

## Program Endorsement Brief: 0614.30 – Website Design and Development

### PHP Web Programmer; Web Developer

Los Angeles/Orange County Center of Excellence, May 2021

#### Summary Analysis

<b>Program Endorsement:</b>	<b>Endorsed: All Criteria Met</b> <input type="checkbox"/>	<b>Endorsed: Some Criteria Met</b> <input checked="" type="checkbox"/>	<b>Not Endorsed</b> <input type="checkbox"/>
<b>Program Endorsement Criteria</b>			
<b>Supply Gap:</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Living Wage: (Entry-Level, 25<sup>th</sup>)</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
<b>Education:</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
<b>Emerging Occupation(s)</b>			
	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

The Los Angeles/Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to four middle-skill occupations: *web developers and digital interface designers* (15-1257), *special effects artists and animators* (27-1014), *graphic designers* (27-1024), and *film and video editors* (27-4032). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.<sup>1</sup> Although most of these occupations typically require a bachelor's degree, they were included in this report because nearly one-third of workers in the field have completed some college or an associate degree. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs that align with the relevant occupations.

Based on the available data, there appears to be a supply gap for these web design-related occupations in the region. **Therefore, the COE endorses this proposed program.** Detailed reasons include:

#### Demand:

- **Supply Gap Criteria** – Over the next five years, there is projected to be **5,214 jobs available annually** in the region due to job growth and replacements, **which is more than the 852 awards conferred annually** by educational institutions in the region.

<sup>1</sup> The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

- **Living Wage Criteria** – Within Los Angeles County, these web design-related occupations have entry-level wages above the county’s living wage (\$15.04/hour).<sup>2</sup>
- **Educational Criteria** – Within the LA/OC region, 83% of job openings related to web design **typically require a bachelor’s degree**.
  - However, the national-level educational attainment data indicates **between 25% and 28.3% of workers in the field have completed some college or an associate degree**.

**Supply:**

- There are **25 community colleges** in the LA/OC region that offer programs related to the occupations included in this report, conferring an average of **487 awards annually** between 2016 and 2019.
- Between 2014 and 2017, there was an average of **365 awards conferred annually** in related training programs by non-community college institutions throughout the LA/OC region.

**Occupational Demand**

Exhibit 1 shows the five-year occupational demand projections for web design-related occupations included in this report. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 5% through 2024. There will be more than 5,200 job openings per year through 2024 due to job growth and replacements.

*This report includes employment projection data by Emsi which uses EDD information. Emsi’s projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy, during the projection period, will be at approximately full employment. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.*

**Exhibit 1: Occupational demand in Los Angeles and Orange Counties<sup>3</sup>**

Geography	2019 Jobs	2024 Jobs	2019-2024 Change	2019-2024 % Change	Annual Openings
Los Angeles	39,511	41,691	2,180	6%	4,367
Orange	8,285	8,615	330	4%	847
<b>Total</b>	<b>47,796</b>	<b>50,306</b>	<b>2,510</b>	<b>5%</b>	<b>5,214</b>

<sup>2</sup> Living wage data was pulled from California Family Needs Calculator on 1/6/2021. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

<sup>3</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

## Wages

The labor market endorsement in this report considers the entry-level hourly wages for web design-related occupations in Los Angeles County, compared to the county's living wage. Orange County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

**Los Angeles County**—Web design-related occupations have entry-level wages above the living wage for one adult (\$15.04 in Los Angeles County). Typical entry-level hourly wages are in a range between \$18.78 and \$25.48. Experienced workers can expect to earn wages between \$37.67 and \$70.54, which are higher than the living wage estimate.

**Orange County**—Approximately 89% of the annual job openings for the web design-related occupations have entry-level wages above the living wage for one adult (\$17.36 in Orange County). Typical entry-level hourly wages are in a range between \$13.86 and \$20.32. Experienced workers can expect to earn wages between \$36.76 and \$60.27, which are higher than the living wage estimate.

## Job Postings

There were 9,405 online job postings for web design-related occupations listed over the last 12 months. The highest number of job postings were for web developer, graphic designer, video editor, junior graphic designer, UX designer, and UI/UX designer. The top skills were web design, Adobe Photoshop, graphic design, Adobe InDesign, Adobe Illustrator, and JavaScript. The top employers, by number of job postings, in the region were Anthem Blue Cross, Activision Blizzard Entertainment, Amazon, Disney, and IBM.

*It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the impact of COVID-19. While employers have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.*

## Educational Attainment

The Bureau of Labor Statistics (BLS) lists the following typical entry-level education requirements for the occupations studied in this report:

- **Associate degree:** web developers and digital interface designers (15-1257)
- **Bachelor's degree:** special effects artists and animators (27-1014), graphic designers (27-1024), and film and video editors (27-4032)

In the LA/OC region, 83% of the annual job openings for the web design-related occupations typically require a bachelor’s degree. However, the national-level educational attainment data indicates that between 25% and 28.3% of workers in the field have completed some college or an associate degree as their highest level of education. Of the 48% web design job postings listing a minimum education requirement in Los Angeles/Orange County, 6% (263) requested a high school diploma, 3% (153) requested an associate degree, and 91% (4,056) requested a bachelor’s degree.

## Educational Supply

**Community College Supply**—Exhibit 2 displays the annual and three-year average number of awards conferred by LA/OC regional community colleges in the related TOP codes: Digital Media (0614.00), Multimedia (0614.10), Website Design and Development (0614.30), Animation (0614.40), Computer Graphics and Digital Imagery (0614.60), and Graphic Art and Design (1030.00). The colleges with the most completions in the region are Mt. San Antonio, Golden West, and Santa Monica. Over the past 12 months, there were two other related program recommendation requests from LA/OC regional community colleges.

**Exhibit 2: Regional community college awards (certificates and degrees), 2016-2019**

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
0614.00	Digital Media	East LA	1	-	-	0
		LA Mission	-	-	1	0
		LA Trade	-	7	19	9
		Long Beach	-	1	-	0
		<b>LA Subtotal</b>	<b>1</b>	<b>8</b>	<b>20</b>	<b>10</b>
		Coastline	-	-	3	1
		Golden West	13	9	10	11
		Irvine	8	15	9	11
		<b>OC Subtotal</b>	<b>21</b>	<b>24</b>	<b>22</b>	<b>22</b>
<b>Supply Subtotal/Average</b>			<b>22</b>	<b>32</b>	<b>42</b>	<b>32</b>
0614.10	Multimedia	LA Mission	8	12	21	14
		Long Beach	1	1	-	1
		Pasadena	1	5	6	4
		Santa Monica	6	5	5	5
		<b>LA Subtotal</b>	<b>16</b>	<b>23</b>	<b>32</b>	<b>24</b>
		Cypress	1	1	-	1
		Orange Coast	3	-	1	1
		Santiago Canyon	3	10	9	7
		<b>OC Subtotal</b>	<b>7</b>	<b>11</b>	<b>10</b>	<b>9</b>
<b>Supply Subtotal/Average</b>			<b>23</b>	<b>34</b>	<b>42</b>	<b>33</b>
0614.30	Website Design and Development	LA Pierce	2	-	3	2
		Mt. San Antonio	-	9	9	6
		<b>LA Subtotal</b>	<b>2</b>	<b>9</b>	<b>12</b>	<b>8</b>
		Coastline	1	-	1	1

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		Fullerton	-	-	3	1
		Irvine	8	2	3	4
		Saddleback	5	4	7	5
		Santa Ana	1	1	-	1
		Santiago Canyon	12	9	24	15
		<b>OC Subtotal</b>	<b>27</b>	<b>16</b>	<b>38</b>	<b>27</b>
		<b>Supply Subtotal/Average</b>	<b>29</b>	<b>25</b>	<b>50</b>	<b>35</b>
0614.40	Animation	Cerritos	4	3	7	5
		East LA	3	6	14	8
		El Camino	-	1	5	2
		Glendale	4	6	2	4
		LA Mission	4	4	8	5
		Mt. San Antonio	19	53	67	46
		Pasadena	-	-	2	1
		Rio Hondo	11	11	11	11
		Santa Monica	12	17	9	13
		<b>LA Subtotal</b>	<b>57</b>	<b>101</b>	<b>125</b>	<b>94</b>
		Cypress	9	3	7	6
		Fullerton	-	1	-	0
		Irvine	-	1	1	1
		Santa Ana	5	2	15	7
		<b>OC Subtotal</b>	<b>14</b>	<b>7</b>	<b>23</b>	<b>15</b>
		<b>Supply Subtotal/Average</b>	<b>71</b>	<b>108</b>	<b>148</b>	<b>109</b>
		0614.60	Computer Graphics and Digital Imagery	Citrus	7	23
East LA	-			-	16	5
<b>LA Subtotal</b>	<b>7</b>			<b>23</b>	<b>29</b>	<b>20</b>
Coastline	1			2	5	3
Cypress	11			1	7	6
Fullerton	-			1	2	1
North Orange Adult	2			4	9	5
Orange Coast	28			35	38	34
Saddleback	8			7	4	6
Santa Ana	7			3	-	3
<b>OC Subtotal</b>	<b>57</b>			<b>53</b>	<b>65</b>	<b>58</b>
<b>Supply Subtotal/Average</b>	<b>64</b>			<b>76</b>	<b>94</b>	<b>78</b>
1030.00	Graphic Art and Design	Cerritos	6	10	11	9
		East LA	12	10	18	13
		El Camino	2	2	-	1
		Glendale	14	9	6	10

TOP Code	Program	College	2016-2017 Awards	2017-2018 Awards	2018-2019 Awards	3-Year Award Average
		LA City	5	5	6	5
		LA Pierce	10	15	22	16
		LA Valley	3	3	2	3
		Long Beach	-	2	1	1
		Mt. San Antonio	21	11	15	16
		Pasadena	10	7	9	9
		Rio Hondo	-	-	30	10
		Santa Monica	30	26	31	29
		<b>LA Subtotal</b>	<b>113</b>	<b>100</b>	<b>151</b>	<b>121</b>
		Fullerton	16	14	12	14
		Golden West	32	22	57	37
		Irvine	2	-	5	2
		Saddleback	17	15	23	18
		Santa Ana	-	1	4	2
		Santiago Canyon	3	9	5	6
		<b>OC Subtotal</b>	<b>70</b>	<b>61</b>	<b>106</b>	<b>79</b>
		<b>Supply Subtotal/Average</b>	<b>183</b>	<b>161</b>	<b>257</b>	<b>200</b>
		<b>Supply Total/Average</b>	<b>392</b>	<b>436</b>	<b>633</b>	<b>487</b>

**Non-Community College Supply**—For a comprehensive supply analysis, it is important to consider the supply from non-community college institutions in the region that provide relevant training programs. Exhibit 3 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Code: Graphic Design (50.0409). Due to different data collection periods, the most recent three-year period of available data is from 2014 to 2017. Between 2014 and 2017, 14 non-community colleges in the region conferred an average of 365 awards annually in related training programs. Please note that all three of Argosy University’s campuses in the region, Hollywood, Los Angeles, and Orange County, closed March 9, 2019.

**Exhibit 3: Regional Non-community College awards, 2014-2017**

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
50.0409	Graphic Design	Argosy University-The Art Institute of California-Hollywood	43	30	14	29
		Argosy University-The Art Institute of California-Los Angeles	19	33	9	20

CIP Code	Program	College	2014-2015 Awards	2015-2016 Awards	2016-2017 Awards	3-Year Award Average
		Argosy University-The Art Institute of California-Orange County	40	23	7	23
		Art Center College of Design	64	61	71	65
		California State Polytechnic University-Pomona	61	89	123	91
		Chapman University	29	21	24	25
		Concordia University-Irvine	4	13	12	10
		Eagle Rock College	8	-	-	3
		East San Gabriel Valley Regional Occupational Program	5	4	-	3
		FIDM-Fashion Institute of Design & Merchandising-Los Angeles	50	61	44	52
		Laguna College of Art and Design	9	21	24	18
		Mt Sierra College	17	26	15	19
		Platt College-Los Angeles	7	7	7	7
		University of La Verne	-	-	1	0
<b>Supply Total/Average</b>			<b>356</b>	<b>389</b>	<b>351</b>	<b>365</b>

**Appendix A: Occupational demand and wage data by county**

**Exhibit 4. Los Angeles County**

<b>Occupation (SOC)</b>	<b>2019 Jobs</b>	<b>2024 Jobs</b>	<b>5-Yr Change</b>	<b>5-Yr % Change</b>	<b>Annual Openings</b>	<b>Entry-Level Hourly Earnings (25<sup>th</sup> Percentile)</b>	<b>Median Hourly Earnings</b>	<b>Experienced Hourly Earnings (75<sup>th</sup> Percentile)</b>
Graphic Designers (27-1024)	13,951	14,212	261	2%	1,472	\$18.78	\$27.52	\$37.67
Film and Video Editors (27-4032)	11,176	12,074	898	8%	1,315	\$25.48	\$39.92	\$70.54
Special Effects Artists and Animators (27-1014)	7,468	7,917	449	6%	925	\$21.71	\$38.28	\$59.05
Web Developers and Digital Interface Designers (15-1257)	6,916	7,488	572	8%	655	\$21.50	\$33.13	\$46.71
<b>Total</b>	<b>39,511</b>	<b>41,691</b>	<b>2,180</b>	<b>6%</b>	<b>4,367</b>			

**Exhibit 5. Orange County**

<b>Occupation (SOC)</b>	<b>2019 Jobs</b>	<b>2024 Jobs</b>	<b>5-Yr Change</b>	<b>5-Yr % Change</b>	<b>Annual Openings</b>	<b>Entry-Level Hourly Earnings (25<sup>th</sup> Percentile)</b>	<b>Median Hourly Earnings</b>	<b>Experienced Hourly Earnings (75<sup>th</sup> Percentile)</b>
Graphic Designers (27-1024)	4,385	4,457	71	2%	456	\$18.64	\$27.00	\$36.76
Web Developers and Digital Interface Designers (15-1257)	2,710	2,897	187	7%	248	\$20.32	\$31.41	\$44.33
Special Effects Artists and Animators (27-1014)	794	826	32	4%	94	\$13.86	\$28.36	\$48.20
Film and Video Editors (27-4032)	395	435	40	10%	49	\$20.08	\$33.85	\$60.27
<b>Total</b>	<b>8,285</b>	<b>8,615</b>	<b>330</b>	<b>4%</b>	<b>847</b>			



### Exhibit 6. Los Angeles and Orange Counties

Occupation (SOC)	2019 Jobs	2024 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education
Graphic Designers (27-1024)	18,336	18,669	333	2%	1,929	Bachelor's degree
Film and Video Editors (27-4032)	11,571	12,509	938	8%	1,363	Bachelor's degree
Web Developers and Digital Interface Designers (15-1257)	9,626	10,385	759	8%	903	Associate degree
Special Effects Artists and Animators (27-1014)	8,262	8,743	481	6%	1,019	Bachelor's degree
<b>Total</b>	<b>47,796</b>	<b>50,306</b>	<b>2,510</b>	<b>5%</b>	<b>5,214</b>	

#### Appendix B: Sources

- O\*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

For more information, please contact:

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