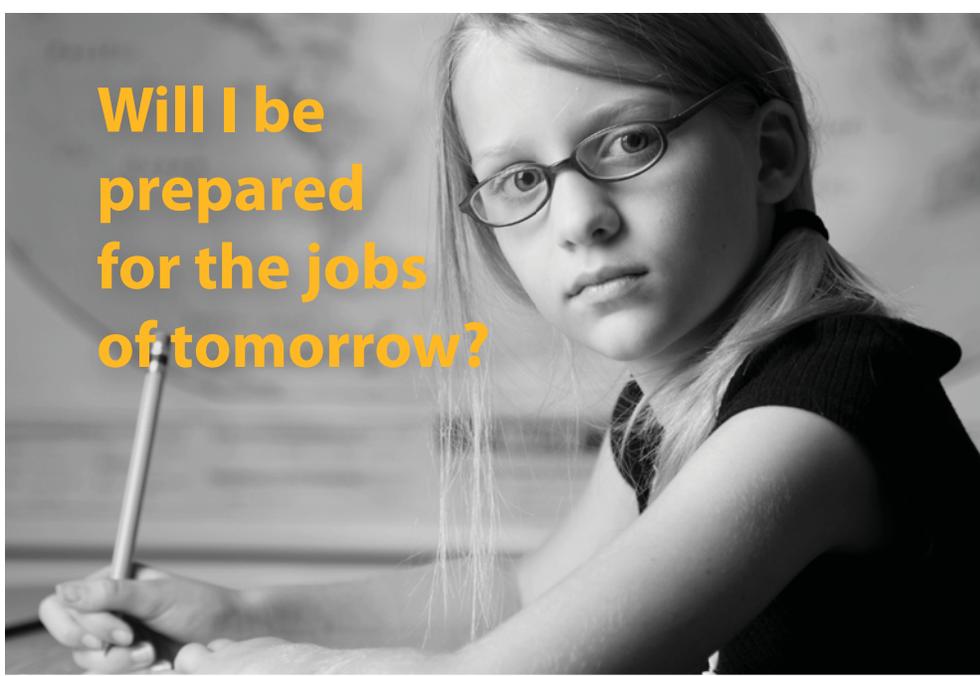


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Will my business find the employees it needs?



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**2008-2009**

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## What are Clusters?

Clusters are geographic concentrations of interconnected companies, specialized suppliers, service providers, and associated institutions in a particular field that are present in a particular region or local economy. Clusters emerge because companies engaged in a similar industry recognize they can enhance their productivity through locating near each other, thus enhancing their ability to compete collectively and cooperatively.

*Industry clusters typically possess four key characteristics:*

- Critical mass/concentration -- in other words, more concentrated than average.
- High Growth rates -- a tendency toward higher growth rates than other sectors.
- High Multiplier effects -- not all jobs are equal in terms of their effect on other parts of the economy. For example, creating a job in an industry cluster typically creates two or three other jobs throughout the economy, such as in Advanced Manufacturing.
- Finally, and most importantly, some key reason, or some competitive advantage for the cluster to be here, today and in the future - Disney and Boeing are two examples of key reasons we have competitive advantage in their respective clusters.

Because of this, these businesses tend to be higher growth and generate higher wage occupations. Having significant multipliers also plays a role in identifying the clusters of Orange County. While a cluster itself may have more moderate growth or wages, if it has high multiplier effects (e.g. manufacturing), it could be included with a "sub-cluster" defined within it where more high-growth, high-wage jobs are concentrated. "Emerging clusters" are also defined in situations where elements of a cluster are emerging and expected to play a larger role into the future.

The "Cluster Competitiveness" strategy and mapping framework and methodology used by the Orange County Workforce Indicators was developed by the Institute for Strategy and Competitiveness at Harvard University. Using a Cluster Mapping Project the Institute for Strategy and Competitiveness has assembled a detailed picture of the location and performance of industries in the United States. Extensive data from the project is now available. In addition, the Cluster Meta-Study aggregates data from existing cluster publications to learn more about the locational, economic, and

competitive characteristics of industry clusters, the reasons behind their competitiveness or lack thereof, and their patterns of evolution over time as well as the reasons behind these patterns.

Orange County industry clusters were identified using comparative North American Industrial Classification System (NAICS) and Occupational Information Network (O\*NET) data for Orange County and the surrounding region, along with sophisticated economic techniques such as Location Quotient, Shift-Share, Economic Base Analysis, and econometric research. Using analysis from over fifteen years of data and findings from the Cal State Fullerton Institute for Economic and Environmental Studies as well as a half dozen years of analysis in partnership with the Orange County Workforce Investment Board, clusters specific to Orange County have been identified, cataloged, and tracked.

Broken down by industry, NAICS data show the relative growth and decline of industries as measured by number of employees, fluctuations in payroll, concentration of industry in OC relative to California and the nation, and changes in the share of total regional employment held by each industry. This approach to identifying industry clusters of opportunity provides both a powerful analytical tool as well as a useful means of communicating the state of the regional economy to non-specialists.

The 2007 Workforce Indicator's Report included research and analysis on ten industry clusters in Orange County that this report has tracked for several years: biomedical, business and professional services, communications, computer hardware, computer software, construction, defense and aerospace, energy and environment, health services, and tourism. Past research experience involving these industry clusters over the last six years has led to a refinement of data collection and analysis, as well as changes in the way the State and federal government classifies and tracks industry and employment. The 2008 Workforce Indicator Report contains an update and re-definition of Orange County's industry clusters to reflect changes in the economy and alterations in the policy goals for improving economic growth. In some cases, clusters have been re-named, in others, definitions of the components of the cluster were revised to better capture the essence of the cluster. Sub-clusters were added to a few of the clusters to better refine the analysis of them better. Emerging clusters were added to capture fields that have a promising future in Orange County.

## Business and Professional Services Cluster

The Business & Professional Services industry cluster includes firms and occupations that are involved with the provision of specialized services in support of businesses. These include areas such as law, accounting, architecture, computer programming, consulting market research, and advertising. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math).

### Occupations

SOC Code	Occupational Title	BLS Training Level
11-2011	Advertising and Promotions Managers	BA/BS + Experience
11-3011	Administrative Services Managers	BA/BS + Experience
11-3041	Compensation and Benefits Managers	BA/BS + Experience
11-3042	Training and Development Managers	BA/BS + Experience
11-3049	Human Resources Managers, All Other	BA/BS + Experience
11-9000	Other Management Occupations	
13-1021	Purchasing Agents and Buyers, Farm Products	Work Experience
13-1022	Wholesale and Retail Buyers, Except Farm Products	BA/BS Degree
13-1071	Employment, Recruitment, and Placement Specialists	BA/BS Degree
13-1072	Compensation, Benefits, and Job Analysis Specialists	BA/BS Degree
13-1073	Training and Development Specialists	BA/BS Degree
13-1079	Human Resources, Training, and Labor Relations Specialists, All Other	BA/BS Degree
13-1111	Management Analysts	BA/BS + Experience
13-1199	Business Operations Specialists, All Other	BA/BS Degree
19-3022	Survey Researchers	MA/MS Degree
23-1011	Lawyers	LLD/MD Degree
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	BA/BS + Experience
23-1023	Judges, Magistrate Judges, and Magistrates	BA/BS + Experience
23-2011	Paralegals and Legal Assistants	AA Degree
23-2092	Law Clerks	BA/BS Degree
23-2099	Legal Support Workers, All Other	BA/BS Degree
27-3022	Reporters and Correspondents	BA/BS + Experience
27-3041	Editors	BA/BS Degree
27-3043	Writers and Authors	BA/BS Degree
27-3091	Interpreters and Translators	12-Month OJT
27-3099	Media and Communication Workers, All Other	12-Month OJT
33-9021	Private Detectives and Investigators	Work Experience
33-9032	Security Guards	30-Day OJT
43-6012	Legal Secretaries	Post-Secondary Voc-Ed
51-5011	Bindery Workers	1-12 Month OJT
51-5021	Job Printers	12-Month OJT
51-5022	Prepress Technicians and Workers	12-Month OJT
51-5023	Printing Machine Operators	1-12 Month OJT

Source: California Regional Economies Employment CREE Series, 2007

**Management and Administration Sub-Cluster**

The Business Management and Administration industry sub-cluster includes firms and occupations that are involved with the establishment and staffing of businesses. These include firms involved with management of companies, administrative support, employment and temporary help services, document preparation, telemarketing companies, collection agencies, credit bureaus, janitorial services, locksmiths, security services, and convention and trade show organizations. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math).

**Occupations**

SOC Code	Occupational Title	BLS Training Level
11-9199	Managers, All Other	Work Experience
11-1021	General and Operations Managers	BA/BS + Experience
33-1099	First-Line Supervisors/Managers, Protective Service Workers, All Other	Work Experience
37-1011	First-Line Supervisors/Managers of Housekeeping and Janitorial Workers	Work Experience
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	Work Experience
43-1011	First-Line Supervisors/Managers of Office and Administrative Support Workers	Work Experience
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	30-Day OJT
43-4171	Receptionists and Information Clerks	30-Day OJT
43-4199	Information and Record Clerks, All Other	30-Day OJT
43-6011	Executive Secretaries and Administrative Assistants	1-12 Month OJT
43-6014	Secretaries, Except Legal, Medical, and Executive	1-12 Month OJT
43-9061	Office Clerks, General	30-Day OJT
43-9071	Office Machine Operators, Except Computer	30-Day OJT
43-9199	Office and Administrative Support Workers, All Other	1-12 Month OJT

Source: California Regional Economies Employment CREE Series, 2007

## Emerging Cluster: Energy, Environment, and Green Technologies

The Energy, Environment, and Green Technologies industry cluster is the field of employment of the future that will utilize high technology in transportation, in the construction and modification of the built environment, in economic development in response to climate change, and will respond to the emerging legislative mandates affecting the economy. Green technologies will include efficiencies and re-use and/or transformation of waste into usable products. Recycling and organizing resources in a new way, will respond to energy needs and shortages while also growing the economy. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math). Occupations that exist today and may grow as a response to these demands are listed below.

### Occupations

SOC Code	Occupational Title	BLS Training Level
13-1041	Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation	12-Month OJT
17-2081	Environmental Engineers	BA/BS Degree
17-3025	Environmental Engineering Technicians	AA Degree
17-3031	Surveying and Mapping Technicians	1-12 Month OJT
19-2041	Environmental Scientists and Specialists, Including Health	BA/BS Degree
19-2042	Geoscientists, Except Hydrologists and Geographers	MA/MS Degree
19-2099	Physical Scientists, All Other	BA/BS Degree
19-3051	Urban and Regional Planners	MA/MS Degree
19-4091	Environmental Science and Protection Technicians, Including Health	AA Degree
19-4092	Forensic Science Technicians	AA Degree
19-4093	Forest and Conservation Technicians	AA Degree
19-4099	Life, Physical, and Social Science Technicians, All Other	AA Degree
37-2021	Pest Control Workers	1-12 Month OJT
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	1-12 Month OJT
45-1011	First-Line Supervisors/Managers of Farming, Fishing, and Forestry Workers	Work Experience
45-2092	Farm-workers and Laborers, Crop, Nursery, and Greenhouse	30-Day OJT
45-2093	Farm-workers, Farm and Ranch Animals	30-Day OJT
45-2099	Agricultural Workers, All Other	30-Day OJT
49-9051	Electrical Power-Line Installers and Repairers	12-Month OJT
51-8031	Water and Liquid Waste Treatment Plant and System Operators	12-Month OJT
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	12-Month OJT

Source: California Regional Economies Employment CREE Series, 2007

The Construction industry cluster includes firms and occupations involved with the construction, design, and development of buildings and built structures. These include firms involved with housing construction, industrial building construction, utility system construction, highway construction, and specialized contractors (plumbers, electricians, roofers, etc.). Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math). In addition, the construction cluster includes components of geospatial architectural research and auto-CAD work.

Occupations

SOC Code	Occupational Title	BLS Training Level
11-9021	Construction Managers	BA/BS Degree
13-1051	Cost Estimators	BA/BS Degree
17-1011	Architects, Except Landscape and Naval	BA/BS Degree
17-1012	Landscape Architects	BA/BS Degree
17-1022	Surveyors	BA/BS Degree
17-2051	Civil Engineers	BA/BS Degree
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	BA/BS Degree
17-3011	Architectural and Civil Drafters	Post-Secondary Voc-Ed
17-3022	Civil Engineering Technicians	AA Degree
37-1012	First-Line Supervisors/Managers of Landscaping, Lawn Service, and Groundskeeping Workers	Work Experience
37-3013	Tree Trimmers and Pruners	30-Day OJT
37-3019	Grounds Maintenance Workers, All Other	30-Day OJT
47-1011	First-Line Supervisors/Managers of Construction Trades and Extraction Workers	Work Experience
47-2021	Brickmasons and Blockmasons	12-Month OJT
47-2022	Stonemasons	12-Month OJT
47-2031	Carpenters	12-Month OJT
47-2041	Carpet Installers	1-12 Month OJT
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	1-12 Month OJT
47-2044	Tile and Marble Setters	12-Month OJT
47-2051	Cement Masons and Concrete Finishers	12-Month OJT
47-2061	Construction Laborers	1-12 Month OJT
47-2071	Paving, Surfacing, and Tamping Equipment Operators	1-12 Month OJT
47-2073	Operating Engineers and Other Construction Equipment Operators	1-12 Month OJT
47-2081	Drywall and Ceiling Tile Installers	1-12 Month OJT
47-2082	Tapers	1-12 Month OJT
47-2111	Electricians	12-Month OJT
47-2121	Glaziers	12-Month OJT
47-2131	Insulation Workers, Floor, Ceiling, and Wall	1-12 Month OJT
47-2132	Insulation Workers, Mechanical	1-12 Month OJT
47-2141	Painters, Construction and Maintenance	1-12 Month OJT
47-2151	Pipelayers	1-12 Month OJT
47-2152	Plumbers, Pipefitters, and Steamfitters	12-Month OJT
47-2161	Plasterers and Stucco Masons	12-Month OJT
47-2181	Roofers	1-12 Month OJT
47-2211	Sheet Metal Workers	1-12 Month OJT
47-2221	Structural Iron and Steel Workers	12-Month OJT
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	30-Day OJT
47-3012	Helpers--Carpenters	30-Day OJT
47-3013	Helpers--Electricians	30-Day OJT
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	30-Day OJT
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	30-Day OJT
47-3019	Helpers, Construction Trades, All Other	30-Day OJT
47-4011	Construction and Building Inspectors	Work Experience
47-4021	Elevator Installers and Repairers	12-Month OJT
47-4031	Fence Erectors	1-12 Month OJT
47-4041	Hazardous Materials Removal Workers	1-12 Month OJT
47-4051	Highway Maintenance Workers	1-12 Month OJT
47-4099	Construction and Related Workers, All Other	1-12 Month OJT
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	Post-Secondary Voc-Ed

## FIRE (Finance, Insurance, Real Estate)

FIRE (Finance, Insurance, Real Estate) industry cluster includes firms and occupations involved with the financial operation of the economy through real estate, banking, and insurance. FIRE includes banks, credit unions, mortgage loan originators, insurance companies, rental centers, and real estate offices. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math).

### Occupations

SOC Code	Occupational Title	BLS Training Level
11-3031	Financial Managers	BA/BS + Experience
11-9141	Property, Real Estate, and Community Association Managers	BA/BS Degree
13-1031	Claims Adjusters, Examiners, and Investigators	12-Month OJT
13-1032	Insurance Appraisers, Auto Damage	12-Month OJT
13-2011	Accountants and Auditors	BA/BS Degree
13-2021	Appraisers and Assessors of Real Estate	Post-Secondary Voc-Ed
13-2031	Budget Analysts	BA/BS Degree
13-2041	Credit Analysts	BA/BS Degree
13-2051	Financial Analysts	BA/BS Degree
13-2052	Personal Financial Advisors	BA/BS Degree
13-2053	Insurance Underwriters	BA/BS Degree
13-2061	Financial Examiners	BA/BS Degree
13-2071	Loan Counselors	BA/BS Degree
13-2072	Loan Officers	BA/BS Degree
13-2081	Tax Examiners, Collectors, and Revenue Agents	BA/BS Degree
13-2082	Tax Preparers	1-12 Month OJT
13-2099	Financial Specialists, All Other	BA/BS Degree
19-3021	Market Research Analysts	MA/MS Degree
23-2093	Title Examiners, Abstractors, and Searchers	1-12 Month OJT
41-3021	Insurance Sales Agents	BA/BS Degree
41-3031	Securities, Commodities, and Financial Services Sales Agents	BA/BS Degree
41-9021	Real Estate Brokers	Work Experience
43-3011	Bill and Account Collectors	30-Day OJT
43-3021	Billing and Posting Clerks and Machine Operators	1-12 Month OJT
43-3031	Bookkeeping, Accounting, and Auditing Clerks	1-12 Month OJT
43-3051	Payroll and Timekeeping Clerks	1-12 Month OJT
43-3061	Procurement Clerks	30-Day OJT
43-3071	Tellers	30-Day OJT
43-4011	Brokerage Clerks	1-12 Month OJT
43-4041	Credit Authorizers, Checkers, and Clerks	30-Day OJT
43-4111	Interviewers, Except Eligibility and Loan	30-Day OJT
43-4131	Loan Interviewers and Clerks	30-Day OJT
43-4141	New Accounts Clerks	Work Experience
43-9041	Insurance Claims and Policy Processing Clerks	1-12 Month OJT

Source: California Regional Economies Employment CREE Series, 2007

## Healthcare Cluster

The Healthcare industry cluster includes firms and occupations for the provision of healthcare services. These include hospitals, outpatient care centers, family planning centers, home healthcare services, ambulance services, nursing care facilities, social assistance agencies, and intermediate (nursing homes) and residential care facilities. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math).

### Occupations

SOC Code	Occupational Title	BLS Training Level
11-9111	Medical and Health Services Managers	BA/BS + Experience
19-3031	Clinical, Counseling, and School Psychologists	PHD Degree
21-1011	Substance Abuse and Behavioral Disorder Counselors	MA/MS Degree
21-1013	Marriage and Family Therapists	MA/MS Degree
21-1014	Mental Health Counselors	MA/MS Degree
21-1015	Rehabilitation Counselors	MA/MS Degree
21-1021	Child, Family, and School Social Workers	BA/BS Degree
21-1022	Medical and Public Health Social Workers	BA/BS Degree
21-1023	Mental Health and Substance Abuse Social Workers	MA/MS Degree
21-1029	Social Workers, All Other	BA/BS Degree
21-1091	Health Educators	MA/MS Degree
21-1092	Probation Officers and Correctional Treatment Specialists	BA/BS Degree
21-1093	Social and Human Service Assistants	1-12 Month OJT
21-1099	Community and Social Service Specialists, All Other	BA/BS Degree
25-1066	Psychology Teachers, Postsecondary	PHD Degree
25-1071	Health Specialties Teachers, Postsecondary	MA/MS Degree
25-1072	Nursing Instructors and Teachers, Postsecondary	MA/MS Degree
29-1011	Chiropractors	LLD/MD Degree
29-1021	Dentists, General	LLD/MD Degree
29-1029	Dentists, All Other Specialists	LLD/MD Degree
29-1031	Dietitians and Nutritionists	BA/BS Degree
29-1041	Optometrists	LLD/MD Degree
29-1051	Pharmacists	LLD/MD Degree
29-1062	Family and General Practitioners	LLD/MD Degree
29-1063	Internists, General	LLD/MD Degree
29-1064	Obstetricians and Gynecologists	LLD/MD Degree
29-1065	Pediatricians, General	LLD/MD Degree
29-1066	Psychiatrists	LLD/MD Degree
29-1067	Surgeons	LLD/MD Degree
29-1069	Physicians and Surgeons, All Other	LLD/MD Degree
29-1071	Physician Assistants	BA/BS Degree
29-1111	Registered Nurses	AA Degree
29-1122	Occupational Therapists	BA/BS Degree
29-1123	Physical Therapists	MA/MS Degree

SOC Code	Occupational Title	BLS Training Level
29-1125	Recreational Therapists	BA/BS Degree
29-1126	Respiratory Therapists	AA Degree
29-1127	Speech-Language Pathologists	MA/MS Degree
29-1129	Therapists, All Other	BA/BS Degree
29-1199	Health Diagnosing and Treating Practitioners, All Other	MA/MS Degree
29-2011	Medical and Clinical Laboratory Technologists	BA/BS Degree
29-2012	Medical and Clinical Laboratory Technicians	AA Degree
29-2021	Dental Hygienists	AA Degree
29-2031	Cardiovascular Technologists and Technicians	AA Degree
29-2032	Diagnostic Medical Sonographers	AA Degree
29-2034	Radiologic Technologists and Technicians	AA Degree
29-2041	Emergency Medical Technicians and Paramedics	Post-Secondary Voc-Ed
29-2051	Dietetic Technicians	1-12 Month OJT
29-2052	Pharmacy Technicians	1-12 Month OJT
29-2053	Psychiatric Technicians	Post-Secondary Voc-Ed
29-2055	Surgical Technologists	Post-Secondary Voc-Ed
29-2061	Licensed Practical and Licensed Vocational Nurses	Post-Secondary Voc-Ed
29-2071	Medical Records and Health Information Technicians	AA Degree
29-2081	Opticians, Dispensing	12-Month OJT
29-2099	Health Technologists and Technicians, All Other	Post-Secondary Voc-Ed
29-9011	Occupational Health and Safety Specialists	BA/BS Degree
29-9099	Healthcare Practitioners and Technical Workers, All Other	Post-Secondary Voc-Ed
31-1000	Nursing, Psychiatric, and Home Health Aides	
31-1011	Home Health Aides	30-Day OJT
31-1012	Nursing Aides, Orderlies, and Attendants	30-Day OJT
31-2011	Occupational Therapist Assistants	AA Degree
31-2021	Physical Therapist Assistants	AA Degree
31-2022	Physical Therapist Aides	30-Day OJT
31-9011	Massage Therapists	Post-Secondary Voc-Ed
31-9091	Dental Assistants	1-12 Month OJT
31-9092	Medical Assistants	1-12 Month OJT
31-9093	Medical Equipment Preparers	30-Day OJT
31-9094	Medical Transcriptionists	Post-Secondary Voc-Ed
31-9095	Pharmacy Aides	30-Day OJT
31-9099	Healthcare Support Workers, All Other	30-Day OJT
39-9021	Personal and Home Care Aides	30-Day OJT
43-6013	Medical Secretaries	Post-Secondary Voc-Ed

Source: California Regional Economies Employment CREE Series, 2007

## Information Technology Cluster

The Information Technology industry cluster includes firms and occupations involved with the creation of items used in advanced technology economies. These include computer software, telecommunications, internet service provision, motion pictures, and publishing businesses. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math).

### Occupations

SOC Code	Occupational Title	BLS Training Level
11-3021	Computer and Information Systems Managers	BA/BS + Experience
15-1011	Computer and Information Scientists, Research	PHD Degree
15-1021	Computer Programmers	BA/BS Degree
15-1031	Computer Software Engineers, Applications	BA/BS Degree
15-1032	Computer Software Engineers, Systems Software	BA/BS Degree
15-1041	Computer Support Specialists	AA Degree
15-1051	Computer Systems Analysts	BA/BS Degree
15-1061	Database Administrators	BA/BS Degree
15-1071	Network and Computer Systems Administrators	BA/BS Degree
15-1081	Network Systems and Data Communications Analysts	BA/BS Degree
15-1099	Computer Specialists, All Other	AA Degree
15-2000	Mathematical Scientists	
15-2041	Statisticians	MA/MS Degree
15-2099	Mathematical Science Occupations, All Other	MA/MS Degree
17-2061	Computer Hardware Engineers	BA/BS Degree
17-2071	Electrical Engineers	BA/BS Degree
17-2072	Electronics Engineers, Except Computer	BA/BS Degree
25-1021	Computer Science Teachers, Postsecondary	MA/MS Degree
25-1022	Mathematical Science Teachers, Postsecondary	MA/MS Degree
27-1014	Multi-Media Artists and Animators	BA/BS Degree
27-1019	Artists and Related Workers, All Other	
27-1024	Graphic Designers	BA/BS Degree
27-4000	Media and Communication Equipment Workers	
27-4011	Audio and Video Equipment Technicians	12-Month OJT
27-4012	Broadcast Technicians	Post-Secondary Voc-Ed
27-4021	Photographers	12-Month OJT
27-4031	Camera Operators, Television, Video, and Motion Picture	1-12 Month OJT
27-4032	Film and Video Editors	BA/BS Degree
27-4099	Media and Communication Equipment Workers, All Other	1-12 Month OJT
43-2000	Communications Equipment Operators	
43-2011	Switchboard Operators, Including Answering Service	30-Day OJT
43-9011	Computer Operators	1-12 Month OJT
43-9021	Data Entry Keyers	1-12 Month OJT
43-9022	Word Processors and Typists	1-12 Month OJT
43-9031	Desktop Publishers	Post-Secondary Voc-Ed

Source: California Regional Economies Employment CREE Series, 2007

## Logistics and Transportation Cluster

The Logistics and Transportation industry cluster includes firms and occupations which manage the flow of goods, information and other resources, including energy and people, between the point of origin and the point of consumption in order to meet the requirements of consumers (frequently, and originally, military organizations). Logistics involves the integration of information, transportation, inventory, warehousing, material-handling, and packaging. Logistic and Transportation businesses include wholesalers, railroads, trucking, taxis, and charter bus businesses.

### Sub-Cluster: Transportation

The Transportation sub-cluster of the Logistics and Transportation industry cluster includes firms and occupations involved with the transport of goods and commercial transportation such as railroads, air cargo, shipping, trucking, taxis, and charter buses.

### Occupations

SOC Code	Occupational Title	BLS Training Level
13-1081	Logisticians	BA/BS Degree
15-2031	Operations Research Analysts	MA/MS Degree
43-5011	Cargo and Freight Agents	1-12 Month OJT
43-5021	Couriers and Messengers	30-Day OJT
43-5032	Dispatchers, Except Police, Fire, and Ambulance	1-12 Month OJT
43-5041	Meter Readers, Utilities	30-Day OJT
43-5061	Production, Planning, and Expediting Clerks	30-Day OJT
43-5071	Shipping, Receiving, and Traffic Clerks	30-Day OJT
43-5081	Stock Clerks and Order Fillers	30-Day OJT
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	30-Day OJT
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	30-Day OJT
49-3011	Aircraft Mechanics and Service Technicians	Post-Secondary Voc-Ed
49-3021	Automotive Body and Related Repairers	12-Month OJT
49-3022	Automotive Glass Installers and Repairers	12-Month OJT
49-3023	Automotive Service Technicians and Mechanics	Post-Secondary Voc-Ed
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	Post-Secondary Voc-Ed
49-3052	Motorcycle Mechanics	12-Month OJT
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	1-12 Month OJT
49-3091	Bicycle Repairers	1-12 Month OJT
49-3093	Tire Repairers and Changers	30-Day OJT
53-1021	First-Line Supervisors/Managers of Helpers, Laborers, and Material Movers, Hand	Work Experience
53-1031	First-Line Supervisors/Managers of Transportation and Material-Moving Machine and Vehicle Operators	Work Experience
53-2012	Commercial Pilots	Post-Secondary Voc-Ed
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	1-12 Month OJT
53-3021	Bus Drivers, Transit and Intercity	1-12 Month OJT
53-3022	Bus Drivers, School	30-Day OJT
53-3031	Driver/Sales Workers	30-Day OJT
53-3032	Truck Drivers, Heavy and Tractor-Trailer	1-12 Month OJT
53-3033	Truck Drivers, Light or Delivery Services	30-Day OJT
53-3041	Taxi Drivers and Chauffeurs	30-Day OJT
53-3099	Motor Vehicle Operators, All Other	30-Day OJT
53-5011	Sailors and Marine Oilers	30-Day OJT
53-5021	Captains, Mates, and Pilots of Water Vessels	Work Experience
53-6021	Parking Lot Attendants	30-Day OJT
53-6031	Service Station Attendants	30-Day OJT

SOC Code	Occupational Title	BLS Training Level
53-6099	Transportation Workers, All Other	30-Day OJT
53-7011	Conveyor Operators and Tenders	30-Day OJT
53-7032	Excavating and Loading Machine and Dragline Operators	1-12 Month OJT
53-7051	Industrial Truck and Tractor Operators	30-Day OJT
53-7061	Cleaners of Vehicles and Equipment	30-Day OJT
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	30-Day OJT
53-7063	Machine Feeders and Offbearers	30-Day OJT
53-7064	Packers and Packagers, Hand	30-Day OJT
53-7081	Refuse and Recyclable Material Collectors	30-Day OJT
53-7121	Tank Car, Truck, and Ship Loaders	1-12 Month OJT
53-7199	Material Moving Workers, All Other	30-Day OJT

Source: California Regional Economies Employment CREE Series, 2007



## Manufacturing Cluster

The Manufacturing industry cluster includes firms and occupations that create finished goods from raw materials, such as food products, wood products, apparel, printing, paper, plastics, biotechnology goods, glass, aluminum, semiconductors, transportation items (aerospace, automobiles, boats), and furniture. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math).

### Occupations

SOC Code	Occupational Title	BLS Training Level
11-3051	Industrial Production Managers	BA/BS Degree
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1-12 Month OJT
49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	Work Experience
49-2011	Computer, Automated Teller, and Office Machine Repairers	Post-Secondary Voc-Ed
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	12-Month OJT
49-2092	Electric Motor, Power Tool, and Related Repairers	Post-Secondary Voc-Ed
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	Post-Secondary Voc-Ed
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	Post-Secondary Voc-Ed
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	Post-Secondary Voc-Ed
49-2098	Security and Fire Alarm Systems Installers	Post-Secondary Voc-Ed
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	1-12 Month OJT
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	12-Month OJT
49-9031	Home Appliance Repairers	12-Month OJT
49-9041	Industrial Machinery Mechanics	12-Month OJT
49-9042	Maintenance and Repair Workers, General	12-Month OJT
49-9043	Maintenance Workers, Machinery	12-Month OJT
49-9069	Precision Instrument and Equipment Repairers, All Other	12-Month OJT
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	1-12 Month OJT
49-9094	Locksmiths and Safe Repairers	1-12 Month OJT
49-9098	Helpers--Installation, Maintenance, and Repair Workers	30-Day OJT
49-9099	Installation, Maintenance, and Repair Workers, All Other	1-12 Month OJT
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	Work Experience
51-2021	Coil Winders, Tapers, and Finishers	30-Day OJT
51-2022	Electrical and Electronic Equipment Assemblers	30-Day OJT
51-2023	Electromechanical Equipment Assemblers	30-Day OJT
51-2041	Structural Metal Fabricators and Fitters	1-12 Month OJT
51-2091	Fiberglass Laminators and Fabricators	1-12 Month OJT
51-2092	Team Assemblers	1-12 Month OJT
51-2099	Assemblers and Fabricators, All Other	1-12 Month OJT
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	1-12 Month OJT
51-4012	Numerical Tool and Process Control Programmers	12-Month OJT
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT

<b>SOC Code</b>	<b>Occupational Title</b>	<b>BLS Training Level</b>
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4041	Machinists	12-Month OJT
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4111	Tool and Die Makers	12-Month OJT
51-4121	Welders, Cutters, Solderers, and Brazers	Post-Secondary Voc-Ed
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	1-12 Month OJT
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4192	Lay-Out Workers, Metal and Plastic	1-12 Month OJT
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4194	Tool Grinders, Filers, and Sharpeners	1-12 Month OJT
51-4199	Metal Workers and Plastic Workers, All Other	1-12 Month OJT
51-6011	Laundry and Dry-Cleaning Workers	1-12 Month OJT
51-6021	Pressers, Textile, Garment, and Related Materials	30-Day OJT
51-6031	Sewing Machine Operators	1-12 Month OJT
51-6041	Shoe and Leather Workers and Repairers	12-Month OJT
51-6052	Tailors, Dressmakers, and Custom Sewers	12-Month OJT
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	1-12 Month OJT
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	1-12 Month OJT
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	12-Month OJT
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	1-12 Month OJT
51-6092	Fabric and Apparel Patternmakers	12-Month OJT
51-6093	Upholsterers	12-Month OJT
51-7011	Cabinetmakers and Bench Carpenters	12-Month OJT
51-7021	Furniture Finishers	12-Month OJT
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	1-12 Month OJT
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	1-12 Month OJT
51-8021	Stationary Engineers and Boiler Operators	12-Month OJT
51-8099	Plant and System Operators, All Other	12-Month OJT
51-9011	Chemical Equipment Operators and Tenders	1-12 Month OJT
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9022	Grinding and Polishing Workers, Hand	1-12 Month OJT
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9031	Cutters and Trimmers, Hand	30-Day OJT
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	1-12 Month OJT
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	1-12 Month OJT
51-9071	Jewelers and Precious Stone and Metal Workers	Post-Secondary Voc-Ed
51-9111	Packaging and Filling Machine Operators and Tenders	30-Day OJT
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9123	Painting, Coating, and Decorating Workers	30-Day OJT
51-9131	Photographic Process Workers	1-12 Month OJT
51-9132	Photographic Processing Machine Operators	30-Day OJT
51-9141	Semiconductor Processors	AA Degree
51-9191	Cementing and Gluing Machine Operators and Tenders	1-12 Month OJT
51-9194	Etchers and Engravers	12-Month OJT
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	1-12 Month OJT
51-9196	Paper Goods Machine Setters, Operators, and Tenders	1-12 Month OJT

<b>SOC Code</b>	<b>Occupational Title</b>	<b>BLS Training Level</b>
51-9198	Helpers--Production Workers	30-Day OJT
51-9199	Production Workers, All Other	1-12 Month OJT
11-3051	Industrial Production Managers	BA/BS Degree
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	1-12 Month OJT
49-1011	First-Line Supervisors/Managers of Mechanics, Installers, and Repairers	Work Experience
49-2000	Electrical and Electronic Equipment Mechanics, Installers, and Repairers	
49-2011	Computer, Automated Teller, and Office Machine Repairers	Post-Secondary Voc-Ed
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	12-Month OJT
49-2092	Electric Motor, Power Tool, and Related Repairers	Post-Secondary Voc-Ed
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	Post-Secondary Voc-Ed
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	Post-Secondary Voc-Ed
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	Post-Secondary Voc-Ed
49-2098	Security and Fire Alarm Systems Installers	Post-Secondary Voc-Ed
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	1-12 Month OJT
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	12-Month OJT
49-9031	Home Appliance Repairers	12-Month OJT
49-9041	Industrial Machinery Mechanics	12-Month OJT
49-9042	Maintenance and Repair Workers, General	12-Month OJT
49-9043	Maintenance Workers, Machinery	12-Month OJT
49-9069	Precision Instrument and Equipment Repairers, All Other	12-Month OJT
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	1-12 Month OJT
49-9094	Locksmiths and Safe Repairers	1-12 Month OJT
49-9098	Helpers--Installation, Maintenance, and Repair Workers	30-Day OJT
49-9099	Installation, Maintenance, and Repair Workers, All Other	1-12 Month OJT
51-1011	First-Line Supervisors/Managers of Production and Operating Workers	Work Experience
51-2021	Coil Winders, Tapers, and Finishers	30-Day OJT
51-2022	Electrical and Electronic Equipment Assemblers	30-Day OJT
51-2023	Electromechanical Equipment Assemblers	30-Day OJT
51-2041	Structural Metal Fabricators and Fitters	1-12 Month OJT
51-2091	Fiberglass Laminators and Fabricators	1-12 Month OJT
51-2092	Team Assemblers	1-12 Month OJT
51-2099	Assemblers and Fabricators, All Other	1-12 Month OJT
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	1-12 Month OJT
51-4012	Numerical Tool and Process Control Programmers	12-Month OJT
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4041	Machinists	12-Month OJT
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4111	Tool and Die Makers	12-Month OJT

SOC Code	Occupational Title	BLS Training Level
51-4121	Welders, Cutters, Solderers, and Brazers	Post-Secondary Voc-Ed
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	1-12 Month OJT
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4192	Lay-Out Workers, Metal and Plastic	1-12 Month OJT
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	1-12 Month OJT
51-4194	Tool Grinders, Filers, and Sharpeners	1-12 Month OJT
51-4199	Metal Workers and Plastic Workers, All Other	1-12 Month OJT
51-6011	Laundry and Dry-Cleaning Workers	1-12 Month OJT
51-6021	Pressers, Textile, Garment, and Related Materials	30-Day OJT
51-6031	Sewing Machine Operators	1-12 Month OJT
51-6041	Shoe and Leather Workers and Repairers	12-Month OJT
51-6052	Tailors, Dressmakers, and Custom Sewers	12-Month OJT
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	1-12 Month OJT
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	1-12 Month OJT
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	12-Month OJT
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	1-12 Month OJT
51-6092	Fabric and Apparel Patternmakers	12-Month OJT
51-6093	Upholsterers	12-Month OJT
51-7011	Cabinetmakers and Bench Carpenters	12-Month OJT
51-7021	Furniture Finishers	12-Month OJT
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	1-12 Month OJT
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	1-12 Month OJT
51-8021	Stationary Engineers and Boiler Operators	12-Month OJT
51-8099	Plant and System Operators, All Other	12-Month OJT
51-9011	Chemical Equipment Operators and Tenders	1-12 Month OJT
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9022	Grinding and Polishing Workers, Hand	1-12 Month OJT
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9031	Cutters and Trimmers, Hand	30-Day OJT
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	1-12 Month OJT
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	1-12 Month OJT
51-9071	Jewelers and Precious Stone and Metal Workers	Post-Secondary Voc-Ed
51-9111	Packaging and Filling Machine Operators and Tenders	30-Day OJT
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9123	Painting, Coating, and Decorating Workers	30-Day OJT
51-9131	Photographic Process Workers	1-12 Month OJT
51-9132	Photographic Processing Machine Operators	30-Day OJT
51-9141	Semiconductor Processors	AA Degree
51-9191	Cementing and Gluing Machine Operators and Tenders	1-12 Month OJT
51-9194	Etchers and Engravers	12-Month OJT
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	1-12 Month OJT
51-9196	Paper Goods Machine Setters, Operators, and Tenders	1-12 Month OJT
51-9198	Helpers--Production Workers	30-Day OJT
51-9199	Production Workers, All Other	1-12 Month OJT

Source: California Regional Economies Employment CREE Series, 2007

### *Sub-Cluster: Advanced Manufacturing*

The Advanced Manufacturing sub-cluster of the Manufacturing industry cluster includes firms and occupations that specialize in emerging elements of high-technology manufacturing. These include biotechnology, pharmaceuticals, medical devices, and aerospace. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math).

#### Occupations

SOC Code	Occupational Title	BLS Training Level
11-3061	Purchasing Managers	BA/BS + Experience
11-9041	Engineering Managers	BA/BS + Experience
17-2112	Industrial Engineers	BA/BS Degree
17-2131	Materials Engineers	BA/BS Degree
17-2141	Mechanical Engineers	BA/BS Degree
17-2161	Nuclear Engineers	BA/BS Degree
17-2199	Engineers, All Other	BA/BS Degree
17-3012	Electrical and Electronics Drafters	Post-Secondary Voc-Ed
17-3013	Mechanical Drafters	Post-Secondary Voc-Ed
17-3019	Drafters, All Other	Post-Secondary Voc-Ed
17-3023	Electrical and Electronic Engineering Technicians	AA Degree
17-3024	Electro-Mechanical Technicians	AA Degree
17-3026	Industrial Engineering Technicians	AA Degree
17-3027	Mechanical Engineering Technicians	AA Degree
17-3029	Engineering Technicians, Except Drafters, All Other	AA Degree
27-1021	Commercial and Industrial Designers	BA/BS Degree
27-3042	Technical Writers	BA/BS Degree
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	1-12 Month OJT
41-9031	Sales Engineers	BA/BS Degree

Source: California Regional Economies Employment CREE Series, 2007

## Emerging Cluster: Biotechnology/Nanotechnology

The Biotechnology/Nanotechnology industry is a future employment cluster which will produce discoveries in biology and technology and mix the two to create new products, services and industries to enhance healthcare and biological care. While pharmaceuticals and medical device manufacturing are two components of this industry, discoveries from the human genome project, nanotechnology, and advances in biological knowledge promise the emergence of fields that can only be imagined now. Occupations in this cluster frequently require skills in STEM (Science, Technology, Engineering and Math). Occupations that exist today and may grow as a response to these demands are listed below.

### Occupations

SOC Code	Occupational Title	Education & Training Levels
11-9012	Farmers and Ranchers	12-Month OJT
11-9121	Natural Sciences Managers	BA/BS + Experience
17-2031	Biomedical Engineers	BA/BS Degree
17-2041	Chemical Engineers	BA/BS Degree
19-1012	Food Scientists and Technologists	BA/BS Degree
19-1021	Biochemists and Biophysicists	PHD Degree
19-1022	Microbiologists	PHD Degree
19-1029	Biological Scientists, All Other	BA/BS Degree
19-1042	Medical Scientists, Except Epidemiologists	PHD Degree
19-1099	Life Scientists, All Other	MA/MS Degree
19-2031	Chemists	BA/BS Degree
19-4011	Agricultural and Food Science Technicians	AA Degree
19-4021	Biological Technicians	AA Degree
19-4031	Chemical Technicians	AA Degree
25-1042	Biological Science Teachers, Postsecondary	PHD Degree
29-1131	Veterinarians	LLD/MD Degree
29-2056	Veterinary Technologists and Technicians	AA Degree
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	30-Day OJT
49-9062	Medical Equipment Repairers	1-12 Month OJT
51-9081	Dental Laboratory Technicians	12-Month OJT
51-9082	Medical Appliance Technicians	12-Month OJT
51-9083	Ophthalmic Laboratory Technicians	1-12 Month OJT

Source: California Regional Economies Employment CREE Series, 2007

## Hospitality and Tourism Cluster

The Hospitality and Tourism industry cluster includes firms that are involved with the promotion and services for visitors to a particular location. These include hotels, museums, amusement parks, casinos, restaurants, and caterers.

### *Sub-Cluster: Hospitality*

The Hospitality sub-cluster represents hotels and restaurants within the Tourism industry cluster. This cluster includes firms that are involved with the provision of accommodation and hospitality services to visitors such as hotels, restaurants, casinos, and caterers.

### Occupations

SOC Code	Occupational Title	Education & Training Levels
11-2021	Marketing Managers	BA/BS + Experience
11-2022	Sales Managers	BA/BS + Experience
11-2031	Public Relations Managers	BA/BS + Experience
11-9051	Food Service Managers	Work Experience
11-9081	Lodging Managers	Work Experience
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	BA/BS + Experience
13-1121	Meeting and Convention Planners	BA/BS Degree
27-1022	Fashion Designers	BA/BS Degree
27-1023	Floral Designers	1-12 Month OJT
27-1025	Interior Designers	BA/BS Degree
27-1026	Merchandise Displayers and Window Trimmers	1-12 Month OJT
27-1029	Designers, All Other	BA/BS Degree
27-2000	Entertainers and Performers, Sports and Related Workers	
27-2011	Actors	12-Month OJT
27-2012	Producers and Directors	BA/BS + Experience
27-2021	Athletes and Sports Competitors	12-Month OJT
27-2022	Coaches and Scouts	12-Month OJT
27-2032	Choreographers	Work Experience
27-2041	Music Directors and Composers	BA/BS + Experience
27-2042	Musicians and Singers	12-Month OJT
27-3000	Media and Communication Workers	
27-3012	Public Address System and Other Announcers	12-Month OJT
27-3031	Public Relations Specialists	BA/BS Degree
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	30-Day OJT
35-1000	Supervisors, Food Preparation and Serving Workers	
35-1012	First-Line Supervisors/Managers of Food Preparation and Serving Workers	Voc-Ed
35-2000	Cooks and Food Preparation Workers	Work Experience
35-2011	Cooks, Fast Food	30-Day OJT
35-2012	Cooks, Institution and Cafeteria	1-12 Month OJT
35-2014	Cooks, Restaurant	12-Month OJT
35-2015	Cooks, Short Order	30-Day OJT
35-2021	Food Preparation Workers	30-Day OJT
35-3000	Food and Beverage Serving Workers	
35-3011	Bartenders	30-Day OJT
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	30-Day OJT
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	30-Day OJT
35-3031	Waiters and Waitresses	30-Day OJT
35-3041	Food Servers, Non-restaurant	30-Day OJT
35-9000	Other Food Preparation and Serving Related Workers	
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	30-Day OJT
35-9021	Dishwashers	30-Day OJT

<b>SOC Code</b>	<b>Occupational Title</b>	<b>Education &amp; Training Levels</b>
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	30-Day OJT
35-9099	Food Preparation and Serving Related Workers, All Other	30-Day OJT
37-2012	Maids and Housekeeping Cleaners	30-Day OJT
37-3000	Grounds Maintenance Workers	
37-3011	Landscaping and Groundskeeping Workers	30-Day OJT
39-1021	First-Line Supervisors/Managers of Personal Service Workers	Work Experience
39-2000	Animal Care and Service Workers	
39-2011	Animal Trainers	1-12 Month OJT
39-2021	Nonfarm Animal Caretakers	30-Day OJT
39-3000	Entertainment Attendants and Related Workers	
39-3019	Gaming Service Workers, All Other	1-12 Month OJT
39-3021	Motion Picture Projectionists	30-Day OJT
39-3031	Ushers, Lobby Attendants, and Ticket Takers	30-Day OJT
39-3091	Amusement and Recreation Attendants	30-Day OJT
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	30-Day OJT
39-3099	Entertainment Attendants and Related Workers, All Other	30-Day OJT
39-4021	Funeral Attendants	30-Day OJT
39-5000	Personal Appearance Workers	
39-5012	Hairdressers, Hairstylists, and Cosmetologists	Post-Secondary Voc-Ed
39-5092	Manicurists and Pedicurists	Post-Secondary Voc-Ed
39-5094	Skin Care Specialists	Post-Secondary Voc-Ed
39-6011	Baggage Porters and Bellhops	30-Day OJT
39-6012	Concierges	1-12 Month OJT
39-6021	Tour Guides and Escorts	1-12 Month OJT
39-9031	Fitness Trainers and Aerobics Instructors	Post-Secondary Voc-Ed
39-9032	Recreation Workers	BA/BS Degree
39-9041	Residential Advisors	1-12 Month OJT
39-9099	Personal Care and Service Workers, All Other	30-Day OJT
41-3011	Advertising Sales Agents	1-12 Month OJT
41-3041	Travel Agents	Post-Secondary Voc-Ed
43-4081	Hotel, Motel, and Resort Desk Clerks	30-Day OJT
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	30-Day OJT
51-3011	Bakers	12-Month OJT
51-3021	Butchers and Meat Cutters	12-Month OJT
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	30-Day OJT
51-3023	Slaughterers and Meat Packers	1-12 Month OJT
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	30-Day OJT
51-3092	Food Batchmakers	30-Day OJT
51-3093	Food Cooking Machine Operators and Tenders	30-Day OJT

Source: California Regional Economies Employment CREE Series, 2007



**Orange County One-Stop Centers**

[www.oconestop.com](http://www.oconestop.com)

**Westminster**

5405 Garden Grove Boulevard  
Westminster, CA 92683  
Phone: (714) 241-4900

**Irvine**

125 Technology Drive, Suite 200  
Irvine, CA 92618  
Phone: (949) 341-8000



**Orange County  
Workforce Investment Board**  
[www.ocwib.org](http://www.ocwib.org)



**Orange County Youth Providers**

**Orange County Youth Café**

5405 Garden Grove Blvd, Ste 100  
Westminster, CA 92683  
Tel: (714) 241-4900

**The BRIDGE**

1407 North Batavia St., Ste. 120  
Orange, CA 92867  
Tel: (714) 532-6660

**Orange County Youth Center**

1811 W. La Habra Blvd.  
La Habra, CA 90631  
Tel: (562) 905-7076

**The BRIDGE**

31736 Rancho Viejo Rd # A  
San Juan Capistrano, CA 92675  
Tel: (949) 661-0452

**La Familia Services/  
Fuerzas Unidas**

32238 Paseo Adelanto, Ste. E  
San Juan Capistrano, CA. 92675  
Tel: (949) 489-9045

**Irvine Unified School District-  
Career Link**

5050 Barranca Parkway  
Irvine, CA 92714  
Tel: (949) 936-5040

