COE | CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

Digital Photography Skills

Labor Market Analysis: San Diego County

April 2021

Summary

NEW PROGRAM RECOMMENDATION?	EVIDENCE OF A SUPPLY GAP?	AT OR ABOVE THE LIVING WAGE?	EXPECTED LEVEL OF EDUCATION
● Proceed with New Program	☑ ☒	☑ ☒	☑ Bachelor's Degree ☐ Associate Degree ☐ Some College or Certificate ☐ HS Diploma or Equivalent ☐ Less than a HS Diploma ☐ Apprenticeship
	NUMBER OF INSTITUTIONS THAT PROVIDE TRAINING	NUMBER OF ANNUAL JOB OPENINGS	
	MEDIUM	HIGH	

The San Diego-Imperial Center of Excellence for Labor Market Research (COE) developed this brief to assist the region's community colleges with strategic planning and program development. According to available labor market information, there was an average of 731 online job postings between 2010 and 2020 for *Digital Photography Skills*, which included the skills: "digital photography," "photography," "photo editing," and/or "photo processing." For comparison, there was an average of 560 online job postings for an occupation in San Diego County in 2020. This brief identified "Photographers," "Graphic Designers," and "Market Research Analysts and Marketing Specialists" as the top three occupations that request *Digital Photography Skills*. These three occupations have an estimated demand of 240 annual job openings (while average demand for a single occupation in San Diego County is 277 annual job openings). Entry-level wages and median wages are above the living wage, except for "Photographers." This brief recommends proceeding with a new program that trains for *Digital Photography Skills* because 1) a high number of online job postings request *Digital Photography Skills*; 2) a high number of annual job openings exist for the top three occupations that request *Digital Photography Skills;* and 3) a supply gap exists for these occupations. Colleges should note, however, that **employers typically require a bachelor's degree as the minimum educational requirement when requesting these skills.**

Introduction

The San Diego-Imperial Center of Excellence for Labor Market Research (COE) completed this brief to provide the San Diego and Imperial Counties Community Colleges with information about *Digital Photography Skills* for strategic planning and program development. While labor market demand is typically defined as the number of annual job openings for an occupation, *Digital Photography Skills* can be applied to a variety of occupations. Therefore, a traditional analysis of demand (annual job openings) may not fully capture the need for *Digital Photography Skills* across various occupations, or address that an occupation may not necessarily require these skills. The purpose of this brief is to identify the most relevant occupations for *Digital Photography Skills* by analyzing online job postings within the last full five years (January 2016 – December 2020). It is important to note that the number of online job postings is not indicative of the number of annual job openings for any given occupation because employers may post a position online multiple times for various reasons, such as increasing the pool of applicants, for example. This brief also summarizes labor market information for the top occupations in which *Digital Photography Skills* are most relevant, while accounting for the proportion of online job postings that specifically requested *Digital Photography Skills* for those occupations. Finally, this brief provides an overview of related programs offered at community colleges in San Diego County.

To conduct the analysis in this report, the "skills" search function in Burning Glass, a software tool that aggregates and deduplicates online job postings from thousands of online job posting sources, was utilized. For the purpose of this report and as referenced throughout, *Digital Photography Skills* includes the skills: "digital photography," "photography," "photo editing," and/or "photo processing."

Online Job Postings

This report analyzes historical and recent data from online job postings (which is also known as real-time labor market information). Online job postings may provide insight into changes happening in the labor market and provide information about specific skills sought by employers in online job postings. Between 2010 and 2020, there was an average of 731 online job postings per year for *Digital Photography Skills* in San Diego County (Exhibit 1). The largest increase in online job postings seeking candidates with *Digital Photography Skills* was between 2017 and 2018, with a 92 percent increase in online job postings requesting these skills. More recently, there was an eight percent decline between 2019 and 2020. Please note that online job postings do **not** equal labor market demand; demand is represented by annual job openings. As noted previously, employers may post a position multiple times for various reasons, such as increasing the pool of applicants, for example.

Exhibit 1: Number of Online Job Postings and Percentage Change for *Digital Photography Skills* in San Diego County (2010-2020)[1]
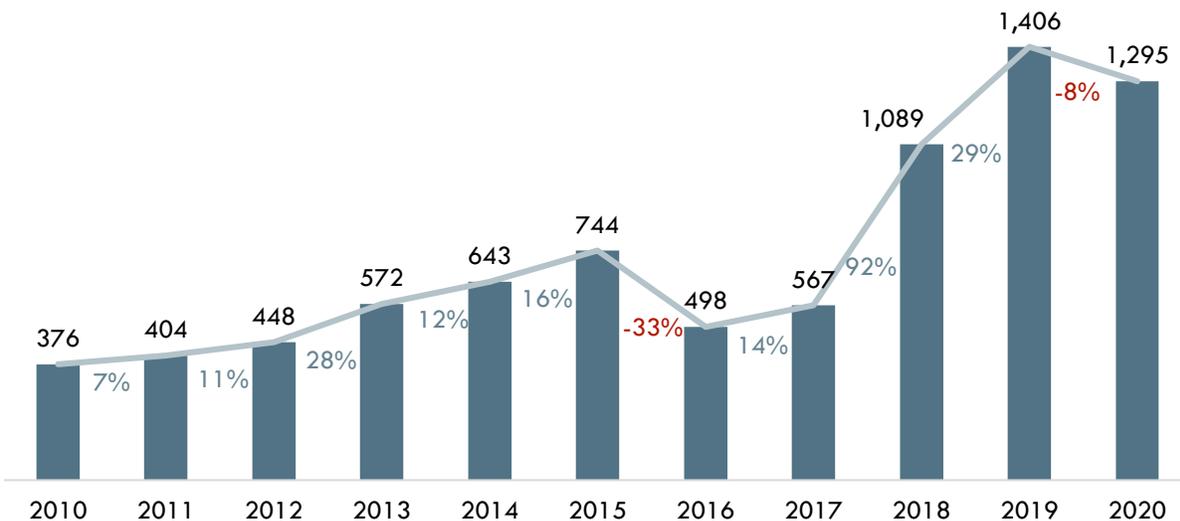
[1] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2010-2020.

Top Employers

Between January 1, 2016 and December 31, 2020, the top employers in San Diego County requesting *Digital Photography Skills* were Lifetouch, University of California San Diego, Qualcomm, ActionLink, and Bella Baby Photography based on online job postings (Exhibit 2).

Exhibit 2: Top Employers in San Diego County Requesting *Digital Photography Skills*, 2016-2020[2]

Top Employers	
• Lifetouch	• Tribune Company
• University of California San Diego	• Retail Merchandising Services
• Qualcomm	• Winston Retail
• ActionLink	• MCG Health
• Bella Baby Photography	• NBC

Top Occupations

Between January 1, 2016 and December 31, 2020, there were 4,855 online job postings requesting *Digital Photography Skills* in San Diego County. Exhibit 3 shows the occupations with the most online job postings requesting these skills. The top occupations were Photographers, Graphic Designers, and Market Research Analysts and Marketing Specialists.

Exhibit 3: Number of Job Postings Requesting *Digital Photography Skills*, 2016-2020[3]

SOC[4]	Occupational Title	# of Job Postings (2016-2020)
27-4021	Photographers	1,094
27-1024	Graphic Designers	453
13-1161	Market Research Analysts and Marketing Specialists	394
27-3031	Public Relations Specialists	203
41-2031	Retail Salespersons	166
27-1026	Merchandise Displayers and Window Trimmers	158
11-2021	Marketing Managers	149
15-1132	Software Developers, Applications	118

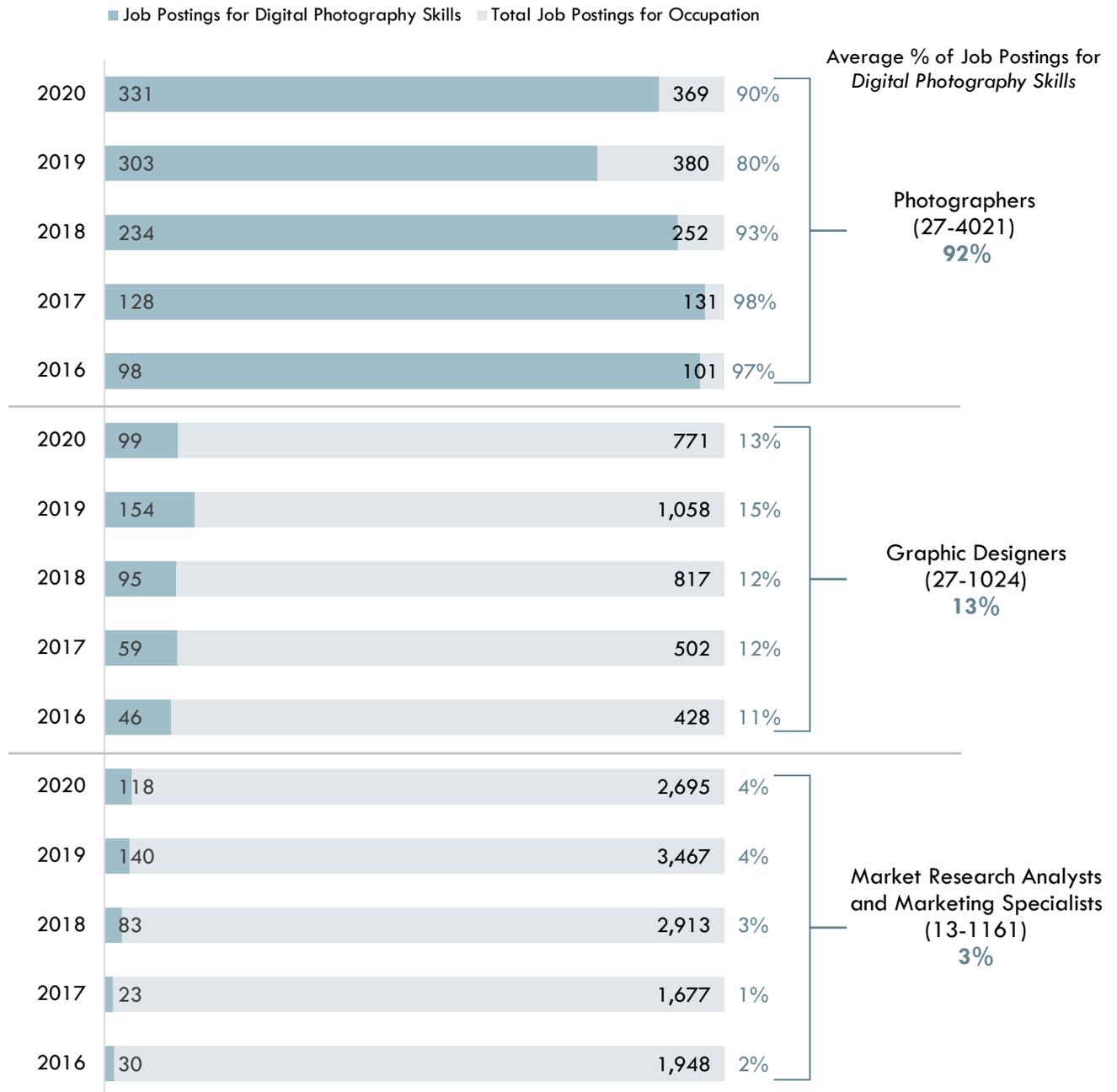[2] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2020.
[3] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2020.
[4] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. bls.gov/soc.

Exhibit 4 summarizes the percentage of online job postings that requested *Digital Photography Skills* for the top three occupations, calculated from the total number of online job postings for the occupation each year.

Exhibit 4: Percentage of Job Postings Requesting *Digital Photography Skills* by Occupation, 2016-2020[5]

Job Postings for Digital Photography Skills   Total Job Postings for Occupation

Year	Job Postings for Digital Photography Skills	Total Job Postings for Occupation	%	Occupation	Average % of Job Postings for Digital Photography Skills
2020	331	369	90%		
2019	303	380	80%		
2018	234	252	93%	Photographers (27-4021)	92%
2017	128	131	98%		
2016	98	101	97%		
2020	99	771	13%		
2019	154	1,058	15%		
2018	95	817	12%	Graphic Designers (27-1024)	13%
2017	59	502	12%		
2016	46	428	11%		
2020	118	2,695	4%		
2019	140	3,467	4%		
2018	83	2,913	3%	Market Research Analysts and Marketing Specialists (13-1161)	3%
2017	23	1,677	1%		
2016	30	1,948	2%		

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[5] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2020.

Top Job Titles

Although occupational titles are used to classify workers into federally recognized categories, employers commonly use various job titles in online job postings (ex. job titles "Freelance Photographer" and "Real Estate Photographer" can be classified as the occupation "Photographers [27-4021]"). Between January 1, 2016 and December 31, 2020, job titles with the most online job postings requesting *Digital Photography Skills* in San Diego County were Photographer, Graphic Designer, Pre-School Photographer, Retail Sales Associate - Photographer, and Marketing Coordinator (Exhibit *5*).

**Exhibit 5: Top Job Titles in Job Postings Requesting *Digital Photography Skills*, 2016-2020[6]**

Job Title	Made the List of 'Top 10 Job Titles' for Year					Total # Job Postings (2016-2020)
	2016	2017	2018	2019	2020	
Photographer	X	X	X	X	X	221
Graphic Designer	X	X	X	X	X	201
Pre-School Photographer				X	X	64
Retail Sales Associate - Photographer		X	X	X		53
Marketing Coordinator	X		X	X		42
Merchandiser			X			41
Retail Merchandising Representative				X	X	38
Photographer - Graduation Event				X		30
Photographer/Sales Associate			X			28
Junior Graphic Designer				X		28
Social Media Coordinator						27
Reporter						27
Senior Graphic Designer				X		26
Photographer/Editor					X	26
Freelance Photographer					X	26
Real Estate Photographer					X	24
Photo Ambassador			X			24
Communications Specialist		X		X		24
Social Media Manager						22
Marketing Manager						22

[6] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2020.

Education and Skills

Based on online job postings between January 1, 2016 and December 31, 2020 in San Diego County, the top listed educational requirement for *Digital Photography Skills* was a bachelor's degree (Exhibit 6).[7]

Exhibit 6: Educational Requirements for *Digital Photography Skills* in San Diego County

High school or vocational training	Associate degree	Bachelor's degree	Master's degree or higher
23%	6%	67%	5%
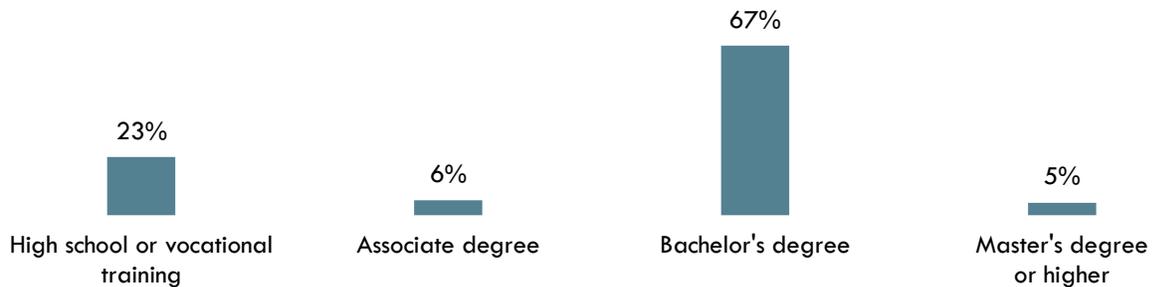
*May not add up to 100% due to rounding.

Exhibit 7 lists the top specialized, soft, and software skills that appeared in online job postings between January 1, 2016 and December 31, 2020 for occupations that requested *Digital Photography Skills*.

Exhibit 7: Top Skills in Job Postings for Occupations Requesting *Digital Photography Skills* in San Diego County[8]

Specialized Skills	Soft Skills	Software Skills
Photography	Creativity	Adobe Photoshop
Social Media	Communication Skills	Adobe InDesign
Graphic Design	Editing	Adobe Illustrator
Customer Service	Teamwork / Collaboration	Adobe Acrobat
Digital Photography	Organizational Skills	Adobe Creative Suite
Videography	Detail-Oriented	Microsoft Excel
Sales	Writing	Microsoft Office
Photo Editing	Research	Facebook
Video Editing	Meeting Deadlines	Microsoft PowerPoint
Budgeting	Computer Literacy	Microsoft Word
Marketing	Multi-Tasking	Adobe After Effects
Project Management	Physical Abilities	Adobe Premiere
Content Management	Problem Solving	YouTube
Scheduling	Planning	Social Media Platforms
Web Site Design	Time Management	Final Cut Pro

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[7] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2020.
[8] Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool." 2016-2020.

Digital Photography Skills Occupations

This report identifies three occupations with the most online job postings for *Digital Photography Skills* in the past five years. The following sections of the report provide labor market information in San Diego County for the following occupational codes in the Standard Occupational Classification (SOC)[9] system:

- **Photographers** (SOC[10] 27-4021): Photograph people, landscapes, merchandise, or other subjects. May use lighting equipment to enhance a subject's appearance. May use editing software to produce finished images and prints. Includes commercial and industrial photographers, scientific photographers, and photojournalists.

- **Graphic Designers** (27-1024): Design or create graphics to meet specific commercial or promotional needs, such as packaging, displays, or logos. May use a variety of mediums to achieve artistic or decorative effects.

- **Market Research Analysts and Marketing Specialists** (13-1161): Research conditions in local, regional, national, or online markets. Gather information to determine potential sales of a product or service, or plan a marketing or advertising campaign. May gather information on competitors, prices, sales, and methods of marketing and distribution. May employ search marketing tactics, analyze web metrics, and develop recommendations to increase search engine ranking and visibility to target markets.

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[9] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. bls.gov/soc.
[10] The Standard Occupational Classification (SOC) system is used by federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating or disseminating data. bls.gov/soc.

Projected Occupational Demand

Between 2020 and 2025, these occupations are projected to increase by 755 net jobs or five percent (Exhibit 8). Employers in San Diego County will need to hire 1,415 workers annually to fill new jobs and backfill jobs due to attrition caused by turnover and retirement, for example.

Exhibit 8: Number of Jobs for Top *Digital Photography Skills* Occupations (2010-2025)[11]
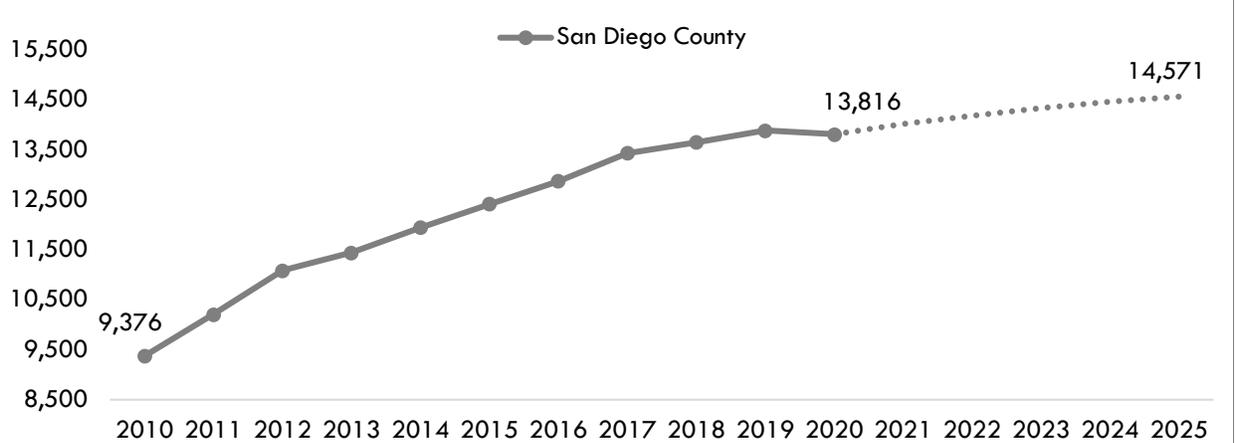

Exhibit 9 shows the adjusted number of annual job openings for *Digital Photography Skills*, which was calculated from the percentage of online job postings that requested *Digital Photography Skills* from the total number of online job postings for each occupation (see Exhibit 4). "Photographers" are projected to have the most labor market demand between 2020 and 2025, with 176 annual job openings.

Exhibit 9: Estimated Labor Market Demand for Top *Digital Photography Skills* Occupations in San Diego County (2020-2025)[12]

Occupational Title	2020 Jobs	2025 Jobs	2020 - 2025 Net Jobs Change	Annual Job Openings (Demand)	Average % of Job Postings for *Digital Photography Skills*	Adjusted Annual Job Openings (Demand)
Photographers	1,892	1,910	18	176	92%	176[13]
Graphic Designers	3,200	3,154	46	273	13%	35
Market Research Analysts and Marketing Specialists	8,724	9,507	783	966	3%	29
Total	13,816	14,571	755	1,415	-	240

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[11] EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.
[12] EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.
[13] Annual job openings for "Photographers" were not adjusted because the majority of online job postings requested *Digital Photography Skills*.

Earnings

The entry-level hourly earnings for the top occupations requesting *Digital Photography Skills* range from $12.83 to $21.33 (Exhibit 10).

Exhibit 10: Hourly Earnings for Top *Digital Photography Skills* Occupations in San Diego County[14]

Occupational Title	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Typical Entry-Level Education
Market Research Analysts and Marketing Specialists	$21.33	$29.28	Bachelor's Degree
Graphic Designers	$17.25	$24.49	Bachelor's Degree
Photographers	$12.83	$22.25	High School Diploma

Educational Supply

Educational supply for an occupation can be estimated by analyzing the number of awards in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes.[15] This brief provides an overview of awards from three TOP and five CIP codes related to *Digital Photography Skills* (Exhibit 11).

Exhibit 11: TOP and CIP Codes for Programs Related to *Digital Photography Skills*

TOP or CIP Code	TOP or CIP Program Title
TOP 0614.00	Digital Media
TOP 1011.00	Photography
TOP 1012.00	Applied Photography
CIP 10.0201	Photographic and Film/Video Technology/Technician and Assistant
CIP 10.0303	Prepress/Desktop Publishing and Digital Imaging Design
CIP 50.0102	Digital Arts
CIP 50.0401	Design and Visual Communications, General
CIP 50.0406	Commercial Photography

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[14] EMSI 2021.1; QCEW, Non-QCEW, Self-Employed.
[15] TOP data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data).

According to TOP data, five community colleges supply the region with awards for *Digital Photography Skills*: Grossmont College, MiraCosta College, Palomar College, San Diego City College, and Southwestern College. According to CIP data, two non-community-college institution supplies the region with awards, Platt College and Argosy University-The Art Institute of California-San Diego (Exhibit 12).

Exhibit 12: Number of Awards (Certificates and Degrees) Conferred by Postsecondary Institutions (Program Year 2014-15 through PY2018-19 Average)

Top or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards (PY16-17 to PY18-19)	Other Educational Institutions 3-Yr Annual Average Awards (PY14-15 to PY16-17)	3-Yr Total Average Supply (PY14-15 to PY18-19)
0614.00	Digital Media	**32**	**0**	**32**
MiraCosta	• Associate Degree	4	0	
	• Certificate 30<60 units	6	0	
	• Certificate 12<18 units	0	0	
	• Certificate 6<18 units	1	0	
Palomar	• Associate Degree	5	0	
	• Certificate 30<60 units	7	0	
	• Certificate 18<30 units	1	0	
	• Certificate 6<18 units	3	0	
San Diego City	• Certificate 6<18 units	5	0	
1011.00	Photography	**18**	**0**	**18**
Grossmont	• Associate Degree	8	0	
	• Certificate 30<60 units	0	0	
	• Certificate 16<30 units	9	0	
Southwestern	• Associate Degree	1	0	
1012.00	Applied Photography	**43**	**0**	**43**
MiraCosta	• Associate Degree	8	0	
	• Certificate 18<30 units	6	0	

Top or CIP Code	TOP or CIP Program Title	3-Yr Annual Average CC Awards (PY16-17 to PY18-19)	Other Educational Institutions 3-Yr Annual Average Awards (PY14-15 to PY16-17)	3-Yr Total Average Supply (PY14-15 to PY18-19)
MiraCosta	• Certificate 12<18 units	0	0	
Palomar	• Associate Degree	5	0	
	• Certificate 30<60 units	6	0	
	• Certificate 6<18 units	3	0	
San Diego City	• Associate Degree	3	0	
	• Certificate 30<60 units	0	0	
	• Certificate 18<30 units	3	0	
Southwestern	• Associate Degree	5	0	
	• Certificate 30<60 units	3	0	
	• Certificate 16<30 units	1	0	
10.0201	Photographic and Film/ Video Technology/ Technician and Assistant	**0**	**1**	**1**
Platt College	• Award <1 Academic yrs	0	1	
10.0303	Prepress/Desktop Publishing and Digital Imaging Design	**0**	**0**	**0**
Platt College	• Award 1<2 Academic yrs	0	0	
50.0406	Commercial Photography	**0**	**16**	**16**
Argosy University- The Art Institute of California- San Diego	• Associate Degree	0	11	
	• Award 1<2 Academic yrs	0	0	
	• Bachelor's Degree	0	5	
			Total	**110**

Demand vs. Supply

While labor market demand is typically defined as the number of annual job openings for an occupation, this brief uses an adjusted labor demand for *Digital Photography Skills* (calculated by multiplying the projected number of annual openings by the proportion of online job postings that requested *Digital Photography Skills* for an occupation). Comparing the adjusted labor demand with labor supply[16] suggests that there is a supply gap for *Digital Photography Skills* in San Diego County, with 240 annual openings and 110 awards. Comparatively, there are 2,867 annual openings in California and 1,016 awards, suggesting that there is a supply gap across the state[17] (Exhibit 13).

Exhibit 13: Labor Demand (Annual Openings) Compared with Labor Supply (Average Annual Awards)

	Demand (Adjusted Annual Openings)	Supply (Total Annual Average Supply)	Supply Gap or Oversupply
San Diego	240	110	**130**
California	2,867	1,016	**1,851**

Please note: This is a basic analysis of supply and demand of labor. The data does not include workers currently in the labor force who could fill these positions or workers who are not captured by publicly available data. This data should be used to discuss the potential gaps or oversupply of workers; however, it should not be the only basis for determining whether or not a program should be developed.

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[16] Labor supply can be found from two different sources: EMSI or the California Community Colleges Chancellor's Office MIS Data Mart. EMSI uses CIP codes while MIS uses TOP codes. Different coding systems result in differences in the supply numbers.
[17] "Supply and Demand," Centers of Excellence Student Outcomes, coeccc.net/Supply-and-Demand.aspx.

Prepared by:

Tina Ngo Bartel, Director (tngobartel@miracosta.edu)

John Edwards, Research Analyst (jedwards@miracosta.edu)

Priscilla Fernandez, Research Analyst (pfernandez@miracosta.edu)

San Diego-Imperial Center of Excellence for Labor Market Research

Important Disclaimers

All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. This study examines the most recent data available at the time of the analysis; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and the report findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

This workforce demand report uses state and federal job projection data that was developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.