** Magnetic Resonance Imaging Technologists**

**Labor Market Information Report**

**Cabrillo College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

September 2019

# Recommendation

There appears to be an oversupply of Magnetic Resonance Imaging (MRI) Technologists compared to the demand for this occupation in the Bay region and in the SC-Monterey sub-region (Monterey, San Benito, and Santa Cruz Counties) when traditional demand and supply data sources are utilized. There is a projected oversupply of about 53 students annually in the Bay region and 14 students annually in the SC-Monterey Sub-Region.

However, based on information provided by Cabrillo College regarding the supply of Magnetic Resonance Imaging (MRI) Technologists, the closest available TOP code for their proposed new program is TOP 1225.00 - Radiologic Technology. Cabrillo indicates that the supply of all awards from this TOP code is not an accurate number to use when determining supply for MRI Technologists. This is because none of the Radiologic Technology graduates are qualified to be hired as MRI Technologists. These students would need to complete the program which Cabrillo is proposing to develop in order to become qualified.

So effectively there is no supply for certified MRI Technologists, not just in the Bay region, but in the state, according to their governing body. There is one private school in the Bay region that offers training, but it does not offer the certification Cabrillo wants to offer. In addition, Cabrillo indicates that at least 70-75% of students interested in enrolling in this program are also interested in gaining certification in additional advanced modalities.

With respect to demand for MRI Technologists, there is a significant difference between the EMSI data which projects 79 annual openings for this occupation in the Bay Region and the 759 annual job postings for the occupation for the past 12 months, reported by Burning Glass data. In the SC-Monterey sub-region, EMSI data projects four (4) annual openings for this occupation, while the annual job postings for the past 12 months in the sub-region reported by Burning Glass data are 61.

This report also provides student outcomes data on employment and earnings for programs on TOP 1225.00 - Radiologic Technology 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.

# Introduction

This report profiles Magnetic Resonance Imaging Technologists in the 12 county Bay region and in the SC-Monterey sub-region for a proposed new program at Cabrillo College.

|  |
| --- |
| * **Magnetic Resonance Imaging Technologists (SOC 29-2035):** Operate Magnetic Resonance Imaging (MRI) scanners. Monitor patient safety and comfort, and view images of area being scanned to ensure quality of pictures. May administer gadolinium contrast dosage intravenously. May interview patient, explain MRI procedures, and position patient on examining table. May enter into the computer data such as patient history, anatomical area to be scanned, orientation specified, and position of entry. |
| Entry-Level Educational Requirement: Associate's degree |
| Training Requirement: None |
| Percentage of Community College Award Holders or Some Postsecondary Coursework: 60% |

# Occupational Demand

**Table 1. Employment Outlook for Magnetic Resonance Imaging Technologists in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Magnetic Resonance Imaging Technologists | 1,014 | 1,137 | 123 | 12% | 397 | 79 | $27.97 | $44.39 |

*Source: EMSI 2019.2*

**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 Magnetic Resonance Imaging Technologists in SC-Monterey Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Average Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Magnetic Resonance Imaging Technologists | 68 | 73 | 4 | 6% | 22 | 4 | $20.69 | $35.11 |

*Source: EMSI 2019.2*

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

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

**Table 3. Number of Job Postings by Occupation for latest 12 months (August 2018 - July 2019)**

| Occupation | Bay Region | 4-County | SC-Monterey |
| --- | --- | --- | --- |
| Magnetic Resonance Imaging Technologists | 759 | 209 | 61 |

**4-County Sub-Region** includes Monterey, San Benito, Santa Cruz, and Santa Clara Counties

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

*Source: Burning Glass*

**Table 4a. Top Job Titles for Magnetic Resonance Imaging Technologists for latest 12 months (August 2018 - July 2019) Bay Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | Bay | Common Title | Bay |
| MRI Technologist | 219 | Travel Technician | 1 |
| CT Technologist | 195 | Technologist | 1 |
| CT Technician | 169 | Technician, Travel | 1 |
| MRI Technician | 89 | Technical Officer, Magnetic Resonance Imaging ( Mri ),Ct | 1 |
| Radiologic Technologist | 21 | Surgical Technician | 1 |
| Technician | 13 | Senior Mri S | 1 |
| Acute Care Travel Technologist | 12 | Mri Technolgist | 1 |
| Medical Technician | 8 | Mri Technica | 1 |
| Imaging Systems | 4 | Mri Scientis | 1 |
| Cat Scan Technologist | 4 | Mri Physicis | 1 |
| Strong Visualization Candidate | 2 | Mammography Technologist | 1 |
| Opthalmic Technician | 2 | Imaging Technologist | 1 |
| Imaging Strategist, Imaging | 2 | Ct Tech- 13 Week Opportunity- San Francisco | 1 |
| Head | 2 | Clinical Technologist | 1 |

**Table 4b. Top Job Titles for Magnetic Resonance Imaging Technologists for latest 12 months (August 2018 - July 2019) 4-County Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | 4-County | Common Title | 4-County |
| CT Technologist | 74 | Travel Technician | 1 |
| MRI Technologist | 50 | Technician, Travel | 1 |
| CT Technician | 32 | Senior Mri S | 1 |
| MRI Technician | 25 | Mri Technolgist | 1 |
| Technician | 4 | Mri Technica | 1 |
| Radiologic Technologist | 4 | Mri Scientis | 1 |
| Imaging Systems | 3 | Mri Physicis | 1 |
| Strong Visualization Candidate | 2 | Clinical Technologist | 1 |
| Opthalmic Technician | 2 | Body Mri | 1 |
| Medical Technician | 2 | Advanced Visualization | 1 |

**Table 4c. Top Job Titles for Magnetic Resonance Imaging Technologists for latest 12 months (August 2018 - July 2019) SC-Monterey Sub-Region**

|  |  |  |  |
| --- | --- | --- | --- |
| Common Title | SC-Monterey | Common Title | SC-Monterey |
| CT Technician | 23 | MRI Technologist | 2 |
| CT Technologist | 22 | Radiologic Technologist | 1 |
| MRI Technician | 8 | Medical Technician | 1 |
| Technician | 3 | Acute Care Travel Technologist | 1 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Magnetic Resonance Imaging Technologists in Bay Region**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2018) | Jobs in Industry (2022) | % Change (2018-22) | % in Industry (2018) |
| General Medical and Surgical Hospitals (622110) | 361 | (9) | 36.5% | 0.4% |
| Medical Laboratories (621511) | 266 | 63 | 20.1% | 2.9% |
| HMO Medical Centers (621491) | 113 | 24 | 8.8% | 0.2% |
| Hospitals (Local Government) (903622) | 93 | 6 | 8.6% | 0.3% |
| Offices of Physicians (except Mental Health Specialists) (621111) | 87 | 1 | 8.5% | 0.2% |
| Diagnostic Imaging Centers (621512) | 81 | 18 | 6.2% | 3.1% |
| Hospitals (State Government) (902622) | 22 | 5 | 1.6% | 0.1% |
| Freestanding Ambulatory Surgical and Emergency Centers (621493) | 17 | 5 | 1.2% | 0.2% |
| Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (541715) | <10 | Insf. Data | 1.0% | 0.0% |

*Source: EMSI 2019.2*

**Table 6. Top Employers Posting Jobs for Magnetic Resonance Imaging Technologists in Bay Region and SC-Monterey Sub-Region (August 2018 - July 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | 4-County | Employer | SC-Monterey |
| Kaiser Permanente | 40 | Stanford Health Care | 10 | Allied | 6 |
| Cross Country Allied | 20 | Hospital Corp. of America | 10 | Shared Imaging Inc. | 3 |
| UC San Francisco Medical Center | 19 | Alliance Healthcare Services | 9 | KPG Healthcare | 3 |
| KPG Healthcare | 19 | Allied | 7 | Cross Country Allied | 3 |
| Allied | 19 | Lucile Packard Children’s Hospital | 6 | Alliance Healthcare Services | 3 |
| Sutter Health | 18 | Kaiser Permanente | 6 | Emerald Health Services | 2 |
| Alliance Healthcare Services | 18 | Shared Imaging Inc. | 5 | Cynet Health | 2 |
| Sutter Health Sacramento Sierra Region | 15 | El Camino Hospital | 5 | Titan Medical Group | 1 |
| Sutter Medical Center | 12 | Cross Country Allied | 5 | Soliant | 1 |
| Stanford Health Care | 11 | Ansible Government Solutions | 5 | Salinas Valley Memorial | 1 |
| Emerald Health Services | 11 | Viewray | 4 | Community Hospital Of Monterey Peninsula | 1 |
| Hospital Corp. of America | 10 | Good Samaritan Hospital | 4 | Community Health Systems Professional Services Corp. | 1 |
| Nursefly Travel Nursing | 9 | University Healthcare Alliance | 3 | Bakersfield Memorial Hospital | 1 |
| UC San Diego | 7 | O’Connor Hospital | 3 | Alliance Radiology | 1 |
| Shared Imaging Inc. | 7 | Light | 3 |  |  |
| Covenant Health | 7 | KPG Healthcare | 3 |  |  |
| Lucile Packard Children’s Hospital | 6 | Emerald Health Services | 3 |  |  |

*Source: Burning Glass*

# Educational Supply

There are six community colleges in the Bay Region issuing 132 awards on average annually (last 3 years) on TOP 1225.00 - Radiologic Technology. Cabrillo College is the only college in the SC-Monterey Sub-Region issuing awards on this TOP code, issuing18 awards on average annually (last 3 years). However, based on information provided by Cabrillo College regarding the supply of Magnetic Resonance Imaging Technologists, the closest available TOP code for their proposed new program is TOP 1225.00 - Radiologic Technology. Cabrillo indicates that the supply of all awards from this TOP code is not an accurate number to use when determining supply for MRI Technologists. This is because none of the Radiologic Technology graduates are qualified to be hired as Magnetic Resonance Imaging (MRI) Technologists. These students would need to complete the program which Cabrillo is proposing to develop in order to become qualified.

So effectively there is no supply for certified MRI Technologists, not just in the Bay region, but in the state, according to their governing body. There is one private school in the Bay region that offers training, but it does not offer the certification Cabrillo wants to offer. Gurnick Academy of Medical Arts in San Mateo, CA offers a Magnetic Resonance Imaging (MRI) Technology/Technician program that graduates approximately 25 graduates annually.

**Table 7. Awards on TOP 1225.00 - Radiologic Technology in the Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| College | Sub-Region | Associates | Certificates | Noncredit | Total |
| Cabrillo College | Santa Cruz - Monterey | 18 | - | - | 18 |
| Cañada College | Mid-Peninsula | 17 | - | - | 17 |
| City College of San Francisco | Mid-Peninsula | 26 | - | - | 26 |
| Foothill College | Silicon Valley | 19 | - | - | 19 |
| Merritt College | East Bay | 15 | 14 | - | 29 |
| Santa Rosa Junior College | North Bay | 17 | 6 | - | 23 |
| **Total Bay Region** | | **112** | **20** | **0** | **132** |
| **Total SC-Monterey Sub-Region** | | **18** | **0** | **0** | **18** |

# *Source: Data Mart*

Note: The annual average for awards is 2015-16 to 2017-18.

# Gap Analysis

Based on the traditional supply and demand data included in this report, there appears to be an oversupply in the Bay region with 79 annual openings for Magnetic Resonance Imaging Technologists and 132 annual (3-year average) awards for an annual oversupply of 53 students. In the SC-Monterey Sub-Region, there is also an oversupply with 4 annual openings and 18 annual (3-year average) awards for an annual oversupply of 14 students.

However, based on information provided by Cabrillo College regarding the supply of Magnetic Resonance Imaging (MRI) Technologists, the closest available TOP code for their proposed new program is TOP 1225.00 - Radiologic Technology. Cabrillo indicates that the supply of all awards from this TOP code is not an accurate number to use when determining supply for MRI Technologists. This is because none of the Radiologic Technology graduates are qualified to be hired as MRI Technologists. These students would need to complete the program which Cabrillo is proposing to develop in order to become qualified.

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# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1225.00 - Radiologic Technology**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay  (All CTE Programs) | Cabrillo College (All CTE Programs) | State (1225.00) | Bay (1225.00) | SC-Monterey (1225.00) | Cabrillo College (1225.00) |
| % Employed Four Quarters After Exit | 74% | 77% | 82% | 81% | 76% | 76% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $8,150 | $14,704 | $18,404 | $16,443 | $16,443 |
| Median % Change in Earnings | 46% | 58% | 150% | 145% | 64% | 64% |
| % of Students Earning a Living Wage | 63% | 54% | 76% | 81% | 92% | 92% |

*Source: Launchboard Pipeline (version available on 8/29/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Magnetic Resonance Imaging Technologists in Bay Region (August 2018 - July 2019)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Radiology | 304 | Anatomy | 64 | Patient Interviewing | 34 |
| Radiologic Technology | 240 | Diagnostic Imaging | 62 | Patient Positioning | 34 |
| Magnetic Resonance Imaging (MRI) | 201 | Computed Axial Tomography (CAT Scan) | 59 | Siemens Nixdorf Hardware | 33 |
| Cardiopulmonary Resuscitation (CPR) | 191 | Interaction with Patients / Medical Personnel | 55 | Image Processing | 32 |
| Patient Care | 179 | Radiography | 55 | Medical Triage | 32 |
| Life Support | 140 | Injections | 42 | Repair | 32 |
| Venipuncture | 130 | Patient Safety | 41 | Patient Preparation | 30 |
| Acute Care | 108 | Physiology | 37 | Mammography | 29 |
| X-Rays | 108 | Hospital Experience | 36 | Radiation Protection | 26 |
| Computed Tomography (CT) | 107 | Diagnostic Radiology | 35 | Ultrasound | 26 |
| Scheduling | 92 | Ionizing Radiation | 35 | Supervisory Skills | 25 |
| Quality Assurance and Control | 66 | Infection Control | 34 | Advanced Cardiac Life Support (ACLS) | 22 |
| Radiology | 304 | Anatomy | 64 | Patient Interviewing | 34 |
| Radiologic Technology | 240 | Diagnostic Imaging | 62 | Patient Positioning | 34 |
| Magnetic Resonance Imaging (MRI) | 201 | Computed Axial Tomography (CAT Scan) | 59 | Siemens Nixdorf Hardware | 33 |

*Source: Burning Glass*

**Table 10. Certifications for Magnetic Resonance Imaging Technologists in Bay Region (August 2018 - July 2019)**

Note: 74% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| Certification | Postings | Certification | Postings |
| American Registry of Radiologic Technologists (ARRT) Certification | 466 | Diagnostic Radiologic Technologists | 8 |
| Basic Life Saving (BLS) | 233 | Radiography Certification | 5 |
| Registered Radiologic Technologist | 123 | American Registry For Diagnostic Medical Sonography (ARDMS) | 5 |
| Basic Cardiac Life Support Certification | 81 | Certified Technologist | 4 |
| First Aid Cpr Aed | 74 | Quality Improvement | 2 |
| Certified Radiology Technician | 55 | Medical Technician | 2 |
| American Heart Association Certification | 50 | Ceu's Certificate | 2 |
| Ca License | 39 | Registered Respiratory Therapist | 1 |
| Advanced Cardiac Life Support (ACLS) Certification | 22 | Nurse Practitioner | 1 |
| Driver's License | 15 | Neonatal Resuscitation Program (NRP) | 1 |
| IV (Intravenous) Certification | 14 | Home Health Aide | 1 |
| Radiologic Technologist | 10 | Certified Surgical Technician | 1 |

*Source: Burning Glass*

**Table 11. Education Requirements for Magnetic Resonance Imaging Technologists in Bay Region**

Note: 89% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |  |
| --- | --- | --- |
| Education (minimum advertised) | Latest 12 Mos. Postings | Percent 12 Mos. Postings |
| High school or vocational training | 37 | 43% |
| Associate Degree | 27 | 31% |
| Bachelor’s Degree or Higher | 21 | 26% |

*Source: Burning Glass*

# 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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