



A PUBLICATION OF
Technology & Learning Services

Occupation Report

October 1, 2007

Prepared by
Orange County Business Council

I N T R O D U C T I O N

The colleges of South Orange County Community College District provide critical vocational programs as well as continuing education for the vital industries of south Orange County. Although both Irvine Valley College (IVC) and Saddleback College serve students who wish to transfer to four year universities, they also provide students the necessary instruction for vocational skills in south Orange County's diverse population and workforce.

The purpose of this report will be to inform the reader of South Orange County's:

1. Trends in occupational growth and decline.
2. Education/experience required for these growing jobs as well as the requisite abilities, skills and knowledge needed to be successful in these occupations. In addition, current wage levels of occupations as well as career growth prospects will be examined in detail.
3. Industries that hire the occupations as well as the top employers of the growing industries to determine the SOCCCD district service areas. This will include which industries will have a great demand for employees in the next 3 to 5 years.
4. The final portion of this study will be the most recent data on the number of new businesses started by area and by cluster and the number of businesses which closed and/or moved from south Orange County.

This report will begin with preliminary demographic information of south Orange County to illustrate the environmental conditions of our study. This preliminary background will include updated population profiles of city census to cover distribution by education level, employment status and average/median income. Then, an in-depth analysis of six major south Orange County industrial clusters will be presented examining occupation at growth rates in each, wage levels in each, education/experience requirements of each, and skill, knowledge areas and abilities needed for workers to prosper in each. This report will also cover the largest companies that employ the county by industry and by region.

This study covered the cities of only south Orange County which include: Aliso Viejo, Dana Point, Irvine, Lake Forest, Laguna Beach, Laguna Hills, Laguna Niguel, Laguna Woods, Mission Viejo, Newport Beach, Rancho Santa Margarita, San Clemente, San Juan Capistrano and Tustin. For the purpose of our study these cities were further divided into two regions based on their prox-

inities of Irvine Valley College and Saddleback Community College. Region 1 centered on cities in the proximity of Irvine Valley College which are Irvine, Newport Beach, Tustin, Lake Forest and Laguna Woods. Region 2 centered on cities in the proximity of Saddleback Community College which are Aliso Viejo, Dana Point, Mission Viejo, Rancho Santa Margarita, Laguna Beach, Laguna Hills, Laguna Niguel, San Clemente and San Juan Capistrano.



Information on labor statistics based on occupations and industries were produced by the State of California Employment Development Department. Dun and Bradstreet provided information on companies listed by cities. The figures used for our study were taken from 2006 figures from the Dept of Labor O-Net for information on occupational skills, knowledge and abilities. All south Orange County demographic information was taken from Demographicsnow.com, a demographics compiler of Experian data. In addition, any economic data forecasts are Demographicsnow.com projections into the future to 2011.

B A C K G R O U N D D E M O G R A P H I C S

South Orange County's population grew from 772,260 to 853,523 from 2000 to 2006. This growth has shown that the population has increased 10.5% from six years ago. Region 1's population has grown 9.7% from 339,366 in 2000 to 372,540 in 2006. Region 2's larger population has experienced a larger growth of 11% from 416,228 to 463,007 in 2000 to 2006. The overall South Orange County population is projected to grow 7.5% to 917,611 by 2011.

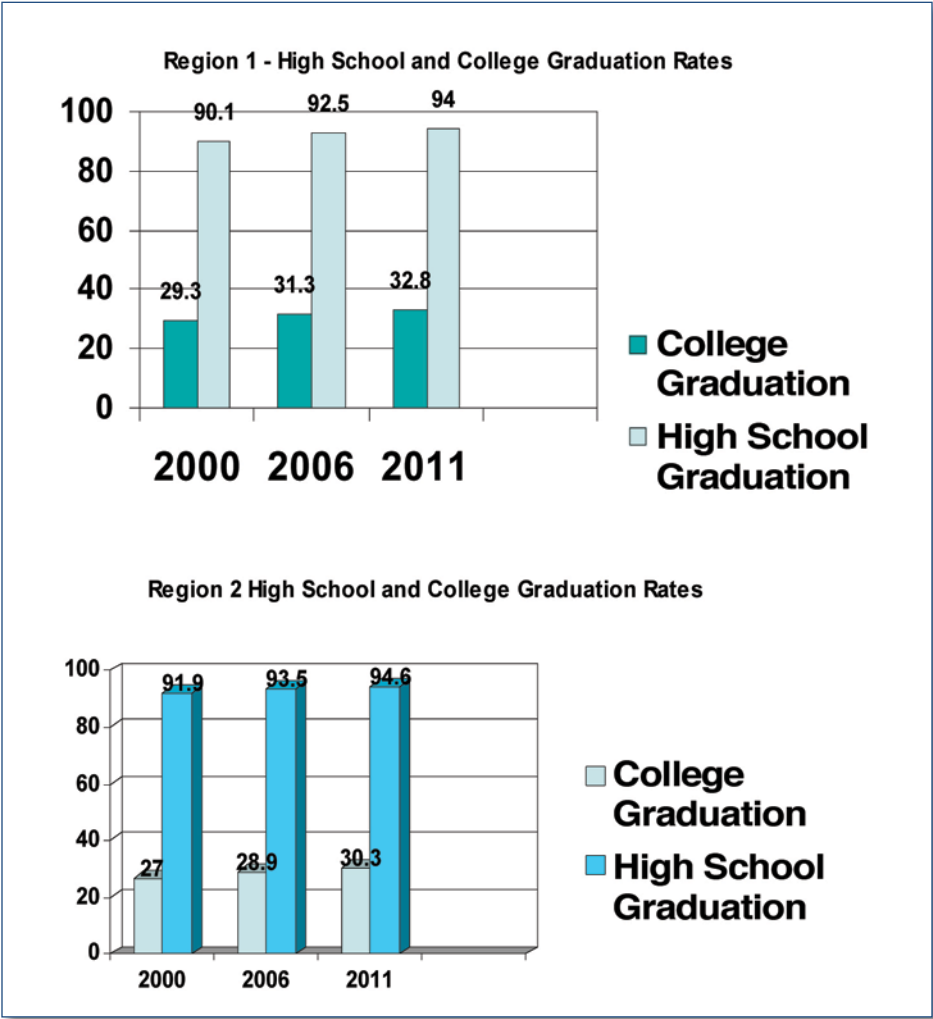
In 2006, the overall South OC ethnic/racial makeup was composed as followed: 0.3% Native American, 9.8% Asian, 1.2% Black, 0.16% Hawaiian/Pacific Islander, 81.5% White, 4.3% Other and 2.7% Multi-Racial. The Hispanic population is classified as those who identify with different racial origins but with Hispanic or Spanish cultural influences which comprises a county total of 23%. 2011 census figures expect all racial categories to increase a slight growth of 1% in south Orange County however the Hispanic population is expected to experience the most growth at a 6% rate.

Region 1's ethnic makeup is composed as follows: 1% Native American, 16.5% Asian, 1.5% Black, 0.2% Hawaiian/Pacific Islander, 72.5% White, 5.3% Other, 3% Multi-racial and 19.2% Hispanic.

Region 2's ethnic makeup is similar with the exception of a smaller Asian population of only 7.2% and with much higher white population of 84.8%. The Hispanic population in Region 2 also reflects a slightly higher percentage of 24.5%.

Although the population reflects steady growth from 2000 to 2011, the vital workforce from ages 20-44 reflect a decline in numbers from the overall population due to the rising living and real estate costs in south Orange County. As the exodus of the young workforce continues because of this trend, South Orange County will experience a huge gap of workers in the workforce. Region 1's 20-44 age population decreased from 41% to 37.1% in 2000 to 2006. This age group is further projected to decline in population to 34.5% in 2011. Region 2 also experienced this decline from 38.2% to 34.8% from 2000 to 2006. In 2011, Region 2 is further expected to experience further decline to 32.2%. As a whole, however, South OC's 20-44 year old workforce reflected 36.7% of the population in 2000. This same workforce declined in 2006 to 33.3% and is expected to continue to 31% in 2011.

Education in south Orange County has consistently shown a steady increase in the number of high school graduates and those completing postsecondary education.



The 2006 South Orange County as a whole averaged 93.2% in high school graduation rates compared to its overall 2000 graduation rate of 92.3%. Also in 2006, approximately 29.6% of south OC's overall population attained at least a Bachelors degree as opposed to 27.7% in 2000. High school graduation rates are expected to grow to 94.5% throughout 2011 while postsecondary education rates should increase to 31.1%.

Average/median incomes however have increased in both regions. Region 1's 2006 annual average income increased 14% from \$107,117 in 2000 to \$93,713 in 2006. Median income in Region 1 also experienced a higher increase at 16% from \$70,042 to \$81,211 during this time. Region 2 experienced a similar increase in both average and median income. Region 2's annual average increased 16.7% from \$96,144 to \$112,264 from 2000 to 2006 while median income increased 14.6% from \$72,287 to \$82,874. As a result, South OC as a whole experienced an increase in average income from \$91,880 to \$106,789, a 14% increase. Average income projected for 2011 is forecasted to be \$115,228 annually, a 7.9% increase. Additionally 2006's unemployment rate stood at 2.54%.

Region One has a larger population density, in addition to lower home ownership rates, income and a younger age population than Region 2. While still a very wealthy area, Region 1 is closer to the business heart of Orange County while Region 2 is much more a residential community comprised of older established home owner residents. Demographic details for each south Orange County city are shown in Attachment 1. Please see attachment.

I N D U S T R Y A N A L Y S I S

Taking into account the respective curriculums at both Irvine Valley and Saddleback Colleges, our study has analyzed and concluded that there are six main industries that show consistent growth. Industries that show consistent growth are where students are most likely to be placed in employment. Our analysis focused on the types of growing occupations in each industry, the required education, abilities and aptitudes needed to be successful in each occupation, the current wages and career progression in each field. The industries that were analyzed were: Computer/Technology, Business/Financial Services, Biomedical/Biotech, Aerospace, Healthcare and Tourism.

COMPUTER/TECHNOLOGY

The Computer/Technology industry is the sector that includes both the development of computer hardware and computer software tools for business and personal development application. Computer software is the primary component of this sector. Careers in this field include software engineers, database network administrators, communications systems analysts and other computer-related specialists. The necessary education required for most jobs in this field is at least one year OJT (On-The-Job Training) for vocational entry level jobs or a Bachelors degree for entry to mid-level management positions. The knowledge areas needed for this career path are the application of engineering sciences and technology. These skills require complex problem solving skills through trouble-shooting abilities to diagnose problems and critical thinking skills to assess strengths and weaknesses to approach problems and devise solutions. Other skills that would prove useful for those interested in the computer/technology industry are inductive and deductive reasoning abilities needed to apply rules to find solutions or form conclusions based on pieces of information to solve problems. Occupations in this profession are projected to grow 40% on average through 2011.

The typical career progression would start at entry level from computer support specialist. The next step would be a database administrator at the intermediary level. The progression would then lead to software engineer/manager (depending on the experience level and education). Average wages for these jobs range between \$31.38 to \$34.39 per hour.

Table 1

Required Skills, Knowledge and Abilities For Computer/Technology Occupations

Knowledge	Skills	Abilities
Mathematics	Complex Problem Solving	Deductive/Inductive Reasoning
Engineering/Technology	Troubleshooting	Information Ordering
Communications/Media Use	Critical Thinking	Mathematical Reasoning
	Programming	
	Systems Analysis	

Source: O-Net, US Department of Labor

Top 5 Computer/Technology Employers By Region

Region 1	Employees	Region 2	Employees
Western Digital (Newport Beach)	2058	Unisys (Mission Viejo)	1000
Toshiba (Irvine)	1100	US Tech Resources LLC (Aliso Viejo)	1000
Conexant (Irvine)	820	Quest Software (Laguna Niguel)	600
Jazz Semiconductor (Newport Beach)	700	Cal Software Corp (Laguna Niguel)	150
Mind Speed Tech (Newport Beach)	500	Q Logic Corp. (Aliso Viejo)	138

Source: Dun & Bradstreet

South Orange County Company Count By Region from 2005 to 2006

	Region 1	Region 2
	No. of Co's/(No. of Employees)	No. of Co's/(No. of Employees)
Computer/Technology	1,018 / (25,069)	254 / (2,032)

Source: Dun & Bradstreet

However there are occupations within this industry that are projected to decline. They are those associated in manufacturing hardware products. With stiff competition between firms, companies have become keen to managing costs. Outsourcing has led to more computer manufacturing operations overseas which have resulted in lower manufacturing domestically.

BUSINESS/FINANCIAL SERVICES

This industry includes occupations such as business information systems and finance specialists. It can also include business-related occupations such as those in the legal profession. Education and training required for occupations in these fields are at least one year OJT. However, in most cases a BA degree in business-related major. The knowledge area needed to pursue careers in finance/business services are strong mathematical reasoning to solve problems using formulas. Additionally, strong customer service and time management skills are needed to serve customers under time constraints. However a required skill unique to all other industries examined in this study is the skill of information ordering. This particular skill requires a person to arrange things or actions in a particular order to a specific set of rules or pattern. Since the business services sector deals with a high volume of customers, strong written and oral communications skills are mandatory to fully understand customer expectations and demands.

Table 2

**Required Skills, Knowledge and Abilities
For Business/Financial Services Occupations**

Knowledge	Skills	Abilities
Customer/Personal Service	Speaking/Listening	Information Ordering
Clerical Administration	Time Management	Written Expression
Economics/Accounting	Social Perceptiveness	Oral Expression
English Language Proficiency	Critical Thinking	Inductive/Deductive Reasoning
Mathematics	Judgment/Decision Making	

Source: O-Net, US Department of Labor

Top 5 Employers in Business/Financial Employer By Region

Region 1	Employees	Region 2	Employees
Whitson B Alan Co (Newport Beach)	750	Barney Simmons & Co (San Clemente)	2000
Young & Rubicam (Irvine)	500	Foundstone Inc (Mission Viejo)	80
Ernst & Young LLP (Irvine)	300	Anderson & Kriger (Rancho Santa Margarita)	50
First American SMS Inc (Irvine)	240	Blytheco Inc (Laguna Hills)	50
Gibson Dunn & Crucher (Irvine)	200	CBH Consultants (Laguna Hills)	30

Source: Dun & Bradstreet

South Orange County Company Count By Region from 2005 to 2006

	Region 1	Region 2
	No. of Co's/ (No. of Employees)	No. of Co's/ (No. of Employees)
Business/Financial Services	2,110 / (42,812)	832 / (10,884)

Source: Dun & Bradstreet

Information system and financial managers are expected to experience 26% and 21% growth respectively to 2011. Accountants and auditors are expected to experience 25.3% growth while those working in business operations will experience 32.4% growth. The salary ranges for these professions are from \$47.74 to \$52.54 per hour. Typically the career progression would begin as billing account collector at the vocational level to supervisor depending on experience and training. Those with a BA degree in business-related studies can enter as an entry level finance personnel to eventually progress to a financial manager depending on the number of years of experience.

However, the jobs in this industry that are declining in number are those that can be automated. Such occupations include clerks, administrative support workers, book keepers, credit authorizers, file clerks and computer operators. These declining jobs are experiencing more office automation processes as business information systems rapidly advance and off-shoring customer services to other countries.

BIOMEDICAL/BIOTECHNOLOGY

The biomedical/biotechnology sector is the industrial sector involved with using biological discoveries to develop healthcare products and services to improve the wellbeing of individuals. The occupations associated to this industry are biomedical engineers or scientists specialized in the biomedical sciences. The minimum education required to work in this field is a four year BS degree in the biomedical sciences or engineering. Those in this industry must have a comprehensive knowledge of the sciences as well as a thorough understanding of both mathematical and quantitative skill sets. Both of these hard skill sets must be applied to generate or adapt technology to serve user needs. Biomedical engineers have the ability to converge and apply knowledge from the different disciplines of engineering, life sciences to create design techniques, tools, and principles involved in production of precision technical models.

Table 3

Required Skills, Knowledge and Abilities for Biomedical/Biotechnology Occupations

Knowledge	Skills	Abilities
Engineering/Technology	Technology Design	Inductive/Deductive Reasoning
Mathematics	Complex Problem Solving	Visualization
Biological/Physical Sciences	Critical Thinking	Originality
Public Safety/Security	Quality Control Analysis	

Source: O-Net, US Department of Labor

Top 5 Employers in Biomedical/Biotechnology Employers By Region

Region 1	Employees	Region 2	Employees
Allergan (Irvine)	3800	Endevco Corp (San Juan Capistrano)	319
Sicor Pharmaceuticals (Irvine)	2230	ICU Medical Inc (San Clemente)	149
Edwards Life Sciences (Irvine)	1700	Gish Biomedical Inc (Rancho Santa Margarita)	116
James Glidewell (Newport Beach)	1100	OSSUR North America Inc (Aliso Viejo)	95
Baxter Life Sciences (Irvine)	350	Senorx Inc (Aliso Viejo)	60

Source: Dun & Bradstreet

South Orange County Company Count By Region from 2005 to 2006

	Region 1	Region 2
	No. of Co's/(No. of Employees)	No. of Co's/(No. of Employees)
Biomedical	82 / (5,699)	47 / (941)

Source: Dun & Bradstreet

Biomedical engineers are expected to experience one of the largest growth rates in all industries at 42.3% throughout 2011. Hourly wages for biomedical engineers average \$37.08 per hour. Those in the biomedical field tend to begin as entry level technicians who eventually build their career progression to become engineering managers or supervisors. The biomedical profession will continually enjoy a healthy growth throughout the future since the demand for this industry parallels those with the healthcare industry.

Although certain elements of the biomedical industry can export its work elsewhere, the strict domestic standards within the United States will most likely require that all tests and most manufacturing be done within the US.

AEROSPACE

Aerospace is the industrial sector involved with the development of aircraft and space vehicles. Jobs experiencing strong growth in this industry are general and business operations specialists as well as software engineers associated in the aerospace industry. Education required for these jobs is a Bachelors degree or equivalent. The knowledge and skills needed are those similar to those of the computer/technology fields. However, there is more of an emphasis on having the soft skills in administration and management. These skills include strategic planning, resource allocation (both human and capital), leadership, and coordination with other entities within and outside of an organization. Also, a key required skill is the ability to visualize how something tangible would look like after it has been moved or rearranged. Additionally, business operations specialists in this industry must understand production processes, quality control, and techniques to maximize the manufacturing and the distribution of goods. These skills are necessary for analyzing the needs and requirements for designing a new product. Other basic hard skills include a strong quantitative background in mathematics.

Table 4

Required Skills, Knowledge and Abilities For Aerospace Occupations

Knowledge	Skills	Abilities
Engineering/Technology	Critical Thinking	Written Comprehension
Mathematics	Complex Problem Solving	Inductive/Deductive Reasoning
Computer and Electronics	Operations Analysis	Information Ordering
Physics	Time Management	Oral Expression
Building/Construction		
Public Safety/Security		

Source: O-Net, US Department of Labor

Top 5 Aerospace Employers By Region

Region 1	Employees	Region 2	Employees
Parker Hannifin (Irvine)	1300	Aircraft Bearing (San Clemente)	15
Thales Avionics (Irvine)	800	Bailey Industries (Mission Viejo)	12
Boeing (Irvine) 260			
Meggitt Defense Systems (Tustin)	64		
Rogerson Aircraft Systems (Irvine)	30		

Source: Dun & Bradstreet

South Orange County Company Count By Region from 2005 to 2006

	Region 1	Region 2
	No. of Co's/(No. of Employees)	No. of Co's/(No. of Employees)
Aerospace	10 / (2,307)	3 / (34)

Source: Dun & Bradstreet

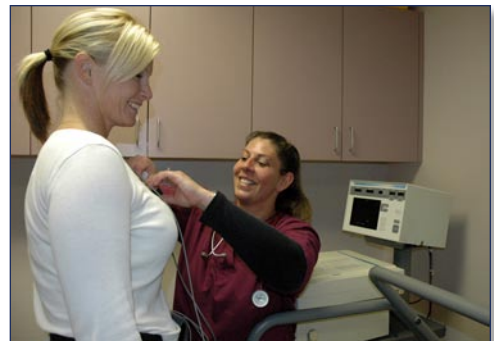
The general and business operations managers in this industry average \$28.12 to \$48.67 per hour in wages. The engineering wages currently range from \$34.40 to \$40.80 per hour. A career progression in this industry would typically start from a technician/engineer level to industrial engineer. The higher positions would eventually lead to an engineering manager position depending on the years of experience as not just an engineer but in supervisory positions.



Although the number of business operations specialist positions is projected to grow steadily to 2011, the number of engineers and assembly workers remains constant. The number of both the new jobs and the net replacements equal almost in number. Our projections based on historical data taken since 2000 show that these professions will not experience significant growth. With globalization and lower costs for manufacturing overseas, the aerospace jobs that stand to experience a noticeable decline are assemblers, machinists and production line workers where the number of new openings projected are smaller in number compared to the number of needed replacements.

HEALTHCARE

Those in the healthcare industry diagnose and treat human injuries, diseases, and deformities. These efforts include identifying symptoms, determining treatment alternatives, understanding drug properties and interactions, and enacting preventive health-care measures. Occupations in the healthcare industry include physicians, nurses, pharmacists, dentists, physical therapists, physician assistants. The vocational level occupations in this industry are pharmacy technicians, vocational nurses, dental hygienists. Vocational



positions require some schooling from a minimum of 12 months OJT to an AA degree. The more skilled healthcare occupations require a study beyond a Bachelors degree in the sciences which often includes professional schools in the different healthcare fields. Physicians, dentists, pharmacists often require an additional 4 years past a post-secondary education plus training where as other professions such as nurses and physical therapists require no more than a few years beyond a BA degree.

The knowledge areas and skills needed to succeed in the healthcare industry are the most comprehensive of all six industries analyzed for our study. The hard skill sets must be accompanied with strong mathematical skills as well as having a profound knowledge of the sciences. Other important abilities to complement the knowledge to treating patients include understanding human psychol-

Table 5

Required Skills, Knowledge and Abilities For Healthcare Occupations

Knowledge	Skills	Abilities
Biological and Physical Sciences	Active Listening Critical Thinking	Problem Sensitivity
Psychology Therapy/Counseling Mathematics	Service Management Instructing Social Perceptiveness	Inductive/Deductive Reasoning Written/Oral Expression

Source: O-Net, US Department of Labor

Top 5 Healthcare Employers By Region

Region 1	Employees	Region 2	Employees
Hoag Memorial (Newport Beach)	3600	Mission Hospital (Mission Viejo)	1349
Pacific Health Corp (Tustin)	300	Saddleback Memorial (Laguna Hills)	1020
Senior Care Mgt LLC (Irvine)	250	South Coast Medical Center (Laguna Beach)	690
Five Star Quality Care (Irvine)	200	Nichols Institute Labs (San Juan Capistrano)	525
Freedom Village Healthcare (Lake Forest)	100	Viejo Niguel Internal Medical (Mission Viejo)	200

Source: Dun & Bradstreet

South Orange County Company Count By Region from 2005 to 2006

	Region 1	Region 2
	No. of Co's/ (No. of Employees)	No. of Co's/ (No. of Employees)
Healthcare	644 / (17,161)	543 / (10,894)

Source: Dun & Bradstreet

ogy, counseling and providing therapy for those in need. The ability to actively listen and understand the problems and concerns of people and to be sensitive to problems is also necessary to succeed in this industry. Since occupations in this industry are service-oriented, the soft skills are equally important as the quantitative and scientific skill sets.

The growth rate through 2011 for the healthcare profession can range from 27.7% for registered nurses to as much as 55.8% for home health aid professionals. Hourly wages for these professions can range from \$49.80 for pharmacists to \$53.57 for dentists. The natural progression for healthcare professionals would be to work many years as a healthcare provider and eventually move up to managing a practice, clinic or a department within a hospital.

The demand for healthcare professionals is strong and will remain so throughout 2011. This profession will continue to experience healthy growth into the future since the state's aging and growing population is fueling the demand for medical and dental care. This growth creates its own demand by the new advances in medicine and life expectancy increases. Additionally, there are no substitutes for healthcare services since the nature of these services is that they are domestic and are vital to the health and welfare of a community. The healthcare industry remains to be one of the few that is shielded from being replaced or outsourced.

TOURISM

The tourism industry is the most diverse in terms of number of occupations that make up the industry. The occupations in this industry can be from cooks, food preparation attendants, restaurant waiters and bartenders to general operations or meeting/convention planners. The tourism industry in south Orange County is composed primarily of restaurants, hotels and businesses in the entertainment/leisure industry. Most of the skills required for this industry are OJT with the exception of management positions such as operations and planning specialists which require a four year degree. The knowledge and skills required for this industry is very customer-service oriented. Although education is minimal, the ability to assess customer needs, uphold quality standards and evaluate customer satisfaction is required to succeed. There is also a considerable overlap with sales and marketing to employ methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.

Table 6

Required Skills, Knowledge and Abilities For Tourism Occupations

Knowledge	Skills	Abilities
Administration and Management	Active Listening	Oral Expression
Customer/Personal Service	Speaking	Problem Sensitivity
Personnel/Human Resources	Persuasion	Written Expression
Public Safety/Security	Management of Financial Resources Management of Personnel Resources	Near Vision

Source: O-Net, US Department of Labor

Top 5 Tourism Employers By Region

Region 1	Employees	Region 2	Employees
Marriott International (Irvine)	500	CPH Monarch Hotels Inc (Dana Point)	1100
Hyatt Corp (Irvine)	450	Laguna Bch Luxury Hotel Inc (Laguna Beach)	700
Taco Bell Enterprises (Irvine)	400	JC Resorts LLC (Laguna Beach)	300
El Cholo Cantina (Irvine)	275	Wind & Sea Restaurants (Dana Point)	120
Golden Hotel LTD (Irvine)	140	Claim Jumper Restaurants (Dana Point)	120

Source: Dun & Bradstreet

South Orange County Company Count By Region from 2005 to 2006

	Region 1 No. of Co's/ (No. of Employees)	Region 2 No. of Co's/ (No. of Employees)
Tourism	701/ (31,088)	633 / (15,843)

Source: Dun & Bradstreet



Salary figures for the tourism industry are very diverse. They can range from \$8.11 an hour for cooks to as much as \$48.67 per hour for general managers. Career promotion begins at the entry level as an attendant, waiter or cook. Mid-level positions are usually team or line supervisors and with the higher levels to be mid to upper management levels.

The growth for tourism job is projected to be steady through 2011 as the new job openings are projected to equal the number of net replacements.

COMMON KNOWLEDGE, SKILLS AND ABILITIES IN INDUSTRY ANALYSIS

The six industries analyzed in this report nonetheless share some overlap in knowledge, skills and abilities. We examined where these common traits overlapped for all six industries that were studied.

Table 7

COMMON KNOWLEDGE, SKILLS, ABILITIES AREAS AMONG ALL SIX INDUSTRIES

	Mathematics	Engineering/ Technology	Public Safety/ Security	Critical Thinking	Complex Problem Solving	Inductive/ Deductive Reasoning	Written/ Oral Expression
Computer/ Technology	×	×		×	×	×	
Business/ Financial Services	×			×		×	×
Biomedical	×	×	×	×	×	×	
Aerospace	×	×	×	×	×	×	×
Healthcare	×			×		×	×
Tourism			×				×

Source: O-Net, US Department of Labor

ANALYSIS OF REGIONS 1 AND 2 COMPANIES

The number of companies and businesses in South Orange County totaled 17,197 establishments. Region 1 (the northern section near Irvine Valley College) accounted for 10,453 businesses while region 2 (the southern section near Saddleback) accounted for 6,744. The following chart indicates the number of companies in the six industries analyzed for this report.

Table 8

South Orange County Company Count By Region from 2005 to 2006

	Region 1 No. of Co's/ (No. of Employees)	Region 2 No. of Co's/ (No. of Employees)
Computer/Technology	1,018 / (25,069)	254 / (2,032)
Business/Financial Services	2,110 / (42,812)	832 / (10,884)
Aerospace	10 / (2,307)	3 / (34)
Healthcare	644 / (17,161)	543 / (10,894)
Biomedical	82 / (5,699)	47 / (941)
Tourism	701 / (31,088)	633 / (15,843)
Total	4,565 / (124,136)	2,122 / (40,628)

Source: Dun & Bradstreet

The chart above indicates that Region 1 has more than double the number of companies of Region 2 despite the fact that Region 1 is only 43.6% of the population of south Orange County. Region 1 has over four times the number of computer/technology jobs of Region 2 and more than triples the number of business/financial companies of Region 2. Despite these huge differences, the number of healthcare and tourism businesses is comparable between both regions.

Table 9

Migration Patterns of Businesses

	Region 1	Region 2	Total
Migrated In	2,373	1,523	3,986
Migrated Out	1,824	1,030	2,854

Source: Dun & Bradstreet

Also of note is that the number of companies that have either migrated out of or into south Orange County in 2006. The number of companies that left south Orange County totaled 2,854. In contrast, the number of companies that moved into south Orange County in 2006 totaled 3,986. By regions, the number of companies that left totaled 1,824 for Region 1 and 1,030 for Region 2. The number of companies that relocated to South Orange county equaled 2,373 for Region 1 and 1,523 for Region 2.

REGION 1

Companies That Left Region 1 2006

Company	Employees
Telemark Services	173
Sasco Electric	150
Silkscreen Etc	125
New Tangrem LLC	80
Western Sales Inc.	75

Companies Moved To Region 1 In 2006

Company	Employees
Davita Inc	270
Cybron Dental	250
Velocitel	200
Casa Pacifica	200
Primoris Corporation	140

REGION 2

Companies That Left Region 1 2006

Company	Employees
Preferred Coatings Inc	200
Vision Art Reaction	121
EP Memory	100
Phoenix Group	96
Univac Toys	47

Companies Moved To Region 1 In 2006

Company	Employees
INC Capital Group	100
Pacific Coast Foods	88
Bas Foods	79
OCB Restaurant	80
Big Dog USA	56

Source: Dun & Bradstreet

The total number of companies from all six industries makes up roughly 39% of the 17,197 companies in south Orange County. The remaining companies not studied in this report are from those industries such as construction/landscaping 20%, wholesale/retail trade 26%, manufacturing 10%, transportation/public utilities 3% and other services 1%.

Table 10

Business Growth By Region from 2005 to 2006

	Region 1	Region 2
Computer/Technology	19.2%	35.0%
Business/Financial Services	21.4%	26.3%
Aerospace	16.7%	66.7%
Healthcare	18.9%	18.4%
Biomedical	13.5%	8.3%
Tourism	19.2%	15.7%

Source: Dun & Bradstreet

In 2006, both regions enjoyed the most growth in computer/technology and business/financial services. However Region 2 experienced a higher growth rate at 35% and 26.3% respectively versus Region 1's growth of 19.2% and 21.4%. As a result, we can expect Region 2 to experience more growth throughout 2011 in the technical fields.

The growth rates in Table 10 reflect the 2006 migration patterns of companies that entered and left each region. The second chart in Table 9 only indicates the top 5 company's in each migration in 2006.

The chart below provides a breakdown of the top employers by region and by industry.

Table 11

TOP EMPLOYERS BY REGION
Region 1

Company	Employees
Allergan	3800
Hoag Memorial	3600
Sicor Pharmaceutical	2230
James Glidewell Dental Ceramics	2100
Western Digital	2058
Edwards Life Sciences	1700
Parker Hannifin Corporation	1300
Toshiba	1100
Taco Bell Corp	1025
Conexant Systems Inc	850
Thales Avionics	800
Whitson Alan B Company	750
Jazz Semiconductor Inc	700
Alcon Laboratories	600
FSH Newport Beach Inc	500
Marriott International Inc	500
Ernst & Young LLP	300

Region 2

Company	Employees
Unisys Corporation	2100
Barney Simmons & Co.	2000
Fluor Enterprises	2000
Mission Hospital Regional Medical Center	1349
CPH Monarch Hotel LLC	1100
Saddleback Memorial Hospital	1020
Unisys Corporation	1000
US Technology Resources LLC	1000
Laguna Beach Luxury Hotel LLC	700
South Coast Medical Center	690
Quest Software Inc	600
Nichols Institute Reference Labs	525

Source: Dun & Bradstreet

Table 12

TOP EMPLOYERS BY INDUSTRY

Computer/Technology	
Western Digital	2058
Toshiba	1100
Conexant Systems Inc	850
Business/Financial Services	
Barney Simmons & Co	2000
Whitson B Alan Company	750
Ernst & Young LLP	300
Aerospace	
Parker Hannifin	1300
Thales Avionics	800
Boeing	260
Healthcare	
Hoag Memorial	3600
Mission Hospital Regional Center	1349
Saddleback Memorial Hospital	1020
Biomedical	
Allergan	3800
Sicor Pharmaceuticals Inc	2230
James Glidewell Dental Ceramics	2100
Edwards Life Sciences	1700
Tourism	
CPH Monarch Hotel LLC	1100
Laguna Beach Luxury Hotel LLC	700
Marriott International Inc	500

Source: Dun & Bradstreet

CONCLUSION

In order to push for more marketing materials and outreach efforts to both the business community and student population at these two community colleges, both industry leaders and community colleges must create partnerships that would standardize internship programs to provide the training for current and potential students. By integrating OJT/internship programs into its academic curriculum, both IVC and Saddleback can prepare its students to begin employment as fully qualified and skilled employees not needing any OJT when entering the workforce. In other words, the OJT portion of a vocational student's training would be completed while in school versus after being hired into a position. In addition, industry leading companies would need to not only partner with these schools to devise a

standardized OJT/internship curriculum but to take the additional step to mentor and encourage students while completing their programs at IVC or Saddleback.

Occupational trends point to future south Orange County jobs becoming more technical therefore requiring more education and training. Manufacturing and laborious jobs are moving elsewhere due to lower costs overseas. Both Irvine Valley and Saddleback College can prepare for these occupational trend shifts by designing curriculums for either vocational positions or transfer programs to four year universities specifically for these occupational industries.

