ICT & DIGITAL MEDIA

Orange County Sector Analysis Project Nov 2021

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Orange County Community Colleges

SECTOR OVERVIEW

This Sector Profile highlights key points from the entire ICT and Digital Media sector in Orange County as well as from the Orange County (OC) Sector Analysis Project – a research report conducted by the OC Center of Excellence for Labor Market Research. ICT companies can range from small, innovative startup companies with less than five employees to large, global corporations with more than 1,000 employees. ICT workers develop new innovative products and services that improve productivity of firms across all industries. ICT companies include those in telecommunications, web development, data analytics, cybersecurity, video game development, and computer software. ICT and Digital Media employers place significant value in industry certifications and/or portfolios of previous work. Industry-based certifications are offered by the companies who developed the software, such as Microsoft, Cisco or CompTIA. Certifications are awarded based on completion of coursework and typically require a set number of instructional hours. In 2019, 52% of students who completed or exited an ICT and Digital Media community college program in the Orange County region were employed within six months after exiting.

ⓘ Data Points

58,206
people employed in OC

2.9% (1,694)
5-year projected job change

5,263
businesses in OC

5.8%
of the sector's employment in California is from OC

$93,706
average earnings per job

7.7%
of the sector's businesses in California are from OC

The ICT and Digital Media sector accounts for 58,206 jobs in the Orange County region and 5.8% of all ICT and Digital Media jobs in California. There are approximately 5,263 individual businesses in the region which make up 7.7% of all the businesses for the sector in California. This sector is projected to grow by 2.9% (or 1,694 jobs) in the next five years in Orange County. The average earnings per ICT and Digital Media job are $93,706.

🪪 Local Employers

Numa Networks

C2 Wireless

Open Text

Blizzard Entertainment

Ready at Dawn Studios

Digital Network Group

TOP MIDDLE-SKILL JOBS

Middle-skill jobs are occupations that community college students would be best prepared for after obtaining a certificate or degree. The top middle-skill jobs for the ICT and Digital Media sector are included below, along with corresponding entry-level and median hourly wages.
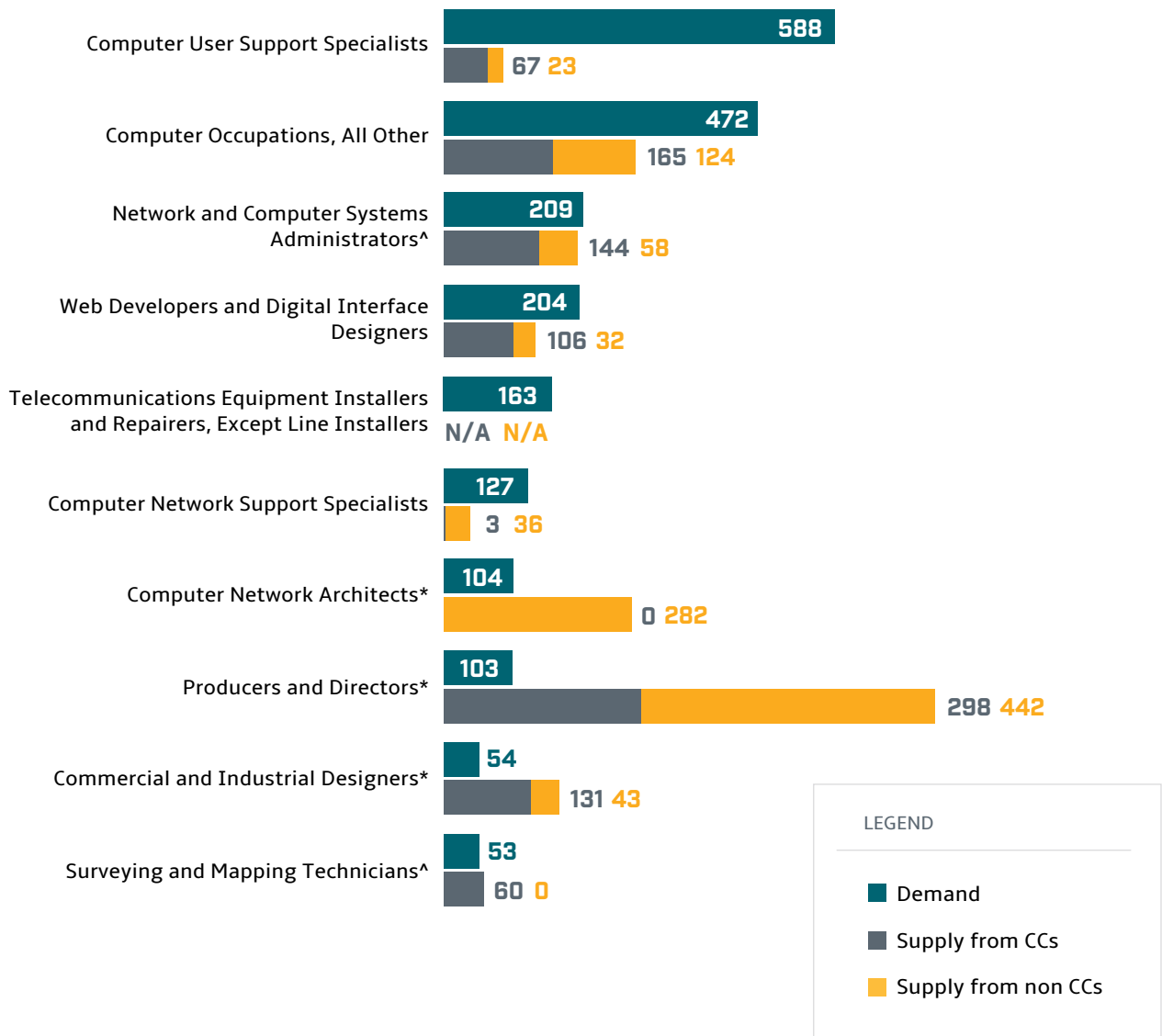
Middle-Skill Jobs Attainable with a Community College Education, Orange County (2020-2025)

SOC Code	SOC Occupational Title	Demand Annual Openings	Entry-Level Wage 25th Percentile	Median Wage
15-1232	Computer User Support Specialists	588	$21.39	$27.35
15-1299	Computer Occupations, All Other	472	$27.19	$38.70
15-1244	Network and Computer Systems Administrators	209	$34.80	$45.01
15-1257	Web Developers and Digital Interface Designers	204	$22.01	$33.48
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	163	$31.60	$38.71
15-1231	Computer Network Support Specialists	127	$26.58	$32.07
15-1241	Computer Network Architects	104	$40.98	$56.88
27-2012	Producers and Directors	103	$25.74	$41.99
27-1021	Commercial and Industrial Designers	54	$28.41	$37.41
17-3031	Surveying and Mapping Technicians	53	$29.98	$41.24

LABOR MARKET DEMAND, PROGRAM SUPPLY, & SUPPLY GAPS

Top middle-skill jobs are defined as occupations with the most labor market demand, stable employment growth, and entry-level wages at or above the living wage, as determined by the California Family Needs Calculator. The living wage for a single adult in Orange County is currently $20.63.[1] Comparing labor market demand with program supply suggests that half of the top middle-skill jobs in this sector have supply gaps in the Orange County region. Labor market demand is defined as the number of average annual job openings per year that employers expect to fill for a particular occupation. Program supply is the number of awards (e.g., degrees, certificates) from community colleges and other training providers.

Top Middle-Skill Jobs in Orange County: Labor Market Demand vs. Program Supply

| Occupation	Demand	Supply from CCs	Supply from non CCs
Computer User Support Specialists	588	67	23
Computer Occupations, All Other	472	165	124
Network and Computer Systems Administrators^	209	144	58
Web Developers and Digital Interface Designers	204	106	32
Telecommunications Equipment Installers and Repairers, Except Line Installers	163	N/A	N/A
Computer Network Support Specialists	127	3	36
Computer Network Architects*	104	0	282
Producers and Directors*	103	298	442
Commercial and Industrial Designers*	54	131	43
Surveying and Mapping Technicians^	53	60	0

LEGEND
■ Demand
■ Supply from CCs
■ Supply from non CCs

(Please note: * indicates that the occupation has an oversupply of labor, ^ indicates that the occupation's demand has been met, and N/A indicates that no community college program reported awards for this occupation or no community college program is available for this occupation.)

[1] The living wage as determined by the California Family Need Calculator is the hourly wage that a single adult needs to earn to meet basic needs in Orange County. https://insightcced.org/family-needs-calculator/

MIDDLE-SKILL JOBS WITH ENTRY-LEVEL WAGES BELOW THE REGIONAL LIVING WAGE

While it is important to understand which top middle-skill jobs have opportunities for increased program supply, it is also important to consider middle-skill occupations that have entry-level wages below the regional living wage, currently at $20.63, but median wages near or above it. Since wages generally increase from entry-level to median earnings with additional experience and training, students could potentially earn self-sustaining wages with additional apprenticeship or work-based learning opportunities.

Middle-Skill Jobs in Orange County with Entry-Level Wages Below the Regional Living Wage
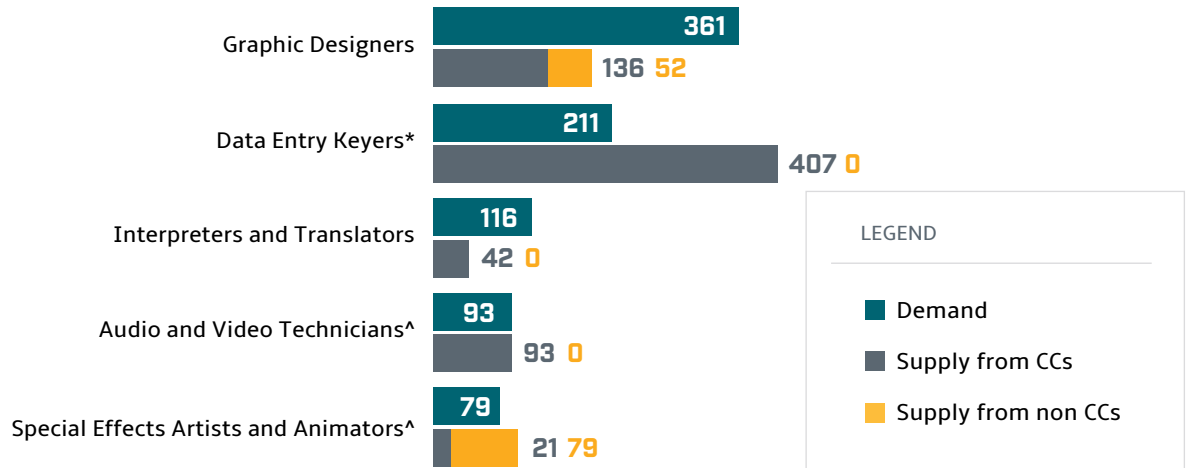
(Please note: * indicates that the occupation has an oversupply of labor, ^ indicates that the occupation's demand has been met, and N/A indicates that no community college program reported awards for this occupation or no community college program is available for this occupation.)

Entry-Level and Median Wages for Middle-Skill Jobs in Orange County with Entry-Level Wages Below the Regional Living Wage

SOC Code	SOC Occupational Title	Demand Annual Openings	Entry-Level Wage 25th Percentile	Median Wage Above the Living Wage
27-1024	Graphic Designers	361	$19.13	$27.84
43-9021	Data Entry Keyers	211	$14.68	$17.07
27-3091	Interpreters and Translators	116	$19.60	$26.50
27-4011	Audio and Video Technicians	93	$19.30	$28.73
27-1014	Special Effects Artists and Animators	79	$15.49	$30.51

KEY FINDINGS & RECOMMENDATIONS

Between July and August 2019, focus groups comprised of stakeholders from the community colleges and industry experts met to review the labor market demand and program supply for middle-skill jobs in Orange County's Priority and Emerging Sectors. The objectives of the focus groups were to identify labor market supply gaps in middle-skill jobs and provide intelligence as to how they are working to close supply gaps, as well as the challenges they encounter in their programs. The following summarizes the findings and recommendations for the ICT and Digital Media sector.

2,937
annual job openings
(labor market demand)

2,844
average annual program awards
(labor market supply)

93
supply gap
(awards needed to close the gap)

Key Finding	Recommendation
1 **A four-year degree for information technology does not exist, so employers focus on skills and certifications when hiring workers:** Community colleges in Orange County train for a variety of certification, such as those offered by CompTIA and Cisco, but it is unclear which certifications employers value the most when making hiring decisions.	To identify the most in-demand certifications, the Regional Employer Engagement Team and faculty members could work with employers to determine which certifications they value the most. Once these certifications are identified, colleges could consider providing students with vouchers to take certification exams after they complete a degree or certificate.
2 **Finding data for emerging areas in the ICT and Digital Media sector makes it difficult to define the skills that should be taught in new programs:** Traditional labor market information does not always capture new and emerging areas, so information related to skills, certifications, and education requirements are not always readily available.	To better understand local employer needs, colleges and the Regional Employer Engagement Team could work with employers to identify emerging areas for which they need workers and identify the skills, certifications, and education employers require. Colleges could then work with the COE to verify this information in order to re-tool or develop new programs.
3 **Emerging areas in this sector require skills from a variety of disciplines:** New and emerging areas such as Augmented Reality (AR) and Virtual Reality (VR), cloud technology, cybersecurity, data analytics, and game design require a diverse skill set that is not often found in a single discipline. For example, game design may involve character design, concept art, story development, and programming skills, while data analytics skills can be used in a variety of business occupations.	To diversify the skill set of students in ICT and Digital Media programs, faculty could work with their counterparts in other departments, such as business, to develop multi-disciplinary programs that will provide students with skills that could be used in multiple occupations.

Key Finding	Recommendation

4 **Similar programs at different colleges could help train qualified workers for emerging areas, but some colleges may already have areas of specialization that can be expanded:** Common challenges to expanding programs included the lack of dedicated lab space and high costs for equipment. If every college is using their resources to buy equipment for their individual campus, they may not be able to provide training in all areas of need.

Colleges could explore the idea of working with each other to establish college-specific specializations that build upon already existing infrastructure, personnel, and resources. Faculty at each college could work with each other to establish articulation agreements and clear pathways for students. For example, students could earn a foundational IT skills certificate at one college, then continue taking courses at another college that specializes in cybersecurity.

5 **Knowledge, Skills, and Abilities (KSAs) for the sector have not been validated by employers:** The OC Sector Analysis Project brief examines job gaps but does not explore the specific KSAs taught at the colleges and compare them to the labor market's demand for ICT and Digital Media KSAs.

To determine if the region's community colleges are training for the right KSAs, the Regional Employer Engagement Team should convene employers in a "regional advisory group" where employers can review program KSAs, provide feedback, and validate the KSAs' current relevance and demand in the labor market.

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 Orange County COE is fully funded by the Orange County Regional Strong Workforce Program allocation. 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.

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Orange County Center of Excellence
for Labor Market Research

For the full report, visit Orange County at coeccc.net.

Sources

Demand data is pulled from Emsi, a software program that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS), and other government agencies.

Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Important Disclaimer

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 such as those from the Orange County Center of Excellence for Labor Market Research and Cal-PASS Plus LaunchBoard. 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 college/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.

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