



INLAND EMPIRE/DESERT REGION  
EDUCATIONAL SUPPLY & OCCUPATIONAL DEMAND ANALYSIS:

# Quantifying the Degree of Alignment Between Career Education Credentials and Middle-Skill Job Openings



A regional Data Analysis & Alignment  
report supported by Strong Workforce

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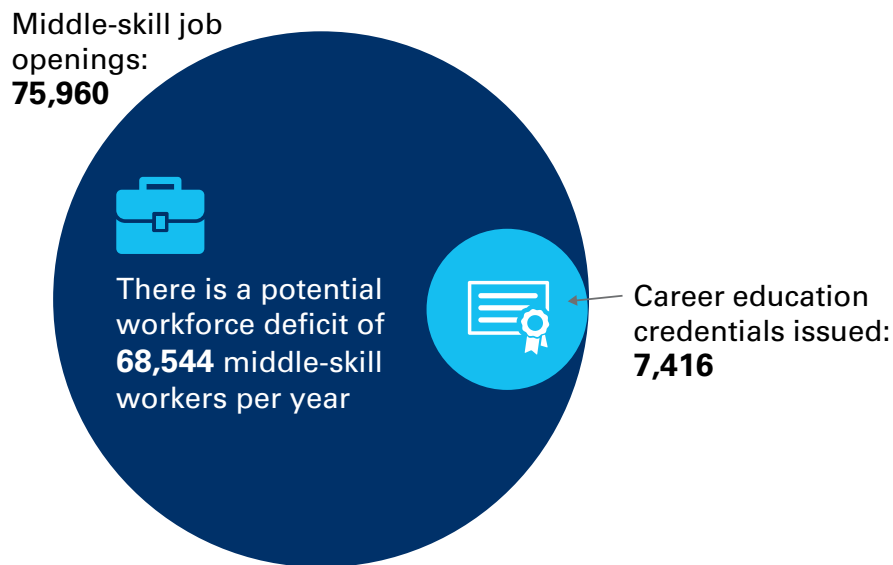
# EXECUTIVE SUMMARY

The purpose of this report is to present findings regarding the middle-skill job market in the Inland Empire/Desert region (IEDR) of California. Middle-skill jobs are classified as jobs that generally require more education than a high school diploma but less than a bachelor's degree; the training purview of the California Community Colleges system. The primary focus of this report is the degree of alignment between the supply of community college career education credential completions and employer demand for middle-skill occupations. This study found the following:

- Employment demand for middle-skill occupations is expected to **increase by 8% over the next five years**, 2018 to 2023 in the IEDR. The region is expected to have **75,960 annual middle-skill job openings**.
- An annual average of **7,416 career education credentials** (2015 to 2018) were conferred from IEDR community colleges.
- There is a potential workforce deficit of **68,544 middle-skill workers per year** across 293 middle-skill occupations in the region. Workforce deficit and oversupply vary by occupation.
- The median wages for **97% of middle-skill occupations are above the MIT Living Wage estimate of \$12.39 per hour** for a single adult living in the region.

The overall findings of this analysis indicate that IEDR community colleges have many opportunities to expand existing programs or create new programs to meet employer demand. This report serves as a strategic plan for the colleges to identify the education supply and employer demand gaps in the IEDR. The colleges should review the findings in this report and consult with local employers to further gauge the demand for workers and specific demand for emerging worker skills to close the middle-skill employment gap.

**Exhibit A: Projected annual average middle-skill job openings (2018-23) and annual average career education credentials issued in the IEDR (2015-18), with potential workforce deficit**



Source: EMSI 2019.2 & Chancellor's Office Management Information Systems Data Mart (MIS)

# INTRODUCTION

The Inland Empire/Desert Region (IEDR) Educational Supply & Occupational Demand Analysis report is the strategic plan guiding the Data Analysis and Alignment Strong Workforce project. The Data Analysis and Alignment project is designed to bridge data sources between the participating IEDR colleges, institutional research/effectiveness, and the Desert Centers of Excellence for Labor Market Research to ensure validated data aligns across the region. This study is supported by Economic and Workforce Development funds awarded by the California Community Colleges Chancellor's Office. Funding for the Data Analysis and Alignment project is apportioned through Rounds 2 and 3 of Strong Workforce.

The goal of this report is to determine if the community colleges are training enough students to fill the projected number of middle-skill job openings expected over the next five years. In other words, this study measures the degree of alignment between educational supply and occupational demand by comparing the following:

- The number of career education credentials issued by the 12 regional colleges.
- The number of annual job openings for middle-skill occupations.

Additionally, this study analyzes the portion of middle-skill occupations paying a median wage that is greater than the living wage threshold for the region. This additional analysis ensures that the local colleges are guiding students toward career opportunities that offer self-sustainable income.

This first iteration of educational supply and employer demand analysis is a living document and should be considered as a starting point for larger discussions regarding the type of career education programs the community colleges offer. The Center of Excellence recommends that colleges carefully consider the limitations of this study, and consult with regional employers before taking action based on the findings of this report.

## The 12 Inland Empire/Desert region community colleges are:



Barstow Community College



Chaffey College



Copper Mountain College



Crafton Hills College



College of the Desert



Moreno Valley College



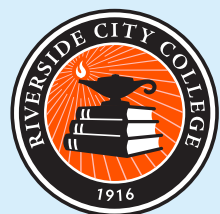
Mt. San Jacinto College



Norco College



Palo Verde College



Riverside City College



San Bernardino Valley College



Victor Valley College

# METHODOLOGY

This study measures the alignment between middle-skill occupational demand and the number of career education credentials conferred by IEDR community colleges. Middle-skill occupations are those that generally require an educational attainment level greater than a high school diploma, but less than a bachelor's degree; this is usually some college coursework, a postsecondary-level certificate, or an associate degree. Exceptions are made if the occupations met one of the criteria listed in the sidebar. The middle-skill definition used for this study identified 293 occupations.

Labor market demand for middle-skill occupations is measured by the number of projected annual job openings from 2018 to 2023. All occupational data contained in this report was sourced from Economic Modeling Specialists, Intl (EMSI).

Educational supply is measured by the number of career education credentials issued by the 12 IEDR community colleges between the 2015 and 2018 academic years; this includes academic years 2015-16, 2016-17, and 2017-18. All credential data was retrieved from the Chancellor's Office Management Information Systems Data Mart by Taxonomy of Programs (TOP) code. Program credentials were coded as career education if the TOP code matched one of the 272 career education codes from the TOP code manual. Please note that a single credential may not be the equivalent of one person in search of a job opening since a student may earn more than one credential, such as an associate degree in addition to a certificate.

The credentials were matched with middle-skill occupations using the Taxonomy of Programs (TOP) to Standard Occupational Classification (SOC) crosswalk, developed by The Centers of Excellence for Labor Market Research. Some programs train students exclusively for a single occupation. For example, the registered nursing and licensed vocational nurse programs are intended for students who plan to become *registered nurses* and *licensed vocational nurses*, respectively. This one-to-one relationship is typical in the health discipline. Other educational programs that are broader in scope can train for multiple occupations. For example, the accounting program prepares students for employment in various clerical occupations.

Lastly, the projected number of annual average middle-skill job openings were compared to the annual average number of career education credentials issued by regional community colleges to assess the potential for a middle-skill workforce surplus or deficit. The surplus or deficit was calculated by subtracting the annual average job openings from the annual average career education credentials issued.

The analysis also included the portion of middle-skill occupations that pay a median wage that is greater than the living wage threshold for the region (\$12.39/hr.) according to the MIT Living Wage Calculator.

This study focuses solely on career education credentials issued by community colleges. It does not include credentials issued from non-career education programs, credentials issued by education institutions outside of the community college system, or credentials issued outside of Riverside and San Bernardino counties.



**Middle-Skill** occupations must meet one of the following criteria:

- All occupations that typically require some college or an associate degree.
- All occupations that require an apprenticeship.
- All occupations that typically require a bachelor's degree with more than 1/3 of incumbent workers having completed some college to an associate degree.
- All occupations that typically require a high school diploma or equivalent or no formal education with long-term, on-the-job training.
- All supervisory occupations.

Exceptions were made for occupations that generally require a bachelor's degree where community college-level programs exist. Exceptions were also made for occupations requiring a high school diploma or equivalent or no formal education with short- or moderate-term, on-the-job training where multiple community colleges have existing programs.

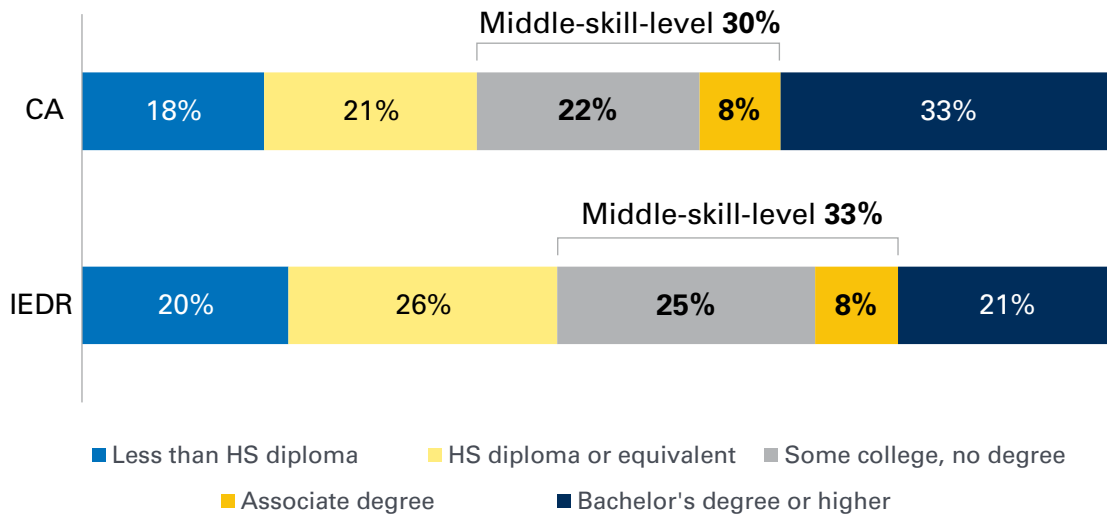
# REGIONAL CONTEXT

The Inland Empire/Desert region is comprised of Riverside and San Bernardino counties. They are the fourth and fifth most populous counties in California behind Los Angeles, San Diego, and Orange counties. Together, they accounted for 11.6% (4,629,834 people) of California’s total population (39,853,042 people) in 2018, and are expected to grow by 4.4% through 2023, adding 205,217 people during the same timeframe (EMSI, 2019).

According to five-year estimates from the American Community Survey (2013-17), one-third (33%) of the population over 25 years of age has earned a level of education that can be attained from a community college (i.e., “some college, no degree” or an “associate degree”). In terms of population estimates, this is equal to roughly 934,000 people. Middle-skill employment is especially meaningful to the region, given that there is a large segment of the population with a community college-level of education compared to a high school diploma alone or a bachelor’s degree or higher education level.

Compared to California as a whole, the IEDR has a larger portion of residents holding a level of education that aligns with low-skill and middle-skill jobs, and a smaller portion of residents with a bachelor’s degree or higher.

**Exhibit 1: Educational attainment of population 25 and over in the IEDR and CA**



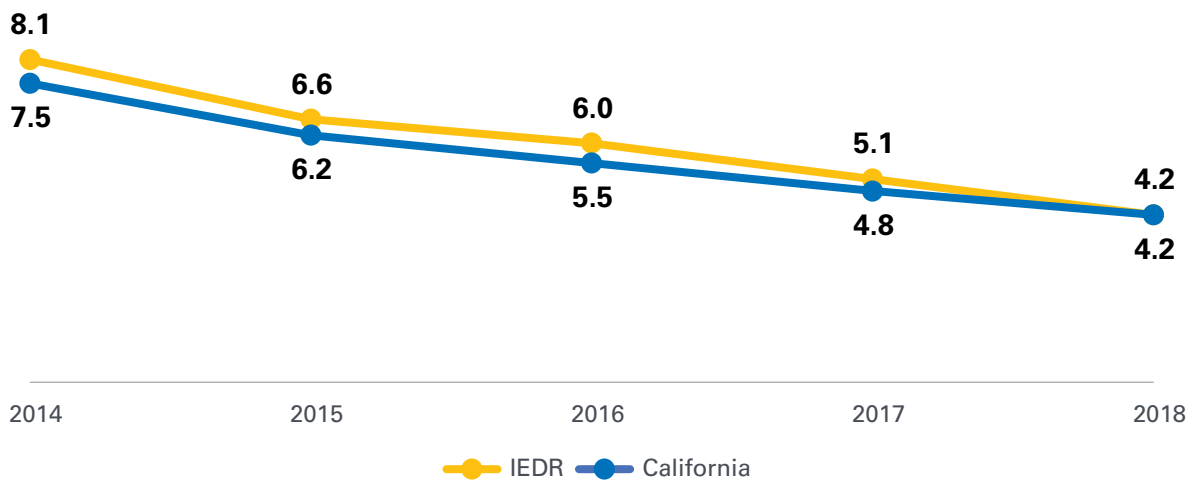
*Source: American Community Survey, 2017 five-year average, may not total to 100% due to rounding*





The annual average unemployment rate in the IEDR was 4.2% in 2018, falling from 8.1% in 2014 and down from 5.1% in 2017 (LMID, 2019). The local unemployment rate has typically been slightly higher than the state average until 2018 when the region matched the state unemployment rate.

**Exhibit 2: Annual Average Unemployment rate for IEDR and California, 2014-2018**

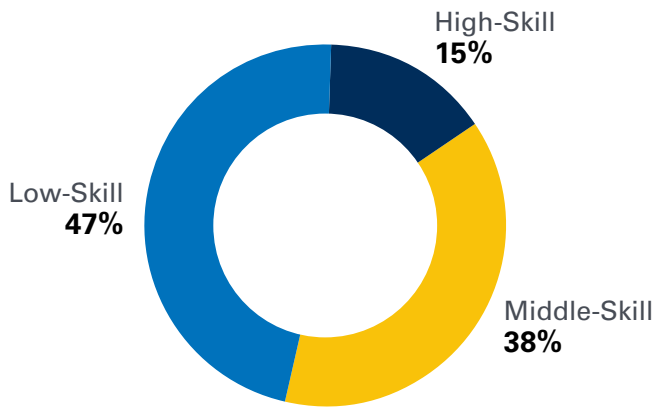


Source: California Employment Development Department, Labor Market Information Division

# OCCUPATIONAL DEMAND

In 2018, middle-skill jobs accounted for more than one-third of overall employment (643,058 jobs) and will grow by 8% over the next five years (2023). Employers will need to hire 75,960 middle-skill workers annually to fill new jobs and backfill jobs that workers are leaving permanently; this includes retirements, career changes, and promotions to a different occupation.

**Exhibit 3: Share of all regional jobs by skill level, 2018**



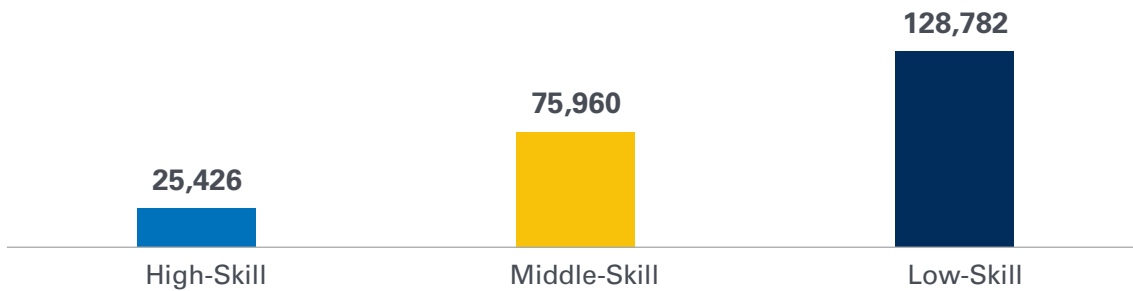
Skill Level	2018 Jobs	2023 Jobs	% Change
High-Skill	255,359	278,595	9%
Middle-Skill	643,058	692,184	8%
Low-Skill	788,617	864,311	10%
<b>Total</b>	<b>1,687,033</b>	<b>1,835,090</b>	<b>9%</b>

Source: EMSI, 2019.2

**Regional employers will need to hire 75,960 middle-skill workers annually between 2018 and 2023.**



**Exhibit 4: Annual average job openings by skill level, 2018-2023**



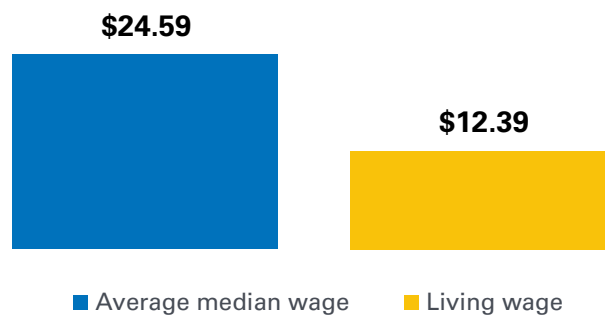
Source: EMSI, 2019.2





The median hourly wage for 284 middle-skill occupations (97%) exceeds the regional living wage of \$12.39 per hour for a single adult. The median wage of only nine middle-skill occupations (3%) analyzed in this report falls below the hourly living wage standard. The combined average median wage for all middle-skill occupations in the region is more than \$12 per hour greater than the living wage standard.

**Exhibit 5: Average hourly median wage for all middle-skill occupations and regional living wage estimate**



Source: EMSI, 2019.2

Exhibit 6 displays the 30 most in-demand middle-skill occupations by the projected number of annual job openings and median wage information. The projected job openings from these 30 occupations account for 60% of all middle-skill job openings in the region. Wages appear in **red** if they fall below the living wage standard for the region. For a full list of all 293 middle-skill occupations in the region, please visit the following link on the Centers of Excellence website: [http://coeccc.net/reports/Inland\\_EmpireDesert\\_Region\\_Middleskill\\_Occupations](http://coeccc.net/reports/Inland_EmpireDesert_Region_Middleskill_Occupations)

**Exhibit 6: Thirty middle-skill occupations with the most annual openings, IEDR, 2018-2023**

#	Occupation	Total jobs, 2018	Projected annual average job openings, 2018-2023	Median wage (50th percentile), 2018
1	Heavy and Tractor-Trailer Truck Drivers	31,762	4,056	\$20.70
2	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	23,738	2,677	\$17.57
3	Customer Service Representatives	17,759	2,578	\$17.18
4	Teacher Assistants	19,815	2,410	\$15.77
5	Registered Nurses	29,683	2,307	\$45.58
6	Carpenters	21,036	2,228	\$17.57
7	Childcare Workers	14,361	2,060	(\$10.50)
8	Bookkeeping, Accounting, and Auditing Clerks	15,956	1,915	\$19.06
9	First-Line Supervisors of Retail Sales Workers	16,365	1,883	\$16.13
10	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	15,550	1,801	\$26.60
11	First-Line Supervisors of Office and Administrative Support Workers	15,080	1,688	\$26.09
12	First-Line Supervisors of Food Preparation and Serving Workers	9,302	1,642	\$13.87
13	Maintenance and Repair Workers, General	13,678	1,638	\$18.55
14	Sales Representatives, Services, All Other	9,433	1,317	\$22.27
15	Medical Assistants	9,265	1,302	\$14.34
16	Hairdressers, Hairstylists, and Cosmetologists	9,016	1,300	(\$12.04)
17	Nursing Assistants	7,894	1,211	\$14.56
18	Electricians	7,899	1,161	\$24.08
19	Automotive Service Technicians and Mechanics	10,479	1,124	\$16.68
20	First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	7,266	1,067	\$26.33
21	Medical Secretaries	7,325	1,016	\$16.25
22	Business Operations Specialists, All Other	8,478	902	\$30.43
23	Home Health Aides	3,139	871	\$14.15
24	First-Line Supervisors of Construction Trades and Extraction Workers	7,222	864	\$29.50
25	Plumbers, Pipefitters, and Steamfitters	5,922	849	\$21.01
26	Dental Assistants	5,154	736	\$15.54
27	Licensed Practical and Licensed Vocational Nurses	7,758	732	\$22.97
28	Recreation Workers	3,601	693	(\$12.13)
29	Fitness Trainers and Aerobics Instructors	3,450	661	\$20.56
30	Insurance Sales Agents	5,796	631	\$20.37
	Subtotal for these 30 middle-skill occupations	363,183	45,318	\$19.95 avg
	Subtotal for the other 263 middle-skill occupations	278,875	30,642	\$25.12 avg
	<b>Total for all 293 middle-skill occupations</b>	<b>643,058</b>	<b>75,960</b>	<b>\$24.59</b>

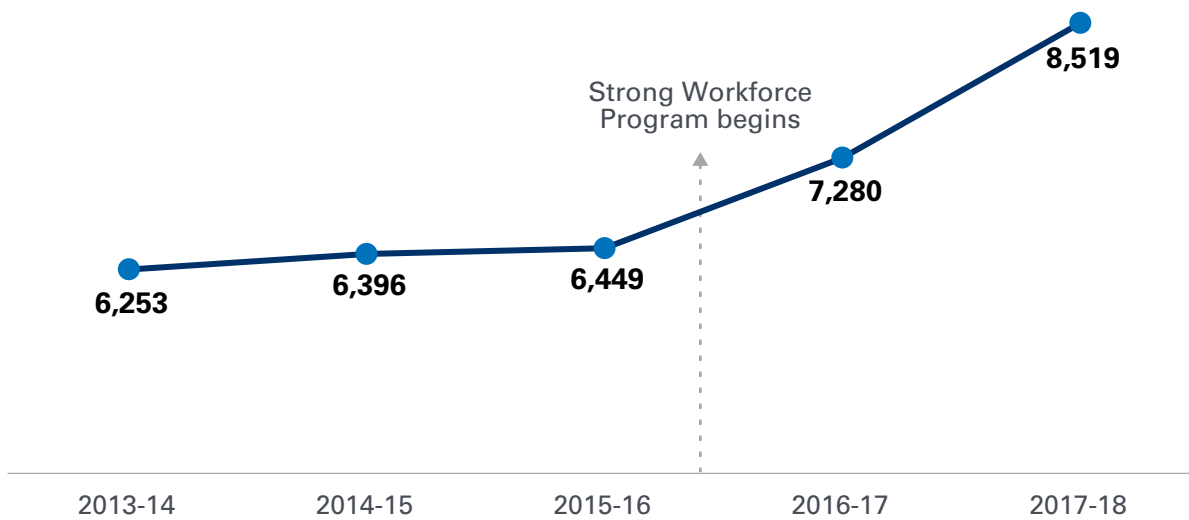
Source: EMSI 2019.2

# EDUCATIONAL SUPPLY

The number of career education credentials issued by the IEDR community colleges has increased 36% over the last five years. A sharp increase in the number of credentials issued by the college occurred between the 2015-16 and 2017-18 academic years, increasing by 32%. This increase coincides with the implementation of the Strong Workforce Program. Exhibit 7 displays the number of career education credentials issued by IEDR community colleges during the last five academic years.

**An annual average of 7,416 career education credentials were issued between 2015 and 2018.**

**Exhibit 7: Career education credentials issued by IEDR community colleges in the last five years**



Source: Chancellor's Office Management Information Systems Data Mart

To better understand the recent sharp increase in career education credentials, Exhibit 8 displays the number of credentials issued over the previous three years by credential type. The most significant increases are in four credential types: Associate in Arts for Transfer (A.A.-T) Degrees, Associate in Science for Transfer (A.S.-T) Degrees, Certificates requiring 12 to < 18 units, and Other Credit Awards, < 6-semester units.



**Exhibit 8: Career educational credentials issued by type, 2015-2018 with three-year percent change**

Credential Type	Academic Year			Percent increase, 2015 to 2018
	2015-16	2016-17	2017-18	
Associate in Arts for Transfer (A.A.-T) Degree	11	18	25	127%
Associate in Science for Transfer (A.S.-T) Degree	832	1,175	1,503	81%
Associate of Arts (A.A.) degree	296	324	239	(19%)
Associate of Science (A.S.) degree	2,057	2,036	2,207	7%
Certificate requiring 60+ semester units	131	132	104	(21%)
Certificate requiring 30 to < 60 semester units	1,180	1,205	1,400	19%
Certificate requiring 18 to < 30 semester units	933	905	1,340	44%
Certificate requiring 12 to < 18 units	3	47	106	3,433%
Certificate requiring 6 to < 18 semester units	995	1,213	1,505	51%
Other Credit Award, < 6 semester units	11	225	87	691%
Noncredit award requiring from 48 to < 96 hours	-	-	3	-
<b>Total from all career education programs</b>	<b>6,449</b>	<b>7,280</b>	<b>8,519</b>	<b>32%</b>

Source: Chancellor's Office Management Information Systems Data Mart

The ten community college career education programs issuing the most awards are displayed in Exhibit 9. These ten programs accounted for more than half of all career education credentials issued during each of the three academic years displayed below (see Exhibit 9). The most substantial increases are from Business Administration, Child Development/Early Care and Education, Emergency Medical Services, and Licensed Vocational Nursing.

**Exhibit 9: Career educational credentials issued by program, 2015-2018 with three-year percent change**

Program Name – TOP code	Academic Year			Percent increase, 2015 to 2018
	2015-16	2016-17	2017-18	
Business Administration-050500	677	890	1,108	64%
Child Development/Early Care and Education-130500	561	710	738	32%
Registered Nursing-123010	556	558	503	(10%)
Administration of Justice-210500	472	500	558	18%
Automotive Technology-094800	246	187	267	9%
Emergency Medical Services-125000	155	143	397	156%
Accounting-050200	204	233	235	15%
Business Management-050600	184	189	131	(29%)
Business and Commerce, General-050100	178	169	156	(12%)
Licensed Vocational Nursing-123020	151	116	206	36%
Subtotal from top ten programs	3,384	3,695	4,299	27%
Subtotal from all other programs	3,065	3,585	4,220	38%
<b>Total from all career education programs</b>	<b>6,449</b>	<b>7,280</b>	<b>8,519</b>	<b>32%</b>

Source: Chancellor's Office Management Information Systems Data Mart



IEDR career education programs focus on workforce development within the priority industry sectors established by the state Community College Chancellor’s Office. Exhibit 10 displays the number of career education credentials issued by programs within each sector; the sharpest increases were in Advanced Manufacturing, ICT/DM, and Agriculture, Water and Environmental Technology. Please note that not all career education programs have been assigned to a sector (LaunchBoard, 2019). No credentials have been issued for programs assigned to the Life Sciences – Biotechnology sector in the region. Regional Deputy Sector Navigators represent the italicized sectors in Exhibit 10.

**Exhibit 10: Career educational credentials issued by sector, 2015-2018 with three-year percent change**

Priority and Emerging Sector – Regional Sectors Italicized	Academic Year			Percent increase, 2015 to 2018
	2015-16	2016-17	2017-18	
<i>Business and Entrepreneurship</i>	1,430	1,727	1,908	33%
<i>Health</i>	1,476	1,489	1,764	20%
Public Safety	761	1,090	1,066	40%
<i>Information and Communication Technologies – Digital Media</i>	729	804	1,179	62%
Education and Human Development	655	794	825	26%
<i>Advanced Transportation and Logistics</i>	391	360	497	27%
<i>Energy, Construction and Utilities</i>	303	318	387	28%
<i>Advanced Manufacturing</i>	191	219	314	64%
Retail, Hospitality and Tourism	256	200	266	4%
Agriculture, Water and Environmental Technologies	66	84	106	61%
Global Trade	8	4	15	88%
Life Sciences - Biotechnology	-	-	-	-
Unassigned*	183	191	192	5%
<b>Total from all career education programs</b>	<b>6,449</b>	<b>7,280</b>	<b>8,519</b>	<b>32%</b>

\*Programs not assigned to a sector: Applied Design-100900, Fitness Trainer-083520, Human Services-210400, Legal and Community Interpretation-214000, Library Technician (Aide)-160200, Other Engineering and Related Industrial Technologies-099900, Paralegal-140200, Technical Theater-100600, Vocational ESL-493100.

Source: Chancellor’s Office Management Information Systems Data Mart (MIS)

## SUPPLY/DEMAND ANALYSIS

With 7,416 annual average career education credentials awarded in the IEDR between the 2015-16 and 2017-18 academic years, there is a potential annual average deficit of 68,544 qualified workers to fill the 75,960 middle-skill job openings. When focusing on specific occupations, there is a workforce gap ranging from 574 qualified *licensed vocational nurses* to 4,056 *heavy and tractor-trailer truck drivers* each year within the 30 middle-skill occupations displayed below in Exhibit 11.

**There is a potential workforce deficit of 68,544 middle-skill workers per year.**



**Exhibit 11: Potential annual workforce deficit for the thirty most in-demand middle-skill occupations**

#	Occupation	Projected annual average job openings, 2018-2023	Annual average credentials issued, 2015-2018	Potential annual workforce deficit
1	Heavy and Tractor-Trailer Truck Drivers	4,056	-	(4,056)
2	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	2,677	149	(2,527)
3	Customer Service Representatives	2,578	2	(2,576)
4	Teacher Assistants	2,410	14	(2,396)
5	Registered Nurses	2,307	539	(1,768)
6	Carpenters	2,228	-	(2,228)
7	Childcare Workers	2,060	681	(1,378)
8	Bookkeeping, Accounting, and Auditing Clerks	1,915	224	(1,691)
9	First-Line Supervisors of Retail Sales Workers	1,883	6	(1,877)
10	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1,801	9	(1,792)
11	First-Line Supervisors of Office and Administrative Support Workers	1,688	32	(1,656)
12	First-Line Supervisors of Food Preparation and Serving Workers	1,642	159	(1,483)
13	Maintenance and Repair Workers, General	1,638	5	(1,634)
14	Sales Representatives, Services, All Other	1,317	-	(1,317)
15	Medical Assistants	1,302	41	(1,261)
16	Hairdressers, Hairstylists, and Cosmetologists	1,300	114	(1,186)
17	Nursing Assistants	1,211	80	(1,131)
18	Electricians	1,161	23	(1,138)
19	Automotive Service Technicians and Mechanics	1,124	236	(888)
20	First-line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors	1,067	-	(1,067)
21	Medical Secretaries	1,016	2	(1,014)
22	Business Operations Specialists, All Other	902	22	(879)
23	Home Health Aides	871	12	(859)
24	First-Line Supervisors of Construction Trades and Extraction Workers	864	16	(849)
25	Plumbers, Pipefitters, and Steamfitters	849	-	(849)
26	Dental Assistants	736	35	(701)
27	Licensed Vocational Nurses	732	158	(574)
28	Recreation Workers	693	1	(692)
29	Fitness Trainers and Aerobics Instructors	661	15	(646)
30	Insurance Sales Agents	631	-	(631)
	Subtotal for these 30 middle-skill occupations	45,318	2,575	(42,744)
	Subtotal for other 263 middle-skill occupations	30,642	4,841	(25,800)
	<b>Total for all 293 middle-skill occupations</b>	<b>75,960</b>	<b>7,416</b>	<b>(68,544)</b>

Source: EMSI 2019.2 & Chancellor's Office Management Information Systems Data Mart (MIS)

To better understand the potential for community colleges to provide training to meet the middle-skill labor market demand, this section will examine individual training programs and their related occupations.

Exhibit 12 displays the career education programs with potential workforce deficits of over 1,000 jobs. The occupation(s) related to each program are included in the center column, alongside the number of annual job openings. The supply/demand gaps are grouped by the region's priority sectors as described in an earlier section.

**Exhibit 12: Career education programs with the largest workforce deficits (>1,000 jobs), by priority sector**

Program Name – TOP code	Annual average credentials issued, 2015-18	Related Occupations (Annual Openings)	Projected annual average job openings, 2018-23	Potential Workforce Deficit
<b>Advanced Transportation</b>				
Truck and Bus Driving-094750	0	Heavy and Tractor-Trailer Truck Drivers (4,056)	4,056	(4,056)
<b>Information and Communication Technologies –Digital Media</b>				
Office Technology/ Office Computer Applications-051400	149	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive (2,677)	2,677	(2,527)
<b>Retail, Hospitality and Tourism</b>				
Retail Store Operations and Management-050650	6	First-Line Supervisors of Retail Sales Workers (1,883)	1,883	(1,877)
Office Management-051440	25	First-Line Supervisors of Office and Administrative Support Workers (1,688)	1,688	(1,663)
<b>Education and Human Development</b>				
Educational Aide (Teacher Assistant)-080200	14	Teacher Assistants (2,410)	2,410	(2,396)
Child Development/Early Care and Education-130500	670	Childcare Workers (2,060) Preschool Teachers, Except Special Education (464)	2,524	(1,854)
<b>Energy, Construction and Utilities</b>				
Carpentry-095210	0	Carpenters (2,228)	2,228	(2,228)
Electrical-095220	23	Electricians (1,161)	1,161	(1,138)
<b>Global Trade</b>				
International Business and Trade-050800	9	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products (1,801) Buyers and Purchasing Agents (410)	2,211	(2,202)

*continued*



**Exhibit 12: Career education programs with the largest workforce deficits (>1,000 jobs), by priority sector (continued)**

<b>Business and Entrepreneurship</b>				
Accounting-050200	224	Bookkeeping, Accounting, and Auditing Clerks (1,915) Payroll and Timekeeping Clerks (231) Tax Preparers (102) Tax Examiners and Collectors, and Revenue Agents (34) Brokerage Clerks (14)	2,296	(2,072)
Cosmetology and Barbering-300700	114	Hairdressers, Hairstylists, and Cosmetologists (1,300) Barbers (135)	1,435	(1,321)
<b>Advanced Manufacturing</b>				
Industrial Systems Technology and Maintenance-094500	5	Maintenance and Repair Workers, General (1,638) Industrial Machinery Mechanics (310)	1,948	(1,943)
<b>Health</b>				
Registered Nursing-123010	539	Registered Nurses (2,307)	2,307	(1,768)
Medical Assisting-120800	41	Medical Assistants (1,302)	1,302	(1,261)
Certified Nurse Assistant-123030	80	Nursing Assistants (1,211)	1,211	(1,131)
Medical Office Technology-051420	2	Medical Secretaries (1,016)	1,016	(1,014)

Source: Chancellor's Office Management Information Systems Data Mart (MIS), EMSI 2019.2 & TOP-SOC Crosswalk

A full supply and demand list of all career education programs in the IEDR is available on the Center of Excellence website: [http://coecc.net/reports/Inland\\_EmpireDesert\\_Region\\_Supply\\_and\\_Demand](http://coecc.net/reports/Inland_EmpireDesert_Region_Supply_and_Demand)



## CONCLUSION

There is a potentially large workforce deficit present for several middle-skill occupations in the Inland Empire/Desert region; indicating that employers may struggle to find enough trained and well-qualified middle-skill workers to fill anticipated job openings over the next five years. Paired with the fact that 97% of middle-skill occupations in the region pay a median-level living wage, students should be optimistic about the prospect of finding a good paying job upon completing a career education program at their local community college.

This IEDR Educational Supply & Occupational Demand Analysis report serves as a springboard for the community colleges to launch discussions on expanding existing career education programs or creating new programs linked to middle-skill occupations. With the abundance of accessible data related to program outcomes and regional job openings, a thorough analysis of how and where resources can be distributed is possible. This study moves the needle in that direction, but also acknowledges that further research is needed to address labor market demand from the regional employers' perspective.

Each occupational deficit requires careful consideration before investing. Many factors should be taken into consideration before creating or expanding career education programs based on the most significant potential workforce deficit alone. Factors that must be considered are self-sustainable wages, union training programs, educational programs offered by institutions outside of the community college system, the costs associated with starting or expanding a program, or other factors unique to specific programs and occupations. A thorough review of comparable programs throughout the state is a worthwhile consideration. A mixed methods analysis of regional employment must also be considered, which can be studied via traditional labor market information, real-time job posting data, or a more in-depth survey of local employers. For these reasons, it is important to consult with the IEDR Center of Excellence, as well as regional employers, before moving forward with program creation or expansion.



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## MORE ABOUT THE CENTERS OF EXCELLENCE

The Centers of Excellence (COE) for Labor Market Research deliver regional workforce research and technical expertise to California Community Colleges for program decision making and resource development. This information has proven valuable to colleges in beginning, revising, or updating economic development and Career Education (CE) programs, strengthening grant applications, assisting in the accreditation process, and in supporting strategic planning efforts.

The Centers of Excellence Initiative is funded in part by the Chancellor's Office, California Community Colleges, Economic and Workforce Development Program. The Centers aspire to be the leading source of regional workforce information and insight for California Community Colleges. More information about the Centers of Excellence is available at [coeccc.net](http://coeccc.net).

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