

Regional Labor Market Data and Projected Needs

An analysis of the Economic Modeling Specialists International (EMSI) labor market data was conducted by a partnership between The San Mateo Community College District, The San Mateo County Workforce Investment Board, and the San Mateo County Economic Development Association in order to ascertain how college programs are addressing the occupation needs of the community. It produced occupational employment projections of San Mateo County for the period 2012-2017. The dataset included current employment levels, projected openings due to growth, retirements and turnover, median hourly wages and the education level associated with each detailed occupation. Table 1 depicts the framework used and the resultant occupational titles.

Table 1 – Highest Levels of Employment 2012

Rank	Occupation Title	Currently Employed	Pct of County
1	Sales and related occupations	63,562	14%
2	Office and administrative support occupations	57,011	10%
3	Management occupations	44,507	9%
4	Business and financial operations occupations	38,441	9%
5	Food preparation and serving related occupations	28,911	8%
6	Computer and mathematical science occupations	26,029	7%
7	Transportation and material moving occupations	24,239	5%
8	Personal care and service occupations	20,652	5%
9	Arts, design, entertainment, sports, and media occupations	19,453	5%
10	Life, physical, and social science occupations	18,890	4%
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Within each occupation title, the analysis ascertained the percentage of jobs that are new and the percentage that will result from turnover. The assumption made is that job openings derived from new positions represent areas of growth where those derived from turnover do not represent growth as they are replacing already existing jobs. Data are separated into these two categories in order to identify areas of occupation growth. Those results are presented in Table 2.

Table 2 - Occupational Titles and Job Openings

Major Occupation Title	Projected 2017 Job Openings	Percent that are New Jobs	Percent from Turnover
Sales and related occupations	11,601	28%	72%
Office and administrative support occupations	7,786	18%	82%
Management occupations	7,560	33%	67%
Business and financial operations occupations	7,510	54%	46%
Food preparation and serving related occupations	6,818	22%	78%
Computer and mathematical science occupations	5,505	62%	38%
Transportation and material moving occupations	3,999	19%	81%
Personal care and service occupations	3,990	39%	61%
Arts, design, entertainment, sports, and media occupations	3,972	40%	60%
Life, physical, and social science occupations	3,179	49%	51%
Education, training, and library occupations	2,615	37%	63%
Healthcare practitioners and technical occupations	2,504	36%	64%
Building and grounds cleaning and maintenance occupations	2,346	32%	68%
Production occupations	2,180	8%	92%
Construction and extraction occupations	1,984	18%	82%
Installation, maintenance, and repair occupations	1,799	24%	76%
Architecture and engineering occupations	1,160	31%	69%
Healthcare support occupations	1,152	54%	46%
Protective service occupations	1,045	20%	80%
Community and social services occupations	697	34%	66%
Legal occupations	652	39%	61%
Farming, fishing, and forestry occupations	201	19%	81%
Military occupations	153	6%	94%

Using these data, the top five occupations being driven by new job growth were identified as: Business and financial operations; Computer and mathematical science; Life, physical and social science; Arts, design, entertainment, sports and media; and health care support.

The next table groups employment and wage profiles by worker education level. There is a bimodal distribution of worker education level—short term training and BA Degree workers. The more educated the worker the higher the hourly wage.

Table 3 - Education Levels

Worker Education Level	Total Current 2012 Employment	Percent of Total Current 2012 Employment	Total Projected 2017 Openings	Percent of Total Projected 2017 Openings	Current Median Hourly Wage
Short Term Training	134,147	31%	24,006	32%	\$14.90
Moderate Training	49,740	11%	6,602	9%	\$15.00
Long Term Training	32,274	7%	5,094	7%	\$21.80
Related Work Exp	54,315	12%	8,316	11%	\$21.90
Post Secondary Voc Awarded	29,712	7%	4,795	6%	\$21.64
AA Degree	16,579	4%	3,020	4%	\$28.15
BA Degree	93,313	21%	18,608	25%	\$31.92
Grad Degree	25,984	6%	4,625	6%	\$36.51

Table 4 depicts the source of job openings for San Mateo by worker education level. Jobs at both ends of the skills spectrum have strong new job growth.

Table 4 - Education Level and Projected Openings

Worker Education Level	Total Projected 2017 Openings	Percent that are New Jobs	Percent from Turnover
Short Term Training	24,006	34%	66%
Moderate Training	6,602	5%	95%
Long Term Training	5,094	20%	80%
Related Work Exp	8,316	32%	68%
Post Secondary Voc Awarded	4,795	5%	95%
AA Degree	3,020	40%	60%
BA Degree	18,608	33%	67%
Grad Degree	4,625	19%	81%

Table 5 depicts the education level required for a broader array of occupational titles. Note the percentages of openings in the column labeled “Vocational Award or AA Degree”. The top five occupations being driven by new job growth are also highlighted here.

Table 5 - Occupational Titles and Educational Requirements

Occupational Title	Projected 2017 Openings	Percent of Openings Requiring				
		On the Job Training	Work Experience	Vocational Award or AA Degree	BA or Grad Degree	Degree plus Work Experience
Management	7,560	0%	30%	0%	19%	52%
Business and financial operations	7,510	7%	0%	3%	68%	22%
Computer and mathematical science	5,505	0%	0%	18%	82%	0%
Architecture and engineering	1,160	1%	0%	14%	85%	0%
Life, physical, and social science	3,179	0%	0%	8%	92%	0%
Community and social services	697	10%	0%	0%	90%	0%
Legal	652	13%	0%	13%	73%	1%
Education, training, and library	2,615	13%	6%	11%	69%	1%
Arts, design, entertainment, sports, & media	3,972	47%	0%	5%	39%	8%
Healthcare practitioners and technical	2,504	4%	0%	61%	35%	0%
Healthcare support	1,152	71%	0%	29%	0%	0%
Protective service	1,045	88%	11%	0%	0%	0%
Food preparation and serving related	6,818	97%	3%	0%	0%	0%
Building, grounds cleaning & maintenance	2,346	84%	16%	0%	0%	0%
Personal care and service	3,990	80%	5%	14%	0%	0%
Sales and related	11,601	40%	26%	18%	16%	0%
Office and administrative support	7,786	83%	16%	1%	0%	0%
Farming, fishing, and forestry	201	81%	16%	0%	0%	0%
Construction and extraction	1,984	87%	12%	0%	0%	0%
Installation, maintenance, and repair	1,799	45%	8%	47%	0%	0%
Production	2,180	90%	4%	5%	0%	0%
Transportation and material moving	3,999	86%	3%	0%	11%	0%

Further data analysis produced additional closely related occupations to those depicted in Table 5. They are: Architecture and engineering and Healthcare practitioners and technical.

The analysis conducted by the partnership went on to identify possible occupational segments in order to refine the data so that specific occupations might be targeted for educational opportunities within the District. Figure 1 displays these possible occupational segments.

Figure 1

Possible Occupational Segments		
<p>1. Life, physical & social science</p> <ul style="list-style-type: none"> •44 detail occupations •Current Jobs = 12,177 •Projected Openings = 3,179 •Most jobs require Post Secondary Degree/Certificate 	<p>2. Healthcare*</p> <ul style="list-style-type: none"> •61 detail occupations •Current Jobs = 24,269 •Projected Openings = 3,656 •Jobs are a mix of training & Post Secondary Degree/Certificate 	<p>3. Business & Financial</p> <ul style="list-style-type: none"> •30 detail occupations •Current Jobs = 38,441 •Projected Openings = 7,510 •Most jobs require Post Secondary Degree/Certificate
<p>4. Art, design & new media</p> <ul style="list-style-type: none"> •42 detail occupations •Current Jobs = 20,652 •Projected Openings = 3,972 •Jobs are a mix of training and Post Secondary Degree/Certificate 	<p>5. Computers Math & Engineering*</p> <ul style="list-style-type: none"> •35 detail occupations •Current Jobs = 31,007 •Projected Openings = 6,297 •Most jobs require Post Secondary Degree/Certificate 	
<p>* Segments made up of two major occupational groups. Healthcare is the combination of Healthcare practitioners & technical occupations (SIC 29) and Healthcare support occupations (SIC 31). Computers Math & Engineering is the aggregate of Computer, math & science occupations (SIC 15) and Architecture & engineering occupations (SIC 17).</p>		

Figure 2 shows the number of jobs the five segments collectively account for. Note that these jobs pay an average wage of approximately 20% above the County average.

Figure 2

<p><i>The five segments collectively account for</i></p> <ul style="list-style-type: none"> • 126, 000 current jobs (28% of county) • 25,000 projected job openings (32% of county) • 12,500 projected opening from new growth (48 % of county) • Pay an average wage of roughly 20% above the county average (growth in this group raises county per capita income)
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