



# Labor Market Information Report

## Animation Occupations

### Cabrillo College

Prepared by the San Francisco Bay Center of Excellence for Labor Market Research  
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#### Recommendation

Based on all available data, there appears to be an “undersupply” of Animation workers compared to the demand for this cluster of occupations in the Bay region and in the SC-Monterey sub-region (Monterey, San Benito, Santa Cruz counties). There is a projected annual gap of about 775 students in the Bay region and 6 students in the SC-Monterey Sub-Region.

#### Introduction

This report provides student outcomes data on employment and earnings for TOP 0924.00 Engineering Technology, General (requires Trigonometry) programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Cabrillo College and in the region.

This report profiles Animation Occupations in the 12 county Bay region and in the SC-Monterey sub-region for program modification at Cabrillo College.

- **Mechanical Engineering Technologists and Technicians (17-3027):** Apply theory and principles of mechanical engineering to modify, develop, test, or calibrate machinery and equipment under direction of engineering staff or physical scientists.  
Entry-Level Educational Requirement: Associate’s degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 51%
- **Special Effects Artists and Animators (27-1014):** Create special effects, animation, or other visual images using film, video, computers, or other electronic tools and media for use in products or creations, such as computer games, movies, music videos, and commercials.  
Entry-Level Educational Requirement: Bachelor’s degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 26%
- **Commercial and Industrial Designers (27-1021):** Develop and design manufactured products, such as cars, home appliances, and children’s toys. Combine artistic talent with research on product use, marketing, and materials to create the most functional and appealing product design.  
Entry-Level Educational Requirement: Bachelor’s degree  
Training Requirement: None  
Percentage of Community College Award Holders or Some Postsecondary Coursework: 24%

## Occupational Demand

**Table 1. Employment Outlook for Animation Occupations in Bay Region**

Occupation	2020 Jobs	2025 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Mechanical Engineering Technologists and Technicians	850	916	66	8%	477	95	\$24	\$32
Special Effects Artists and Animators	4,765	5,130	364	8%	2,909	582	\$28	\$41
Commercial and Industrial Designers	1,215	1,260	44	4%	620	124	\$31	\$41
<b>Total</b>	<b>6,830</b>	<b>7,306</b>	<b>476</b>	<b>7%</b>	<b>4,006</b>	<b>801</b>		

Source: EMSI 2021.4

**Bay Region includes:** Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

**Table 2. Employment Outlook for Animation Occupations in SC-Monterey Sub-region**

Occupation	2020 Jobs	2025 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Mechanical Engineering Technologists and Technicians	28	29	1	7%	16	3	\$21	\$26
Special Effects Artists and Animators	124	121	-2	-2%	66	13	\$10	\$23
Commercial and Industrial Designers	17	18	1	12%	11	2	\$18	\$29
<b>Total</b>	<b>168</b>	<b>169</b>	<b>1.7</b>	<b>1%</b>	<b>92</b>	<b>18</b>		

Source: EMSI 2021.4

**SC-Monterey Sub-Region includes:** Monterey, San Benito, Santa Cruz Counties

## Job Postings in Bay Region and SC-Monterey Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months**

Occupation	Bay Region	SC-Monterey
Commercial and Industrial Designers	5,576	17
Multimedia Artists and Animators	710	6
Mechanical Engineering Technicians	685	9

Source: Burning Glass

**Table 4a. Top Job Titles for Animation Occupations for latest 12 months - Bay Region**

Title	Bay	Title	Bay
Product Designer	726	Mechanical Inspector	41
Senior Product Designer	560	Industrial Designer	36
Lead Product Designer	156	Interaction Designer	36
Product Engineer	100	Product Design Engineer	34
Mechanical Technician	83	Mechanical Assembly Technician	33
Principal Product Designer	68	Senior Scientist	33
Senior Product Engineer	66	Senior Ux Product Designer	25
Motion Graphic Designer	60	Senior Interaction Designer	24
Product Development Engineer	48	Product Designer Remote	23

Source: Burning Glass

**Table 4b. Top Job Titles for Animation Occupations for latest 12 months - SC-Monterey Sub-Region**

Title	SC-Monterey	Title	SC-Monterey
Industrial Designer - Giro	4	Mechanical Inspector	1
Quality Inspector, Mechanical Assemblies	3	Product Designer	1
Interaction Designer	2	Product Designer Lead	1
Mechanical Assembler/Assembly Technician	2	Product Development and Support Engineer	1
Mechanical Technician	2	Product Development Engineering Leader/Manager - Electronics	1
Product Development Engineering Manager	2	Product Development Engineering Leader/Manager	1
Senior Industrial Designer	2	Product Development Engineering Manager - Electronics	1
Digital Modeler II	1	Product Development Engineering Manager	1
Inkscape Illustrator/Animator	1		

Source: Burning Glass

## Industry Concentration

**Table 5. Industries hiring Animation Workers in Bay Region**

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2020)	Jobs in Industry (2025)	% Change (2020-25)	% Occupation Group in Industry (2020)
Software Publishers	1,446	1,546	7%	21%
Internet Publishing and Broadcasting and Web Search Portals	685	799	17%	10%
Motion Picture and Video Production	344	343	0%	5%
Graphic Design Services	315	295	-7%	5%
Custom Computer Programming Services	312	329	6%	5%
Interior Design Services	266	304	15%	4%
Independent Artists, Writers, and Performers	268	294	10%	4%
Electronic Computer Manufacturing	203	218	7%	3%
Engineering Services	182	193	6%	3%
Computer Systems Design Services	178	175	-2%	3%

Source: EMSI 2021.4

**Table 6. Top Employers Posting Animation Occupations in Bay Region and SC-Monterey Sub-Region**

Employer	Bay	Employer	SC-Monterey
Apple Inc.	126	Joby Aviation	5
Facebook	112	Pacific Scientific Energetic Materials Co.	4
Google Inc.	105	Vista Outdoor Inc	3
Intel Corporation	92	Vista Outdoor	3
Intuit	73	Plantronics Incorporated	2
Lawrence Livermore National Laboratory	70	Nanotronics Imaging	2
Amazon	70	Zero Motorcycles	1
Braintrust Group	53	Verify	1
Johnson & Johnson	51	The Mom Project	1
Lucid Motors Inc	43	Proxypics	1

Source: Burning Glass

## Educational Supply

There are four (4) community colleges in the Bay Region issuing 26 awards on average annually (last 3 years ending 2018-19) on TOP 0924.00 Engineering Technology, General (requires Trigonometry). In the SC-Monterey Sub-Region, there is one (1) community college (Cabrillo) that issued 12 awards on average annually (last 3 years) on this TOP code.

**Table 7. Community College Awards on TOP 0924.00 Engineering Technology, General (requires Trigonometry) in Bay Region**

College	Subregion	Associate	Certificate Low	Total
Cabrillo	SC-Monterey	2	10	12
Las Positas	East Bay	12	0	12
San Francisco	Mid-Peninsula	1	0	1
San Mateo	Mid-Peninsula	1	0	1
<b>Total</b>		<b>16</b>	<b>10</b>	<b>26</b>

Source: Data Mart

Note: The annual average for awards is 2016-17 to 2018-19.

## Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 801 annual openings for the Animation occupational cluster and 26 annual (3-year average) awards for an annual undersupply of 775 students. In the SC-Monterey Sub-Region, there is also a gap with 18 annual openings and 12 annual (3-year average) awards for an annual undersupply of 6 students.

## Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0924.00 Engineering Technology, General (requires Trigonometry)**

Metric Outcomes	Bay All CTE Programs	Cabrillo All CTE Programs	State 0924.00	Bay 0924.00	SC-Monterey 0924.00	Cabrillo 0924.00
Students with a Job Closely Related to Their Field of Study	74%	80%	66%	68%	100%	100%
Median Annual Earnings for SWP Exiting Students	\$47,419	\$40,665	\$36,469	\$48,280	\$43,660	\$45,552
Median Change in Earnings for SWP Exiting Students	23%	23%	37%	28%	19%	18%
Exiting Students Who Attained the Living Wage	52%	47%	59%	52%	49%	52%

Source: Launchboard Strong Workforce Program Median of 2017 to 2020.

## Skills, Certifications and Education

**Table 9. Top Skills for Animation Occupations in Bay Region**

Skill	Posting	Skill	Posting
Product Design	2,613	Design Thinking	604
Prototyping	1,752	Adobe Illustrator	593
Product Development	1,713	User Interface (UI) Design	579
Visual Design	1,556	Typesetting	557
User Research	1,359	Graphic Design	524
Process Design	1,335	Mechanical Engineering	498
Interaction Design	1,313	Python	458
Product Management	1,108	Human Computer Interaction	448
UX Wireframes	1,093	Quality Assurance and Control	445
Adobe Photoshop	927	Information Architecture	444
Experiments	764	Software as a Service (SaaS)	433
Adobe Indesign	639	Project Management	416
Adobe Acrobat	611	Data Analysis	398
Adobe Creative Suite	609	Manufacturing Processes	389

Source: Burning Glass

**Table 10. Certifications for Animation Occupations in Bay Region**

Certification	Posting	Certification	Posting
Driver's License	80	Six Sigma Black Belt Certification	7
American Society For Quality (ASQ) Certification	49	Project Management Certification	7
Certified Reliability Engineer	29	Six Sigma Green Belt Certification	6
Certified Quality Engineer (CQE)	29	Project Management Professional (PMP)	6
Security Clearance	18	Electric Vehicle Technician (EVT)	6
Certified ScrumMaster (CSM)	16	IT Infrastructure Library (ITIL) Certification	5
Certified Quality Inspector (CQI)	16	Certified Information Systems Security Professional (CISSP)	5
Automotive Service Excellence (ASE) Certification	14	Home Energy Raters (HERS) Certification	4
I-Car	11	Welding Certification	3

Certification	Posting	Certification	Posting
Six Sigma Certification	7	OSHA Safety 10 Hour	3

Source: Burning Glass

Note: 97% of records have been excluded because they do not include a certification. As a result, the chart above may not be representative of the full sample.

**Table 11. Education Requirements for Animation Occupations in Bay Region**

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	337	9%
Associate's degree	169	5%
Bachelor's degree and higher	3,220	86%

Source: Burning Glass

Note: 47% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

## Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

## Sources

O\*Net Online  
 Labor Insight/Jobs (Burning Glass)  
 Economic Modeling Specialists International (EMSI)  
 CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://www.calpassplus.org/Launchboard/)  
 Statewide CTE Outcomes Survey  
 Employment Development Department Unemployment Insurance Dataset  
 Living Insight Center for Community Economic Development  
 Chancellor's Office MIS system

## Contacts

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