Medical Technology/Technician (EMT Paramedic) (CERT)</p> <p>Automobile/Automotive Mechanics Technology/Technician (ASSOC)</p> <p>Information Technology (ASSOC & T-T)</p>
<p>LOW DEMAND, LOW SUPPLY</p> <p><i>Should we discontinue these programs?</i></p> <p>Philosophy (ASSOC)</p> <p>Astronomy (T-T)</p>	<p>LOW DEMAND, HIGH SUPPLY</p> <p><i>Are we connecting these programs to opportunities outside the region?</i></p> <p>Criminal Justice/Police Science (CERT)</p> <p>Social Sciences, General (ASSOC)</p> <p>Anthropology (T-T)</p>

Source: Emsi program demand gap model. The programs recommended in the table were chosen by the Emsi Economist authoring the report. While the table refers solely to the demand and supply, additional consideration has been given to wages when selecting programs featured in this table. Some programs with significant gaps and low wages are not included in this table, while other high wage programs with moderately high gaps have been included.

INTRODUCTION

For purposes of this analysis, SBCCCD serves a region, called the SBCCCD Service Region, comprised of two counties in California: Riverside County and San Bernardino County. This report conducts an environmental scan and uses the region's average annual projected job openings between 2020 and 2030 as a measurement of labor market demand. When job openings are compared to the region's supply of educational program completions, the analysis determines how well SBCCCD's program offerings satisfy regional workforce demand. In addition, this report offers recommendations for new program development. In its entirety, the analysis is a starting point for SBCCCD as the district continues to develop programs using data-based decision-making strategies. The following figures and tables display key findings of the analyses.

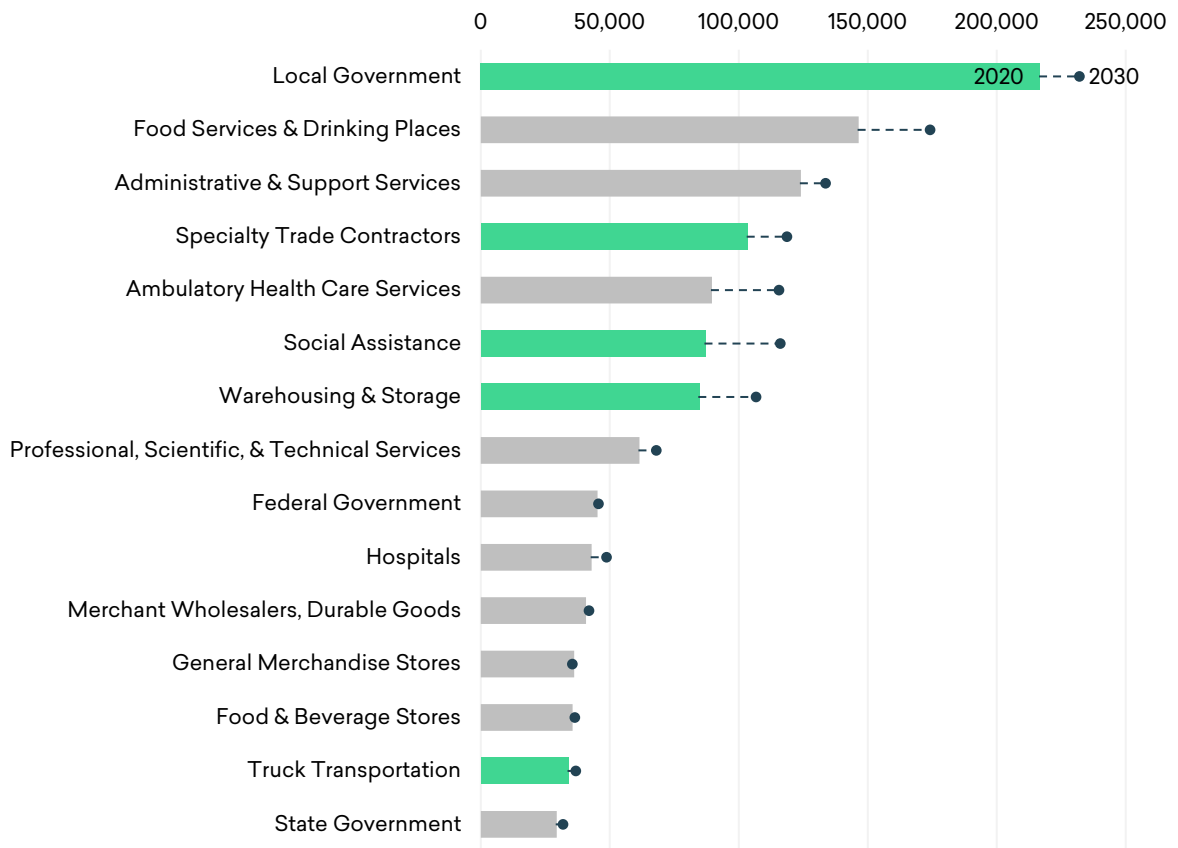
Figure 1: Map of the SBCCCD Service Region



Source: Emsi Analyst. Region provided by SBCCCD.

Figure 2 displays the top industry subsectors in terms of employment in the SBCCD Service Region, and Figure 3 shows the top industry subsectors in terms of employment concentrations, referred to as location quotients (LQs). High LQs (usually anything greater than 1.2) are an indication that the region has a comparative advantage or specialization in certain industry subsectors relative to the rest of the nation or potentially to other regions.

Figure 2: Top Industry Subsectors in the SBCCD Service Region by Jobs



Source: Employees & Self-Employed 2020.3.

Figure 3: Top Industry Subsectors in the SBCCD Service Region by Employment Concentration (LQ)



Source: Employees & Self-Employed 2020.3.

Note the green bars in the figures. Across all of the SBCCD Service Region’s industry subsectors, five are within the top 15 in terms of jobs with relatively high LQs. The appearance of these industry subsectors provides an indication of their strength in the region’s economy and offers the district insight into potential employment opportunities for its students. These industry subsectors, ranked by 2020 jobs, are:

- Local Government;
- Specialty Trade Contractors;
- Social Assistance;
- Warehousing & Storage; and
- Truck Transportation.

AUTOMATION INDEX OF OCCUPATIONS

As companies adopt advanced robotics and artificial intelligence workers in some occupations may be more susceptible to displacement. Emsi's US Automation Index analyzes the potential automation risk of occupations based on job task content - derived from ONET work activities. Combining that data with the Frey and Osborne findings at the occupation level, we identify which job tasks are 'at risk' and which are resilient. This is a 100-based index, meaning that occupations with an automation index above 100 have an above average risk of automation, while occupations with an automation index of below 100 have a below average risk of automation. Table 1 shows the top 10 occupation groups with below average risk of automation, while table 2 shows the occupation groups with above average risk of automation.

Table 1: Top 10 Occupation Groups with Below Average Risk of Automation

Occupation Group	Automation Index	2020 Jobs	2030 Jobs	2020 - 2030 Change	2020 - 2030 % Change
Religious Workers	78.4	3,913	4,074	161	4%
Physical Scientists	79.3	1,752	1,948	196	11%
Life Scientists	79.8	1,820	2,107	286	16%
Lawyers, Judges, and Related Workers	81.7	5,617	6,478	861	15%
Advertising, Marketing, Promotions, Public Relations, and Sales Managers	82.1	6,368	6,994	626	10%
Top Executives	82.2	21,866	25,131	3,265	15%
Architects, Surveyors, and Cartographers	82.4	1,717	1,998	281	16%
Counselors, Social Workers, and Other Community and Social Service Specialists	83.2	29,325	34,793	5,468	19%
Preschool, Elementary, Middle, Secondary, and Special Education Teachers	83.2	47,850	45,204	(2,647)	-6%
Computer Occupations	83.3	20,204	23,888	3,685	18%

Table 2: Top 10 Occupation Groups with Above Average Risk of Automation

Occupation Group	Automation Index	2020 Jobs	2030 Jobs	2020 - 2030 Change	2020 - 2030 % Change
Helpers, Construction Trades	134.6	4,066	4,555	489	12%
Food and Beverage Serving Workers	129.2	67,970	81,516	13,545	20%
Grounds Maintenance Workers	128.6	22,645	24,023	1,378	6%
Other Food Preparation and Serving Related Workers	128.4	17,195	18,376	1,180	7%
Construction Trades Workers	125.7	88,509	98,796	10,287	12%
Cooks and Food Preparation Workers	125.7	40,611	46,579	5,968	15%
Building Cleaning and Pest Control Workers	122.9	38,197	40,117	1,920	5%
Woodworkers	120.8	3,128	3,196	68	2%
Metal Workers and Plastic Workers	118.2	17,047	16,593	(455)	-3%
Food Processing Workers	117.8	5,978	6,812	835	14%

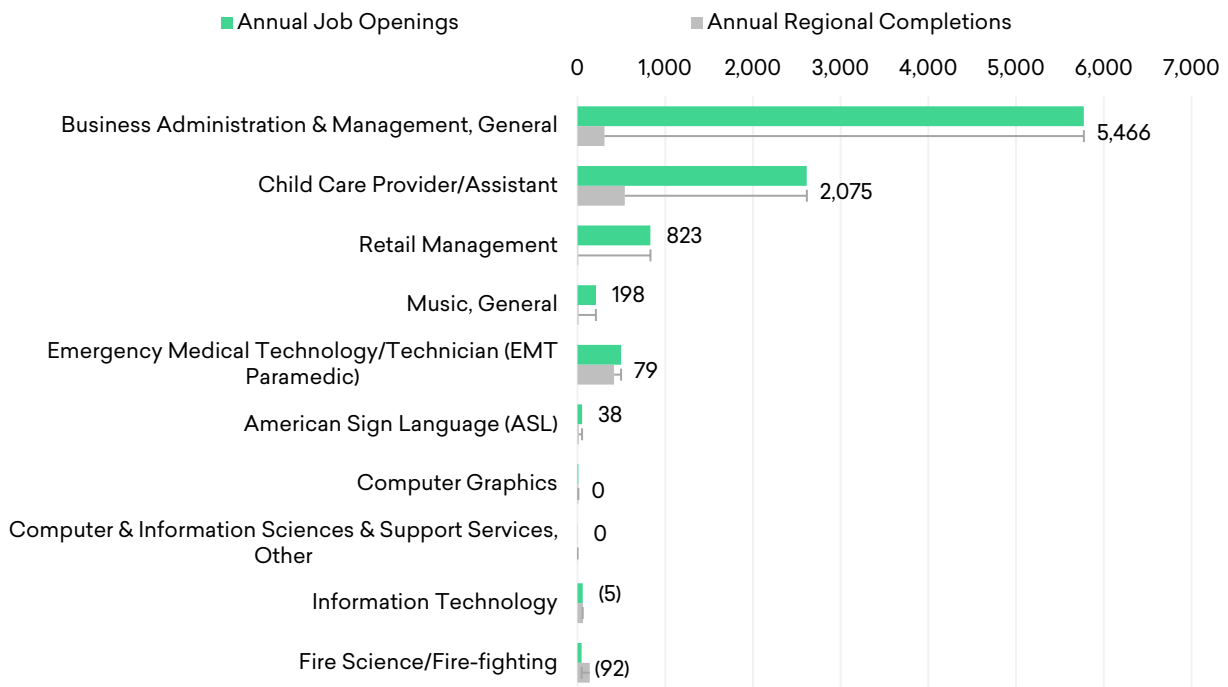


PROGRAM DEMAND GAP ANALYSIS

The program demand gap analysis provides results across all of SBCCD’s certificate and associate degree level programs, which have been classified by their formal CIP code.¹ The analysis connects the district’s program completers with the availability of regional job openings. Furthermore, the analysis focuses on the gaps and surpluses in the programs by award level. A gap or surplus larger than 500 is considered beyond normal labor market fluctuations and therefore an area of consideration for program development.

Table 1 displays the certificate level programs within the district, ordered by college. SBCCD offers 46 certificate level programs, twelve of which have a significant gap above the 500-openings level of significance. Many of which should be expanded to meet the current and future needs of employers in the SBCCD Service Region, emphasis should be placed on programs with high median hourly wages. No programs at this award level have a significant surplus. Programs with a significant gap or surplus have been highlighted in Table 3, Figure 4 and Figure 5 show the top ten programs by gap or surplus for each college.

Figure 4: Certificate Level Gaps for Crafton Hills College

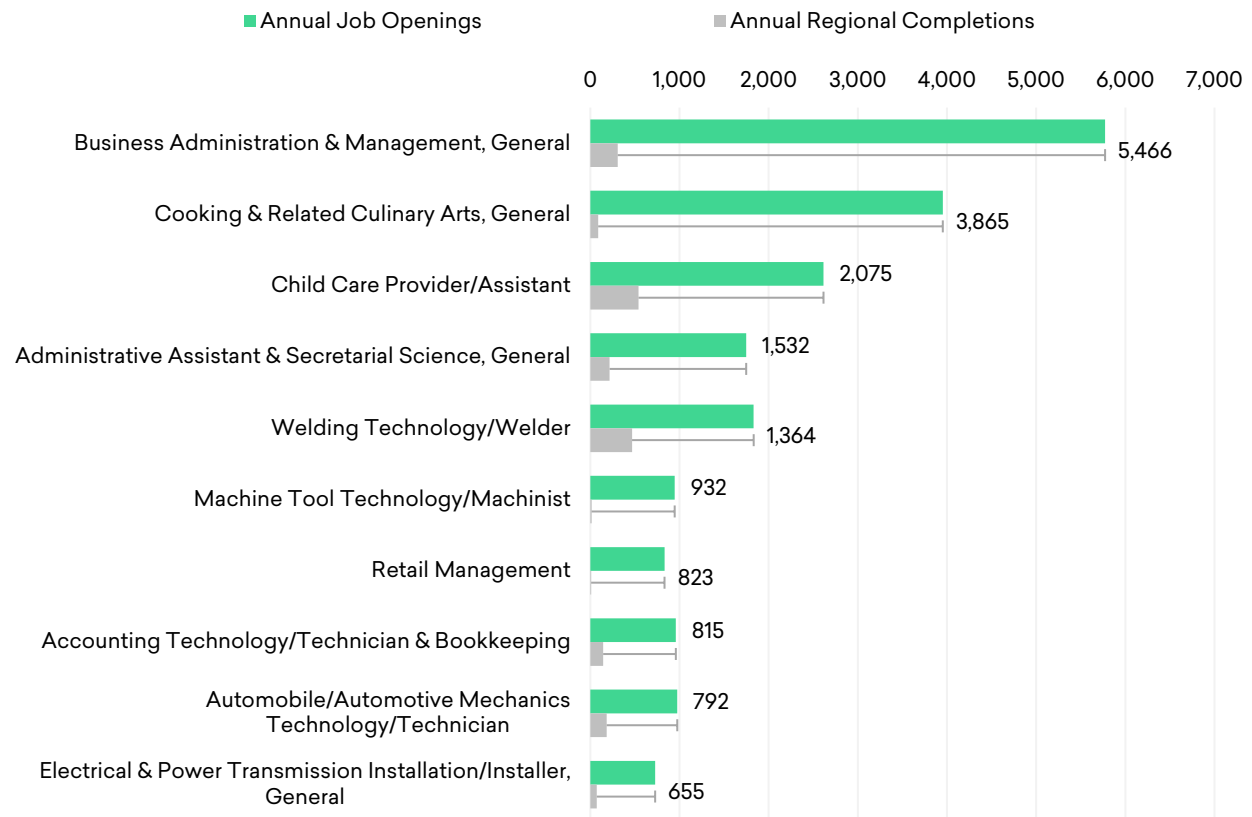


Source: Emsi program demand gap model.

1 CIP refers to the Classification of Instructional Program and was originally developed by the U.S. Department of Education’s National Center for Education Statistics (NCES).



Figure 5: Top 10 Certificate Level Gaps for San Bernardino Valley College



Source: Emsi program demand gap model.

Table 3: Certificate Level Programs at SBCCD, by College

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
Crafton Hills College						
52.0201	Business Administration & Management, General	5,773	307	1	5,466	\$26.58
19.0709	Child Care Provider/Assistant	2,614	540	5	2,075	\$15.42
52.0212	Retail Management	832	9	<1	823	\$16.27
50.0901	Music, General	211	12	<1	198	\$33.94
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	497	418	230	79	\$19.85
16.1601	American Sign Language (ASL)	52	14	6	38	\$25.14
11.0803	Computer Graphics	10	10	2	0	\$24.03
11.9999	Computer & Information Sciences & Support Services, Other	1	1	1	0	\$34.20



CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
11.0103	Information Technology	59	64	1	(5)	\$36.33
43.0203	Fire Science/Fire-fighting	47	139	51	(92)	\$33.43
San Bernardino Valley College						
52.0201	Business Administration & Management, General	5,773	307	<1	5,466	\$26.58
12.0500	Cooking & Related Culinary Arts, General	3,953	88	8	3,865	\$15.72
19.0709	Child Care Provider/Assistant	2,614	540	16	2,075	\$15.42
52.0401	Administrative Assistant & Secretarial Science, General	1,748	216	7	1,532	\$18.22
48.0508	Welding Technology/Welder	1,831	468	3	1,364	\$23.96
48.0501	Machine Tool Technology/Machinist	946	14	7	932	\$20.10
52.0212	Retail Management	832	9	3	823	\$16.27
52.0302	Accounting Technology/Technician & Bookkeeping	958	144	21	815	\$20.68
47.0604	Automobile/Automotive Mechanics Technology/Technician	975	183	7	792	\$20.24
46.0301	Electrical & Power Transmission Installation/Installer, General	727	72	8	655	\$27.54
15.0613	Manufacturing Engineering Technology/Technician	597	25	1	571	\$32.22
47.0605	Diesel Mechanics Technology/Technician	607	91	14	516	\$21.37
12.0504	Restaurant, Culinary, & Catering Management/Manager	503	33	3	469	\$18.22
44.0000	Human Services, General	514	49	12	465	\$22.32
47.0101	Electrical/Electronics Equipment Installation & Repair, General	348	24	19	324	\$19.45
52.1501	Real Estate	378	73	4	305	\$29.63
43.0102	Corrections	329	55	1	275	\$40.39
47.0603	Autobody/Collision & Repair Technology/Technician	259	23	15	236	\$17.90
15.0501	Heating, Ventilation, Air Conditioning & Refrigeration Engineering Technology/Technician	304	99	17	205	\$24.55
25.0301	Library & Archives Assisting	127	6	6	122	\$21.47
15.0506	Water Quality & Wastewater Treatment Management & Recycling Technology/Technician	93	28	9	65	\$33.87
19.0505	Foodservice Systems Administration/Management	68	3	<1	64	\$19.98
09.0701	Radio & Television	88	36	2	52	\$27.39
51.0805	Pharmacy Technician/Assistant	250	222	5	28	\$17.01



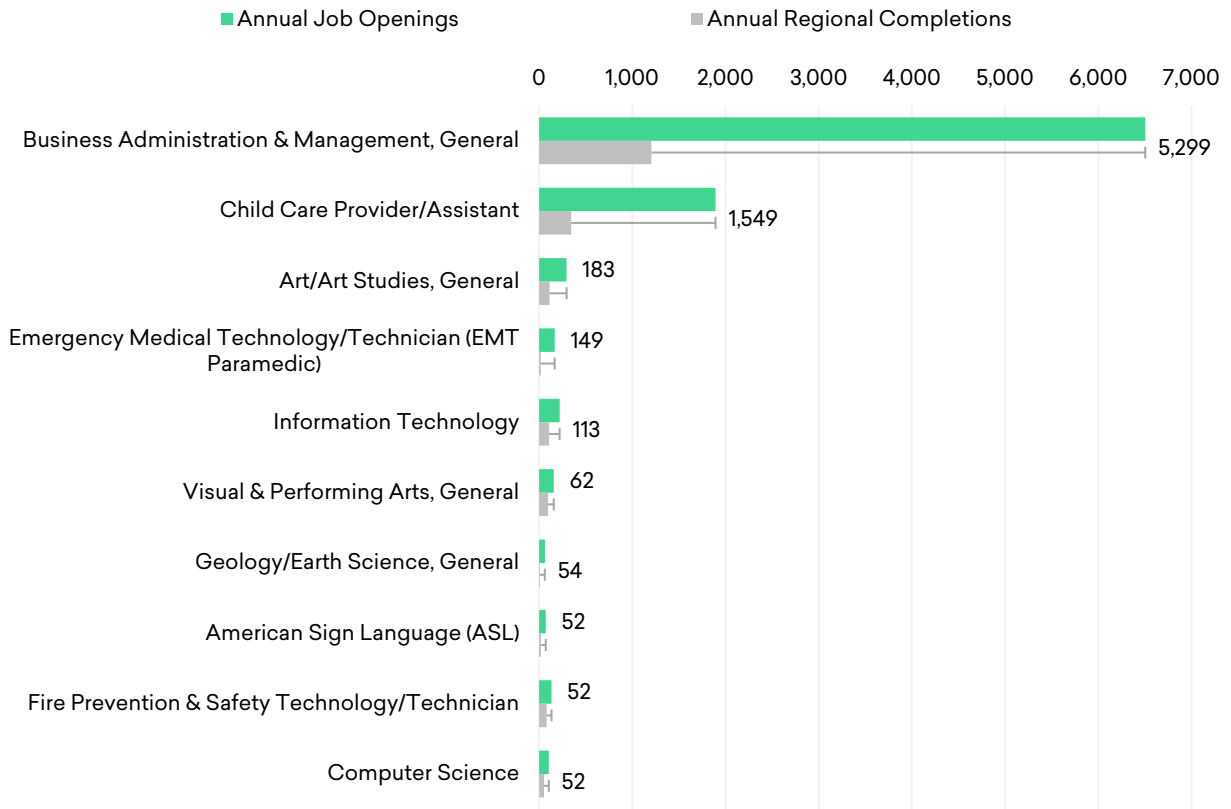
CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
13.1015	Education/Teaching of Individuals in Early Childhood Special Education Programs	36	14	2	22	\$21.71
51.1502	Psychiatric/Mental Health Services Technician	49	28	28	21	\$32.94
50.0409	Graphic Design	53	43	8	10	\$22.27
11.0101	Computer & Information Sciences, General	23	21	<1	2	\$34.20
19.0707	Family & Community Services	0	<1	<1	(0)	\$23.82
14.1004	Telecommunications Engineering	1	2	2	(0)	\$57.75
45.0799	Geography, Other	1	2	2	(1)	\$34.82
51.1501	Substance Abuse/Addiction Counseling	167	176	25	(9)	\$22.15
46.0403	Building/Home/Construction Inspection/Inspector	4	16	1	(11)	\$40.22
47.0104	Computer Installation & Repair Technology/Technician	32	51	2	(18)	\$23.39
47.0608	Aircraft Powerplant Technology/Technician	42	70	17	(27)	\$34.66
11.0201	Computer Programming/Programmer, General	50	80	1	(30)	\$36.14
50.0602	Cinematography & Film/Video Production	15	54	<1	(40)	\$28.72
47.0607	Airframe Mechanics & Aircraft Maintenance Technology/Technician	84	125	19	(41)	\$34.18
43.0107	Criminal Justice/Police Science	255	345	171	(91)	\$48.83

Source: Emsi program demand gap model.

At the associate degree level, nine programs have a significant gap. Table 2 displays the associate degree level programs within the district, ordered by college. Several should be considered for a district-wide expansion, many of which are related to other associate degree level programs without a significant 500-openings gap. Many should be considered for expansion, with more priority given to the programs with a significant gap and high median hourly wage. Furthermore, if the associate degree level program is associated with a formal industry-specific certificate, permit, or license required for employment, it is also recommended for expansion. One program at this award level has a significant surplus, programs with a significant gap or surplus have been highlighted in Table 4. Figure 6 and Figure 7 show the top ten gaps for each college.



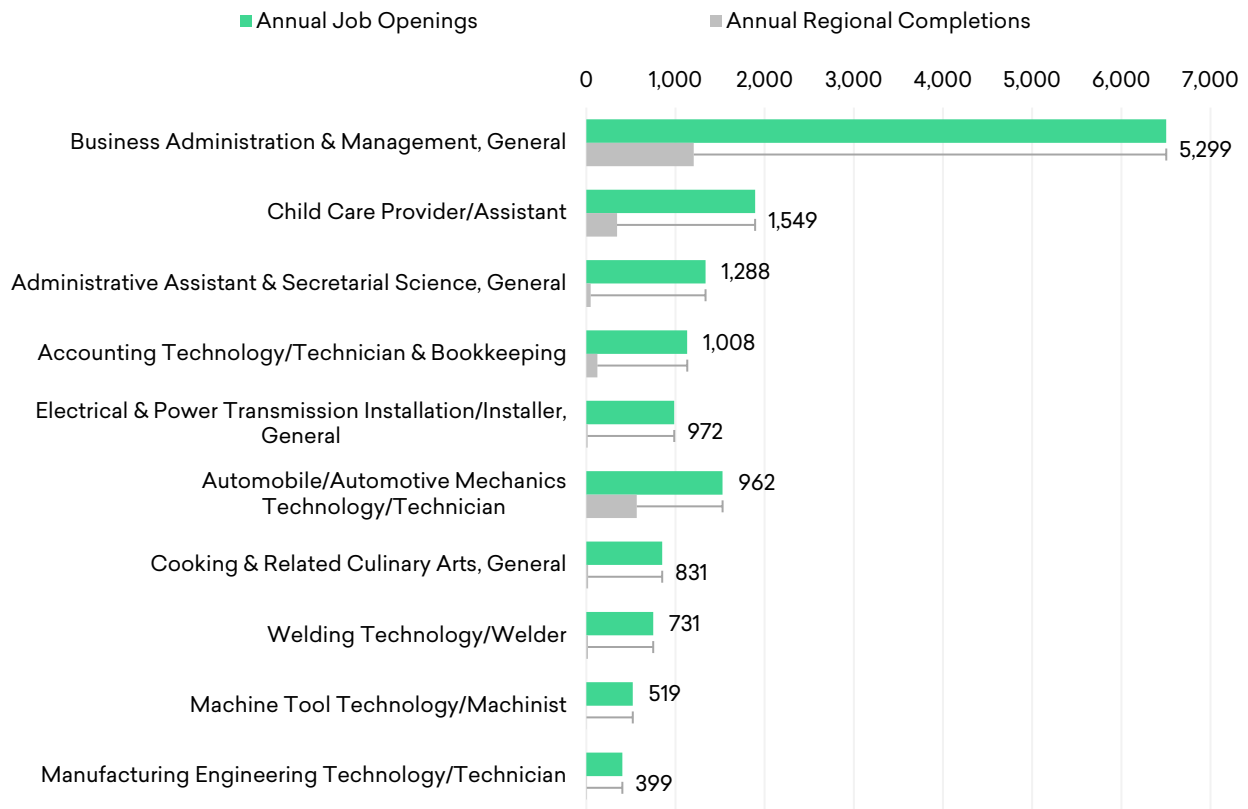
Figure 6: Top 10 Associate Degree Level Gaps for Crafton Hills College



Source: Emsi program demand gap model.



Figure 7: Top 10 Associate Degree Level Gaps for San Bernardino Valley College



Source: Emsi program demand gap model.

Table 4: Associate Degree Level Programs at SBCCD, by College

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
Crafton Hills College						
52.0201	Business Administration & Management, General	6,504	1,205	59	5,299	\$27.49
19.0709	Child Care Provider/Assistant	1,893	344	10	1,549	\$15.52
50.0701	Art/Art Studies, General	295	112	7	183	\$20.82
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	167	18	5	149	\$20.04
11.0103	Information Technology	220	107	5	113	\$35.46
50.0101	Visual & Performing Arts, General	157	95	4	62	\$24.44
40.0601	Geology/Earth Science, General	62	7	2	54	\$22.05
16.1601	American Sign Language (ASL)	72	19	11	52	\$24.75
43.0201	Fire Prevention & Safety Technology/Technician	133	81	12	52	\$33.16



CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
11.0701	Computer Science	104	52	7	52	\$37.76
45.0701	Geography	56	10	<1	45	\$28.94
16.0905	Spanish Language & Literature	90	52	9	38	\$29.30
50.0501	Drama & Dramatics/Theatre Arts, General	68	38	5	30	\$24.97
50.0901	Music, General	74	51	1	23	\$30.06
31.0505	Kinesiology & Exercise Science	105	84	11	22	\$22.05
03.0104	Environmental Science	18	4	1	14	\$32.58
51.0908	Respiratory Care Therapy/Therapist	166	155	29	11	\$29.20
51.0911	Radiologic Technology/Science - Radiographer	103	94	15	9	\$31.65
23.0101	English Language & Literature, General	186	180	22	5	\$31.41
16.0302	Japanese Language & Literature	6	5	5	1	\$20.62
26.0901	Physiology, General	0	<1	<1	(0)	\$51.36
38.0201	Religion/Religious Studies	1	2	1	(1)	\$27.11
40.0501	Chemistry, General	18	27	6	(9)	\$33.33
38.0101	Philosophy	3	24	3	(21)	\$46.39
26.0101	Biology/Biological Sciences, General	18	54	8	(36)	\$26.80
45.0601	Economics, General	7	49	7	(41)	\$29.13
45.1001	Political Science & Government, General	31	100	9	(69)	\$32.89
45.0201	Anthropology	7	76	10	(70)	\$32.84
40.0801	Physics, General	3	89	14	(86)	\$49.97
54.0101	History, General	24	171	25	(146)	\$35.24
09.0101	Speech Communication & Rhetoric	68	254	17	(186)	\$27.76
42.0101	Psychology, General	434	643	60	(209)	\$27.57
27.0101	Mathematics, General	20	247	39	(227)	\$36.87
45.1101	Sociology	84	345	47	(261)	\$34.21
45.0101	Social Sciences, General	62	498	121	(436)	\$34.68
30.0101	Biological & Physical Sciences	1,144	2,598	126	(1,454)	\$22.50
San Bernardino Valley College						
52.0201	Business Administration & Management, General	6,504	1,205	126	5,299	\$27.49
19.0709	Child Care Provider/Assistant	1,893	344	57	1,549	\$15.52
52.0401	Administrative Assistant & Secretarial Science, General	1,337	49	6	1,288	\$18.15



CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
52.0302	Accounting Technology/Technician & Bookkeeping	1,131	124	39	1,008	\$20.51
46.0301	Electrical & Power Transmission Installation/Installer, General	986	14	3	972	\$25.54
47.0604	Automobile/Automotive Mechanics Technology/Technician	1,528	566	6	962	\$21.84
12.0500	Cooking & Related Culinary Arts, General	850	20	1	831	\$16.08
48.0508	Welding Technology/Welder	750	19	2	731	\$25.02
48.0501	Machine Tool Technology/Machinist	521	2	<1	519	\$19.39
15.0613	Manufacturing Engineering Technology/Technician	404	5	1	399	\$27.49
44.0000	Human Services, General	410	39	31	371	\$19.26
52.1501	Real Estate	341	20	2	321	\$29.59
15.0501	Heating, Ventilation, Air Conditioning & Refrigeration Engineering Technology/Technician	328	10	2	317	\$22.97
47.0605	Diesel Mechanics Technology/Technician	306	65	2	241	\$21.54
12.0504	Restaurant, Culinary, & Catering Management/Manager	250	15	1	235	\$18.19
19.0708	Child Care & Support Services Management	232	4	1	228	\$15.36
51.0805	Pharmacy Technician/Assistant	228	24	12	204	\$17.14
47.0101	Electrical/Electronics Equipment Installation & Repair, General	216	13	7	203	\$21.04
51.3801	Registered Nursing/Registered Nurse	720	520	82	200	\$50.01
50.0701	Art/Art Studies, General	295	112	11	183	\$20.82
04.0901	Architectural Technology/Technician	131	9	1	122	\$33.20
11.0103	Information Technology	220	107	6	113	\$35.46
47.0603	Autobody/Collision & Repair Technology/Technician	77	4	3	73	\$17.29
45.0701	Geography	56	10	3	45	\$28.94
13.1015	Education/Teaching of Individuals in Early Childhood Special Education Programs	69	25	4	44	\$21.02
51.1502	Psychiatric/Mental Health Services Technician	63	22	22	41	\$33.44
15.0506	Water Quality & Wastewater Treatment Management & Recycling Technology/Technician	62	25	10	37	\$33.59
50.0501	Drama & Dramatics/Theatre Arts, General	68	38	1	30	\$24.97
47.0104	Computer Installation & Repair Technology/Technician	36	12	3	23	\$22.02
50.0901	Music, General	74	51	3	23	\$30.06



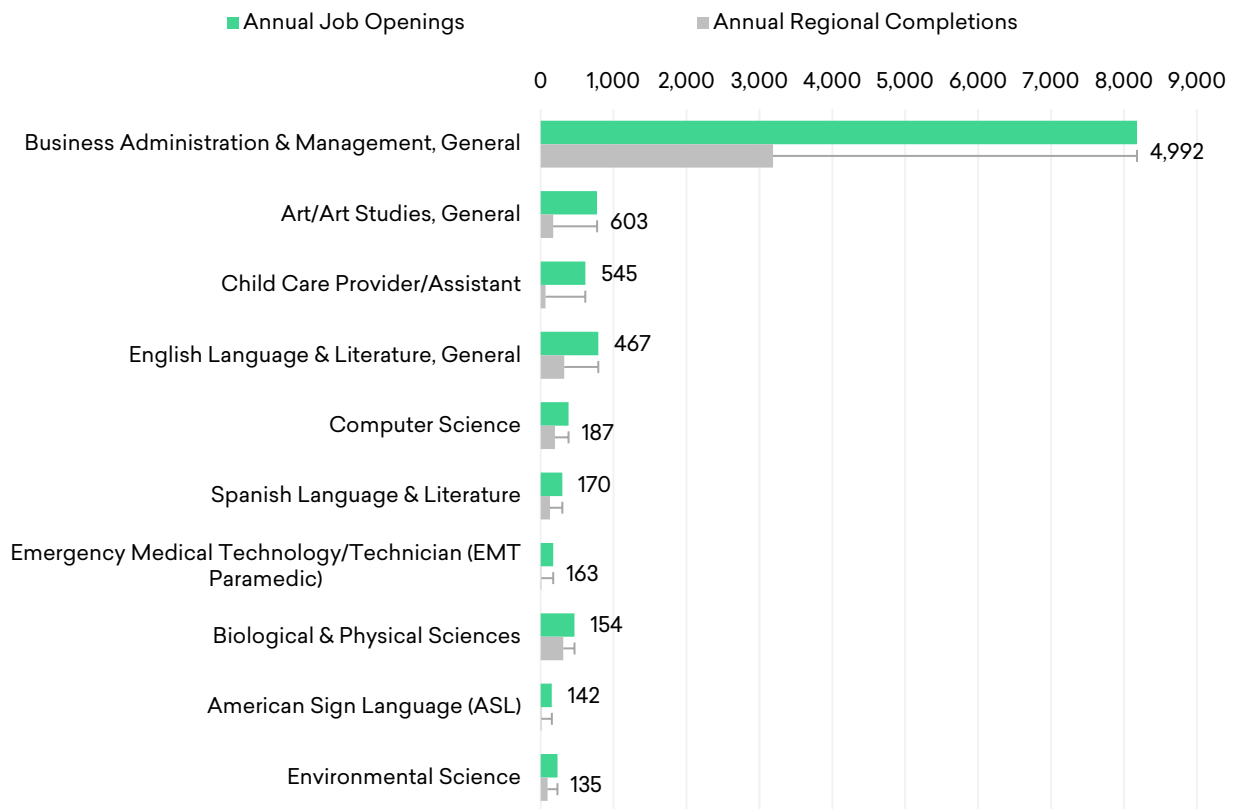
CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
31.0505	Kinesiology & Exercise Science	105	84	4	22	\$22.05
46.0403	Building/Home/Construction Inspection/Inspector	22	5	<1	17	\$40.60
03.0104	Environmental Science	18	4	3	14	\$32.58
11.0201	Computer Programming/Programmer, General	43	33	9	10	\$35.37
23.0101	English Language & Literature, General	186	180	13	5	\$31.41
14.1004	Telecommunications Engineering	1	1	1	(0)	\$62.92
40.0201	Astronomy	0	<1	1	(1)	\$58.41
50.0602	Cinematography & Film/Video Production	2	4	3	(2)	\$23.22
25.0301	Library & Archives Assisting	2	5	5	(3)	\$21.47
40.0501	Chemistry, General	18	27	11	(9)	\$33.33
50.0409	Graphic Design	22	32	11	(10)	\$22.77
09.0701	Radio & Television	27	39	8	(12)	\$28.71
38.0101	Philosophy	3	24	2	(21)	\$46.39
26.0101	Biology/Biological Sciences, General	18	54	7	(36)	\$26.80
47.0607	Airframe Mechanics & Aircraft Maintenance Technology/Technician	90	127	4	(37)	\$34.57
45.1001	Political Science & Government, General	31	100	7	(69)	\$32.89
45.0201	Anthropology	7	76	7	(70)	\$32.84
40.0801	Physics, General	3	89	19	(86)	\$49.97
09.0101	Speech Communication & Rhetoric	68	254	14	(186)	\$27.76
43.0107	Criminal Justice/Police Science	294	488	37	(193)	\$49.33
42.0101	Psychology, General	434	643	67	(209)	\$27.57
27.0101	Mathematics, General	20	247	30	(227)	\$36.87
45.1101	Sociology	84	345	39	(261)	\$34.21
30.0101	Biological & Physical Sciences	1,144	2,598	184	(1,454)	\$22.50

Source: Emsi program demand gap model.



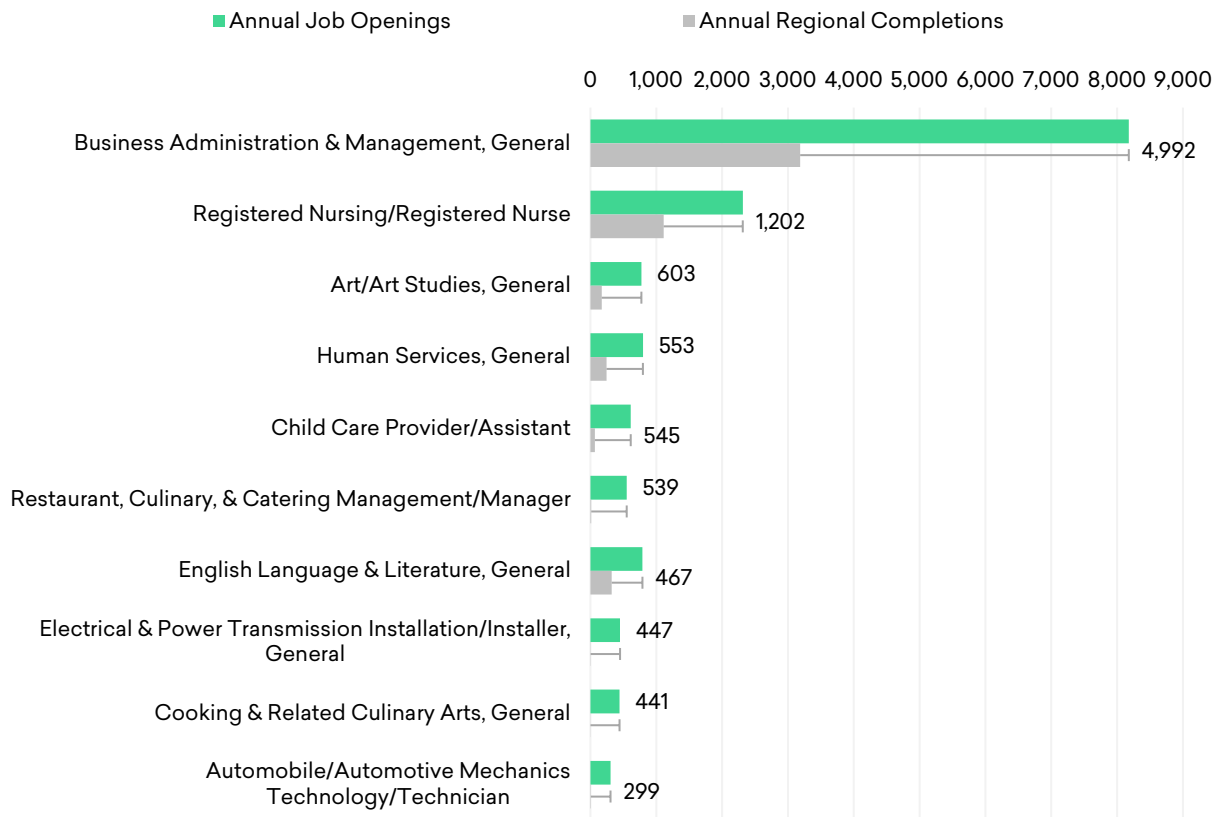
All of SBCCD’s associate degree programs have also been analyzed at the transfer-track level where the openings are measured as if a completer goes on to complete a bachelor’s degree. Table 3 displays the transfer-track degree level programs within the district, ordered by college. At this bachelor’s degree level six programs have a significant gap above the 500-openings level of significance, programs with a significant gap or surplus have been highlighted in Table 5. A program expansion should consider the process by which SBCCD’s students transfer into regional bachelor’s degree level programs. Administrative and academic support measures at SBCCD would enable student success. One program at this award level has a significant surplus. Figure 8 and Figure 9 shows the top ten gaps for each college.

Figure 8: Top 10 Transfer-Track Degree Level Gaps for Crafton Hills College



Source: Emsi program demand gap model.

Figure 9: Top 10 Transfer-Track Degree Level Gaps for San Bernardino Valley College



Source: Emsi program demand gap model.

Table 5: Transfer-Track Degree Level Programs at SBCCD, by College

CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
Crafton Hills College						
52.0201	Business Administration & Management, General	8,178	3,186	59	4,992	\$31.57
50.0701	Art/Art Studies, General	774	171	7	603	\$28.88
19.0709	Child Care Provider/Assistant	612	67	10	545	\$15.86
23.0101	English Language & Literature, General	790	323	22	467	\$39.74
11.0701	Computer Science	383	195	7	187	\$40.23
16.0905	Spanish Language & Literature	297	127	9	170	\$40.81
51.0904	Emergency Medical Technology/Technician (EMT Paramedic)	172	9	5	163	\$21.73



CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
30.0101	Biological & Physical Sciences	464	310	126	154	\$27.29
16.1601	American Sign Language (ASL)	153	11	11	142	\$31.88
03.0104	Environmental Science	230	95	1	135	\$34.56
11.0103	Information Technology	239	118	5	120	\$37.89
51.0908	Respiratory Care Therapy/Therapist	154	39	29	115	\$33.22
50.0901	Music, General	154	44	1	110	\$35.48
51.0911	Radiologic Technology/Science - Radiographer	123	30	15	93	\$37.03
40.0601	Geology/Earth Science, General	107	32	2	74	\$31.13
50.0501	Drama & Dramatics/Theatre Arts, General	118	49	5	69	\$26.70
43.0201	Fire Prevention & Safety Technology/Technician	67	12	12	55	\$33.27
45.0701	Geography	44	14	<1	30	\$30.27
50.0101	Visual & Performing Arts, General	32	10	4	23	\$24.36
26.0901	Physiology, General	0	<1	<1	(0)	\$51.36
16.0302	Japanese Language & Literature	7	10	5	(4)	\$32.69
38.0201	Religion/Religious Studies	4	22	1	(18)	\$27.35
40.0501	Chemistry, General	124	155	6	(31)	\$37.24
38.0101	Philosophy	11	53	3	(42)	\$54.42
31.0505	Kinesiology & Exercise Science	105	152	11	(47)	\$28.28
40.0801	Physics, General	24	80	14	(56)	\$46.89
45.0101	Social Sciences, General	74	143	121	(70)	\$40.85
45.0601	Economics, General	32	145	7	(113)	\$30.46
09.0101	Speech Communication & Rhetoric	146	264	17	(119)	\$30.44
54.0101	History, General	100	221	25	(121)	\$39.68
45.0201	Anthropology	13	177	10	(164)	\$32.71
27.0101	Mathematics, General	138	303	39	(165)	\$41.07
45.1001	Political Science & Government, General	119	285	9	(166)	\$32.22
26.0101	Biology/Biological Sciences, General	224	626	8	(402)	\$40.20
42.0101	Psychology, General	748	1,155	60	(407)	\$29.09
45.1101	Sociology	157	689	47	(533)	\$35.52
San Bernardino Valley College						
52.0201	Business Administration & Management, General	8,178	3,186	126	4,992	\$31.57



CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
51.3801	Registered Nursing/Registered Nurse	2,315	1,112	82	1,202	\$50.39
50.0701	Art/Art Studies, General	774	171	11	603	\$28.88
44.0000	Human Services, General	798	244	31	553	\$19.97
19.0709	Child Care Provider/Assistant	612	67	57	545	\$15.86
12.0504	Restaurant, Culinary, & Catering Management/Manager	551	12	1	539	\$19.14
23.0101	English Language & Literature, General	790	323	13	467	\$39.74
46.0301	Electrical & Power Transmission Installation/Installer, General	450	3	3	447	\$26.02
12.0500	Cooking & Related Culinary Arts, General	442	1	1	441	\$15.13
47.0604	Automobile/Automotive Mechanics Technology/Technician	305	6	6	299	\$22.02
52.1501	Real Estate	267	2	2	265	\$30.97
52.0401	Administrative Assistant & Secretarial Science, General	259	6	6	253	\$18.77
15.0613	Manufacturing Engineering Technology/Technician	252	<1	1	252	\$28.47
48.0508	Welding Technology/Welder	246	2	2	245	\$24.31
48.0501	Machine Tool Technology/Machinist	222	<1	<1	222	\$22.05
47.0101	Electrical/Electronics Equipment Installation & Repair, General	219	7	7	212	\$24.11
15.0501	Heating, Ventilation, Air Conditioning & Refrigeration Engineering Technology/Technician	198	2	2	196	\$24.29
51.0805	Pharmacy Technician/Assistant	201	12	12	189	\$17.75
30.0101	Biological & Physical Sciences	464	310	184	154	\$27.29
47.0605	Diesel Mechanics Technology/Technician	145	2	2	143	\$21.43
47.0603	Autobody/Collision & Repair Technology/Technician	145	3	3	142	\$21.24
52.0302	Accounting Technology/Technician & Bookkeeping	180	39	39	141	\$20.83
03.0104	Environmental Science	230	95	3	135	\$34.56
11.0103	Information Technology	239	118	6	120	\$37.89
50.0901	Music, General	154	44	3	110	\$35.48
50.0501	Drama & Dramatics/Theatre Arts, General	118	49	1	69	\$26.70
51.1502	Psychiatric/Mental Health Services Technician	67	22	22	45	\$33.57
04.0901	Architectural Technology/Technician	43	1	1	42	\$33.49
45.0701	Geography	44	14	3	30	\$30.27



CIP CODE	CIP TITLE	ANNUAL JOB OPENINGS	ANNUAL COMPLETIONS		GAP OR SURPLUS	MEDIAN HOURLY WAGE
			REGION	COLLEGE		
47.0607	Airframe Mechanics & Aircraft Maintenance Technology/Technician	34	4	4	30	\$34.45
15.0506	Water Quality & Wastewater Treatment Management & Recycling Technology/Technician	38	10	10	29	\$33.79
13.1015	Education/Teaching of Individuals in Early Childhood Special Education Programs	30	4	4	26	\$22.54
11.0201	Computer Programming/Programmer, General	44	30	9	15	\$39.13
47.0104	Computer Installation & Repair Technology/Technician	13	3	3	10	\$21.33
19.0708	Child Care & Support Services Management	8	1	1	7	\$15.06
50.0409	Graphic Design	33	27	11	7	\$22.25
46.0403	Building/Home/Construction Inspection/Inspector	4	<1	<1	4	\$40.62
09.0701	Radio & Television	10	9	8	1	\$28.62
14.1004	Telecommunications Engineering	1	1	1	(0)	\$56.63
40.0201	Astronomy	0	<1	1	(1)	\$58.54
25.0301	Library & Archives Assisting	1	5	5	(5)	\$21.47
43.0107	Criminal Justice/Police Science	20	37	37	(17)	\$47.39
40.0501	Chemistry, General	124	155	11	(31)	\$37.24
50.0602	Cinematography & Film/Video Production	14	52	3	(37)	\$30.33
38.0101	Philosophy	11	53	2	(42)	\$54.42
31.0505	Kinesiology & Exercise Science	105	152	4	(47)	\$28.28
40.0801	Physics, General	24	80	19	(56)	\$46.89
09.0101	Speech Communication & Rhetoric	146	264	14	(119)	\$30.44
45.0201	Anthropology	13	177	7	(164)	\$32.71
27.0101	Mathematics, General	138	303	30	(165)	\$41.07
45.1001	Political Science & Government, General	119	285	7	(166)	\$32.22
26.0101	Biology/Biological Sciences, General	224	626	7	(402)	\$40.20
42.0101	Psychology, General	748	1,155	67	(407)	\$29.09
45.1101	Sociology	157	689	39	(533)	\$35.52

Source: Emsi program demand gap model.

A liberal arts program expansion is not recommended at this time, but SBCCD administrators should be aware that students can find success in a variety of business-related occupations. Using Emsi's Profile Analytics database, many liberal arts program

completers are currently employed as retail salespersons, administrative assistants, and customer service representatives, as well as a variety of managers and supervisors. These occupations have a considerable number of job openings in the SBCCD Service Region. The colleges' liberal arts program, therefore, serves as a starting point to students' career goals beyond an associate degree level of education.

PROGRAM ADDITIONS

A variety of certificate level programmatic areas of opportunity have been identified in the program demand gap analysis, many of which are related to Installation, Maintenance, & Repair Occupations; Office & Administrative Support Occupations; and Construction & Extraction Occupations. At the associate degree level, there are fewer opportunities for new programs, considering the district's current offerings. Nonetheless, SBCCD should consider new programs related to Healthcare Practitioners & Technical Occupations, whether its focus is on job openings in the SBCCD Service Region or California. A variety of transfer-track degree level programmatic areas of opportunity were identified in the program demand gap analysis, many of which are related to Business & Financial Operations Occupations; Sales & Related Occupations; and Architecture & Engineering Occupations. For all award levels, many program additions are related to the district's current program offerings, which indicates an opportunity for a curriculum adjustment to better align with the region's current and projected labor market demand. A selection of these occupations, which have the most regional job openings by award level, appear in Table 6.

Table 6: Program Additions by Education Level

SOC TITLE	2020 JOBS	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE	ED. LEVEL
Heavy and Tractor-Trailer Truck Drivers	31,981	3,160	4	3,156	\$22.56	CERT
Carpenters	22,088	1,648	8	1,641	\$22.54	CERT
Construction Laborers	19,914	1,582	8	1,574	\$18.73	CERT
First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	8,838	760	0	760	\$27.06	CERT
Medical Secretaries and Administrative Assistants	8,571	655	106	549	\$17.76	CERT
Painters, Construction and Maintenance	7,190	479	3	476	\$17.77	CERT
Operating Engineers and Other Construction Equipment Operators	4,445	416	2	414	\$39.51	CERT
Nursing Assistants	8,438	912	542	369	\$16.23	CERT
Order Clerks	3,045	252	1	251	\$17.39	CERT

SOC TITLE	2020 JOBS	ANNUAL JOB OPENINGS	ANNUAL COMPL.	GAP	MEDIAN HOURLY WAGE	ED. LEVEL
Dental Assistants	6,316	604	436	168	\$17.46	CERT
Dental Hygienists	1,988	117	50	67	\$45.73	ASSOC
Respiratory Therapists	1,885	99	38	61	\$35.33	ASSOC
Occupational Therapy Assistants	367	44	0	44	\$35.16	ASSOC
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	9,919	706	8	697	\$21.90	T-T
Insurance Sales Agents	5,693	311	0	311	\$21.14	T-T
Office and Administrative Support Workers, All Other	5,089	295	0	295	\$15.99	T-T
Production, Planning, and Expediting Clerks	5,112	287	0	287	\$22.31	T-T
Securities, Commodities, and Financial Services Sales Agents	3,375	210	2	208	\$23.81	T-T

SOC refers to the Standard Occupational Classification system used to classify occupations. Average annual job openings represent regional data from 2020 to 2030. Numbers may not sum due to rounding.

Source: Emsi program demand gap model.

