Business Administration (TOP 0505.00) Regional Program Demand Report

Foothill College, San Francisco larger MSA



Introduction and Contents

Contents

Executive Summary	3
Job Outlook Summary	5
Inverse Staffing Patterns	9
Regional Graduation Summary	10
Occupational Programs & Completers	13

Purpose and Goals

This report is designed to integrate and analyze data from multiple sources to help educational institutions discover regional labor market needs for certain postsecondary programs of study. The overall goal is to help a college align their program offerings the economy and labor market of its service region. To do this, the report selects a set of focus occupations, determines the regional job outlook for them, and compares this to the number of recent graduates in related programs at regional educational institutions. While this is a first step toward a supply/demand analysis, for increased accuracy it could be extended with survey-based information from local employers regarding their hiring outlook and recruitment sources.

The occupation employment and wage numbers are from EMSI's national Complete Employment database, which is built using numerous published data sources from the federal Bureau of Labor Statistics, Bureau of Economic Analysis, and Bureau of the Census. In addition, the report uses industry/occupation data and projections created by the State of AnyState. The completions-by-program and program-to-occupation links use data from the U.S. Department of Education.

These data sources have been specially processed and harmonized to provide more complete and detailed data than any individual source used. For more information, see the final page of this report.

Focus College

Foothill College

Region Definition

Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara

Key Terms and Concepts

Programs: Courses of postsecondary study defined by CIP (Classification of Instructional Programs) codes.

Occupation: A category of workers defined by the Standard Occupational Classification (SOC).

Relating occupations to Programs: EMSI determines these links using information from the U.S. Department of Education.

Replacement Jobs: The estimated number of job openings in an occupation due to retirement, turnover, and other factors aside from job growth. Based on national percentages by occupation.

Annual openings: The sum of new jobs and estimated replacement jobs for a given occupation, divided by the number of years in the timeframe.

Earnings: For industries, total annual earnings per worker is reported; these earnings include wages, salaries, profits, and benefits. Occupational earnings are reported as median hourly wage only.

Jobs: Full-time and part-time positions held by proprietors and payroll employees in the public or private sector. May exceed actual worker count.

Projections: Estimates of future job or population numbers based on (1) recent historical regional trends and (2) published forecasts created by a consensus of state and federal agencies.

Executive Summary

Overview

This report focuses on **14 occupations** which are expected to provide **6,625 annual job openings** from 2008-2013 in the San Francisco larger MSA 6-county area. Meanwhile, in 2007, area colleges produced **10,514 graduates** in **34 programs** related to these occupations. The numbers do not conclusively show an opportunity for area colleges to expand their offerings in this field.¹

Focus Occupations

The following occupations were selected for analysis in this report:²

- Chief executives
- · General and operations managers
- Sales managers
- Administrative services managers
- Industrial production managers
- Transportation, storage, and distribution managers
- Construction managers
- · Social and community service managers
- · Managers, all other
- Cost estimators
- Management analysts
- First-line supervisors/managers of housekeeping and janitorial workers
- Gaming supervisors
- First-line supervisors/managers of personal service workers

Focus Programs

The key occupations above correspond to the following standard postsecondary program titles:³

- Materials Engineering
- Mechanical Engineering
- Construction Engineering
- Manufacturing Engineering

- Construction Engineering Technology/Technician
- Consumer Merchandising/Retailing Management
- Community Organization and Advocacy
- Public Administration
- Public Policy Analysis
- Public Administration and Social Service Professions, Other
- Building/Property Maintenance and Management
- Aeronautics/Aviation/Aerospace Science and Technology, General
- Aviation/Airway Management and Operations
- Theatre/Theatre Arts Management
- Arts Management
- Medical/Health Management and Clinical Assistant/Specialist
- Business/Commerce, General
- Business Administration and Management, General
- Purchasing, Procurement/Acquisitions and Contracts
 Management
- Logistics and Materials Management
- Operations Management and Supervision
- Non-Profit/Public/Organizational Management
- Business Administration, Management and Operations, Other
- Entrepreneurship/Entrepreneurial Studies
- Franchising and Franchise Operations
- Small Business Administration/Management
- · Entrepreneurial and Small Business Operations, Other
- Tourism and Travel Services Management
- Hospitality Administration/Management, Other
- Human Resources Management and Services, Other
- International Business/Trade/Commerce
- Marketing/Marketing Management, General
- Marketing, Other
- Business, Management, Marketing, and Related Support Services, Other

^{1.} Annual job openings: new plus replacement jobs divided by years in the timeframe. Note that openings may be filled from various sources besides new graduates, and that graduates may work in occupations unrelated to their degree.

^{2.} Occupations are defined by the federal SOC system. 3. Programs are defined by the federal CIP system. The occupation-program crosswalk is based on the CIP-SOC crosswalk published by the U.S. Department of Education.

Executive Summary, cont.

Labor Market Outlook

Aggregated data for all focus occupations:

	Region	State[s]	U.S.
2008 total jobs	239,212	1,082,242	8,320,682
2013 total jobs	246,811	1,133,389	8,778,374
2008-2013 growth	7,602	51,146	457,694
2008-2013 repl. jobs	25,522	115,965	499,125
Median hourly earnings	\$38.61	\$32.68	\$27.77

Focus Program Completions

"Completions" represents the total number of students to attain an award or degree at each given level in all the above college programs.

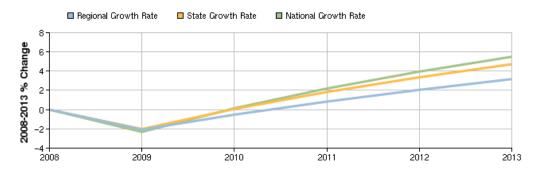
Award Level	2007 Completions (Foothill College)	2007 Completions (All Colleges in Region)
Award < 2 years	0	442
Associate's	32	1035
Bachelor's	-	5307
Postbaccalaureate Certificate	-	3
Master's	-	3572
Doctor's	-	155
Professional	-	-
TOTAL	32	10514

Source: U.S. Department of Education, National Center for Education Statistics: Integrated Postsecondary Education Data System (IPEDS).

Job Outlook Summary

Percent Change in Employment, All Focus Occupations

This graph shows yearly percent growth compared to 2008.



The table summarizes the regional job outlook for the focus occupations using employment projections and current wage data, indicating the demand for these kinds of workers and their pay scale. Colleges which strive to be labor market responsive, maximize their economic impact, and generate a return on investment for public funds should generally focus program resources to support high-growth, high-wage occupations.

Detailed Information by Occupation

	2008-13 Avg. Annual Openings			s Median Hourly Earnings		
Occupation Title	Region	State[s]	U.S.	Region	State[s]	U.S.
Managers, all other	1,346	6,941	33,479	\$28.50	\$23.38	\$20.50
Management analysts	1,270	4,557	23,596	\$31.57	\$27.14	\$26.19
General and operations managers	1,236	6,747	44,174	\$53.76	\$46.20	\$39.70
Chief executives	1,130	5,923	25,244	\$40.30	\$35.28	\$28.27
Sales managers	386	1,857	9,682	\$56.13	\$45.15	\$41.07
First-line supervisors/managers of housekeeping and janitorial workers	227	1,494	9,872	\$12.49	\$11.57	\$10.88
Administrative services managers	199	1,115	9,312	\$40.82	\$37.03	\$32.81
Construction managers	193	1,338	10,541	\$34.91	\$30.58	\$21.43
Industrial production managers	147	633	4,269	\$50.22	\$41.03	\$38.39
Cost estimators	139	771	6,592	\$33.69	\$29.18	\$25.54
Social and community service managers	131	743	6,434	\$25.56	\$23.63	\$20.61
First-line supervisors/managers of personal service workers	105	571	2,602	\$14.48	\$13.12	\$11.88
Transportation, storage, and distribution managers	87	545	3,942	\$40.92	\$35.32	\$34.05
Gaming supervisors	29	186	1,625	\$13.56	\$14.45	\$15.39
TOTAL	6,625	33,422	191,364	\$38.61	\$32.68	\$27.77

Source: EMSI Complete Employment, 3/2008.

Average annual openings: total new plus replacement jobs over the entire timeframe divided by number of years in the timeframe.

^{1.} Projected new and replacement jobs can indicate demand, but are not necessarily equivalent to demand. The number is based on past regional performance of the industries that employ workers in the given occupations, combined with official, biannual state and federal ten-year estimates. Projections may underestimate demand if employers need these kinds of workers but are unable to hire qualified individuals to meet their needs, or if unforeseen business recruitment and growth outpace past trends. Similarly, projections may overestimate demand if there are unforeseen contractions in key employers, entire industries, or the national economy as a whole.

Regional Job Outlook

The table summarizes the regional job outlook for the focus occupations using employment projections and current wage data, indicating the demand for these kinds of workers and their pay scale. Colleges which strive to be labor market responsive, maximize their economic impact, and generate a return on investment for public funds should generally focus program resources to support high-growth, high-wage occupations. Occupations are sorted by total 2008 jobs.

Occupation Title	2008 Jobs	2013 Jobs	New Jobs	New & Rep. Jobs	Median Hourly Earnings
General and operations managers	56,868	56,388	-480	6,178	\$53.76
Managers, all other	44,891	47,214	2,323	6,730	\$28.50
Management analysts	43,672	46,310	2,638	6,351	\$31.57
Chief executives	30,268	31,886	1,618	5,648	\$40.30
Sales managers	14,883	15,193	310	1,928	\$56.13
Construction managers	11,876	11,983	107	967	\$34.91
First-line supervisors/managers of housekeeping and janitorial workers	8,152	8,721	569	1,135	\$12.49
Administrative services managers	6,068	6,269	201	994	\$40.82
Cost estimators	5,679	5,822	143	696	\$33.69
First-line supervisors/managers of personal service workers	5,098	5,053	-45	526	\$14.48
Industrial production managers	4,768	4,572	-196	736	\$50.22
Social and community service managers	3,537	3,846	309	653	\$25.56
Transportation, storage, and distribution managers	2,797	2,821	24	435	\$40.92
Gaming supervisors	653	734	81	146	\$13.56
	239,212	246,811	7,602	33,124	\$38.61

Source: EMSI Complete Employment - Spring 2009.

State & National Job Outlook

These two tables summarize the state and national job outlook for the focus occupations using employment projections and current wage data, indicating the demand for these kinds of workers and their pay scale. Occupations are in the same order as they are in the regional job outlook table on the previous page.

State Job Outlook

Occupation Title	2008 Jobs	2013 Jobs	New Jobs	New & Rep. Jobs	Median Hourly Earnings
	2008 JOBS	2015 JOBS	INEW JODS	2005	Earnings
General and operations managers	255,931	259,600	3,669	33,737	\$46.20
Managers, all other	219,085	232,294	13,209	34,706	\$23.38
Chief executives	148,315	158,177	9,862	29,617	\$35.28
Management analysts	144,587	155,028	10,441	22,786	\$27.14
Construction managers	67,330	69,112	1,782	6,690	\$30.58
Sales managers	60,999	63,661	2,662	9,283	\$45.15
First-line supervisors/managers of housekeeping and janitorial workers	47,039	51,212	4,173	7,472	\$11.57
First-line supervisors/managers of personal service workers	29,386	28,970	-416	2,856	\$13.12
Administrative services managers	28,223	30,082	1,859	5,573	\$37.03
Cost estimators	26,918	28,160	1,242	3,856	\$29.18
Industrial production managers	19,597	18,940	-657	3,166	\$41.03
Social and community service managers	17,665	19,663	1,998	3,713	\$23.63
Transportation, storage, and distribution managers	13,482	14,232	750	2,724	\$35.32
Gaming supervisors	3,685	4,257	572	929	\$14.45
	1,082,242	1,133,389	51,146	167,111	\$32.68

Source: EMSI Complete Employment - Spring 2009.

National Job Outlook

Occupation Title	2008 Jobs	2013 Jobs	New Jobs	New & Rep. Jobs	Median Hourly Earnings
General and operations managers	1,832,323	1,859,862	27,539	220,870	\$39.70
Managers, all other	1,628,972	1,760,627	131,655	167,397	\$20.50
Chief executives	1,147,653	1,233,965	86,312	126,221	\$28.27
Management analysts	1,010,455	1,084,659	74,204	117,979	\$26.19
Construction managers	737,809	775,051	37,242	52,705	\$21.43
First-line supervisors/managers of housekeeping and janitorial workers	408,736	444,829	36,093	49,359	\$10.88
Sales managers	368,899	382,675	13,776	48,411	\$41.07
Administrative services managers	254,172	269,130	14,958	46,558	\$32.81
First-line supervisors/managers of personal service workers	235,230	234,350	-880	13,009	\$11.88
Cost estimators	233,709	245,685	11,976	32,959	\$25.54
Social and community service managers	160,821	181,821	21,000	32,171	\$20.61
Industrial production managers	153,580	145,745	-7,835	21,345	\$38.39
Transportation, storage, and distribution managers	104,093	110,256	6,163	19,711	\$34.05

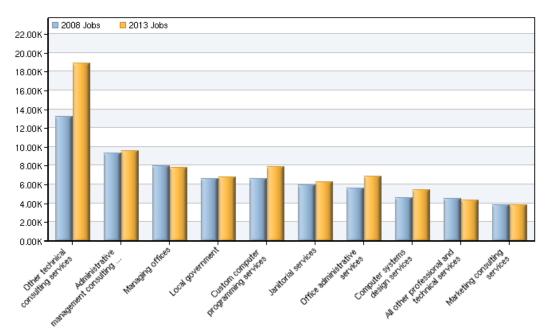
Occupation Title	2008 Jobs	2013 Jobs	New Jobs	New & Rep. Jobs	Median Hourly Earnings
Gaming supervisors	44,230	49,721	5,491	8,126	\$15.39
	8,320,682	8,778,374	457,694	956,819	\$27.77

Source: EMSI Complete Employment - Spring 2009.

Inverse Staffing Patterns

Industrial Makeup

These are your region's top ten growing industries in the selected occupations.



541611 A	Other technical consulting services Administrative management consulting services Managing offices	13,194 9,309 7,954	18,863 9,560	5,669 251	43% 3%
	5 5	•	•	251	3%
551114 N	Managing offices	7 954			570
		1,551	7,761	-193	-2%
930000 L	Local government	6,636	6,774	138	2%
541511 C	Custom computer programming services	6,614	7,891	1,277	19%
561720 Ja	Janitorial services	5,925	6,276	351	6%
561110 O	Office administrative services	5,603	6,887	1,284	23%
541512 C	Computer systems design services	4,541	5,376	835	18%
541990 A	All other professional and technical services	4,524	4,346	-178	-4%
541613 N	Marketing consulting services	3,783	3,809	26	1%

Regional Graduation Summary

Regional graduations ("completions" or number of awards/degrees granted) in the programs tied to the focus occupations are one indicator of workforce supply. (Other sources include in-migration of new workers to the region, promotion from within firms, and currently unemployed workers in the same or similar occupations.) The following table breaks down these graduations by program and award level at AnyRegion college and at all institutions in the region. A zero entry for completers indicates the program is offered but had no completions, while a "-" indicates the program is not offered.

CIP Code	Program Title	Award Level	2007 Completions, Your College	2007 Completions, Entire Region
14.1801	Materials Engineering	Bachelor's degree	-	7
		Master's degree	-	33
		Post-master's certificate	-	-
		Doctor's degree	-	21
14.1901	Mechanical Engineering	Bachelor's degree	-	397
		Master's degree	-	230
		Post-master's certificate	-	-
		Doctor's degree	-	72
14.3301	Construction Engineering	[all]	-	-
14.3601	Manufacturing Engineering	[all]	-	-
15.1001	Construction Engineering Technology/Technician	[all]	-	-
19.0203	Consumer Merchandising/Retailing Management	[all]	-	-
44.0201	Community Organization and Advocacy	[all]	-	-
44.0401	Public Administration	Bachelor's degree	-	22
		Master's degree	-	238
		Doctor's degree	-	5
44.0501	Public Policy Analysis	Bachelor's degree	-	38
		Master's degree	-	93
		Doctor's degree	-	2
44.9999	Public Administration and Social Service Professions, Other	Award of less than 1 academic year	-	3
		Award of at least 1 but less than 2 academic years	-	-
		Associate's degree	-	1
		Bachelor's degree	-	13
		Master's degree	-	-
46.0401	Building/Property Maintenance and Management	Award of less than 1 academic year	-	25
		Award of at least 1 but less than 2 academic years	-	91
49.0101	Aeronautics/Aviation/Aerospace Science and Technology, General	Bachelor's degree	-	42
49.0104	Aviation/Airway Management and Operations	[all]	-	-
50.0508	Theatre/Theatre Arts Management	[all]	-	-
50.0704	Arts Management	Master's degree	-	1

Program Title	Award Level	Your College	Entire Region
Medical/Health Management and Clinical Assistant/Specialist	[all]	-	-
Business/Commerce, General	Award of less than 1 academic year	-	17
	Award of at least 1 but less than 2 academic years	-	-
	Associate's degree	-	149
	Bachelor's degree	-	104
	Master's degree	-	34
	Doctor's degree	-	14
Business Administration and Management, General	Award of less than 1 academic year	-	84
	Award of at least 1 but less than 2 academic years	-	28
	Associate's degree	30	362
	Bachelor's degree	-	4,330
	Master's degree	-	2,690
	Doctor's degree	-	41
Purchasing, Procurement/Acquisitions and Contracts Management	Associate's degree	-	1
Logistics and Materials Management	Master's degree	-	3
Operations Management and Supervision	Bachelor's degree	-	1
	Master's degree	-	1
Non-Profit/Public/Organizational Management	Bachelor's degree	-	-
	Master's degree	-	б
Business Administration, Management and Operations, Other	Award of at least 1 but less than 2 academic years	-	12
	Associate's degree	-	215
	Bachelor's degree	-	64
	Master's degree	-	116
Entrepreneurship/Entrepreneurial Studies	Bachelor's degree	-	7
Small Business Administration/Management	Award of less than 1 academic year	-	5
	Award of at least 1 but less than 2 academic years	-	-
	Associate's degree	-	2
Entrepreneurial and Small Business Operations, Other	[all]	-	-
Tourism and Travel Services Management	[all]	-	-
Hospitality Administration/Management, Other	Award of less than 1 academic year	-	154
	Associate's degree	-	123
Human Resources Management and Services, Other	[all]	-	-
International Business/Trade/Commerce	Award of less than 1 academic year	-	19
	Award of at least 1 but less than 2 academic years	-	-
	Associate's degree	2	2
	Bachelor's degree	-	68
	Master's degree	-	43
Marketing/Marketing Management, General	Bachelor's degree	-	207
	Postbaccalaureate certificate	-	3
	Master's degree		72
	Assistant/Specialist Business/Commerce, General Business Administration and Management, General Business Administration and Management, General Purchasing, Procurement/Acquisitions and Contracts Management Logistics and Materials Management Operations Management and Supervision Operations Management and Supervision Management Business Administration, Management and Operations, Other Entrepreneurship/Entrepreneurial Studies Small Business Administration/Management Husiness Administration/Management Husiness Administration/Management Husiness Administration/Management Husiness Administration/Management Husiness Administration/Management Husiness Administration/Management Marketing/Marketing Management,	Assistant/SpecialistAvard of less than 1 academic yearBusiness/Commerce, GeneralAward of at least 1 but less than 2 academic yearsAssociate's degreeBachelor's degreeInternational degreeBachelor's degreeBusiness Administration and Management, GeneralAward of less than 1 academic yearsAssociate's degreeAward of at least 1 but less than 2 academic yearsBusiness Administration and Management, GeneralAward of at least 1 but less than 2 academic yearsAward of at least 1 but less than 2 academic yearsBachelor's degreeDoctor's degreeDoctor's degreePurchasing, Procurement/Acquisitions and Contracts ManagementMaster's degreeLogistics and Materials Management ManagementMaster's degreeNon-Profit/Public/Organizational managementBachelor's degreeBusiness Administration, Management and Operations, OtherAward of at least 1 but less than 2 academic yearsAssociate's degreeBachelor's degreeBusiness Administration, Management and Operations, OtherBachelor's degreeSmall Business Administration/ManagementAward of at least 1 but less than 2 academic yearsInterpreneurship/Entrepreneural Studies Small BusinessGallPurstenseurship/Entrepreneural Studies Speriotion, OtherAward of at least 1 but less than 2 academic yearsInterpreneural and Small Business Operations, OtherGallInterpreneural and Small BusinessGallPurstenseural Administration/ManagementAward of at least 1 but less than 2 academic years <t< td=""><td>Assitant/SpecialistAward of less than 1 academic yearPBusiness/Commerce, GeneralAward of at least 1 but less than 2 academic yearsPAssociate's degreePBachelor's degreePDoctor's degreePBusiness Administration and Management, GeneralAward of less than 1 academic yearPAward of at least 1 but less than 2 academic yearsPPurchasing, Procurement/Acquisitions and Contracts ManagementAward of at least 1 but less than 2 academic yearsPPurchasing, Procurement/Acquisitions and Contracts ManagementAssociate's degreePPurchasing, Procurement/Acquisitions and Master's degreePPDoctor's degreePPDoctor's degreePPDoctor's degreePPDoctor's degreePPNon-Profit/Public/Organizational Master's degreePPBusiness Administration, Management Advard of at least 1 but less than 2 academic yearsPRaster's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPBusiness Administration, ManagementAward of at least 1 but less than 2 academic yearsPAssociate's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPAss</td></t<>	Assitant/SpecialistAward of less than 1 academic yearPBusiness/Commerce, GeneralAward of at least 1 but less than 2 academic yearsPAssociate's degreePBachelor's degreePDoctor's degreePBusiness Administration and Management, GeneralAward of less than 1 academic yearPAward of at least 1 but less than 2 academic yearsPPurchasing, Procurement/Acquisitions and Contracts ManagementAward of at least 1 but less than 2 academic yearsPPurchasing, Procurement/Acquisitions and Contracts ManagementAssociate's degreePPurchasing, Procurement/Acquisitions and Master's degreePPDoctor's degreePPDoctor's degreePPDoctor's degreePPDoctor's degreePPNon-Profit/Public/Organizational Master's degreePPBusiness Administration, Management Advard of at least 1 but less than 2 academic yearsPRaster's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPBusiness Administration, ManagementAward of at least 1 but less than 2 academic yearsPAssociate's degreePPAssociate's degreePPAssociate's degreePPAssociate's degreePPAss

CIP Code	Program Title	Award Level	2007 Completions, Your College	2007 Completions, Entire Region
52.9999	Business, Management, Marketing & Related Support Services, Other	Award of less than 1 academic year	-	4
		Associate's degree	-	180
		Bachelor's degree	-	7
		Master's degree	-	12
	TOTAL		32	10,514

Source: U.S. Department of Education, National Center for Education Statistics: Integrated Postsecondary Education Data System (IPEDS).

Occupational Programs & Completers

The following section provides detailed information for each focus occupation, including the job outlook information provided above. Each occupation is also associated with one or more postsecondary programs (defined by standard CIP 2000 codes) using information published by the U.S. Department of Education with customizations by EMSI.

A zero entry for completers indicates the program is offered but had no completions, while a "-" indicates the program is not offered.

Summary Table

Occupation	2008-2013 Avg. Annual Openings	2007 Completions, All Related Programs (College)	2007 Completions, All Related Programs (Region)	Total Related Programs	Total Occs. Sharing Same Programs
Managers, all other	1,346	30	9,043	15	27
Management analysts	1,270	30	7,853	2	14
General and operations managers	1,236	32	8,257	5	17
Chief executives	1,130	32	8,407	7	18
Sales managers	386	30	8,135	5	18
First-line supervisors/managers of housekeeping and janitorial workers	227	30	8,058	3	15
Administrative services managers	199	30	8,119	5	20
Construction managers	193	30	7,855	4	28
Industrial production managers	147	30	7,855	3	27
Cost estimators	139	30	8,613	7	20
Social and community service managers	131	30	8,334	7	25
First-line supervisors/managers of personal service workers	105	30	7,944	4	28
Transportation, storage, and distribution managers	87	30	8,163	6	18
Gaming supervisors	29	30	7,944	3	27

Source: EMSI Complete Employment; U.S. Department of Education, IPEDS & Occupational Code Crosswalk - CIP 2000.

An occupation may be related to multiple programs and vice versa. Completions may be double-counted if related to multiple occupations; **do not total**. See columns "Total Related Programs" and "Total Occs. Sharing Same Programs" to refine interpretation of openings versus completions.

Detail Tables

The following tables provide detailed information for focus occupations and related programs, comparing estimated average annual openings in each occupation with recent completions (awards/degrees) in related programs at both AnyRegion College and at all institutions in the region. Many postsecondary programs are linked to multiple occupations; this is shown in the final column of each table and is one indication that fewer program completers will likely enter the given occupation than the overall total would suggest.

Sources for this section: EMSI Complete Employment, 3/2008; U.S. Department of Education, IPEDS.

Chief executives

2008-2013 Avg. Annual Openings: **1,130** Median Hourly Earnings: **\$40.30**

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	32	8,407	18
Public Administration	-	265	9
Public Policy Analysis	-	133	1
Public Administration and Social Service Professions, Other	-	17	-
Business/Commerce, General	-	318	5
Business Administration and Management, General	30	7,535	3
Entrepreneurship/Entrepreneurial Studies	-	7	-
International Business/Trade/Commerce	2	132	-

General and operations managers

2008-2013 Avg. Annual Openings: 1,236

Median Hourly Earnings: \$53.76

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	32	8,257	17
Public Administration	-	265	9
Business/Commerce, General	-	318	5
Business Administration and Management, General	30	7,535	3
Entrepreneurship/Entrepreneurial Studies	-	7	-
International Business/Trade/Commerce	2	132	-

Sales managers

2008-2013 Avg. Annual Openings: **386** Median Hourly Earnings: **\$56.13**

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	8,135	18
Consumer Merchandising/Retailing Management	-	-	4
Business/Commerce, General	-	318	10
Business Administration and Management, General	30	7,535	3

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
Marketing/Marketing Management, General	-	282	1
Marketing, Other	-	-	-

Administrative services managers

2008-2013 Avg. Annual Openings: 199

Median Hourly Earnings: **\$40.82**

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	8,119	20
Public Administration	-	265	9
Medical/Health Management and Clinical Assistant/Specialist	-	-	1
Business/Commerce, General	-	318	5
Business Administration and Management, General	30	7,535	3
Purchasing, Procurement/Acquisitions and Contracts Management	-	1	2

Industrial production managers

2008-2013 Avg. Annual Openings: 147

Median Hourly Earnings: **\$50.22**

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	7,855	27
Business/Commerce, General	-	318	11
Business Administration and Management, General	30	7,535	3
Operations Management and Supervision	-	2	13

Transportation, storage, and distribution managers

2008-2013 Avg. Annual Openings: 87

Median Hourly Earnings: \$40.92

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	8,163	18
Public Administration	-	265	9
Aeronautics/Aviation/Aerospace Science and Technology, General	-	42	-
Aviation/Airway Management and Operations	-	-	-
Business/Commerce, General	-	318	5
Business Administration and Management, General	30	7,535	3
Logistics and Materials Management	-	3	1

Construction managers

2008-2013 Avg. Annual Openings: **193** Median Hourly Earnings: **\$34.91**

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	7,855	28
Construction Engineering Technology/Technician	-	-	3
Business/Commerce, General	-	318	9
Business Administration and Management, General	30	7,535	3
Operations Management and Supervision	-	2	13

Social and community service managers

2008-2013 Avg. Annual Openings: 131

Median Hourly Earnings: \$25.56

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	8,334	25
Community Organization and Advocacy	-	-	3
Public Administration	-	265	7
Business/Commerce, General	-	318	5
Business Administration and Management, General	30	7,535	3
Non-Profit/Public/Organizational Management	-	6	-
Entrepreneurship/Entrepreneurial Studies	-	7	-
Business, Management, Marketing, and Related Support Services, Other	-	203	7

Managers, all other

2008-2013 Avg. Annual Openings: 1,346

Median Hourly Earnings: \$28.50

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	9,043	27
Public Administration	-	265	9
Public Administration and Social Service Professions, Other	-	17	-
Theatre/Theatre Arts Management	-	-	1
Arts Management	-	1	1
Business/Commerce, General	-	318	5
Business Administration and Management, General	30	7,535	3
Non-Profit/Public/Organizational Management	-	б	-
Business Administration, Management and Operations, Other	-	407	-
Entrepreneurship/Entrepreneurial Studies	-	7	-
Franchising and Franchise Operations	-	-	-
Small Business Administration/Management	-	7	-
Entrepreneurial and Small Business Operations, Other	-	-	-
Tourism and Travel Services Management	-	-	1
Hospitality Administration/Management, Other	-	277	-

Related Programs	2007 Completions,	2007 Completions,	Other Occupations
	College	Entire Region	Linked to Program
Business, Management, Marketing, and Related Support Services, Other	-	203	7

Cost estimators

2008-2013 Avg. Annual Openings: 139

Median Hourly Earnings: \$33.69

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	8,613	20
Materials Engineering	-	61	3
Mechanical Engineering	-	699	2
Construction Engineering	-	-	1
Manufacturing Engineering	-	-	-
Construction Engineering Technology/Technician	-	-	2
Business/Commerce, General	-	318	9
Business Administration and Management, General	30	7,535	3

Management analysts

2008-2013 Avg. Annual Openings: 1,270

Median Hourly Earnings: \$31.57

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	7,853	14
Business/Commerce, General	-	318	11
Business Administration and Management, General	30	7,535	3

First-line supervisors/managers of housekeeping and janitorial workers

2008-2013 Avg. Annual Openings: 227

Median Hourly Earnings: \$12.49

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	8,058	15
Building/Property Maintenance and Management	-	116	2
Business Administration and Management, General	30	7,535	13
Business Administration, Management and Operations, Other	-	407	-

Gaming supervisors

2008-2013 Avg. Annual Openings: 29

Median Hourly Earnings: \$13.56

Related Programs	2007 Completions,	2007 Completions,	Other Occupations
	College	Entire Region	Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	7,944	27

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
Business Administration and Management, General	30	7,535	14
Operations Management and Supervision	-	2	13
Business Administration, Management and Operations, Other	-	407	-

First-line supervisors/managers of personal service workers

2008-2013 Avg. Annual Openings: 105

Median Hourly Earnings: **\$14.48**

Related Programs	2007 Completions, College	2007 Completions, Entire Region	Other Occupations Linked to Program
TOTAL, ALL RELATED PROGRAMS	30	7,944	28
Business Administration and Management, General	30	7,535	14
Operations Management and Supervision	-	2	13
Business Administration, Management and Operations, Other	-	407	-
Human Resources Management and Services, Other	-	-	1

About the Data

Introduction

EMSI data is a compilation and harmonization of more than 80 government and private-sector sources. Updated every six months and based on the most recent data available, the dataset covers the entire US population and economy, down to each individual ZIP code. It includes data for industries, occupations, demographics, postsecondary institutions, and selected economic indicators.

Occupation Data

Organizing regional employment information by occupation provides a workforce-oriented view of the regional economy. EMSI's occupation data are based on EMSI's industry data and regional "staffing patterns" (showing the average mix of job types in various industries) taken from the Occupational Employment Statistics program (U.S. Bureau of Labor Statistics). Wage information is augmented by data from the American Community Survey (U.S. Census). Replacement jobs and annual openings estimates are based on national survey data by occupation. As in the official government statistics, occupations are categorized by Standard Occupational Classification (SOC) codes and titles.

Completions Data

Completions are voluntarily reported by postsecondary institutions through the U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS). Completions are organized by program using the Classification of Instructional Programs (CIP) codes and titles.

Relating Occupations to Postsecondary Programs

The occupation-to-program (SOC-to-CIP) "crosswalk" is a large table that describes which occupations are generally trained for by each standard postsecondary program (based on Classification of Instructional Programs [CIP] codes and titles, last updated in 2000). EMSI starts with the official crosswalk published by the U.S. Department of Education and customizes it in various ways to make it more accurate and practical for comparing programs to regional labor markets.

About Economic Modeling Specialists

Products and Services

EMSI provides integrated regional economic and labor market data, web-based analysis tools, data-driven reports, and custom consulting services. EMSI specializes in detailed information about regional economies for assessment and planning purposes, bringing together industry, workforce, economic development, and education/training perspectives.

EMSI's expertise is centered on regional economics, data integration and analysis, programming, and design so that it can provide the best available products and services for regional decision makers. EMSI recently merged with its sister company CCbenefits Inc.-well known for conducting socioeconomic impact studies for over 800 community and technical colleges across the nation-to offer an integrated portfolio of solutions for college, workforce, and economic development professionals.

Clients

EMSI's client base includes hundreds of colleges, workforce boards, economic development organizations, governmental agencies, economists, consultants, academics, and private-sector analysts. With over four thousand current clients in the U.S., Canada, and the United Kingdom, EMSI's products and services are critical for informing regional policy.

Contact EMSI

For more information about EMSI, visit us at www.economicmodeling.com, or call us toll-free at 866.999.3674.