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**Music Technology Program Report**

**For Greater South Bay and Peninsula Region**

**(Santa Clara and San Mateo Counties)**

**November 2014**

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| **Recording Arts Technology/Technician** |

CIP 2010: A program that prepares individuals to apply technical knowledge and skills to the production of sound recordings as finished products or as components of film/video, broadcast, live, or mixed media productions. Includes instruction in sound equipment operation and maintenance; music, dialogue, and sound effects recording; sound track editing; dubbing and mixing; sound engineering; tape, disk, and CD production; digital recording and transmission; amplification and modulation; and working with producers, editors, directors, artists, and production managers.

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| **Target Occupations**‡ |
| Audio and Video Equipment Technicians (27-4011) |
| Sound Engineering Technicians (27-4014) |

‡Based on EMSI crosswalk of the Classification of Instructional Programs (CIP) codes with Standard Occupational Classification (SOC) codes as published by the U.S. Department of Education.

In 2014, the number of music technology (recording arts technology) jobs in the target occupations in Santa Clara and San Mateo Counties totaled 1,069. The Bureau of Labor Statistics (BLS) expects the total number of positions to increase by 8.0% over the next three years. Regional openings in 2014, which included created jobs and turnover, totaled 53. Completions in business administration programs totaled 20, with an additional eight completions from other related programs. These other programs are linked to multiple occupations and not all those who complete will enter the target occupations indicated in this report.

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| **Target Occupation Performance** |
| **1,069\*** | **8.0%\*** | **$22.34/hr** |
| **Jobs (2014)** | **Growth (2014-2017)** | **Median Earnings** |
| National Location Quotient: 1.18† | National: 4.4% | National: $20.44/hr |

 \*Based on total number of jobs for target occupations Santa Clara and San Mateo Counties.

†Represents occupation density as compared to national average (national average=1).

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| --- | --- | --- |
| Regional Openings (2014)\*\* | 53 |  |
| Regional Program Completions (2013) | 20 |  |
| All Regional Completions for Target Occupations†† (2013) | 28 |  |

 \*\*Openings include created jobs and turnover.

†† Includes all regional programs applicable to target occupations.

**Music Technology Occupations Performance**

| **Target Occupations** | **Regional Openings (2014)** | **Median Hourly Earnings** | **Growth (2014-2017)** |
| --- | --- | --- | --- |
| Audio and Video Equipment Technicians (27-4011) | 43 | $21.33 | 8.0% |
| Sound Engineering Technicians (27-4014) | 10 | $26.82 | 8.0% |

**Music Technology Occupations Performance**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **County Name** | **2014 Jobs** | **2017 Jobs** | **2014 Annual Openings** | **Median Hourly Earnings** | **2014 National Location Quotient** |
| Santa Clara | 792 | 865 | 43 | $21.05 | 1.20 |
| San Mateo | 277 | 289 | 10 | $25.90 | 1.12 |
| Total | 1,069 | 1,155 | 53 | $22.34 |  |

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| **Regional Music Technology Training Providers** |
| **1** | **20\*** |
| **Institutions** | **Completions (2013)** |

 \*Based on IPEDS data.



| **Institution** | **Degrees** | **Certificates** | **Total Completions** |
| --- | --- | --- | --- |
| Foothill College | 12 | 8 | 20 |

Other regional programs may train individuals eligible for the targeted music technology occupations, which are based on an occupation-program crosswalk developed by the Department of Education. These additional programs are offered at De Anza College, West Valley College, and Cogswell College. As noted earlier, many postsecondary programs are linked to multiple occupations and not all those who complete the program will enter the target occupation.

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| **Related Regional Programs Allowing Entry to Music Technology** |
| **4** | **28** |
| **Programs (2013)** | **Completions (2013)** |
| **Program** | **2009** | **2010** | **2011** | **2012** | **2013** |
| Recording Arts Technology/Technician (10.0203) | 16 | 10 | 13 | 23 | 20 |
| Photographic and Film/Video Technology/Technician and Assistant (10.0201) | 3 | 6 | 3 | 4 | 5 |
| Music Technology (50.0913) | 0 | 0 | 7 | 3 | 3 |
| Digital Communication and Media/Multimedia (09.0702) | 0 | 0 | 0 | 0 | 0 |

**Target Occupations Demographics**

The demographics among those employed in music technology occupations in Santa Clara and San Mateo Counties for 2014 show that a majority are men (87%) and almost three-fifths are between the ages of 25-44 (57%).

**Gender Demographics (Regional)**

|  |  |  |
| --- | --- | --- |
| Gender |   |   |
| Male | 87% |  |
| Female | 13% |  |

**Age Demographics (Regional)**

|  |  |  |
| --- | --- | --- |
| Age |   |   |
| 14-18 | 1% |  |
| 19-24 | 11% |  |
| 25-44 | 57% |  |
| 45-64 | 29% |  |
| 65+ | 2% |  |

**Industries Employing Music Technology Occupations**

A number of industries in Santa Clara and San Mateo Counties employ those trained in music technology and its related occupations. The following table represents a regional industry breakdown of the number of music technology positions employed, the percentage of music technology jobs employed by industry and the percentage music technology jobs represent within all jobs by each industry. While both motion picture and video production and colleges, universities, and professional schools each employed 11.5% of all regional music technicians in 2014, music technology and its related occupations represent 6.7% and 0.4%, respectively, of the total jobs in those industries.

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| **Inverse Staffing Patterns (Regional)** |
| **Industry** | **Occupation Group Jobs in Industry (2014)** | **% of Occupation Group in Industry (2014)** | **% of Total Jobs in Industry (2014)** |
| Motion Picture and Video Production (512110) | 123 | 11.5% | 6.7% |
| Colleges, Universities, and Professional Schools (611310) | 123 | 11.5% | 0.4% |
| Internet Publishing and Broadcasting and Web Search Portals (519130) | 70 | 6.5% | 0.2% |
| Colleges, Universities, and Professional Schools (Local Government) (903612) | 67 | 6.3% | 0.6% |
| Promoters of Performing Arts, Sports, and Similar Events with Facilities (711310) | 57 | 5.3% | 5.3% |

**Compatible Occupations for Music Technology**

Individuals completing a music technology program share many skills and abilities with other occupations. The Occupational Information Network (O\*Net) identifies compatible occupations based on an analysis of overlapping knowledge, skills and ability. Additional education required for transition can range from short on-site training to advanced post-secondary degrees. The following table shows how much education might be needed to be employed in these compatible occupations.

**Top Ten Compatible Occupations for Music Technology: Associate’s Degree or Less**

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| --- | --- | --- | --- | --- | --- |
| Rank | Occupation | Median Hourly Earnings | 2014 Jobs | 2014-2017 Change | 2014-2017 Estimated Annual Openings |
| 1 | Broadcast Technicians | $19.76 | 187 |  (6) | 3 |
| 2 | Sheet Metal Workers | $33.49 | 1,603 | 88 | 46 |
| 3 | Terrazzo Workers and Finishers | $25.28 | 232 | 15 | 6 |
| 4 | Welders, Cutters, and Welder Fitters | $18.66 | 2,027 |  (22) | 42 |
| 5 | Tank Car, Truck, and Ship Loaders | $20.75 | 28 |  (1) | 1 |
| 6 | Audio and Video Equipment Technicians | $21.33 | 876 | 70 | 30 |
| 7 | Sound Engineering Technicians | $26.82 | 193 | 15 | 7 |
| 8 | Electrical Engineering Technicians | $29.71 | 4,821 |  (8) | 82 |
| 9 | Computer User Support Specialists | $32.34 | 11,829 | 1,221 | 455 |
| 10 | Computer Operators | $21.88 | 612 | 17 | 10 |

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| **Data Sources and Calculations** |

**State Data Sources**

This report uses state data from the following agencies: California Labor Market Information Department

**Institution Data**

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

**Completers Data**

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

**Occupation Data**

EMSI occupation employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry.

**Staffing Patterns Data**

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

**Industry Data**

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.