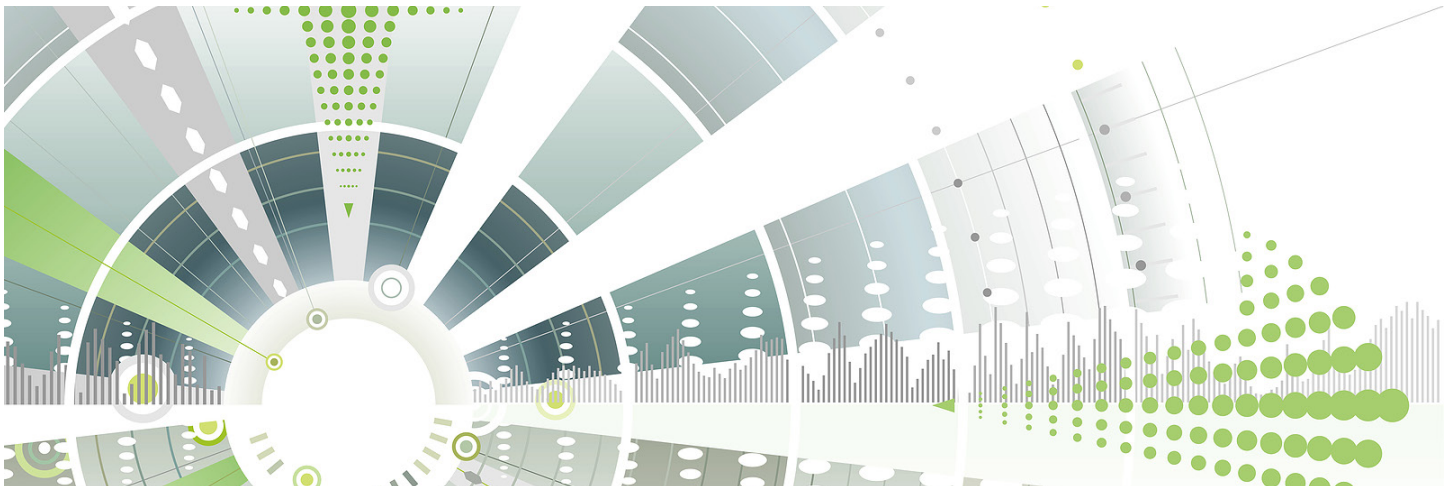June 2018

OPPORTUNITIES FOR CAREER EDUCATION TO CLOSE THE MIDDLE-SKILL JOBS GAP

SAN DIEGO COUNTY

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THE MIDDLE-SKILL JOB MARKET IN SAN DIEGO COUNTY

This summary highlights key points from the study, Opportunities for Career Education to Close the Middle-Skill Jobs Gap. The study explores where the middle-skill job opportunities are in San Diego County and identifies job gaps that could potentially be filled with public Career Education programs.

Middle-skill jobs constitute a significant portion of the San Diego labor market. In 2017, 38% of the 1,583,115 jobs in San Diego County were middle-skill jobs.

Jobs Breakdown in San Diego County, 2017

Below-Middle-Skill Jobs
39% (620K)

Middle-Skill Jobs
38% (600K)

1.58M Jobs

Above-Middle-Skill Jobs
23% (363K)
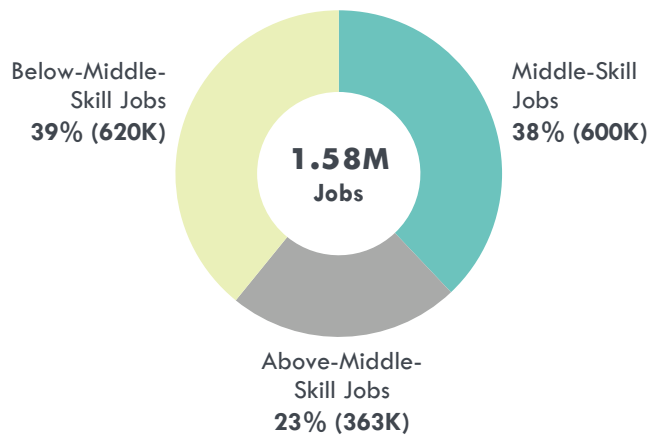
What is a Middle-Skill Job?
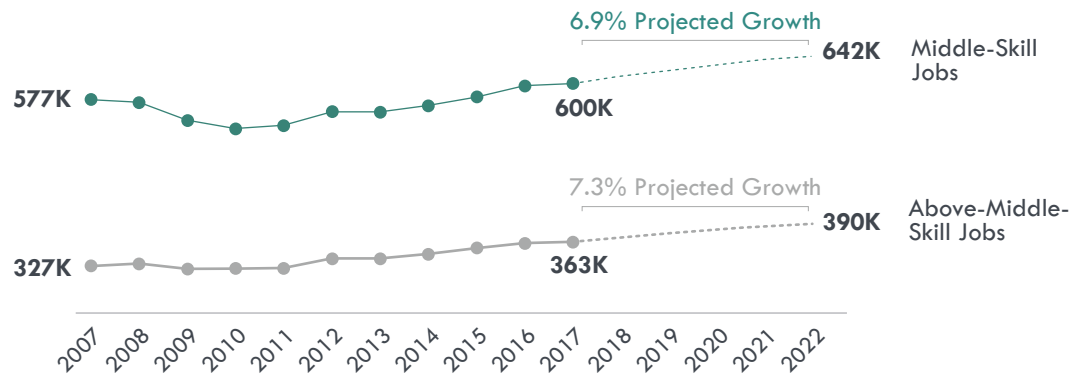
A middle-skill job has the following training requirements:

> Some college coursework, a postsecondary certificate, and/or an associate degree; or

> High school diploma or equivalent with on-the-job training greater than 12 months; or

> Apprenticeship; or

> Bachelor's degree if at least 33% of workers in the occupation, age 25 or older, have completed, as their highest level of education, some college coursework or an associate degree.

Between 2017 and 2022, the number of middle-skill jobs in the region is projected to increase by 41,450 jobs or 6.9%.

Number of People Employed in Middle-Skill and Above-Middle-Skill Jobs in San Diego County

6.9% Projected Growth

642K Middle-Skill Jobs

577K

600K

7.3% Projected Growth

390K Above-Middle-Skill Jobs

327K

363K

2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022

TOP 100 MIDDLE-SKILL JOBS

There are 298 Standard Occupational Classification (SOC) codes that define middle-skill jobs. This study analyzes the top 100 SOC codes for middle-skill jobs that have the most labor market demand, stable employment growth, and entry-level wages at or above the Self-Sufficiency Standard.[1]

88
The number of top middle-skill jobs with supply gaps in the region.

45,457
The number of job openings per year between 2017 and 2022 for the top 100 middle-skill jobs.

29,054
The number of awards that training providers will need to generate to close the supply gap for the top 100 middle-skill jobs.

[1] The Self-Sufficiency Standard is the hourly wage ($13.09) that a single adult (with no family) needs to earn to meet basic needs in San Diego County. selfsufficiencystandard.org
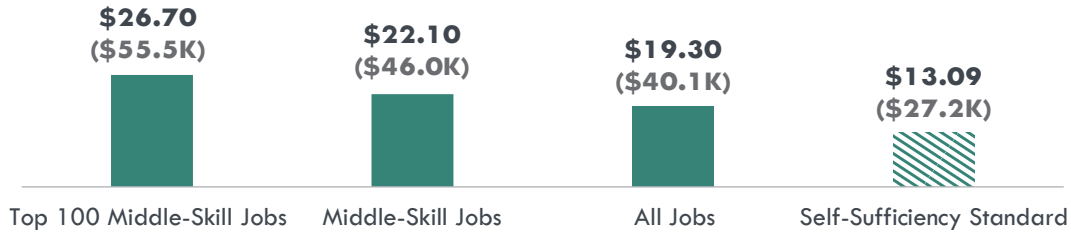
TOP 100 MIDDLE-SKILL JOBS

A comparison of labor market demand (annual jobs openings) with labor supply (program awards) from the region's educational institutions indicates that there are 88 top middle-skill jobs with supply gaps. Occupations with an asterisk (*) indicate an oversupply.

|	
Administrative Services Managers*	Industrial Production Managers
Aircraft Mechanics and Service Technicians	Inspectors, Testers, Sorters, Samplers, and Weighers
Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	Insurance Sales Agents
Architectural and Civil Drafters	Interpreters and Translators
Automotive Body and Related Repairers	Legal Secretaries
Bus and Truck Mechanics and Diesel Engine Specialists	Library Technicians
Bus Drivers, School or Special Client	Licensed Practical and Licensed Vocational Nurses
Business Operations Specialists, All Other	Life, Physical, and Social Science Technicians, All Other
Cargo and Freight Agents	Loan Interviewers and Clerks
Carpenters	Loan Officers
Chefs and Head Cooks*	Lodging Managers
Civil Engineering Technicians	Logisticians
Claims Adjusters, Examiners, and Investigators	Machinists
Computer Network Architects	Maintenance and Repair Workers, General
Computer Network Support Specialists	Medical and Clinical Laboratory Technicians
Computer Occupations, All Other*	Medical and Clinical Laboratory Technologists
Computer User Support Specialists	Medical Assistants*
Computer-Controlled Machine Tool Operators, Metal and Plastic	Medical Records and Health Information Technicians
Construction and Building Inspectors	Medical Secretaries
Construction Managers*	Network and Computer Systems Administrators*
Correctional Officers and Jailers	Operating Engineers and Other Construction Equipment Operators
Cost Estimators*	Paralegals and Legal Assistants
Customer Service Representatives	Payroll and Timekeeping Clerks*
Dental Assistants	Pharmacy Technicians
Dental Hygienists	Phlebotomists
Detectives and Criminal Investigators	Photographers
Electrical and Electronic Equipment Assemblers	Physical Therapist Assistants
Electrical and Electronics Engineering Technicians	Plumbers, Pipefitters, and Steamfitters
Electricians	Police and Sheriff's Patrol Officers
Engineering Technicians, Except Drafters, All Other	Production, Planning, and Expediting Clerks
Executive Secretaries and Executive Administrative Assistants	Property, Real Estate, and Community Association Managers
Firefighters*	Purchasing Agents, Except Wholesale, Retail, and Farm Products
First-Line Supervisors of Construction Trades and Extraction Workers	Radiologic Technologists
First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	Registered Nurses
First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	Reservation and Transportation Ticket Agents and Travel Clerks
First-Line Supervisors of Mechanics, Installers, and Repairers	Sales Representatives, Services, All Other
First-Line Supervisors of Non-Retail Sales Workers	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products
First-Line Supervisors of Office and Administrative Support Workers	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive
First-Line Supervisors of Personal Service Workers*	Sheet Metal Workers
First-Line Supervisors of Production and Operating Workers	Social and Human Service Assistants
First-Line Supervisors of Retail Sales Workers	Structural Iron and Steel Workers
First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	Surgical Technologists
Fitness Trainers and Aerobics Instructors	Tax Preparers*
Glaziers	Training and Development Specialists
Health Technologists and Technicians, All Other	Transportation, Storage, and Distribution Managers
Healthcare Support Workers, All Other	Veterinary Technologists and Technicians*
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	Water and Wastewater Treatment Plant and System Operators
Heavy and Tractor-Trailer Truck Drivers	Web Developers
Human Resources Assistants, Except Payroll and Timekeeping	Welders, Cutters, Solderers, and Brazers
Industrial Machinery Mechanics	Wholesale and Retail Buyers, Except Farm Products

KEY FINDINGS

Training for the top 100 middle-skill jobs can provide job seekers with opportunities for income mobility: The average median hourly wage of all middle-skill jobs is $22.10, the average median hourly wage of all jobs in the region is $19.30, and the Self-Sufficiency Standard is $13.09. The average median hourly wage of the top 100 middle-skill jobs analyzed in this study is $26.70, which is higher than all three.

Median Hourly Earnings (Annual Salary) vs. Self-Sufficiency Standard

$26.70
($55.5K)

$22.10
($46.0K)

$19.30
($40.1K)

$13.09
($27.2K)

Top 100 Middle-Skill Jobs   Middle-Skill Jobs   All Jobs   Self-Sufficiency Standard

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Of the top 100 middle-skill jobs identified in this study, 88 have supply gaps and 12 have labor surpluses (an oversupply of labor). Comparatively, the top 100 above-middle-skill jobs have 30 supply gaps, suggesting that middle-skill jobs have more opportunities to develop programs than above-middle-skill jobs.

867 Occupational (SOC) Codes

Top 100 Middle-Skill Jobs	Top 100 Above-Middle-Skill Jobs
88 Supply Gaps	30 Supply Gaps
12 Labor Surpluses	70 Labor Surpluses
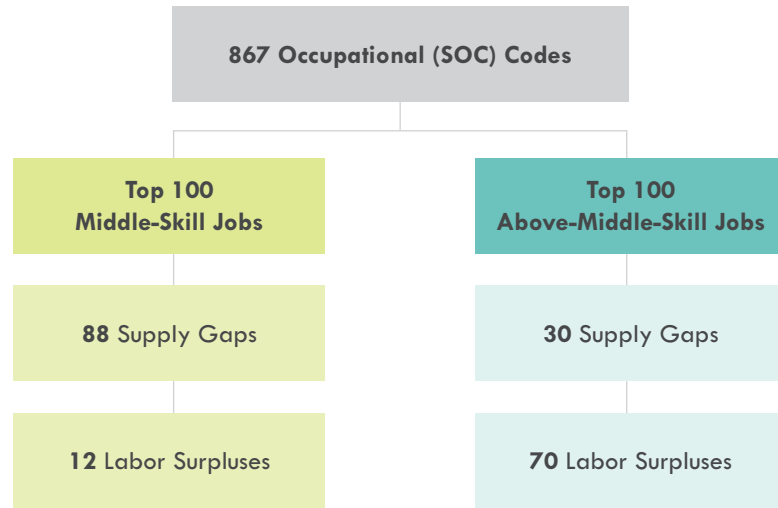
The top 100 middle-skill jobs have a labor market demand of 45,457 annual job openings and a program supply of 16,403 awards. That is a difference of 29,054 awards that could be produced by the region to meet labor market demand.

Not all middle-skill jobs require an associate degree. Of the 45,457 annual job openings, 16% are related to supervisorial or management roles, 17% are related to sales roles, and 17% are related to administrative or secretarial roles. The majority of these occupations require less than an associate degree as their typical entry-level education. This suggests that there are opportunities for short-term certificate programs that can fill these roles. Short-term certificate programs require less than two years to complete.

Median Hourly Earnings vs. Self-Sufficiency Standard*

"Secretaries" or "Administrative"	**17%**
"Sales" or "Customer Service"	**17%**
"Supervisors" or "Managers"	**16%**

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* These percentages have some overlap because an occupation may have more than one role: For example, First-Line Supervisors of Office and Administrative Support Workers are both supervisorial and administrative positions.

RECOMMENDATIONS FOR MORE PROGRAM SUPPLY

Career Education programs can help fill labor supply gaps with short-term certificates or associate degrees. The following list of six-digit Taxonomy of Programs (TOP6) codes are recommended for increased awards to close the supply gap. The TOP system is used at the state level to collect and report information on community college programs. Existing TOP6 programs that train for occupations with a supply gap of at least 100 job openings are included below. The full list of TOP6 programs that train for occupations with supply gaps can be found in the full report. Programs with an asterisk (*) may be suitable for short-term certificate programs.

TOP6	TOP6 Program Title	TOP6	TOP6 Program Title
050400	Banking and Finance	095220	Electrical
050630	Management Development and Supervision*	095230	Plumbing, Pipefitting, and Steamfitting
050640	Small Business and Entrepreneurship	095250	Mill and Cabinet Work
050650	Retail Store Operations and Management	095260	Masonry, Tile, Cement, Lath and Plaster
050800	International Business and Trade*	095280	Drywall and Insulation
050900	Marketing and Distribution*	095500	Laboratory Science Technology
050940	Sales and Salesmanship*	095600	Manufacturing and Industrial Technology
050970	E-Commerce (Business Emphasis)*	095630	Machining and Machine Tools
051000	Logistics and Materials Transportation*	095640	Sheet Metal and Structural Metal
051100	Real Estate	095680	Industrial Quality Control*
051110	Escrow	095720	Construction Inspection
051200	Insurance*	120500	Medical Laboratory Technology
051400	Office Technology/Office Computer Applications*	120510	Phlebotomy
051410	Legal Office Technology*	120820	Administrative Medical Assisting*
051420	Medical Office Technology	120830	Health Facility Unit Coordinator
051440	Office Management*	121100	Polysomnography
070210	Software Applications	121200	Electro-Neurodiagnostic Technology
070730	Computer Systems Analysis	121400	Orthopedic Assistant
070800	Computer Infrastructure and Support	122000	Speech/Language Pathology and Audiology
070820	Computer Support	122100	Pharmacy Technology
092400	Engineering Technology, General	122300	Health Information Technology
093400	Electronics and Electric Technology	122310	Health Information Coding
093410	Computer Electronics	123020	Licensed Vocational Nursing
093430	Telecommunications Technology	123010	Registered Nursing
093440	Electrical Systems and Power Transmission	124010	Dental Assistant
093470	Electron Microscopy	124020	Dental Hygienist
094300	Instrumentation Technology	130320	Fashion Merchandising*
094500	Industrial Systems Technology and Maintenance	140200	Paralegal
094610	Energy Systems Technology	160200	Library Technician (Aide)
094700	Diesel Technology	210210	Public Works
094730	Heavy Equipment Operation	210510	Corrections
094740	Railroad and Light Rail Operations*	210540	Forensics, Evidence, and Investigation
094900	Automotive Collision Repair	210550	Police Academy
095210	Carpentry	300900	Travel Services and Tourism*

RECOMMENDATIONS FOR FURTHER ANALYSIS

Further research coupled with this labor market study may help with decision-making in regard to programs and course offerings:

> **Conduct primary research to validate these recommendations with employers:** This study provides lists of recommended TOP codes for short-term certificate and associate degree programs. However, the recommendations have not been validated by industry or businesses. Collecting primary data directly from employers will help further confirm program recommendations.

> **Examine how well existing programs currently meet labor market needs:** While this study makes recommendations for program development based on labor market information, it lacks information about the programs themselves. By conducting a program evaluation, the community colleges can gain insight as to why so many programs exist in the region for the top 100 middle-skill jobs, but supply from each program is low.

> **Validate whether the recommended TOP codes for short-term certificate programs currently train skills-builders:** Many of the TOP codes that this study recommends for short-term certificate programs may already train for skills-builders in the region. Skills-builders are students who take higher-level Career Education courses, but do not complete a community college program or transfer to a four-year institution. These skills-builders may take a college course to obtain new skills and/or to increase their earnings, but do not need to complete an associate degree program to achieve those goals. By understanding what programs train skills-builders, colleges in the region may want to consider which courses, rather than programs, to market to students and working professionals.

For the full report, visit San Diego-Imperial at **coeccc.net**.

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