# Educational Master Plan

Spring 2013

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# I. Message from the Superintendent/President



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# II. The Context for the Educational Master Plan

The Southwestern College Educational Master Plan (EMP) is a reflective evaluation of where the College has been, where it is now, and where it plans to be in the future with respect to providing services to students and the community. The analysis presented in this document is based on a combination of data and the collective knowledge of faculty, staff, and administrators with respect to predicting the future programmatic needs for the College. Additionally, the EMP aligns with the College's Strategic Plan. The EMP will guide our Facilities Master Plan (FMP) because the College is committed to providing facilities to support the institution's educational goal.

The College developed a combined educational and facilities plan in 2008. Subsequently, a Strategic Plan with priorities was crafted with extensive campus consultation in 2011 to guide the institution over the next five years. The Strategic Plan has eight priorities, four of which help the College fulfill its mission, while the other four help the College strengthen itself as a public institution. Each of the priorities was accompanied by institutional goals and objectives that are monitored to serve as key performance indicators.

The results of the ongoing program review process were used in the EMP. In the course of the program review process the College has reviewed course and program offerings with respect to raw numbers of students served, the equivalent full-time equivalent students (FTES), the number of full-time equivalent faculty (FTEF) per student, success and retention rates within courses, number of sections offered, percentage of students taking courses online, and degrees and certificates awarded (where appropriate.) Academic disciplines and administrative units were used as units of analysis in these reviews to provide granular insights. In addition to the hard data, each division has provided an assessment of its area as well as plans for the future, as specified in the program reviews templates.

With respect to future directions, the EMP uses labor market data from a variety of sources including ESRI, Inc., Bureau of Labor Statistics (BLS), and California Department of Economic Development (EDD) to project future business, government, and industry needs for workers in the region. For purposes of the EMP, data for San Diego County was the primary focus of attention. In some cases we have also presented state and national data as a backdrop.

The EMP's projections represent a best analysis for what the College should do in the next five years. The Plan will be updated based on significant changes that may occur during the next five years. The current Plan was created after the approval of the fall 2012 Midterm Accreditation Report and prior to completion of the Self-Evaluation Report in preparation for the accreditation visit in fall 2015. The College is in the process of implementing many of the action plans described in the 2009 self-study report, but these action plans should be considered on going.



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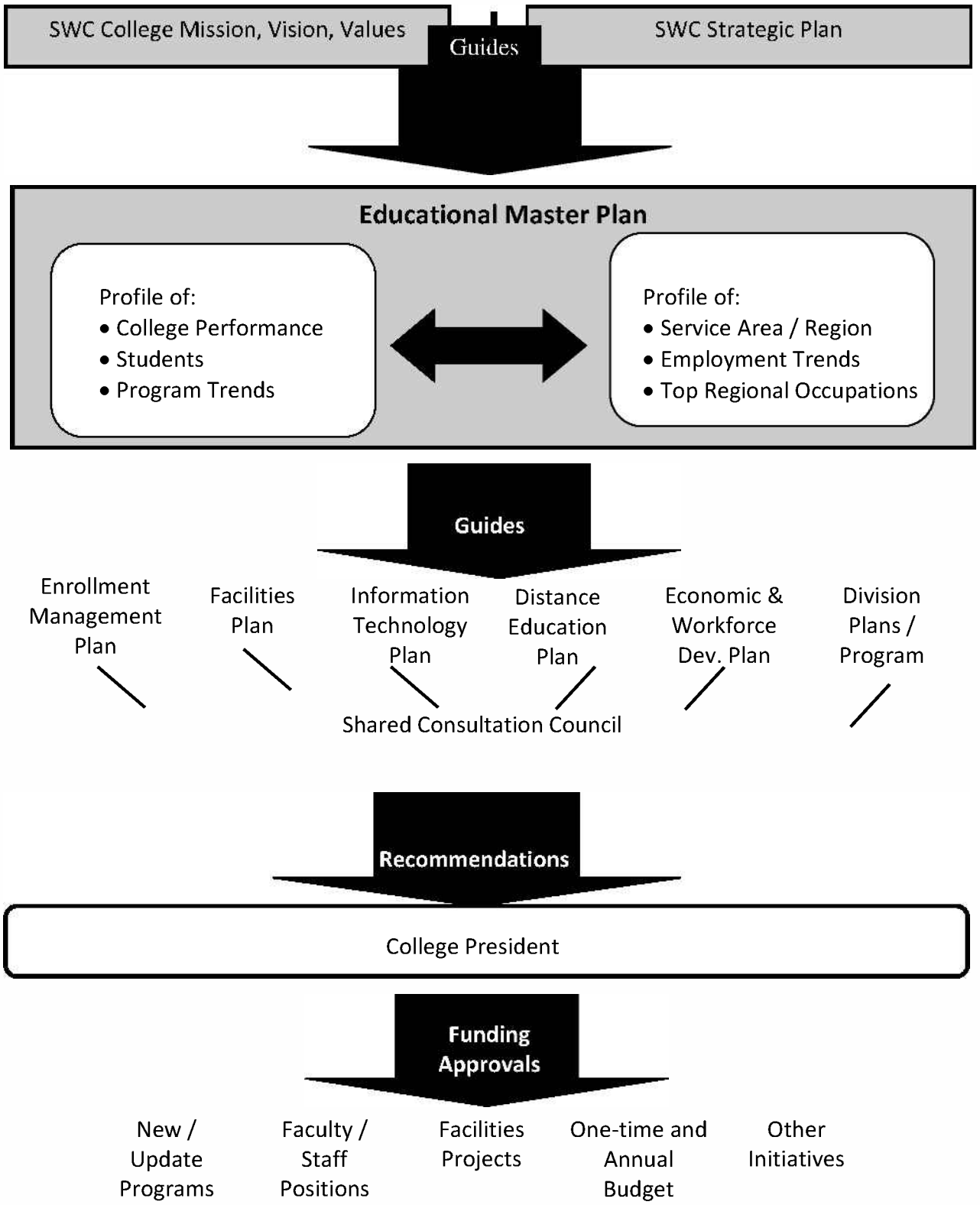
**Master Plan Framework**




The integrated planning process at the College operates as illustrated in the following graphic.



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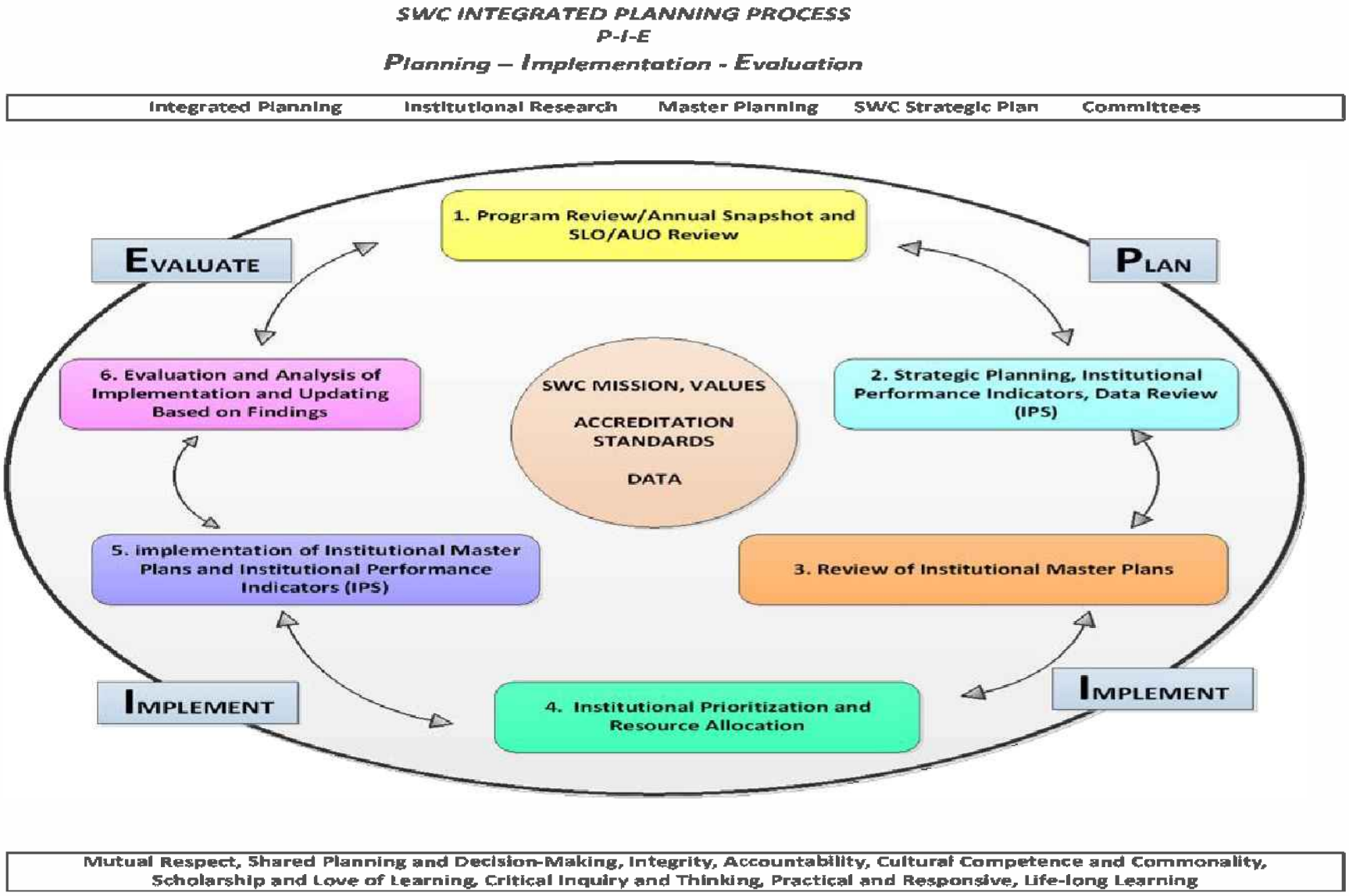


Shared Consultation Council, Approved March 9, 2011



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The following chart illustrates several specific planning committees that have been created to monitor and implement the College plans.

**Shared Consultation Council (SCC) Standing Committees Responsibility Chart**

| Planning Committee | Institutional Plan | Prioritization of Needs | Strategic Priority | Self-Evaluation AAAJC Standard |
|---|---|---|---|---|
| Strategic Planning Subcommittee (SPS) | Strategic Plan; Mission & Values; Self-Evaluation Report | N/A | 5. Organizational Effectiveness | 1. Institutional Mission & Effectiveness<br>4A. Decision-making Roles & Processes<br>4B. Board & Administrative Organization |
| Institutional Technology Committee (ITC) | Technology Plan | Technology (greater than $2,500) | 8. Institutional Technology & Research | 3C. Technology Resources |
| Educational Planning/Enrollment Management Committee (EP/EMC) | Educational & Facilities Master Plan (Educational portion); Enrollment Management Plan; Workforce & Business Development Plan | Supplies/Minor Equipment (less than $4,999); Overarching Institutional Needs | 1. Student Access<br>2. Student Success<br>3. Economic, Workforce & Community Development<br>7. Teaching & Learning | 2. Student Learning Programs & Services |
| Human Resources Committee (HRC) | Human Resources/Staffing Plan; Staff Diversity Plan; Professional Development Plan | Classified & Administrative Positions w/Recommendations from Cabinet (faculty positions via FHP) | 6. Human Resources | 3A. Human Resource |
| Institutional Facilities Committee (IFC) | Educational & Facilities Master Plan (Facilities portion) | Facilities; Equipment (greater than $5,000) | 4. Physical & Financial Resources & Development (Physical Resources portion) | 3B. Physical Resources |
| Budget Committee (BC) | Financial Resources Plan | None- Identifies Funding for Master List once provided by SCC | 4. Physical & Financial Resources & Development (Financial Resources portion) | 3D. Financial Resources |

The College planning and decision-making processes are illustrated in the flow chart on the next page.



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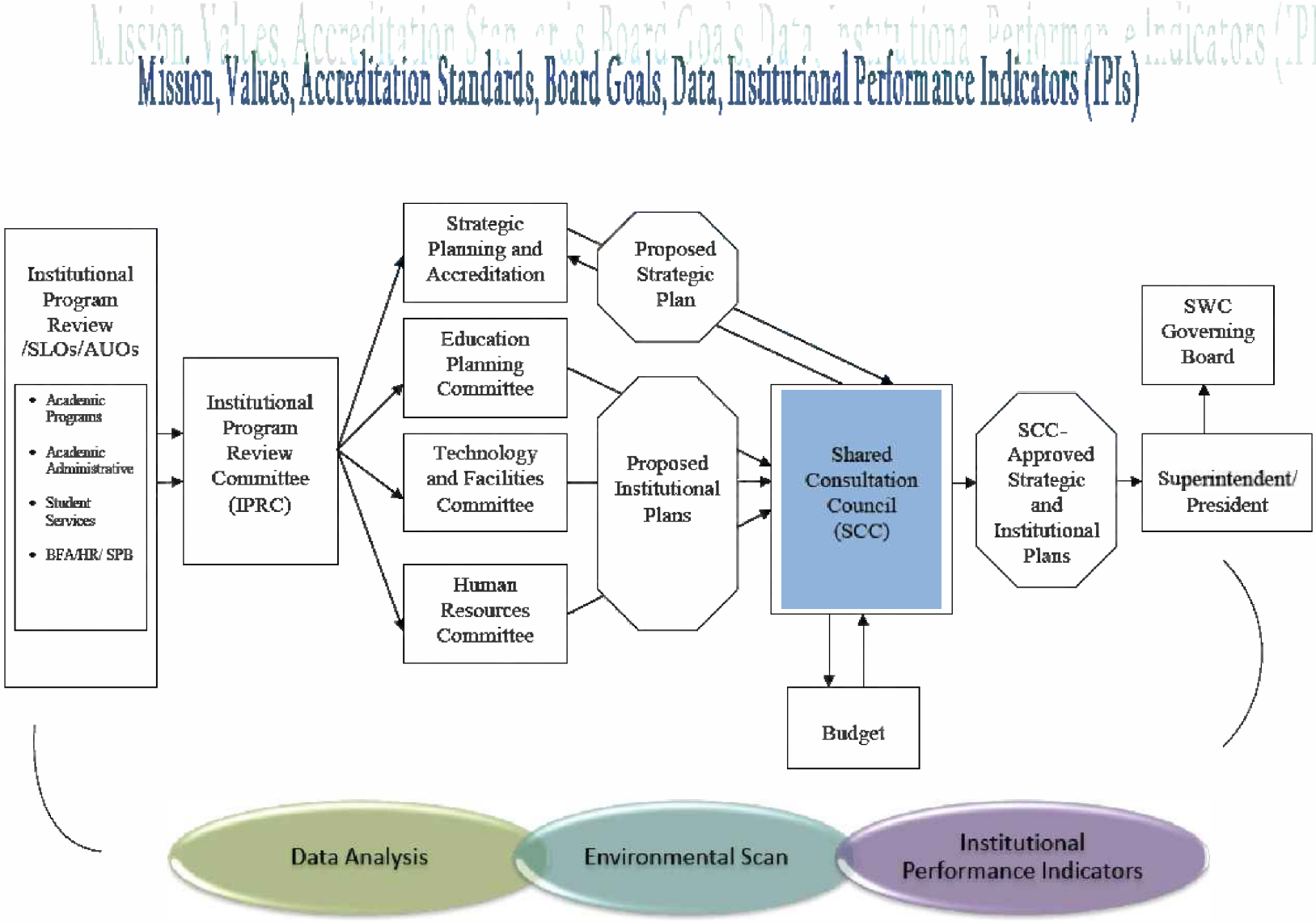


Source: Southwestern College Institutional Effectiveness Office



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Various functional plan documents have been created to assist the College in institutional planning. These plans include information such as data, demographics, current circumstances, projection of future trends, and findings from program review. Those listed below are not, however, all inclusive of the plans that may be developed and utilized as part of institutional planning. In addition, ongoing review of these plans occurs both within the specific committee or group from which the plan originated and within the SSC.

**Enrollment Management Plan/Guidance Documents**
In 2010-11, the College formed an Enrollment Management Committee and began working on enrollment management plans. Guidance for scheduling has been provided each term and academic year in order to hit the FTES targets and overshoot the likely state income. The guidance provides data depicting enrollment and other trends over the next few years that can be used in making enrollment decisions to meet or respond to area demographics, trends, high school yield, etc. In addition, specific enrollment management goals were established to guide college-wide planning in terms of making decisions about program and course offerings and other issues relating to enrollment management.

**Technology Plan**
The College developed a Technology Plan in 2011, after considerable campus consultation. The purpose of the Plan was to guide the further implementation of information technology in support of instruction and administration of the institution through 2015. The Technology Plan provides guidance to the College in terms of processes for providing new and upgraded technology equipment and software, process for repairing technology equipment, minimum computer standards, wireless policies and procedures, use of computer procedures, and guidelines regarding media services and web pages. The plan also includes the organizational and reporting structure of the staff in addition to related board policies and procedures regarding computer use and network prohibitions.

**Five-Year Capital Construction Plan**
Every year, the College submits a rolling Five-Year Capital Construction Plan. This Plan projects intended renovation and construction projects supported by Proposition AA or Proposition R. Projects on this list come from the goals and objectives, and analysis of the earlier EMP and FMP documents. The SCC carefully reviews major renovation or capital construction projects.

**Distance Education Plan**
The College submitted a substantive change proposal to the accrediting commission in March 2010 that outlined the direction the College was to take in distance education. Subsequently, the College created a long-term Online Learning Master Plan in 2012. This Plan was to further guide the development of the support services for faculty teaching online, and the scheduling of curriculum offerings provided in either a hybrid or online format. Related to this Online Learning Master Plan, the College is conducting a review of the support services provided to students who enroll in distance education offerings. This review will ensure that SWC support services are comparable to the services provided to students who attend the physical college sites (Chula Vista, Otay Mesa, San Ysidro, National City or Crown Cove).



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**Student Equity Plan**
In 2009, the College prepared a student equity report and plan to promote greater student access and success. That report considered student achievement data from 2002-03 through 2005-06. Conclusions and observations from that report were translated into plans that flowed into the current College strategic priority to promote more student success and completion.

**Basic Skills Plan**
With the introduction of supplemental basic skills funding to address a Board of Governors initiative, the College invented a request for proposals process to allocate new funding to projects proposed by the faculty. Those projects were designed to support interventions that would address shortcomings in student performance that were identified by the faculty. A series of year-end reports about the allocation of the funds are part of the College records. The most recent report highlights efforts in program and curriculum planning and development, advisement and counseling services, as well as supplemental instruction and tutoring. The report discusses intervention activities that the College has found most useful, as well as planned interventions for the future that are based on data analysis and reporting of student achievement. These plans also flow into the current College strategic priority, which is to promote increased student success and completion.

**Unit Plans**
One of the most important review activities on campus is the program review process. During this process, College programs assesses their effectiveness. Each instructional and non-instructional program conducts a comprehensive program review every three years on a staggered calendar. These reviews include the compilation of various data and information including:

1. The division/program mission statement
2. Student learning outcomes (instruction) or service area outcomes (non-instructional)
3. Analysis of current performance
4. Program strengths and areas for improvement
5. Goals during the program review cycle to include a timeline, needed resources, obstacles to completion, and how the goals link to the college mission statement
6. Staffing levels and requests for new or replacement positions
7. Budget requests with a justification for any increases noted

When an instructional discipline completes its program review, it is forwarded to the Academic Program Review Committee (APRC) for evaluation to ensure that it contains the required information and meets the standards according to the program review evaluation matrix. Those reviews that are missing necessary elements are referred back to the division for modification. Those that contain the necessary elements for action/funding are forwarded to the appropriate standing committee of the SCC for review and approval. Once approved, the program reviews are then forwarded to and reviewed in the Budget Committee to be used when making decisions about budget allocations. A similar process is followed for administrative and student support units, but their completed reviews go to the Institutional Program Review Committee (IPRC) for the same group critique process.



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The next stage of the planning process is implementation. Once the reviews have been completed or goals and objectives have been assessed, action is taken in response to the findings. Goals may change, processes may be modified, or services may be added. Regardless, the assessment or evaluation process concludes the cycle. The assessments/evaluations are used to improve the College's student learning and support services. This overall process, sometimes called the plan, implement, and evaluate (PIE) process, is illustrated in the previously presented integrated planning graphic.

# III. Overview of the College

History

Southwestern College was established in 1961 by operating at Chula Vista High School until the initial buildings were constructed at the current main campus in 1964. The College is now one of 112 public community colleges in the state of California, and the only institute of higher education located in the southern portion of San Diego County. More than 500,000 students have attended Southwestern College since it opened its doors 50 years ago.

Current Day Perspective

Its location, nestled between the City of San Diego and the U.S.-Mexico international border on a 156-acre plot, positions the College to play an important role in the intellectual growth of the more than 400,000 residents that call South San Diego County home.

The College now serves approximately 20,000 students every semester at the main campus located in Chula Vista and the Higher Education Centers in Otay Mesa, San Ysidro, and National City as well as various locations throughout the District service area. The average age of students attending Southwestern College is 25, reflective of the College's appeal to both the traditional high school student and the older, adult learner.

The Higher Education Center in National City (HEC NC) was established in 1988 in partnership with the City of National City. The Center offers100 plus courses in a wide curriculum and has an enrollment of over 1,000 students per semester. The highly successful Dental Hygiene program is located in the 48,000 square foot mixed use center where students are provided the educational experience to become a licensed professional upon completion of the two-year program. Two other allied heath programs offered exclusively at this Center are Medical Laboratory Technician and Medical Office Professions. The center launched a small, but unique apprenticeship program in cooperation with the Puget Sound Naval Shipyard and the Navy facilities in the San Diego area. A limited amount of coursework is offered at the Naval Air Station, North Island for the benefit of active duty service members and their dependents. The center also offers an accelerated 8-week semester for over two-thirds of the courses available for students wishing to be involved in a "fast track" scenario. The center engages in community outreach through a series of programs. A Family Resource Center sponsors workshops on educational opportunities, career development, health, housing and other family issues while a Microenterprise Family Childcare Program gives Spanish-speaking participants the opportunity to receive coursework and training to establish a licensed childcare business in their own home.



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As of fall 2012 the Center houses the Small Business Development Center, which is the lead for similar centers in the region.

The Crown Cove Aquatic Center is an off-campus facility located between the cities of Imperial Beach and Coronado in the Silver Strand State Beach. The primary focus of the Center is to promote boating and water safety programs and to reach out to the youth at risk by providing aquatic programs throughout the year. Activities such as swimming, sailing, kayaking, canoeing, surfing are offered to the local San Diego community and are accomplished through the partnership of Southwestern College, the California Department of Boating and Waterways and the California State Parks. The Safety Afloat Program, Marine Safety Service Program, Youth and Group Training and the American Heart Association Community Training Center are all programs and services provided to the community from this facility. This center offers credit, non-credit and fee-based instruction as well as equipment rental services to the community.

Higher Education Center San Ysidro (HEC SY) is located in a small community in the southwest portion Southwestern College service area. This community, located on the southern border is predominately residential with a population that is approximately 75% Hispanic. San Ysidro has a median household income of $31,791. The HEC SY has historically offered over 130 different courses and a full array of services to meet the student needs, including financial aid and all aspects of counseling. The center accommodates approximately 1,500 students each semester but has been constructed to accommodate a student body of 2,000. The signature programs at this Center are Child Development and Bilingual Legal Interpreter.

The HEC SY temporarily closed in the fall of 2007 for major reconstruction funded by Proposition AA. The center's staff and curriculum was shifted to the HEC NC and Higher Education Center Otay Mesa (HEC OM) and the Chula Vista campus while a new, larger two-story facility was constructed in San Ysidro. The new state-of-the-art 18,000 square-foot, two-story Center replaced an original one-story 7,500 square-foot temporary building, which was in place since 1988.

The 77,000 square foot HEC OM, which opened in the fall of 2007, makes higher education more accessible to the residents of South San Diego County. This full service center provides courses in general education and transfer studies as well as basic skills. Additionally, the Otay Mesa facility houses a number of signature programs such as Nursing, Paramedic, Fire Science, Emergency Medical Technology and a Police Academy. As of fall 2012, in addition to the instructional programs the HEC OM hosts offices for the Center for International Trade and Development (CITD). The new state of the art center has an initial capacity to serve up to 5,000 students, with a projected build-out capacity of 10,000. Otay Mesa is a community of 20,413 located in the eastern part of San Diego along the U.S./Mexican border. The Center provides educational opportunities to a geographic area that currently provides 14% of the student population at the District. This community is zoned as the industrial base for the City of San Diego and plays an expanding role in international manufacturing with Mexico. There are approximately 450 companies in the Otay Mesa community employing an estimated 12,000 people. There is also a large airport facility that is utilized by cargo carriers but is being studied as an alternative to the traffic and congestion at San Diego's existing commercial airport. Business development incentives offered through the State of California's Enterprise Zone and



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Foreign Trade Zone designations have contributed to making this one of the busiest point of entries into the United States for manufacturers operating across the border.

Southwestern College offers the Associate of Arts (AA) degree in some 50 different majors; the Associate of Science (AS) degree in more than 80 different majors; Career Technical Education (CTE) Certificates in over 100 different majors; as well as a host of non-credit offerings for personal and professional development through the College's Continuing Education department.

Of the more than 1,100 community colleges nationwide, Southwestern College consistently places among the top 100 schools in the number of associate degrees conferred. Southwestern College is also the 11th highest associate degree producer in the nation for Hispanic students. Southwestern College has continuously received accreditation by the Accrediting Commission for Community and Junior Colleges (ACCJC), Western Association of Schools and Colleges.

## IV. Mission, Vision, Values

Mission

The mission of Southwestern Community College District is to promote student learning and success by committing to continuous improvement that includes planning, implementation, and evaluation. The College serves a diverse community of students by providing a wide range of dynamic and high quality academic programs and comprehensive student services.

The College provides educational opportunities in the following areas: associate degree and certificate programs; transfer; professional, technical, and career advancement; basic skills; personal enrichment; non-credit adult education; community services; and economic, workforce, and community development.

Vision

Southwestern Community College District builds an exceptional community of learners and leaders who will promote social, educational and economic advancement.

Institutional Values

The following values guide how the institution thinks and acts – essentially defining the enduring character of the College District:

- Mutual respect – to treat one another with respect, dignity, trust, and fairness, appreciating the diversity of our community, students, and work force, in a collegial and cooperative manner
- Shared planning and decision-making – to engage in a collaborative process in which creative thinking, ideas and perspectives contribute to the well being of the entire College community
- Integrity – to say what we mean, to deliver what we promise, to fulfill our commitments, and to stand for what SWC values
- Accountability – to assume responsibility for our College's future as stated in our mission and goals
- Cultural competence and commonality – to positively engage our College community in developing a deep appreciation of and collegiality among all cultures



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- Scholarship and love of learning – to foster and pursue one's curiosity and passion to seek knowledge and gain deeper understanding
- Critical inquiry and thinking – to nurture intellectual exploration and develop the analytical skills to problem-solve in new situations throughout life
- Life-long learning – to inspire a vital and imaginative learning environment
- Practical and responsive – to provide practical educational experiences

The Mission, Vision and Values are evaluated and revised on a cyclical basis to correspond with institutional strategic planning timelines.

# V. Environmental Scan

## A. External Scan

College in Context to Its Environment
As noted above, Southwestern College consists of its main campus on Otay Mesa Drive in Chula Vista, the National City, Otay Mesa, and San Ysidro Educational Centers and the Crown Cove Aquatic Center in the Silver Strand State Beach. The College has also developed a distance education program that is operated from the main campus. There are several instructional programs operated during evening hours and located at a high school and other properties throughout the District service area. The official District service area is the southern portion of San Diego County from the Pacific Ocean east to the County line.

Economic Conditions[1]
As part of the external scan process, the economic climates at the national, state and regional levels were researched and reviewed. While the economic conditions at these levels may appear to be removed from the day-to-day operations of the College, they will have a significant impact on the direction the College takes in the future. The sections that follow outline the findings from this review.

National
Based on the most current information from the Kyser Center for Economic Research (Los Angeles, California), the national recession has hit bottom and the economy is beginning to rebound. Gross Domestic Product (GDP), the best measure of economic output, has regained the territory lost during the recession of 2007 to 2009.

The U.S. economic recovery, however, has been very unbalanced and unstable. Generally, it has been led by three factors: 1) Federal government spending (including the Bush Administration's Troubled Assets Relief Program, or TARP) and the Obama Administration's American Recovery

[1] Sources for the determination of economic conditions included: Federal Level: Bureau of Economic Analysis, Bureau of Labor Statistics, Congressional Budget Office, Federal Reserve Bank, Office of Management and Budget, U.S. Census Bureau. State Level: California Board of Equalization, Department of Finance, Employment Development Department (Labor Market Information), and California Association of Realtors. Regional Level: San Diego Council on Government (SANDAG), San Diego City and County Government, City of Chula Vista. Private Level: The Kyser Center for Economic Research, San Diego County Economic Development Corporation, South Bay Economic Development Council, San Diego Workforce Partnership, Environmental Science Research Institute (ESRI) Data Systems, Economic Modeling Systems Incorporated (EMSI) Data Systems.



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and Reinvestment Program, or ARRA); 2) growth in exports; and 3) consumer spending. While consumer spending only registered a 1% gain over the past three years, the base for consumer spending is so large that even a slight upturn or a downturn can have an enormous impact on the economy.

Economic forecasts indicate that the U.S. economy is recovering. However, it continues to be dragged down by a slow-moving real estate market with massive numbers of foreclosures pending, decreased business investment spending, declining revenues and reduced spending by state and local governments, and the pending Federal "fiscal cliff" at the end of 2012. Employment, which fell precipitously in 2008 and 2009, saw an increase of 1.1 million jobs for 2010 and a 1.2% gain in 2011. Job growth in the first six months of 2012 was mixed, but posted a 1.4% gain year-to-year. The unemployment rate should lower to around 7.7% by the end of 2013. While this is encouraging, it needs to be put in perspective. A total of 8.4 million jobs were lost from 2007 to 2009. This translates to a jobs deficit of millions. Viewed in this light, it will take labor markets several years to get back to pre-2007 employment levels.

Following are some the key indicators for the national economy in moving into 2012/2013 and beyond:

- GDP: After increasing by 1.7% in 2011, GDP is projected to grow by 2.0% in 2012, by 2.2% in 2013, and 3.4% in 2014. However, in each of the past ten recessions GDP returned to its previous peak within two years.

- Consumer Spending: Overall, consumer spending (inflation adjusted) grew by 3.1% in 2011 and by 2.5% in the first quarter of 2012. Consumer spending is the largest sector of the U.S. economy and holds the key to the future economic outlook. Not surprisingly, this sector is informed by consumer confidence.

- Labor Market Conditions: Unemployment for the fourth quarter of 2010 was at 9.4%. It was at 9.0% (adjusted) by the end of 2011. Employment gains have been recorded in the sectors of Education and Healthcare, Business and Professional Services, Tourism, Manufacturing and Retail Trade. The nation's unemployment rate likely will continue to be unacceptably high, in the 8-8.2% range, through most of 2012, but dropped to 7.9% in October.

- Household Financial Assets: Household net worth grew by a 3.3% year-to-year increase in the first quarter of 2012. However, the value of household net worth is still 6.8% below the 2007 peak.

- Corporate Conditions: Adjusted total pre-tax corporate profits across the nation were up by 26% for 2010. Business spending is projected to grow 5-6% in 2012 and 2013.

- Government Spending: The forecast for 2012 and 2013 is for continued growth in federal government purchases, although at substantially lower rates from the "stimulus era" of the past three years. Spending is projected to grow particularly in workforce training and education, unemployment compensation and healthcare programs. The purchase of goods and services by state and local governments will be flat to declining.



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- Inflation: Measured by the Consumer Price Index (CPI), annual consumer inflation decelerated from 2.8% in 2007 to 1.4% in 2010. The price for oil (forecast at $90 to $105 per barrel) and natural gas ($4.75/thousand cubic feet) fluctuated through 2012 but ended on the high end. As a result, food prices and the cost for transported goods also fluctuated through 2012. Overall, the CPI increased by 3.2% in 2011 and advance by 2.2% in 2012 then is projected to increase by 1.9% in 2013. The threat of inflation is best characterized as subdued.

- Monetary Policy and Interest Rates: Actions taken in the last three years by the Federal Reserve (Fed) ensured that short-term inflation was kept in check through 2011. The Fed will endeavor to return interest rates to more normal levels. At the same time, market jitters are causing havoc for long-term interest rates. The current price for 10-year Treasury Notes decline to 1.84% by 2012 and is expected to increase to 2.2% by 2013. The 30-year fixed-rate mortgage is projected to remain below 4.0% through 2012 and increase to 4.25% by the end of 2013.

- Fiscal Policy: The Congressional Budget Office (CBO) announced that the effects of the American Recovery and Reinvestment Act (ARRA) are expected to fade away over the next two years. The federal deficit peaked in 2009 at 1.4 trillion then fell to $1.3 trillion deficit for FY 2010 and 2011. This will equal 9.8% of the GDP. It is almost as high as in 2009, when the deficit was 10% of the GDP – the highest in nearly 65 years. The "fiscal cliff" at the end of 2012 is the time when a series of tax and expenditure changes are scheduled to occur. If all of the changes became effective in 2013, a recession is predicted.

- Global Markets: Failing global capital markets cannot be overlooked in terms of impact to the U.S. economy. The threat of economic failure from countries in Europe and economic slow down in China and elsewhere in the developing world mutes demand for US goods and tempers GDP growth.

Summary: The baseline forecast calls for the U.S. economy to continue on its recovery path through 2012 and 2013. A number of uncertainties could cause the economy to accelerate or contract through 2013 and beyond. Chief among these uncertainties are the following:

- Market Fragility: The financial market system carries considerable risks, particularly in global capital markets. The weakening of the financial position of state and local governments is another concern. Any of these risks could trigger problems in the global capital markets, and consequently affect the large U.S. banks and trickle into the domestic economy.

- Credit Crunch: The banking industry is still reluctant to provide the credit needed to expand business and support economic growth. The economy cannot move forward without credit to finance business and household spending for big-ticket items. The large commercial banks are on the mend. However, many small community banks are in weaker positions due to the high number of ailing (local) commercial real estate ventures that are currently on the books.



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- Housing: There is no definitive timeline on when lenders will work through their toxic real estate loans; however, home prices and new housing starts have stopped their free fall and started modest increases.

- Price of Oil and Gasoline: Sustained increases in oil and gas prices have the potential to drag the recovery in the opposite direction. Gasoline prices have risen in 2012 with a high point in July at $4.58 per gallon, then began to drop as the fall months approached.

Following are the Key Economic Indicators for the U.S. Economy:

### U.S. Economic Indicators

| Indicator | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012f | 2013f |
|---|---|---|---|---|---|---|---|---|
| Real GDP | 2.7 | 1.9 | -0.3 | -3.5 | 3.0 | 1.7 | 2.0 | 2.2 |
| Nonfarm Employment | 1.8 | 1.1 | -0.6 | -4.4 | -0.7 | 1.2 | 1.4 | 1.4 |
| Unemplopyment Rate (%) | 4.6 | 4.6 | 5.8 | 9.2 | 9.7 | 9.0 | 8.2 | 8.0 |
| Consumer Price Index | 3.2 | 2.8 | 3.8 | -0.3 | 1.6 | 3.2 | 2.2 | 1.9 |
| Federal Budget Balance (FY, $billions) | -$248 | -$162 | -$455 | -$1,415 | -$1,294 | -$1,297 | -$1,134 | -$806 |

annual percent change except where noted as "f" or a forecast
Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Office of Management and Budget, Keyser Center for Economic Research, Los Angeles Economic Development Commission

### U.S. Interest Rates (annual average %)

| Category | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012f | 2013f |
|---|---|---|---|---|---|---|---|---|
| Fed Funds Rate | 4.97 | 5.02 | 1.92 | 0.16 | 0.18 | 0.10 | 0.10 | 0.10 |
| Bank Prime Rage | 7.96 | 8.05 | 5.09 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 |
| 10-Yr Treasury Note | 4.80 | 4.63 | 3.66 | 3.26 | 3.22 | 2.79 | 1.84 | 2.22 |
| 30-Year Fixed Mortgage | 6.41 | 6.34 | 6.04 | 5.04 | 4.69 | 4.46 | 3.90 | 4.25 |

Sources: Federal Reserve Bank, Keyser Center for Economic Research, Los Angeles Economic Development Commission

Of special note, given the location of the College along the international border with Mexico, is the magnitude of trade between the United States and Mexico that passes through the ports of entry south of the College. The United States is Mexico's top trading partner and Mexico is the second largest export market and third largest trading partner for the United States. Some 70% of the trade crosses the border via trucks. An estimated six million U.S. jobs, and probably more than that in Mexico, depend on bilateral trade. Six Mexican and four U.S.border states have particularly close bilateral economic ties. However, Mexico is the first or second most important export market for twenty-one states from Colorado to Ohio. The largest trade corridor commonly identified as NASCO, links central and eastern Mexico to Texas, the Midwest, Northwest and Ontario, Canada using the ports of entry at Laredo and Nuevo Laredo. The second important trade artery is the CANAMEX corridor that connects western Mexico to the intermountain United States and Alberta, Canada as well as the high-volume I-5 corridor connecting California to Baja California. The land ports of entry serve as nodes in these networks. As the economies of both nations grow, it is likely that the freight transportation infrastructure and the land ports will experience increased stress.[2]

[2] Lee, Erik and Wilson, Christopher. *The State of Trade, Competitiveness and Economic Well-being in the U.S. Mexican Border Region.* Working Paper, North American Center for Transborder Studies, Arizona State University, June 2012.



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Implications for Southwestern College:

While the national economy is improving, it will be a very slow process. Regaining the ground that was lost will take several years.

- The recovery will be in fits and starts because there is an imbalance among the key economic indicators, some growing, some lagging.
- Expect high unemployment rates to continue, as business and industry, although growing, are reluctant to commit to expand or either rehiring laid-off personnel and/or new hiring.
- U.S. jobs that will see growth will be in the sectors of Education and Healthcare, Business and Professional Services, Tourism, Manufacturing, and Retail Trade.
- Real estate assets will stabilize and continue a modest increase.
- Federal spending will focus on workforce training and education, unemployment and healthcare programs. The resolution of the "fiscal cliff" dilemma will be critical to the future economy of the nation.
- Higher costs for energy can be expected, with projected cost increases for oil and natural gas. Higher prices at the pumps will likely impact the education choice for students who travel a great distance or do not have access to public transportation.
- Reduced funding support from the federal government will impact the state and local governments. They will be burdened with matching revenues to expenses.
- Households of the service area will be impacted by the national credit crunch. Loans for business and big-ticket domestic purchases will be more difficult to secure.
- Trade between Mexico and the United States will continue to grow, creating opportunities for the College instructional programs.

California

The performance of the California economy was mixed in 2011 – some sectors grew, some remained flat and some weakened. In 2012 the economy appeared to be going sideways in regard to unemployment. Retail sales have finally showed signs of recovery. The tourism industry also rebounded to help improve the state's gross financial output from the previous year. At the same time, property values stabilized in 2012.

One of the greatest concerns for continued progress in California's recovery is the condition of the State budget. While tax revenues increased during 2011, general fund expenditures also increased. The 2012-13 State budget was built with the assumption that a November 2012 ballot measure, proposition 30, would pass. Voters did approve that measure to temporarily increase personal income, sales and use taxes. An alternative measure, proposition 38, primarily designed to fund K-12 education and early childhood programs, was defeated. The passage of proposition



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30 avoids sharp budget cuts ($6 billion) that would have been triggered. Whatever solutions are determined to address state financial problems, i.e. reductions in government employment and spending or the addition of new taxes, the impact will be the same - a slow California recovery. As illustrated in the 2012 graphic below, state spending on most programs has been curtailed since 2007-08.

Draft



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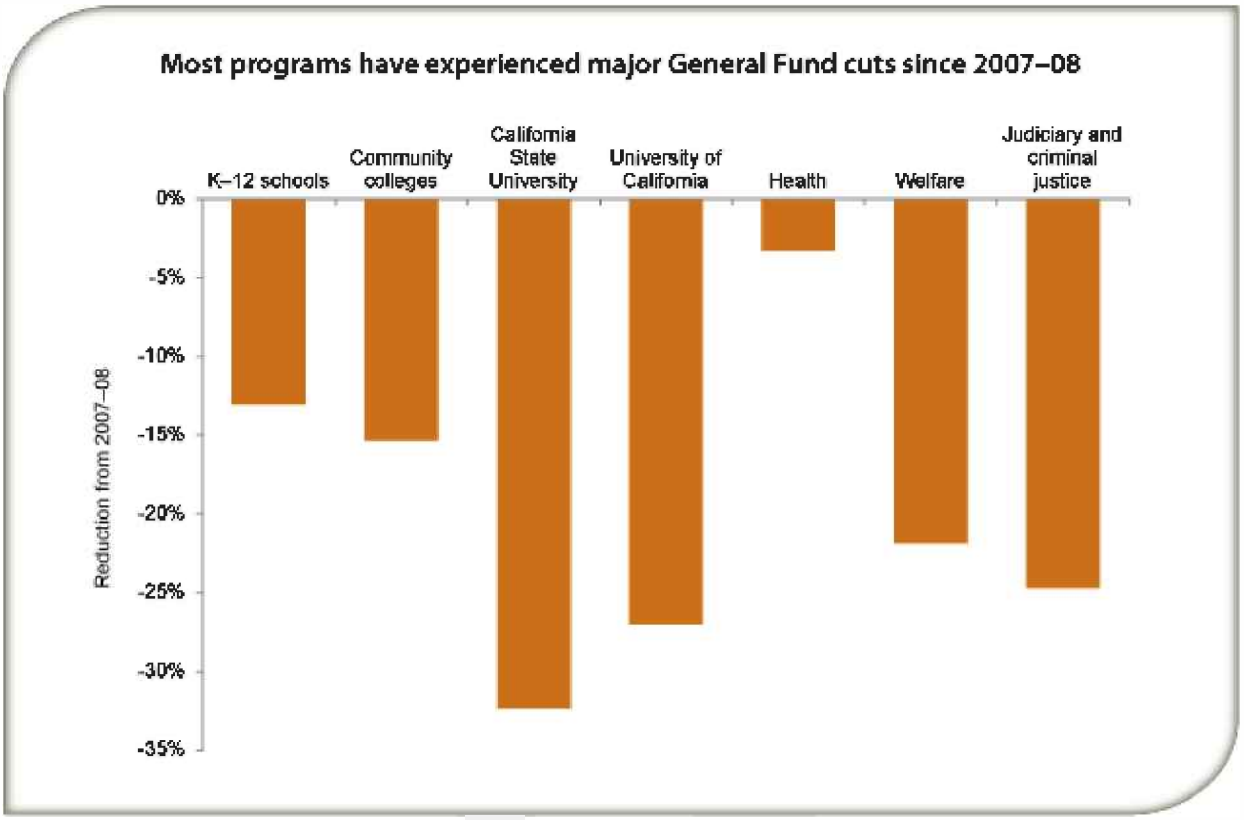
**State Expenditures on Major Programs Since 2007-08**




**Sources:** The 2012–13 Budget: California Spending Plan, Legislative Analyst's Office, September 2012. California Spending Plan 2010–11, November 2010.

**Note:** Change is calculated as the difference between the 2012–13 Budget Act and actual 2007-08 spending levels.

**From:** Just the Facts: California's State Budget: Impact of the November Election, PPIC, 2012.

The potable water supply is another serious concern for the state. Even with the heavy rains in December of 2010, water in California continues to be in short supply. Environmental rulings regarding water have the potential to place one of California's greatest economic generators, i.e. agriculture, in jeopardy. It will also have an impact on municipalities and domestic users. It will create an atmosphere of uncertainty and speculation.

The third concern is the labor market. Between December 2009 and February 2012 the state economy added 370,000 jobs and moved down from 12.3% to 10.9% unemployment. Nonfarm employment rose by .9% during 2011. For 2012, nonfarm employment was projected to gain by 1.9% while unemployment was forecast to average 10.7%. The forecast for 2013 reflects improvement, a gain of 1.8%, but it will not be robust by any means. Nonfarm job growth is projected to rise by 2.5% in 2014; unemployment is forecast at 8.3% in that year. Research provided for a statewide economic summit in May 2012 projected that California would outpace the nation in job growth over the next two years.



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California has approximately 11% of all U.S. jobs but a much higher share in the high-wage, high-growth sectors as illustrated below.

**California Share of Selected U.S. Jobs**

| Sector | 2007 | 2011 |
|---|---|---|
| Internet | 12.9% | 15.4% |
| Scientific & R&D Services | 17.9% | 18.8% |
| Software | 16.8% | 17.7% |
| Computer Services | 14.5% | 14.1% |
| Management & Consulting Services | 16.7% | 16.4% |

Source: Center for the Continuing Study of the California Economy, April 2012

A series of regional forums were held throughout the state in support of the May statewide summit on the California economy. The forums identified broad agreement that the state will benefit from developing an economic strategy that emphasized these things:

- Additional infrastructure investments are needed, as they would serve double duty to advance the competitive position of the state for business location and as a quality of life strategy for residents.
- A world-class workforce through education and training initiatives will serve double duty as a competitiveness strategy for business location and a prosperity strategy for California workers.
- World-class customer service and smart regulatory policy are important components of a state competitiveness strategy.

These factors combined to keep the California recovery moderate in 2012, 2013 and beyond.

Pluses and minuses, relative to the California economy since 2009, are captured in the following overview:

<u>Pluses</u>

- Agriculture: Gross farm receipts rebounded in 2011 by 10.3%. Assuming normal weather patterns and stable fuel and feed costs, agriculture revenues are projected to post a moderate year-over increase for 2012 and 2013.

- Technology (Including Aerospace): The components of California's Technology sector have been somewhat mixed. Business demand for technology products rose in 2010 and continued through 2011 and 2012. Sales of consumer technology were very strong, particularly for computers, e-readers, electronic notepads, MP3 players, and smart phones. California's high tech manufacturers of semi-conductors have benefited as a result. In the defense sector, a number of government-sponsored projects are underway within the state. However key defense cutbacks beginning in 2013 could impact this sector of the economy. This sector grew 31,000 jobs in 2011 and has continued to add jobs in 2012.

- Tourism: Hotels in California posted increases in revenues of 6-9%% in 2011, taking back some of their losses from 2008/2009. Through the first half of 2012, industry employment was up 2% to 1.54 million jobs.



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- Exports/Imports: The State's ports were busy in 2011. Growth through 2012 was solid. Two-way trade rose by 11.1% in 2011 to $558.4 billion, setting a new annual record. An increase of 5% is expected to be reported for 2012.

- Entertainment: This sector posted a solid gain via a strong consumer demand.

- Private Education: Driven by the need for training, re-training, and changing technology, there has been a strong (renewed) consumer interest in education. Private education has been the beneficiary of this demand. While postsecondary public institutions have recognized the demand, they have not been able to capitalize on it due to State mandated budget cuts.

- Healthcare: Driven by the baby boomer generation, healthcare and the health-related industry were projected to remain strong for 2012 and into the future.

- Population Growth: The state's population as of July 2011 was 37.6 million. It is projected to reach 37.9 million by mid-2012 and 38.2 million by 2013. The sheer volume of people within the state creates an economic engine and GDP that is ranked in ninth place compared to all nations in the world.

Minuses

- Housing/Housing Related Activities: The construction of new homes, particularly multi-family dwellings, has started up. In 2009, only 36,421 housing permits were issued. For 2010, there were 44,601 new housing starts. 2011 saw the number of single-family residential units at only 47,092. The 2012 forecast was for 58,500 permits, while the 2013 forecast is for 76,000 permits. However, these numbers are a fraction of the 2004 peak, when new housing starts registered 212,960. These statistics underscore the condition of the current housing market.

- Environmental Regulations: AB 32 (greenhouse gas legislation) will present business/industry and the consumer with many new regulations. It is projected to have a dampening impact on the business climate. California residents and businesses will likely face higher energy costs in the future.

Summary: Recessionary employment losses are diminishing. Still, there is a considerable gap between pre-2007 and the current employment/unemployment conditions. As firms gain confidence that the recovery is for real, an upturn in employment will be experienced.

The largest gains for 2012 were projected by the Employment Development Department (EDD) to occur in three occupational groups. These are Office and Administrative Support (79,700 jobs), Sales and Related (60,200 jobs), and Food Preparation and Serving Related (45,000 jobs). Occupations with the fastest growth rates are Computer and Mathematical (7%); Arts, Design, Entertainment, Sports and Media (5.4%); and Healthcare Support (4.6%).

The short-term outlook for the California economy is better, it has moved from recession to recovery. The economy is at least headed in the right direction, although there is still a long way to go to get back to pre-recessionary levels. State government will need to address its deficit



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spending issues and the housing market will need to improve before the economy can move beyond marginal, incremental progress.

Implications for Southwestern College:

- While the state economy is improving, it is improving slowly.
- California's unemployment rate has remained high (10.7%) through 2012.
- The projected State budget deficits through 2012 will likely trigger more belt tightening for state postsecondary institutions and for state sponsored capital construction projects, even with the passage of proposition 30 in November.
- Housing starts remained at low levels through 2012, but are starting to pick up at the end of the year.
- Energy costs, for gasoline and natural gas likely will rise. The impacts of AB 32 (California Greening) will also create a burden on State residents. Distance education may play a larger role in the postsecondary education market.
- Even with the passage of proposition 30, the College will not be able to meet the demands of all students seeking a postsecondary education. The greatest opportunities for growth will be in not-for-credit and contract education, i.e. areas that are not dependent on traditional public funding.

Tables that display multiple-year trends in California economic indicators and nonfarm employment are found in the appendices of this report.

Regional Area Economy- San Diego County

The County economy is diverse. It is a key hub for the biotech and telecommunications industries. The County also has a significant high technology manufacturing sector and is an attractive travel destination. San Diego County benefits from several innovative clusters including communications, genomics, bio-fuels, energy storage, cyber-security and clean-technology. San Diego has the only large shipbuilding industry on the West Coast. It has a thriving aerospace sector that is adding workers.

A look at the key economic indicators for San Diego County discloses a population base of over 3,095,313 in 2010, the second most populated county in California. Nonfarm employment, which accounts for almost three-fourths of the all jobs, has been slow to grow over the past years, gaining only 1.0% with an annual .1% average. Unemployment is high but is below the state average.

San Diego County, located next to the Mexican border and its transportation infrastructure, make it ideal for international trade, warehousing and distribution. In 2008 the total two-way trade in the customs district reached $54 billion with Mexico accounting for $4.5 billion or 82.5%. In 2010 trade through the Otay Mesa and San Diego ports of entry was valued at $21.6 billion, in 2011 that jumped to $34.2 billion, 87% of which is with Mexico.



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The region's health care industry continues to add jobs and the providers will benefit from the Supreme Court decision on the Affordable Health Care Act because it extends coverage to previously uninsured people.

The San Diego Military Advisory Council 2012 annual report indicates that defense contributes an estimated $32 billion to the County's gross regional product. While defense cuts are projected, a significant amount of work in San Diego is related to the development of systems that will likely continue to grow even as defense budgets are cut. Those are systems in unmanned aerial vehicles, cyber security, intelligence surveillance, and defense-related electronics and software. In the last two decades military presence in the County has declined, but it remains a key driver in the regional economy as it accounts for about 4% of the employment.
Travel and tourism have made a quick recovery from the recession. The growth continued through 2012 as a projected 16 million visitors will travel to the County in 2012 and about 16.2 million are expected in 2013. The County is both an end destination and a travel path for visitors going to and from Mexico.

Agriculture in the County is smaller than it once was, but it is still significant as the County ranks as the 17th largest agricultural economy among all counties in the United States. The largest commercial crops were nursery plants and avocados. The region concentrates in high-value crops and produces the highest dollar value per acre of any county in California.

Per capita income is slightly above the State average. The median household income for San Diego County from 2006-2010 was estimated at $63,069, just above the state and national averages.

Revenue generated from taxable sales averaged 2.0% on an annual basis between years 2001 and 2011. New housing starts saw a significant decrease from year 2001 to 2011. For comparison, at the height of construction in 2003, new housing starts were 18,314. The construction sector of the economy has been depressed for the past several years. But the forecast is for improvement in 2013, with a projection of new home construction permits increasing 26.4% to 5,500. Home sales, particularly multi-family dwellings, have been on the rise in 2012.

### San Diego County Summary of Key Economic Indicators

| Year | Population | Nonfarm Emp | Unemploy-ment Rate | Per Capital Income | Median HH Income | Taxable Retail Sales |
|---|---|---|---|---|---|---|
| 2001 | 2,870,100 | 1,218,600 | 4.2% | $34,653 | $60,699 | $26,300,000,000 |
| 2011 | 3,131,300 | 1,231,200 | 10.0% | $47,776 | $69,227 | $32,000,000,000 |
| 11 Yr Change | 9.1% | 1.0% | | 37.9% | 14.0% | 21.7% |
| Annual Av. | 0.8% | 0.1% | | 3.4% | 1.3% | 2.0% |

Source: ESRI Data Systems; California Department of Finance; Employment Development, Labor Market Information

### Comparison of Key Economic Indicators

| 2010 | Population Growth Rate | Unemploy-ment Rate | Per Capita Income | Median HH Income |
|---|---|---|---|---|
| San Diego | 0.67% | 10.50% | $28,691 | $57,668 |
| State | 0.66% | 12.40% | $27,562 | $57,587 |
| Nation | 0.67% | 9.60% | $26,739 | $54,442 |

Source: ESRI Data Systems; California Department of Finance; Employment Development, LMI; U.S. Census Bureau



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**San Diego County, Employment by Industry**

| Industry | 2008 | 2018 | No. Change | 10-Yyear % Change | Annual % Change |
|---|---|---|---|---|---|
| Government | 225,100 | 246,200 | 21,100 | 9.4% | 0.9% |
| Trade, Transportation & Utilities | 215,900 | 232,300 | 16,400 | 7.6% | 0.8% |
| Business & Professional Services | 215,100 | 239,100 | 24,000 | 11.2% | 1.1% |
| Leisure & Hospitality | 164,000 | 176,800 | 12,800 | 7.8% | 0.8% |
| Education & Health Services | 137,300 | 165,700 | 28,400 | 20.7% | 2.1% |
| Self Employed | 115,500 | 120,300 | 4,800 | 4.2% | 0.4% |
| Manufacturing | 102,800 | 105,000 | 2,200 | 2.1% | 0.2% |
| Construction | 76,100 | 90,500 | 14,400 | 18.9% | 1.9% |
| Financial Activities | 75,200 | 79,600 | 4,400 | 5.9% | 0.6% |
| Other Services | 48,400 | 51,600 | 3,200 | 6.6% | 0.7% |
| Information | 38,500 | 41,200 | 2,700 | 7.0% | 0.7% |
| Unpaid Family & Private Household Workers | 16,100 | 18,700 | 2,600 | 16.1% | 1.6% |
| Farm | 10,500 | 10,700 | 200 | 1.9% | 0.2% |
| Mining and Logging | 400 | 300 | -100 | -25.0% | -2.5% |
| ***Total*** | ***1,440,900*** | ***1,578,000*** | ***137,100*** | ***9.5%*** | ***1.0%*** |

Source: Labor Market Information, San Diego County Projections by Industry 2008-2018; analysis by Cambridge West Partnership, LLC

The San Diego Regional Economic Development Corporation has identified five industries it wants to continue to nurture in order to grow the local economy.[3] They are the following:

1. Clean Technology
2. Defense
3. Software
4. Maritime
5. Life Sciences

To increase overall regional prosperity, innovative capacity must be built in these clusters drawing upon inherited assets (geography, research centers, companies and governmental organizations already in the community). These targeted industry clusters are in addition to traditional tourism that accounts for more than 152,600 jobs and local services (restaurants, auto dealers, hospitals, etc.) that employ more than 772,500 people.

San Diego is the home to more than 800 companies with headquarters, R&D, manufacturing services or sales functions covering a wide range of technology products and services. It is an emerging leader in clean technology with renowned research institutions and industries that encompass alternative energy technologies. The leading sectors in the region are noted below.

[3] Business Thrives in San Diego. Retrieved 7/27/12 from http://www.sandiegobusiness.org



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**Economic Impact of Clean Technology in the San Diego Region**

| Cleantech Sectors | Economic Activity | Employment | Wages |
|---|---|---|---|
| Algae Biofuels | $56,200,000 | 410 | $28,800,000 |
| Clean Transportation | $311,300,000 | 1,350 | $92,600,000 |
| Clean Energy Storage | $133,900,000 | 561 | $56,300,000 |
| Energy Efficiency | $299,800,000 | 1,013 | $89,600,000 |
| Smart Grid | $91,500,000 | 460 | $37,200,000 |
| Solar Energy Generation | $517,600,000 | 1,133 | $134,200,000 |
| ***Total*** | ***$1,410,300,000*** | ***4,927*** | ***$438,700,000*** |

Source: San Diego Economic Development Corporation

San Diego is also home to a large concentration of defense assets. The region is homeport to more than 60% of the U.S. Navy's Pacific Fleet and more than 30% of U.S. Marine Corps' operations. Combined, more that 100,000 service personnel are stationed in the region. The defense industry has contributed to the prominent status of the region in science, technology, tourism, biotechnology, communication, marine technology, information technology, manufacturing and aerospace. The direct economic impact can be expressed as noted in the tables below.

**2009 Direct Economic Impact From Defense**

| Category | Amount ($ billions) | No. Employees |
|---|---|---|
| Direct Spending | $18.2 | |
| Economic Output | $30.5 | |
| Earnings | $16.3 | |
| Employment | | 354,627 |

Source: San Diego Economic Development Corporation



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**2009 Top Ten Department of Defense Contracts Performed in San Diego County**

| Recipient | Contracts Value |
|---|---|
| General Dynamics | $1,493,474,604 |
| Science Applications International | $1,475,910,577 |
| Northrop Grumman | $1,455,091,021 |
| General Atomics | $1,315,647,326 |
| Harper Construction | $324,498,526 |
| BAE Systems | $262,846,222 |
| Tuner-Penick | $213,303,344 |
| Hensel Phelps Construction | $177,640,072 |
| Cubic Corporation | $174,020,374 |
| Booz Allen Hamilton | $135,562,060 |
| ***Top Ten Total*** | ***$7,027,994,126*** |

Source: San Diego Economic Development Corporation

The San Diego region has approximately 1,200 software and computer service firms and is home base to some of the largest software companies in the world. Their economic impact is illustrated in the table below.

**Economic Impact of the Software Industry in San Diego**

| Impact Category | Direct | Total |
|---|---|---|
| Employment | 27,360 | 61,300 |
| Wages & Compensation | $2,109,251,540 | $3,521,632,950 |
| State & Local Taxes | $194,630,766 | $543,920,047 |
| Output | $5,062,398,525 | $9,803,234,355 |

Source: San Diego Economic Development Corporation

San Diego is recognized as one of the leading maritime technology centers based on the presence of globally renowned research institutions, a large concentration of military assets, a major port, a large concentration of ship building assets on the U.S. West Coast, traditional maritime industry and a major cluster of marine technology companies. The industry is composed of nearly 1,000 companies and organizations that employ nearly 28,000 people (excluding military personnel). Annual revenue from this industry sector exceeds $7 billion. The largest sectors in this industry are illustrated below.



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**2009 Economic Impact of Largest Sectors in San Diego Maritime Industry**

| Sector | Revenues Generated | Employment | Organizations |
|---|---|---|---|
| Maritime Technology | $2,632,453,368 | 5,854 | 90 |
| Leisure Boats & Recreation | $1,155,727,624 | 7,841 | 473 |
| Ship Building & Repair | $868,784,520 | 10,574 | 56 |
| Transportation & Cargo Operations | $198,979,971 | 1,035 | 14 |
| Commercial Fishing & Seafood Processing | $108,100,319 | 1,232 | 40 |
| Additional Sectors | $78,935,695 | 1,586 | 69 |
| ***Total*** | ***$5,042,981,497*** | ***28,122*** | ***742*** |

Source: San Diego Economic Development Corporation

The life science industry emerged in San Diego in the 1980s and has become one of the most prominent clusters in the country. The region hosts more than 600 life science, bio-medical companies and more than 80 world-renowned research institutions. The industry employs over 25,000 people; the prominent occupations are listed below with 2010 median wage data.

**2010 Median Wage Data in the San Diego Life Science Industry**

| Occupation | 2010 Median Wage |
|---|---|
| Clinical Research Coordinators | $151,720 |
| Biostatisticians | $86,120 |
| Biochemists & Biophysicists | $82,760 |
| Chemical Engineers | $81,760 |
| Biomedical Engineers | $77,260 |
| Microbiologists | $66,540 |
| Clinical Technologists | $61,680 |
| Laboratory Technicians | $38,500 |

Source: San Diego Economic Development Corporation

Following is a list of the County's major industry types and employers. The list is limited to companies with 100 employees or more. The Retail Trade and Agriculture sectors are not included.



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**Major Employers and Industry Types within San Diego County**

| Employer Name | Location | Industry |
|---|---|---|
| 32nd St Naval Station | San Diego | Federal Government-National Security |
| Barona Casino | Lakeside | Casinos |
| Barona Resort | Lakeside | Resorts |
| General Dynamics NASSCO | San Diego | Ship Builders & Repairers (Mfrs) |
| Goodrich Aerostructures Group | Chula Vista | Aircraft Components-Manufacturers |
| Hairspray | San Diego | Cosmetics & Perfumes-Retail |
| Kaiser Permanente | San Diego | Hospitals |
| Kaiser Permanente | San Diego | Clinics |
| Marine Corps Recruit Depot | San Diego | Military Bases |
| Mary Sharp Birch Hosp-Women | San Diego | Hospitals |
| Merchants Building Maintenance | San Diego | Janitor Service |
| Palomar Memorial Hospital | Escondido | Hospitals |
| Palomar Pomerado Health Rehab | Escondido | Rehabilitation Services |
| San Diego County Sheriff | Santee | Police Departments |
| San Diego Naval Medical Ctr | San Diego | Military Bases |
| Scripps Research Institute | La Jolla | Research Service |
| Sea World San Diego | San Diego | Amusement & Theme Parks |
| Sharp Grossmont Hospital | La Mesa | Hospitals |
| Sharp Memorial Hospital | San Diego | Hospitals |
| Solar Turbines Inc | San Diego | Marketing Programs & Services |
| Sony Electronics Inc | San Diego | Audio-Visual Equipment Manufacturers |
| Sycuan Casino | El Cajon | Casinos |
| Tri City Hospital | Oceanside | Hospitals |
| UCSD MEDICINE-SENIORS LA | La Jolla | Schools-Medical |
| Viejas Casino & Outlet Ctr | Alpine | Casinos |

Source: California Employment Development Department, LMI

South Bay

The south bay area of San Diego that is the official service area for the College has its own economic initiatives. In general, there are very few major employers in the South Bay. Within the private sector the XYZ (formerly Goodrich Aerostructures Group or Rohr Aircraft) is the leader. However, the Chula Vista Chamber of Commerce has identified the following businesses that employ 150 or more people.



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**Major Employers in Chula Vista**

| Employer | Category |
|---|---|
| Specialty Businesses | |
| Bayview Hospital/Mental Health Systems | Hospital |
| Fredericka Manor Retirement Community | Elderly Care Facility |
| GCE Industries | Manufacturing |
| Goodrich Aerostructures | Aerospace Manufacturer |
| Knott's Soak City USA | Amusement Park |
| Marine Group Boat Works | Boat Repair |
| Nupro | Injection Molding |
| Profil Institute | Medical Research |
| Ratheon Systems | Aerospace Manufacture |
| Scripps Health | Hospital |
| Sharp Chula Vista Medical Center | Hospital |
| South Coast Welding | Welding |
| Youngevity | Health Supplements |
| United Parcel Service | Delivery Services |
| Government | |
| Chula Vista Elementary School District | Education |
| City of Chula Vista | Municipal Government |
| Department of Social Services | Social Services Agency |
| Southwestern College | Education |
| Sweetwater Union High School District | Education |
| United States Border Patrol | Law Enforcement |
| Retail | |
| Home Depot | Construction Merchandise |
| Kohl's | Department Store |
| Macy's | Department Store |
| Costco | General Merchandise |
| Sears | Department Store |
| Target | General Merchandise |
| WalMart | General Merchandise |

Source: Chula Vista Chamber of Commerce. *Business in Chula Vista,* 2012. Retrieved from www.chulavistachamber.org on September 26, 2012.

While Chula Vista is the largest city in the College service area, most business activity in the city is composed of small operations with fewer than 20 employees. However, the city does have three long-term economic development projects that will generate job opportunities in the future. Chula Vista has recently accomplished a major economic development milestone with the Coastal Commission's approval of the Chula Vista Bayfront Master Plan covering 556 acres. The plan has been a decade in the making as a joint venture between the city and the Unified Port of San Diego. The project will develop four phases to include parks, open space, ecological buffers, residential areas, resort conference center, hotel, retail, cultural and recreational space along with a reconfigured marina boat basin and a new commercial harbor. It is expected to



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generate 7,000 temporary positions and 2,000 permanent jobs over the next 20 years.[4] A precise analysis describing the nature of the permanent jobs is not available, but an informed source believes that most will be in the service sector and perhaps no more than 15 percent will command a living wage.[5]

A second long-term project to be built-out over 20 years is a new urban center in the Otay Ranch and eastern Chula Vista community called the Millenia Project. It involves 210 acres of mixed land use development to include regional-serving commercial, financial, professional, entertainment and cultural uses, medium to high-density residential areas, parks, plazas, and hotels. It is projected to generate 9,200 jobs at build-out.[6] The final project is a vision for a university and regional technology park to meet the higher education needs of south bay residents. Once developed the university is projected to attract 15,000 students and generate 829 faculty jobs. The regional technology park is envisioned to serve as an incubator for economic development programs, research and development for business and a venue for industrial production. At this time the land on which to locate the university and regional technology park has not been acquired nor has permission been secured from either the University of California or the California State University to move forward with plans for a public higher education institution in the community.

The City of San Diego is updating the community plan for Otay Mesa and anticipating development of that area based on both the industries in the area (transportation logistics, warehousing, manufacturing and service firms) as well as its position as a port of entry from Mexico. The area Council of Governments, SANDAG, has projected the Otay Mesa employment base will increase over five-fold between 2000 and 2030 (8,000 to 42,000 jobs). The largest industrial facilities in the area are U.S.-based twin-plants in the Maquiladora production system with the more labor-intensive functions occurring in the Mexico-based factories. The plants on the U.S. side of the border perform the final assembly, testing, packaging, re-packaging, labeling and distribution of products that are created in whole, or in part, in Mexico. A handful of industry sectors comprise almost two-thirds of the total employment in Otay Mesa. Manufacturing represents about one-third of total employment. Transportation, communications and public utilities represents about 17%; wholesale trade represented 16% and retail trade accounts for an additional 15% of employment. While all of these sectors are expected to continue growing out to 2030, the largest employer is projected to be the services sector that includes business and professional services which are expected to grow to 38% of total employment.[7]

The City of San Diego Airport Authority is moving forward to enhance the Brown Field area into a Metropolitan Airpark with a massive twenty-year project. The developer, Brown Field International Business Park, LLC (BFIPB) and Distinctive Projects Company, Inc. of Carlsbad, envisions a mix of aviation-related and non-aviation-related businesses on 352 acres of the Brown Field site. The development includes an aviation business center, full-service fixed-based operator (FBO) service center, helicopter operations facility, a 50-acre solar energy park, a hotel

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[4] San Diego Union Tribune, "Chula Vista Bayfont Plan OK'd By State Panel," August 10, 2012, pages 1 and A6
[5] Michael Meacham, Director of Economic Development, City of Chula Vista. *Interview.* November 1, 2012
[6] City of Chula Vista. Fiscal Recovery and Progress Plan FY 2013-2017.
[7] City of San Diego, Otay Mesa Community Plan, April 2011 draft. Retrieved from http://www.sandiego.gov/planning/community/profiles/otaymesa/ on September 13, 2012.



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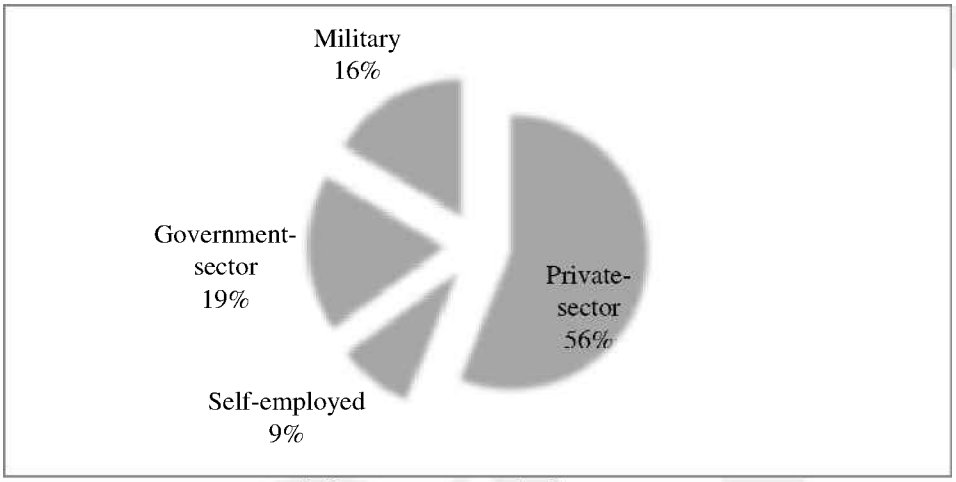
and conference center, commercial and retail space, and relocation of the San Diego Air and Space Museum from Balboa Park. The initial phase would encompass 100 acres and be mainly aviation-related improvements. It is anticipated that the development work alone would generate 7,961 temporary construction jobs starting at the end of 2013 and almost 4,000 jobs through ongoing economic activity located within the development.[8]

The whole of the South County area of San Diego County has an estimated 7,245 private-sector firms (2007) and 88,644 jobs, or about eight percent of all private-sector employment in the County.

**South County Employment**




Source: South County Economic Development Council. *South County Region Employment Profile, 2007*

Employment in the South County area is concentrated in retail trade, accommodation and food services, and health care. Twenty-three percent of total employment is in retail trade. General department stores and other clothing and accessory stores serve both the residents of South County, but also many shoppers from south of the border. The annual average private-sector wage in 2007 was $31,100.[9] The highest paying industries are noted in the following tables.

**High-Paying Private Industries in South County Area**

| High-Paying Private Industries | # Firms | # Jobs | Av Annual Wage |
|---|---|---|---|
| Manufacturing | 353 | 8,917 | $48,500 |
| Transportation & Warehousing | 275 | 2,857 | $44,100 |
| Wholesale Trade | 632 | 4,889 | $43,100 |
| Finance & Insurance | 350 | 3,413 | $42,900 |
| Information | 74 | 782 | $39,100 |
| Health Care | 742 | 11,652 | $37,300 |

Source: South County Economic Development Council. *South County Region Employment Profile, 2007*

[8] Indigo Key. *An Economic Impact Analysis for Foley and Lardner, LLP.* November 2007
[9] South County Economic Development Council. *South County Region Employment Profile.* 2007



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**Employment in Cities and Communities of the South County Area**

| Cities & Communities | # Firms | # Jobs | Av Annual Wage |
|---|---|---|---|
| City of Chula Vista | 3,553 | 44,004 | $31,000 |
| City of Coronado | 561 | 5,991 | $29,400 |
| City of Imperial Beach | 224 | 1,922 | $21,200 |
| City of National City | 1,200 | 18,392 | $31,000 |
| South San Diego | 1,468 | 16,764 | $32,700 |
| Bonita and Lincoln Acres | 239 | 1,571 | $34,600 |

Source: South County Economic Development Council. *South County Region Employment Profile, 2007*

Summary: The economy of San Diego County continued to expand moderately in 2012 with growth increasing in 2013. Job expansion will move with the growth in key industries (tourism, healthcare and high technology). It will take a few years to regain ground lost to the recessionary period of 2008-2009. Unemployment is projected to decrease going through 2013 and employment is expected to increase slowly. San Diego is blessed with a near perfect climate that attracts an educated and talented workforce, a steady influx of well-off retirees and a substantial military presence.

Several aspects about the College's proximity to the Mexican border should be noted. The population (Tijuana estimated to be 1.6 million in 2010) and economy of northern Baja California should be given consideration. The economy of the border communities has blossomed with the development of approximately 500 assembly plants or maquiladoras, telemarketing, some high tech firms and tourism activity. In the past decade Tijuana has become the medical device manufacturing capital of the North American continent. About 300,000 visitors cross to Mexico by foot or car from the San Ysidro port of entry in the United States each day.

Implications for Southwestern College:

- The County's rate of unemployment will remain at higher than desired levels and workforce development is needed.

- Housing starts will be very slow through 2012. New construction will improve, but the housing market will remain distressed until the mess with foreclosed properties and toxic mortgages is abated.

- Jobs within the County that will experience the greatest growth will be retail trade and administrative and support services, leisure and hospitality, and professional and technical services. Healthcare will remain a strong part of the economy as well. It will continue to be a source for employment.

- Local government (county and cities) will continue to struggle, balancing the need for services with depleted revenues. The financial burden will result in reduction of services and capital expenditures.

- The College will have significant enrollment pressure, as the population base within the service area seeks to retrain or advance in education. The College will be hard-pressed to



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invent new ways of "doing business" to accommodate the stepped-up demand for education within the County.

Policy Environment for Higher Education

Several key policy decisions will influence the California Community College system in the coming years. The College is part of the national and State higher education community. As such, it has a public responsibility to make decisions in light of national goals, policies and resources. Speaking at Macomb Community College (Michigan) in July 2009, President Obama articulated the American Graduation Initiative (AGI), which has a goal of increasing the percentage of U.S. residents who earn high quality degrees and credentials from the present rate of 39 percent to a rate of 60 percent by the year 2025. The Lumina Foundation and the Bill and Melinda Gates Foundation have developed similar goals for increasing the educated population. Both philanthropic organizations are preparing to provide incentives that are intended to stimulate students to complete degree programs successfully. While it has been announced that some new federal resources will be allocated for use by community colleges, the Congress is currently also struggling to restrain spending and to reduce debt levels. This will have an impact on the amount of money that the community colleges receive.

President Obama has pushed to increase college graduation rates across the nation. Complete College America, a non-profit organization, was formed to advance this mission. It has enlisted support from 22 state leaders to ensure greater numbers of students acquire degrees. Its publication, *Time is the Enemy*, has focused national attention on several key observations:

- Nontraditional students are the new majority
- Part-time students rarely graduate
- Graduation rates are especially low for students who are of African American or Hispanic descent, as well as students who are older or poorer than the typical student
- Students are wasting time earning excess credits and taking too much time to earn a degree
- Too many students need remediation and too few succeed when they get it[10]

The Gates, Ford, Lumina, and Kellogg Foundations as well as the Carnegie Corporation of New York fund their collective work and the efforts of others to promote change in higher education.

The community colleges may be helped by federal legislation to consolidate student loan programs within the US Department of Education and increase the amount of Pell funds per grant. However, recent Congressional proposals to curtail the Pell grant awards may hurt the colleges and students. The long-term impact remains to be seen. President Obama has signed an executive order to align the monthly repayment rate of federal loans to the level of future wages earned by the student. That may ease the burden of debt for students and make the act of borrowing for a college education more feasible for prospective students. The President has also declared a policy to not enforce deportation on children of illegal immigrants who meet certain conditions and to provide work permits for them. That will ease some burdens in that subset of the population and may stimulate some to attend college who would not otherwise do so.

[10] Complete College America. *Time Is The Enemy.* September 2011



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The Obama administration and the U.S. Department of Education have announced a new emphasis for their involvement with career and technical education through a transformation of the Carl D. Perkins Career and Technical Education Act of 2006 as it comes due for renewal. The new directions are shaped by four key principles:

> (1) Alignment. Effective alignment between high-quality CTE programs and labor market needs to equip students with 21st-century skills and prepare them for in-demand occupations in high-growth industry sectors;
> (2) Collaboration. Strong collaborations among secondary and postsecondary institutions, employers, and industry partners to improve the quality of CTE programs;
> (3) Accountability. Meaningful accountability for improving academic outcomes and building technical and employability skills in CTE programs for all students, based upon common definitions and clear metrics for performance; and
> (4) Innovation. Increased emphasis on innovation supported by systemic reform of state policies and practices to support CTE implementation of effective practices at the local level.

Differences in the current provisions of the Perkins Act and the proposed changes were announced in April 2012.[11]

After the Higher Education Opportunities Act was passed by Congress in 2008 a series of new federal regulations have been issued to improve program integrity where Title IV financial aid funds are involved. Regional accrediting bodies are now expected to provide *closer* scrutiny of member institutions on a range of new topics such as:

- The analysis and use of student achievement data, expressed at a variety of levels and in different ways, to improve programs and services.
- Specific attention must be given to the institution's longitudinal data on student achievement, disaggregated and analyzed in a variety of forms, to identify any concerns about stability and achievement of the institution's mission.
- Conformance of credit hours awarded to the "Carnegie Unit" standard as found in a variety of curriculum and instructional settings.
- The efficacy of methods that the institution uses to verify the identity of students enrolled in distance and correspondence education classes and steps taken to preserve the integrity of the credits and grades awarded.
- Public disclosure of educational costs and employment prospects for students in any career and technical program designed to prepare those students for gainful employment upon graduation.

In part, stimulated by prior federal government actions, regional accrediting bodies are insisting that greater attention be given to student *learning* outcomes. The expectation by the Accrediting Commission for Community and Junior Colleges (ACCJC) is that proficient assessment processes will be routinely practiced at the course, program, and degree levels by all member institutions by fall 2012.

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[11] U.S. Department of Education, Office of Vocational and Adult Education. *Investing in America's Future: A Blueprint for Transforming Career and Technical Education.* April 2012.



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These new areas are in addition to the traditional goals of accreditation:

1. Providing assurance to the public that the education provided by the institution meets acceptable levels of quality
2. Promoting continuous institutional improvement
3. Maintaining the high quality of higher education institutions in the region

Although subtle, the Commission has changed the term used for the initial phase of the comprehensive reaccreditation process from a self-study to a self-evaluation. The change underscores the increased emphasis that claims made by the institution must be supported by evidence and evaluation.[12]

The President's challenge to the nation, which was aimed at increasing the numbers of college graduates, has not been ignored in California. Within California, the Public Policy Institute (PPI) has estimated that one million additional bachelor's degree holders will be needed by 2025 to meet workforce needs in California.[13] The Community College League of California (CCLC) launched a futures project, 2020 Vision for Student Success, to respond to the national graduation goal by identifying policy and practice changes that could be implemented to increase student achievement. To contribute its part toward achieving the national graduation goal, California needs to produce a total of 1,065,000 degrees or certificates per year. That translates to producing an *additional* 23,000 degrees and certificates per year, a 5.2% annual increase.[14] These aspirations are closely coupled with the need to assure the quality of the awards conferred. A recent national report notes the following:

Quality in higher education must be defined in terms of student outcomes, particularly learning outcomes…. The value of degrees and credentials- both for the individual and society as a whole- ultimately rests on the skills and knowledge they represent…. Ultimately, learning is what students' need, what degrees and credentials should represent and what higher education should provide to everyone who seeks it. (p. 1) [15]

The following State initiatives are intended to increase student success rates:

- The Board of Governor's basic skills initiative seeks to enable more students to overcome their academic deficiencies.
- The Student Success Task Force, formed under the provisions of SB1143, prepared a set of recommendations to bolster measures designed to promote student success and degree completion.
- Additional legislation, SB1440 Student Transfer Achievement Reform or STAR Act, simplified the process of transferring from a community college to a school in the California State University (CSU) system. This program provides a pathway for students to follow so that they can be admitted to a CSU with junior status.

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[12] Accrediting Commission for Community and Junior Colleges. *Preparing for A Comprehensive Visit*. Workshop materials presented on October 21, 2011

[13] Hans Johnson and Ria Sengupta *Closing the Gap: Meeting California's Need for College Graduates* (San Francisco, CA: Public Policy Institute of California, April 2009)

[14] *2020 Vision: A Report of the Commission on the Future,* (Sacramento, CA: Community College League of California, 2010)

[15] *A Stronger Nation Through Higher Education: How and Why Americans Must Achieve a "Big Goal" for College Attainment. A Special Report,* (Indianapolis, IN: Lumina Foundation for Education, 2009)



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- Enacted in Fall 2010, AB2302 directs the community college system and the CSU to find ways to clearly articulate transfer requirements and provide guaranteed admission to students who meet those requirements. It also requests that the University of California collaborate with community colleges to design transfer programs and to publicize those programs to increase the number of students who transfer from community colleges.

Perhaps the most potentially far-reaching set of recommendations for change in policy and practice are included in the report from the California Community College Chancellor's Office Student Success Task Force. The group has proposed eight areas of focus with 22 recommendations. The focus areas are:

1. Increase college and career readiness
2. Strengthen support for entering students
3. Incentivize successful student behaviors
4. Align course offerings to meet student needs
5. Improve the education of basic skills students
6. Revitalize and re-envision professional development programs
7. Enable efficient statewide leadership and increase coordination among colleges
8. Align resources with student success recommendations

Some of these recommendations require changes to State law and regulations. Others require new resources. The rest can be accomplished in each community college district that has the will to do so without either of these state-level changes. Two of the Task Force recommendations already have been passed into law. They include creating a common assessment/placement system and providing electronic transcripts. Assembly Bill 743, supporting the common assessment tests, has received a one-time allocation of $500,000. Those public funds will be combined with Gates and Hewlett Foundation grant funding to total $850,000 for start-up costs beginning in January 2012. Assembly Bill 1056, supporting the introduction of electronic transcripts, has also received a one-time allocation of $500,000 to help fund the cost of converting from paper to an electronic transcript system. The ongoing maintenance expenses for an electronic transcript system are anticipated to be covered by the savings generated by the use of the more efficient electronic system. The Legislature passed the Student Success Act in August 2012 and the governor signed it shortly thereafter. The measure would do the following:

- Develop a uniform placement exam for students;
- Provide students with orientation, assessment, placement and counseling services;
- Require students to identify an educational goal (such as degree or certificate for transfer to a four-year university;
- Require colleges that receive student support service funds to complete and post a student success scorecard showing how well the campus is doing in improving completion rates, especially by race, ethnicity, gender, and income;
- Establish minimum academic progress standards for students to receive Board of Governors fee waivers, but also develop an appeal process.

The Task Force recommendations come in the wake of a severe shortfall in resources for the State's public higher education institutions. Fiscal support to the community colleges has been



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sharply curtailed in recent years. Since 2008-09 dwindling state support for the community college system, approximately $800 million, has translated into an historic 17% drop in enrollment or more than 485,000 students. As noted above, the prospects for a *quick* recovery to the state's economy and ability to support higher education are not good. The Legislature has increased the enrollment fee that students pay from $26 per unit to $46 per unit. Governing boards for the University of California and the California State University systems have also responded to reduced State support by increasing their tuition fees. Both university systems are reducing the number of students that are accepted and redirecting many to the community colleges. The community college system is overwhelmed with enrollment. As a result, class sections, which have been reduced in number, fill quickly causing students to take more time to earn their degrees. The passage of proposition 30 will curtail the budget cutting for the immediate future.

Given the circumstances of the economy the new Vice Chancellor for Economic and Workforce Development has listened intently to the perspectives articulated at a statewide economic summit held in May 2012. The themes of the summit were to recognize that the California economy is better described as a series of regional economies rather than a unified state economy. Further, the summit participants identified a need to better match job requirements to educational preparation.[16] The Chancellor's Office has translated these discussions into a four-part initiative called Doing What Matters for Jobs and the Economy. The initiative has four parts:

- Giving Priority. This part of the initiative called for regional discussions and agreement among community colleges to focus on a limited number of industrial sectors that their efforts would target based on labor market information and regional program capacities.
- Make Room. This part of the initiative called for community colleges to reconsider the wide range of programs they were offering and retool or cut out those that were not well matched to the regional economy.
- Student Success. The third part of the initiative calls for a focus on ways to promote greater student success in courses and programs and ways to better measure outcomes through closer collaboration with K-12 systems and the EDD in data collection and program evaluation. That collaboration at the regional level will be incentivized by a new approach to funding projects from the Chancellor's Office.
- Innovate. The initiative intends to invest in innovation, such as highly specialized industry training, technical consulting and a multitude of services that solve a complex workforce training need. The end result is the ability for our system of community colleges to better deliver for employers, sectors, and their workers.

A final policy area merits mention. The largest public school district in the College service area is the Sweetwater Union High School District. That district has elected to embrace some changes in curriculum and practices that may make their graduates more prepared for college. As an experiment, incoming eighth grade students will be issued an iPAD and will be using those devices as they work their way through the balance of their secondary education. Students entering the ninth grade in fall 2012 are required to complete a course in Intermediate Algebra as a graduation requirement. Students entering the ninth grade in fall 2012 also will have courses of

[16] CAForward. *California Economic Summit Action Plan*. July 2012



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study that ensure they will have an opportunity to meet all of the UC/CSU A-G entrance requirements.

Key Demographic Considerations

Demographic attributes for the County and State are provided in the table below. It is notable that, for San Diego County, the projected percentage of increase in population and households between the year 2010 and 2015 (4% each) is slightly more than that of the State. The projected change in average household size and median age are on the order of four times the change throughout the state. The median household income change projected between the year 2010 and 2015 is 4.2% above the State percentage.

**San Diego County vs. State of California Demographic Projections**

| | San Diego County | | | 2000 to 2015 | 2010 to 2015 |
|---|---|---|---|---|---|
| **Element** | **2000** | **2010** | **2015** | **% Change** | **% Change** |
| Population | 2,813,833 | 3,120,279 | 3,246,592 | 15% | 4.0% |
| Households | 994,677 | 1,086,865 | 1,130,792 | 14% | 4.0% |
| Average Household Size | 2.73 | 2.75 | 2.78 | 2% | 1.1% |
| Median Age | 33.2 | 34.7 | 35.1 | 6% | 1.2% |
| Median Household Income | $47,137 | $57,668 | $67,932 | 44% | 17.8% |
| Per Capital Income | $22,926 | $28,691 | $32,695 | 43% | 14.0% |

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI Market Profile

| | State of California | | | 2000 to 2015 | 2010 to 2015 |
|---|---|---|---|---|---|
| **Element** | **2000** | **2010** | **2015** | **% Change** | **% Change** |
| Population | 33,871,648 | 37,983,948 | 39,328,336 | 16% | 3.5% |
| Households | 11,502,870 | 12,662,806 | 13,063,778 | 14% | 3.2% |
| Average Household Size | 2.87 | 2.93 | 2.94 | 2% | 0.3% |
| Median Age | 33.3 | 34.4 | 34.5 | 4% | 0.3% |
| Median Household Income | $47,622 | $60,992 | $69,315 | 46% | 13.6% |
| Per Capital Income | $22,711 | $27,845 | $31,883 | 40% | 14.5% |

Source: U.S. Bureau of the Census, 2000 Census of Population and Housing, ESRI Market Profile

The rate of projected growth on several measures between 2010 and 2016 for San Diego County are comparable to those of the State. However, both the County and the State exceed the median household income rates of change expected throughout the nation.

**San Diego County vs. State vs. National Rates of Change**

| | Annual 2010-2016 Growth Rates | | |
|---|---|---|---|
| **Trends** | **SD County** | **State** | **National** |
| Population | 0.67% | 0.66% | 0.67% |
| Owner Occupied Housing Units | 1.01% | 0.99% | 0.91% |
| Median Household Income | 3.33% | 3.39% | 2.75% |

Source: U.S. Bureau of the Census, 2010 Census of Population and Housing, ESRI Demographic and Income Profile

The percentage of San Diego County residents age 25 or older who are high school graduates is 20.7 percent or -2.2 percent lower that the state average. The portion of County adults age 25 or older that reported having less than ninth grade education or some high school, but no diploma,



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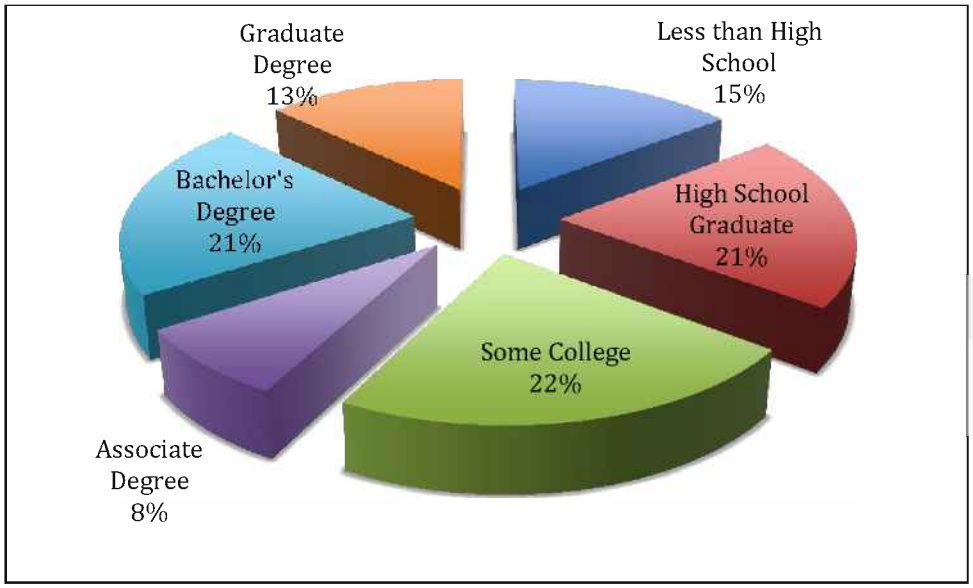
is almost 15% of the adult population. These data suggest there is a large audience to which the College might appeal in providing its educational services.

**San Diego County Educational Attainment, Age 25+ (2010)**




Source: US Census Bureau.

The California Department of Finance projects an annual 18% decrease in the number of high school graduates between 2009-10 and 2020-21 in San Diego County. The graphic below illustrates a gradual increase between 2016-17, followed by a sharper increase from 2018-19 out to 2020-21.



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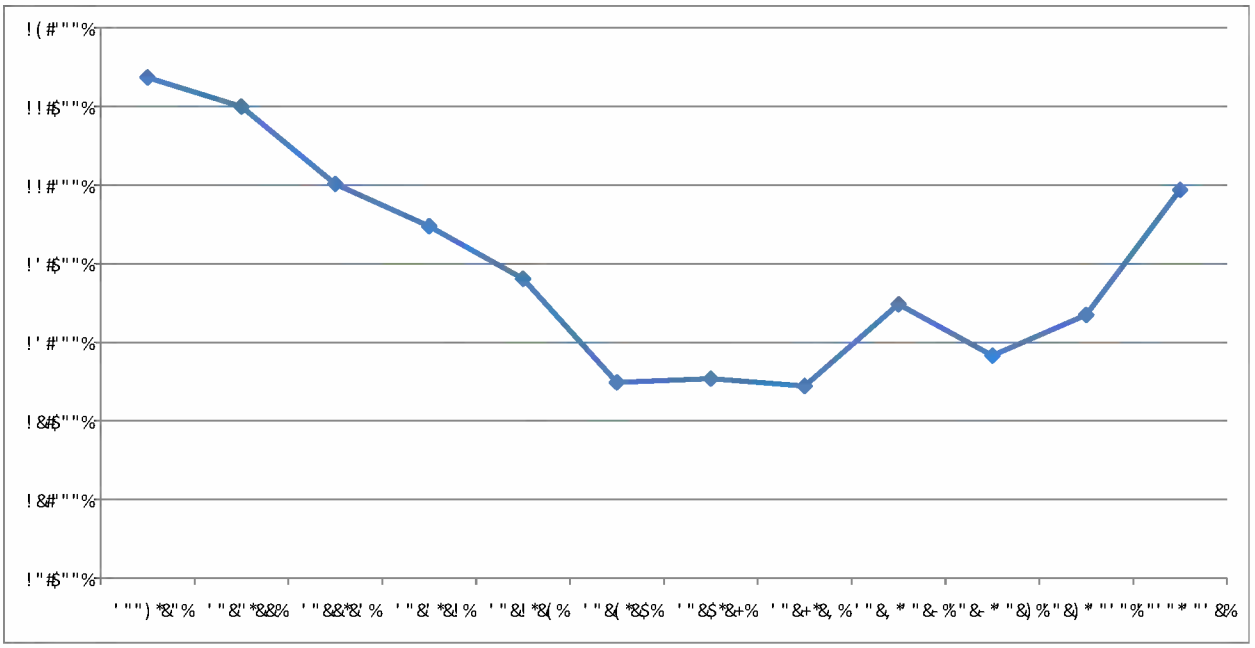
**San Diego County Expected High School Graduates**




Source: State of California, Department of Finance, *California Public K-12 Graded Enrollment and High School Graduate Projections by County, 2011 Series*. Sacramento, California, October 2011.

Although SWC enrolls recent high school graduates from four public high school districts (Sweetwater, Coronado, Grossmont and San Diego), the primary feeder high schools are within the Sweetwater Union High School District. The size of the high school senior class in the Sweetwater District schools parallels the decline shown throughout San Diego County. The estimate of future enrollments 2012 to 2014 (dashed line) illustrates the continuation of that decline in the Sweetwater District. The College may experience a decline in enrollment from the most recent high school graduating classes.



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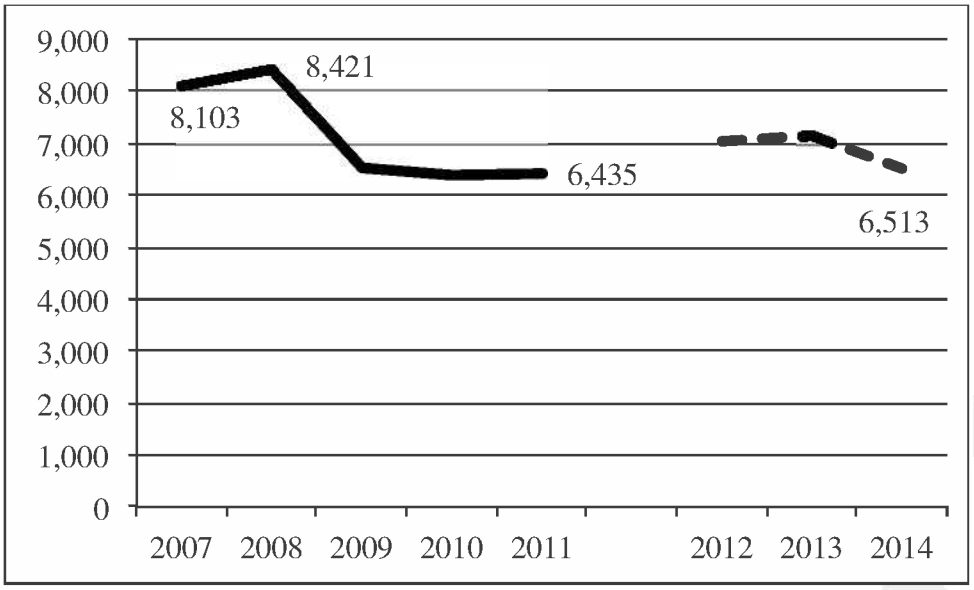
**Senior Class Enrollments, Sweetwater Union High School District**




Source: California Department of Education; analysis Cambridge West Partnership

In the last five fall terms, younger students (under age19) have, on average, represented 45% of the first-time students enrolling at the College.



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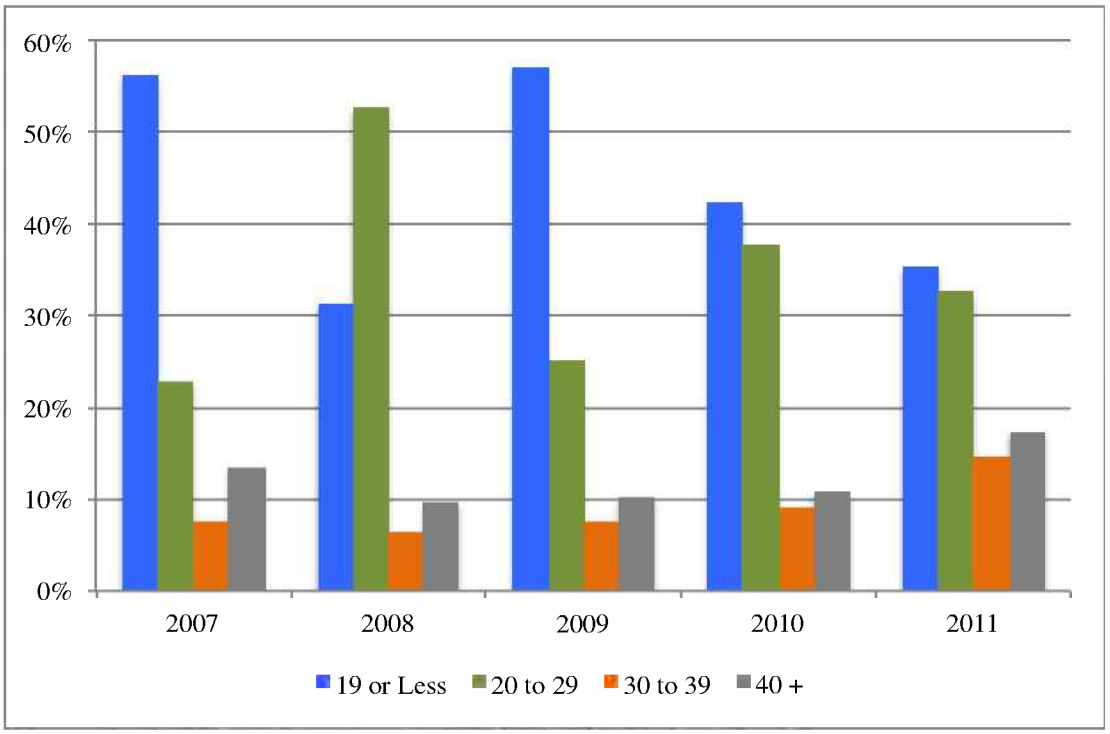
**First-time, Fall Term Students by Age Group**




Source: Chancellor's Office Data Mart 2.0; analysis by Cambridge West Partnershi

There is a wide range of accountability performance index (API) scores among the high schools that commonly send students to the College. The average base API score from 2007-2011 for each high school is displayed in the table below. The API is a composite score ranging from 200 to 1000 based on several standardized exams taken by the high school students.



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**Average API Scores, 2007 to 2011**

| District | School | Average |
|---|---|---|
| Sweetwater | Bonita Vista Senior High | 801 |
| Sweetwater | Olympian High | 801 |
| Sweetwater | Eastlake High | 789 |
| Sweetwater | Otay Ranch Senior High | 769 |
| Sweetwater | Chula Vista Senior High | 749 |
| Sweetwater | Hilltop Senior High | 739 |
| Sweetwater | Sweetwater High | 728 |
| Sweetwater | Castle Park Senior High | 726 |
| Sweetwater | Mar Vista Senior High | 704 |
| Sweetwater | Options Secondary | 701 |
| Sweetwater | Southwest Senior High | 694 |
| Sweetwater | San Ysidro High | 684 |
| Sweetwater | Montgomery Senior High | 672 |
| Sweetwater | East Hills Academy | 602 |
| Sweetwater | Palomar High | 548 |
| Sweetwater | Sweetwater Community Day | 534 |
| Sweetwater | Bounce Back Independent Study | 512 |
| Sweetwater | MAAC Community Charter | 498 |
| Sweetwater | Alta Vista Academy | 404 |
| Coronado Unified | Coronado High School | 859 |
| San Diego Unified | Morse High School | 623 |
| Grossmont Union High | Mount Miguel High School | 654 |

Source: California Department of Education; analysis Cambridge West Partnership

There are also differences among the schools regarding the college readiness for English or mathematics as measured by the California State University Early Assessment Program (EAP) placement recommendations.



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**CSU Early Assessment Program Results, 2012**

| | Sweetwater (all HS) | | Coronado HS | | Morse HS | | Mount Miguel HS | |
|---|---|---|---|---|---|---|---|---|
| EAP Recommendation | Participation % | Placement % | Participation % | Placement % | Participation % | Placement % | Participation % | Placement % |
| ***English*** | 96% | | 19% | | 97% | | 94% | |
| Ready for college | | 23% | | 0% | | 17% | | 10% |
| Ready- conditionally | | 16% | | 0% | | 16% | | 11% |
| Not ready | | 61% | | 100% | | 66% | | 79% |
| ***Mathematics*** | 92% | | 31% | | 90% | | 69% | |
| Ready for college | | 11% | | 24% | | 3% | | 6% |
| Ready- conditionally | | 52% | | 56% | | 48% | | 36% |
| Not ready | | 37% | | 20% | | 48% | | 58% |

Source: California State University, Office of the Chancellor Early Assessment Program Test Results

The participation percentage in the table above reflects the number of students who completed the EAP exams compared to the number of students who participated in the California Standards Test (EST) exams. Participation in the EAP is voluntary. Perhaps the relatively low participation rate at Coronado High School may be attributed to those students intending to apply for UC or private institutions. The values in the placement percent column represent the portion of participating students whose scores met the content standards for CSU and the California community colleges. Additional information about the academic preparation strength of incoming students to the College is discussed in the internal scan section of this Plan.

The College has attracted students from throughout the United States as illustrated in the graphic below that was prepared for a zip code study conducted by College faculty. In some cases the out-of-area student location markers represent active duty military personnel reporting the zip code for their home of record. In other cases, the out of area markers are students enrolled in distance education offerings sponsored by the College.



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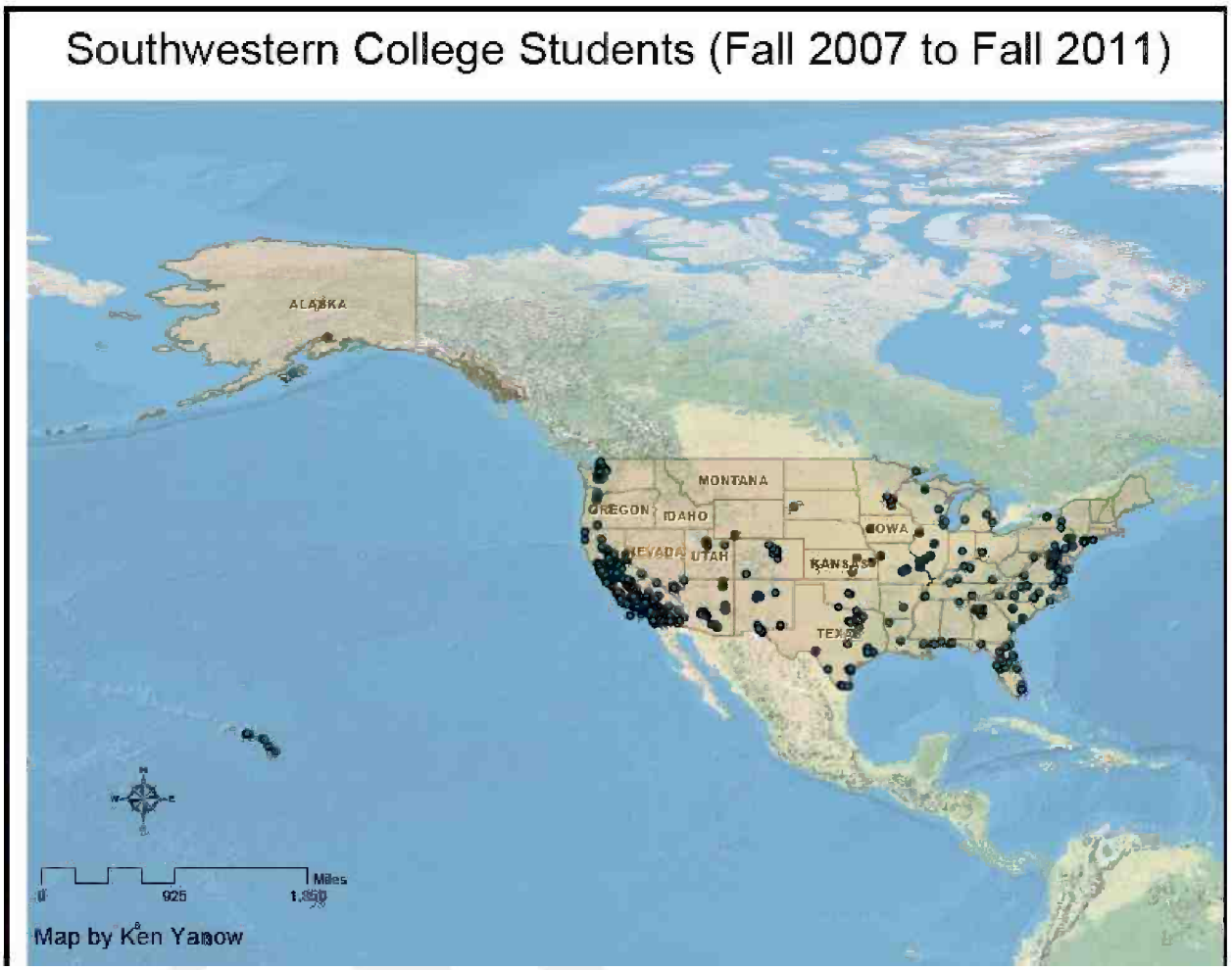




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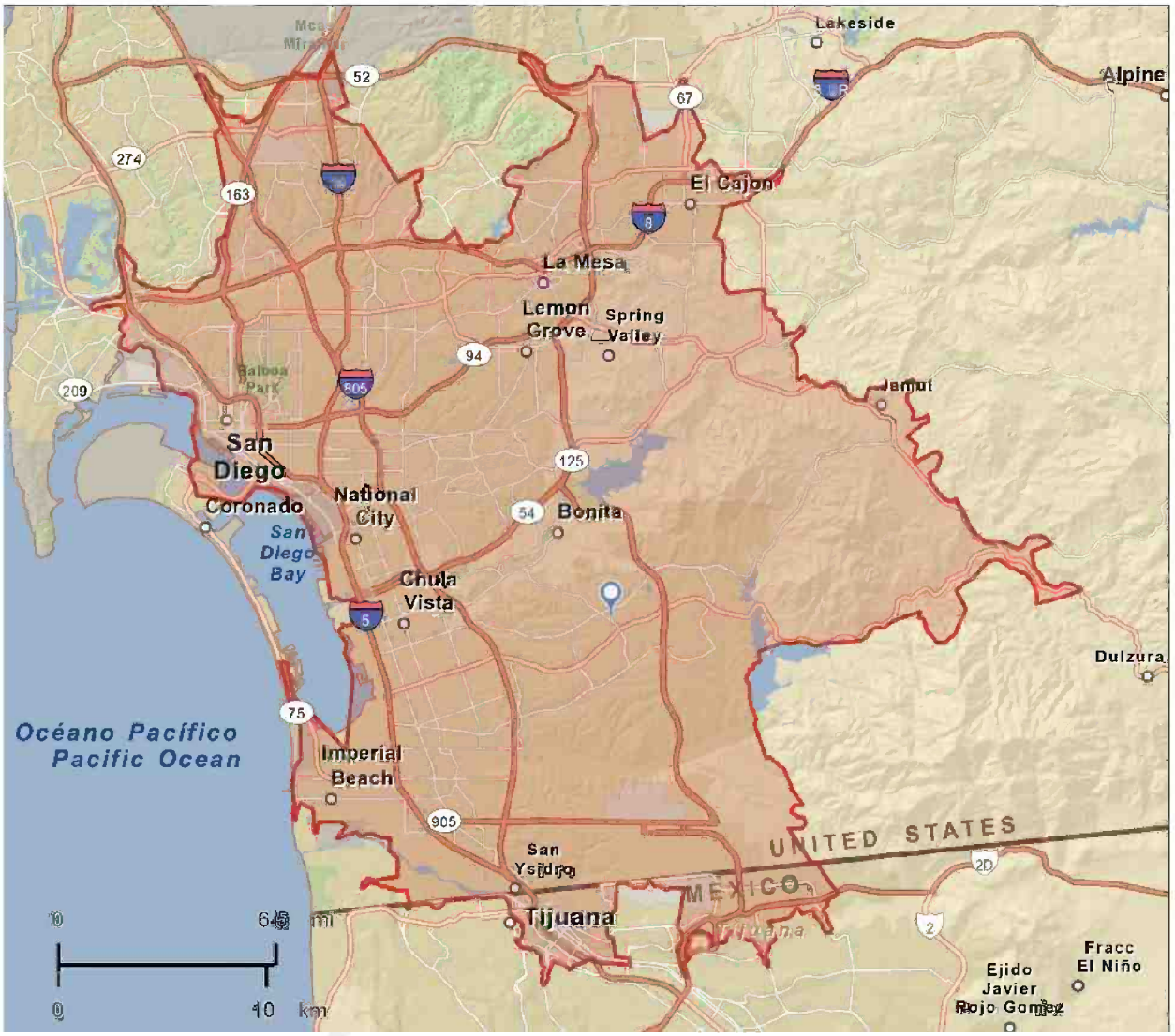
Based upon an analysis of residential zip codes reported by enrolled students (see discussion below) an area of San Diego and adjacent Baja California that encompasses a 20-minute driving time from the main campus site comprises the territory effectively served by Southwestern College. This area is illustrated in the graph below.

**Southwestern College Effective Service Area**




Source: Environmental Sciences Research Institute (ESRI); analysis by Cambridge West Partnership



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The population in this effective service area was 1,179286 in 2000 and is projected to be at 1,341,698 by 2016. The area is expected to grow slowly at an annual rate of .69%, roughly the same as the statewide rate. The median age of the population was 31.5 in 2000 and likely will be 33.5 by 2016. Per capital income for the effective service area has been $17,594 but is expected to be a modest $25,274 in 2016. The median household income, projected at $54,121 is expected to grow between 2010 and 2016 at an annual rate of 2.87% as compared to the state rate of 3.39%.

The San Diego area council of governments, SANDAG, has extended projections to 2050 for the official college service area. These extended SANDAG forecasts between 2008 and 2030 are based on adopted land use plans and policies whereas the growth between 2030 and 2050 includes alternative combinations of economic and demographic projections, and potential land use plan and policy changes that may occur in the region.
The total population from 2008 to 2050, is expected to increase by 51% becoming 701,000 residents in the official College service area. The SANDAG forecast anticipates an 18% increase in population between 2008 and 2020, a full 6% above the San Diego region as a whole. In the out years to 2040, the change in population is anticipated to be around 8%, then nearly 5% in the final decade to 2050. In both periods, the percent change for the official college service area is just slightly above that of the region as a whole.

The most intense subarea for population growth within the College official service area is Otay Mesa. Otay Mesa is an area that is partially within the jurisdiction of the City of San Diego and partially within the unincorporated areas of San Diego County. Both parts of Otay Mesa, plus the area of San Ysidro, which is within the City of San Diego, are prime growth areas. The combined set of communities had 45,314 residents in 2008 but is forecast to become a population of 95,615 by 2030 (a 111% increase from 2008). The area population is then forecast to increase to 117,402 in 2050 (a 159% increase from 2008).

A second intense subarea for population growth is Barrio Logan. This area, north of National City, is outside the College's official service area but is a community from which the curriculum offered by the College attracts students. Although Barrio Logan had a modest 4,227 residents in 2008 it is forecast to increase to 11,800 by 2030 (a 179% increase from 2008) then continue on to 12,501 residents by 2050 (a 196% increase from 2008).



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**Long-Term Forecasts**

| Area | 2008 | 2020 | 2030 | 2008-2030 Numeric | 2008-2030 % Change |
|---|---|---|---|---|---|
| SWC Official Service Area | 462,787 | 548,035 | 600,846 | 138,059 | 30% |
| Chula Vista | 230,397 | 267,427 | 289,044 | 58,647 | 25% |
| National City | 56,144 | 62,300 | 69,306 | 13,162 | 23% |
| | | | | | |
| City of SD, San Ysidro | 27,681 | 29,322 | 32,304 | 4,623 | 17% |
| City of SD, Otay Mesa | 12,938 | 37,098 | 46,392 | 33,454 | 259% |
| Co of SD, Otay Mesa | 4,695 | 12,644 | 16,919 | 12,224 | 260% |
| ***San Diego Subtotal*** | ***45,314*** | ***79,064*** | ***95,615*** | ***50,301*** | ***111%*** |
| | | | | | |
| City of SD, Barrio Logan | 4,227 | 7,776 | 11,800 | 7,573 | 179% |

Source: SANDAG, retrieved September 30, 2012 from http://profilearehouse.sandag.org

The SANDAG estimates for the sub area of Otay Mesa suggest that the projections in the combination of all three areas indicates the 18-19 year old group will experience a 87% gain (2008= 1,411 while 2030= 2,644). The 20-24 year old group will experience a 120% gain (2008= 3,249 while 2030= 7,137).

Considering only the portion of Otay Mesa controlled by the City of San Diego where the College HEC OM is in the middle of that area, the percentage change is much larger. The 18-19 year old group will experience a 394% gain (2008= 217 while 2030= 1,072). The 20-24 year old group will experience a 591% gain (2008= 460 while 2030= 3,177).

The SANDAG extended population forecast for the entire official College service area suggests that the late teen age group (18-19) will remain steady at 3% of the population while the young adult group (20-24) will decline slight by 2020 then increase slightly by 2025.



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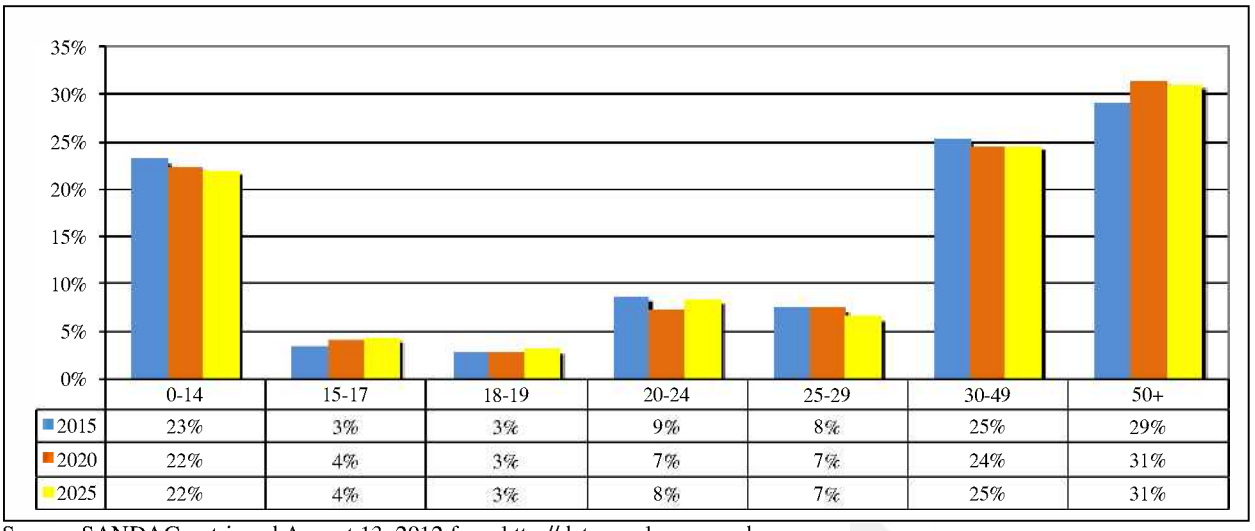
**Southwestern College Official Service Area, SANDAG Age Projections**




| | 0-14 | 15-17 | 18-19 | 20-24 | 25-29 | 30-49 | 50+ |
|---|---|---|---|---|---|---|---|
| 2015 | 23% | 3% | 3% | 9% | 8% | 25% | 29% |
| 2020 | 22% | 4% | 3% | 7% | 7% | 24% | 31% |
| 2025 | 22% | 4% | 3% | 8% | 7% | 25% | 31% |

Source: SANDAG, retrieved August 13, 2012 from http://datawarehouse.sandag.org

The extended SANDAG income forecast to 2050 in the official college service area indicates a dramatic drop in incomes below $45,000 and a slight rise in those in the $100,000+ range. The race/ethnicity extended projections suggest a very gradual increase in the percentage of Hispanic residents from 56% in 2015 to 58% by 2050 and a corresponding decrease in White residents from 23% to 21% over that same time period[17].

Of course, there are variations in population growth rates and income levels among the cities and subareas served by the College. The lowest projected annual rate of population growth to 2016 is found in Bonita (.10%) while the highest is located in San Ysidro (1.02%). Areas with higher annual rates of population growth include Chula Vista, National City, and Spring Valley. The College may reasonably anticipate the greatest enrollment pressure from these high growth areas.

[17] SANDAG, retrieved August 13, 2012 from http:datawarehouse.sandag.org and http: profilewarehouse.sandag.org



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**Population and Median Age Changes 2010 to 2016f**

| Geography | 2010 | 2016f | Annual Rate of Change | 2010 Median Age | 2016f Median Age |
|---|---|---|---|---|---|
| State | 37,253,956 | 38,722,082 | 0.66% | 35.2 | 35.6 |
| County | 3,095,313 | 3,215,406 | 0.67% | 34.7 | 35.1 |
| City of San Diego | 1,307,402 | 1,346,892 | 0.60% | 33.7 | 34.2 |
| | | | | | |
| ***Effective Service Area*** | ***1,289,698*** | ***1,341,687*** | ***0.69%*** | ***33.1*** | ***33.5*** |
| Selected Subareas | | | | | |
| Bonita | 12,538 | 12,497 | 0.10% | 43.8 | 43.7 |
| Chula Vista | 243,916 | 245,683 | 0.80% | 33.7 | 34.1 |
| Coronado | 18,912 | 25,294 | 0.42% | 40.7 | 32.4 |
| Imperial Beach | 26,324 | 26,355 | 0.17% | 31.1 | 31.7 |
| Lemon Grove | 25,320 | 26,215 | 0.62% | 35.0 | 35.3 |
| National City | 58,582 | 61,689 | 0.85% | 30.2 | 31.1 |
| San Diego In District | 194,714 | 199,957 | 0.46% | 30.9 | 31.6 |
| Otay Mesa | 82,588 | 85,926 | 0.65% | 33.1 | 33.6 |
| East of National City | 33,471 | 34,276 | 0.42% | 33.3 | 33.9 |
| San Ysidro | 27,487 | 29,227 | 1.02% | 29.1 | 29.7 |
| Spring Valley | 28,205 | 29,874 | 0.95% | 35.0 | 35.7 |
| North of National City | 265,673 | 266,169 | 0.47% | 30.0 | 30.0 |

Source: ESRI, f indicates a forecast; analysis Cambridge West Partnership

There is also considerable variation in the median household incomes, annual rates of change in income to 2016 and the relative portion of the adult population who are judged to be below the poverty level. Incomes are the highest in Bonita and Coronado as in both areas the median household income is in excess of $90,000. In several areas within the official District service area the projected median household income in 2016 is extraordinarily modest. For example median household income projected in 2016 for San Ysidro ($35,388) and National City ($39,704) are well below the media for the entire effective service area. The Barrio Logan area north of National City that is served by the College, but is outside the official District service area, is projected to have a median household income in 2016 of only $37,477. The U. S. Census Bureau calculates the portion of a population considered to be below the poverty level by considering both family income and the size and composition of the family. That data is not available for all of the subareas served by the College. However, over 10% of the population age 18 to 64 in Imperial Beach, Lemon Grove, and National City are reported as below the poverty level based on the American Community Survey data from 2006-2010.



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**Median Household Income Changes 2010 to 2016f and Percent of Population 18-64 Below Poverty 2006-2010**

| Geography | 2010 | 2016f | Annual Rate of Change | 18 to 64 Yrs, % Below Poverty | Unemploy-ment July 2012 |
|---|---|---|---|---|---|
| State | $57,587 | $68,019 | 3.39% | 12.4% | 10.4% |
| County | $57,668 | $67,932 | 3.33% | 11.7% | 9.3% |
| City of San Diego | $55,570 | $65,141 | 3.23% | 13.7% | 9.5% |
| | | | | | |
| ***Effective Service Area*** | ***$46,900*** | ***$54,121*** | ***2.87%*** | | |
| Selected Subareas | | | | | |
| Bonita | $86,467 | $92,477 | 2.07% | 5.9% | 7.6% |
| Chula Vista | $59,205 | $68,610 | 2.99% | 8.0% | 11.1% |
| Coronado | $79,621 | $90,622 | 2.62% | 5.5% | 6.1% |
| Imperial Beach | $42,130 | $49,120 | 3.12% | 10.3% | 15.2% |
| Lemon Grove | $49,532 | $56,823 | 2.79% | 15.0% | 11.9% |
| National City | $35,581 | $39,704 | 2.22% | 18.5% | 18.2% |
| San Diego In District | $54,304 | $62,425 | 2.83% | | |
| Otay Mesa | $54,091 | $62,310 | 2.87% | | |
| East of National City | $57,315 | $65,231 | 2.62% | | |
| San Ysidro | $31,079 | $35,488 | 2.69% | | |
| Spring Valley | $59,850 | $69,675 | 3.09% | 9.1% | 11.0% |
| North of National City | $33,508 | $37,477 | 2.26% | | |

Sources: ESRI; U.S. Census Bureau, American Community Survey 5-Yr Averages 2006-2010; EDD Unemployment data retrieved September 28, 2012 from http://www.labormarketinfo.edd.ca.gov; analysis by Cambridge West Partnership

Unemployment is the highest in National City (18.2% in July 2012) followed by 15.2% in Imperial Beach. The communities of Chula Vista, Lemon Grove and Spring Valley range between 11% and 11.9% unemployment in July 2012. Throughout the San Diego region 46% of the unemployed are considered long-term unemployed (six plus months without a job). Of all the unemployed served by the career centers network in the region, 44% were between the ages of 41 and 55.[18]

With respect to educational attainment of adults, there is evident variation among the communities and areas within the effective service area. Throughout the effective service area 43.9% of adults 25 years of age or older had accomplished high school graduation or less. However, five communities are reported by the U.S. Census Bureau with higher percentages of citizens at that lower level of educational accomplishment. One of these communities, located north of National City, is just outside the official College service area. These communities represent the areas most in need of the educational services offered by the College.

[18] Peter Callstrom, President & CEO, San Diego Workforce Partnership, presentation to the South County Economic Development Council Economic Summit September 21, 2012.



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**Educational Attainment Levels of Adults by Community**

| 2010 Educational Attainment, Adults 25 Years or Older | ESA | Bonita | Chula Vista | Coronado | Imperial Beach | Lemon Grove | National City | Otay Mesa | East of National City | San Ysidro | Spring Valley | North of National City |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Less than 9th Grade | 10.3% | 2.8% | 8.2% | 0.6% | 8.8% | 5.9% | 21.5% | 13.1% | 7.1% | 32.9% | 4.4% | 19.8% |
| 9th - 12th Grade, No Diploma | 9.9% | 5.2% | 8.3% | 2.3% | 11.1% | 10.8% | 16.4% | 12.7% | 7.5% | 19.4% | 7.8% | 14.5% |
| High School Graduate | 23.7% | 18.0% | 22.8% | 12.8% | 29.3% | 28.5% | 26.4% | 34.1% | 23.7% | 19.8% | 27.3% | 21.5% |
| Some College, No Degree | 22.7% | 21.3% | 22.2% | 22.5% | 28.3% | 27.7% | 18.9% | 20.6% | 26.5% | 15.6% | 26.4% | 19.0% |
| Associate Degree | 8.0% | 9.7% | 9.2% | 7.7% | 8.4% | 8.6% | 5.3% | 6.7% | 9.9% | 4.5% | 8.7% | 6.6% |
| Bachelor's Degree | 16.7% | 25.7% | 19.5% | 28.4% | 10.4% | 12.0% | 8.5% | 9.6% | 20.8% | 5.0% | 17.1% | 12.1% |
| Graduate/Professional Degree | 8.7% | 17.3% | 9.7% | 25.6% | 3.8% | 6.6% | 3.1% | 3.1% | 4.5% | 2.7% | 8.4% | 6.5% |
| | | | | | | | | | | | | |
| *Subtotal HS Graduate or Less* | *43.9%* | *26.0%* | *39.3%* | *15.7%* | *49.2%* | *45.2%* | *64.3%* | *59.9%* | *38.3%* | *72.1%* | *39.5%* | *55.8%* |

Source: ESRI; analysis by Cambridge West Partnership

Implications for Southwestern College:

- The rate of population growth will be a potential strong point for the College going forward. The County is projected annually to grow at .67%. There will be some new residents who are not familiar with the College and should be reached with a marketing message. From 2011 to 2016 the population will rise. Approximately 17,200 people per year are projected to enter the county during this period.
- Residents have moderate incomes, comparable to the state median, but many will have to sacrifice in order to attend college.
- The near-term leveling out in high school graduates suggests there will not be growing numbers of very young adults to accommodate at the College, but there will remain a steady stream of younger students. Past 2018 the projected number of graduates increases sharply suggesting the possibility of much younger student populations in the long term.
- The educational attainment percentages among adults 25 years or older indicates that 35% of these adults are candidates for postsecondary education.

## B. Internal Scan

Perhaps one of the most interesting aspects of any college population are the origins of the students: where they come from and who they are. This characteristic of the institution is an important link between the external environment and internal conditions of the College.

Key Cities

A review of fall term College headcount data from 2007 to 2011 reveals that of the 12 cities that dominate the unduplicated student headcounts on average for each fall term, three of them are outside the official College service area. Zips associated with the City of San Diego but within the official service area contributed the most students. The City of Chula Vista ranks first in the average number of students attending the College. Combined, these cities account for 98% of the total fall headcounts.



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**Fall Term Unduplicated Headcounts of Students by City of Residence**

| In District | City | 2007 | 2008 | 2009 | 2010 | 2011 | Average 2007-2011 | Total 2007-2011 | Cumulative % of Total |
|---|---|---|---|---|---|---|---|---|---|
| Y | Chula Vista | 8,589 | 8,907 | 9,615 | 8,611 | 8,860 | 8,916.4 | 44,582 | |
| Y | San Diego | 4,249 | 4,301 | 4,720 | 4,148 | 4,316 | 4,346.8 | 21,734 | |
| Y | San Ysidro | 1,376 | 1,402 | 1,624 | 1,454 | 1,526 | 1,476.4 | 7,382 | |
| Y | National City | 1,260 | 1,345 | 1,359 | 1,223 | 1,271 | 1,291.6 | 6,458 | |
| Y | Imperial Beach | 633 | 620 | 766 | 700 | 685 | 680.8 | 3,404 | |
| Y | Bonita | 693 | 681 | 719 | 622 | 561 | 655.2 | 3,276 | |
| Y | Spring Valley | 388 | 398 | 431 | 377 | 418 | 402.4 | 2,012 | |
| Y | Coronado | 114 | 142 | 122 | 94 | 92 | 112.8 | 564 | |
| Y | Lemon Grove | 110 | 99 | 102 | 91 | 88 | 98.0 | 490 | |
| Y | Dulzura | 10 | 7 | 5 | 6 | 6 | 6.8 | 34 | |
| N | San Diego | 1,527 | 1,540 | 1,550 | 1,409 | 1,612 | 1,527.6 | 7,638 | |
| N | El Cajon | 188 | 181 | 202 | 202 | 227 | 200.0 | 1,000 | |
| N | La Mesa | 104 | 104 | 107 | 101 | 112 | 105.6 | 528 | 97.3% |

Source: Southwestern College Research and Planning; analysis by Cambridge West Partnership

The geographical areas of the zip codes from San Diego that are *within* the official service area are detailed below.

**Fall Term Unduplicated Headcounts of Students Living In A San Diego Zip**

| Zip | City | Area Description | In District | 2007 | 2008 | 2009 | 2010 | 2011 | Average 2007-2011 | Total 2007-2011 |
|---|---|---|---|---|---|---|---|---|---|---|
| 92154 | San Diego | Otay Mesa East and West | Y | 2,610 | 2,814 | 3,173 | 2,802 | 2,851 | 2,850.0 | 14,250 |
| 92139 | San Diego | Paradise Hills, Bay Terraces | Y | 818 | 752 | 787 | 682 | 717 | 751.2 | 3,756 |
| 92114 | San Diego | Emerald Hills, Encanto, Skyline | Y | 790 | 698 | 727 | 639 | 714 | 713.6 | 3,568 |
| 92153 | San Diego | within 92154, Otay Mesa West | Y | 26 | 29 | 29 | 21 | 25 | 26.0 | 130 |
| 92136 | San Diego | Naval Station, San Diego | Y | 1 | 5 | 2 | 2 | 7 | 3.4 | 17 |
| 92135 | San Diego | within 92118, NAS NI | Y | 2 | 1 | 1 | 2 | 2 | 1.6 | 8 |
| 92155 | San Diego | NAB, Coronado | Y | 2 | 2 | 1 | | | 1.7 | 5 |

Source: Southwestern College Research and Planning; analysis by Cambridge West Partnership

In addition to the several San Diego zip codes shown above as *outside* the official College service area, a large number of students have been attending the College from El Cajon and La Mesa. Some of these students may be enrolled in distance education offerings from the College.

**Fall Term Unduplicated Headcounts of Students Living Outside the Official District Service Area**

| Area/City | 2007 | 2008 | 2009 | 2010 | 2011 | Average 2007-2011 | Total 2007-2011 |
|---|---|---|---|---|---|---|---|
| North of National City | 815 | 836 | 881 | 803 | 928 | 852.6 | 4,263 |
| El Cajon | 188 | 181 | 202 | 202 | 227 | 200.0 | 1,000 |
| La Mesa | 104 | 104 | 107 | 101 | 112 | 105.6 | 528 |
| ***Total This Group*** | ***1,107*** | ***1,121*** | ***1,190*** | ***1,106*** | ***1,267*** | ***1,158.2*** | ***5,791*** |

Source: Southwestern College Research and Planning; analysis by Cambridge West Partnership

Between 2007 and 2011 the relative balance of in-District vs. out-of-District students has remained fairly constant. However, there have been shifts and changes in the city of residence



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among the in-District enrollments at the College. Participation from the core area of San Ysidro has increased the most (10.9%). Conversely, student participation from Bonita (-19%), Lemon Grove (-20%) and Coronado (-19.3%) has decreased the most. Participation from active duty military personnel, many of whom are based in Coronado, likely accounts for some of the decline as those students are subject to deployment directives in support of overseas military conflicts. The small numbers of students from Dulzura translate into a misleading percentage of change calculation.

Overall, the headcount has increased from 19,869 in 2007 to 20,330 in 2011. This increase occurred in the face of the sharp and persistent reductions in revenue support that have curtailed enrollments significantly throughout the state.

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## Changes in Fall Term Unduplicated Headcount by City of Residence

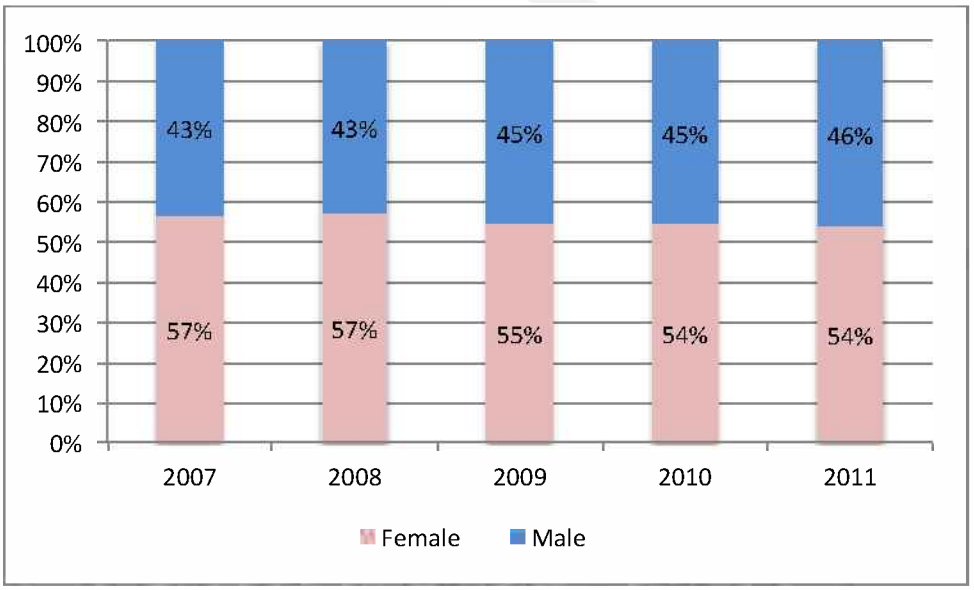
| City | 2007 | 2008 | 2009 | 2010 | 2011 | Average | Total | % Change 07 to 11 |
|---|---|---|---|---|---|---|---|---|
| **In District** | | | | | | | | |
| Chula Vista | 8,589 | 8,907 | 9,615 | 8,611 | 8,860 | 8,916.4 | 44,582 | 3.2% |
| San Diego | 4,249 | 4,301 | 4,720 | 4,148 | 4,316 | 4,346.8 | 21,734 | 1.6% |
| San Ysidro | 1,376 | 1,402 | 1,624 | 1,454 | 1,526 | 1,476.4 | 7,382 | 10.9% |
| National City | 1,260 | 1,345 | 1,359 | 1,223 | 1,271 | 1,291.6 | 6,458 | 0.9% |
| Imperial Beach | 633 | 620 | 766 | 700 | 685 | 680.8 | 3,404 | 8.2% |
| Bonita | 693 | 681 | 719 | 622 | 561 | 655.2 | 3,276 | -19.0% |
| Spring Valley | 388 | 398 | 431 | 377 | 418 | 402.4 | 2,012 | 7.7% |
| Coronado | 114 | 142 | 122 | 94 | 92 | 112.8 | 564 | -19.3% |
| Lemon Grove | 110 | 99 | 102 | 91 | 88 | 98.0 | 490 | -20.0% |
| Dulzura | 10 | 7 | 5 | 6 | 6 | 6.8 | 34 | -40.0% |
| ***Subtotal*** | ***17,422*** | ***17,902*** | ***19,463*** | ***17,326*** | ***17,823*** | ***17,987.2*** | ***89,936*** | 2.3% |
| ***% of Total*** | ***87.7%*** | ***88.2%*** | ***89.0%*** | ***88.8%*** | ***87.7%*** | ***88.3%*** | | |
| | | | | | | | | |
| **Out of District** | 2,447 | 2,397 | 2,400 | 2,180 | 2,507 | 2,386.2 | 113,798 | 2.5% |
| **% of Total** | 12.3% | 11.8% | 11.0% | 11.2% | 12.3% | 11.7% | | |
| | | | | | | | | |
| ***Total*** | ***19,869*** | ***20,299*** | ***21,863*** | ***19,506*** | ***20,330*** | ***20,373.4*** | ***101,867*** | 2.3% |

Source: Southwestern College Research and Planning; analysis Cambridge West Partnership

Students Who Attend the College

Over the past five fall terms, more women have attended the College than men. The average distribution has been 55% female, 45% male. This pattern is similar to the statewide experience where women outnumber the men attending all colleges in the system. Throughout the state, the average distribution over the last five fall semesters has been 54% female, 45% male, and 1% unknown.

## Fall Term Distribution by Gender




Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC

Viewed over several years the College is a surprisingly "young" institution, compared to other community colleges in the state, with 63% of its students age 24 or younger. It should be noted that the age group making the biggest gain (4%) from 2007 to 2011 at the College is the 25 to 34



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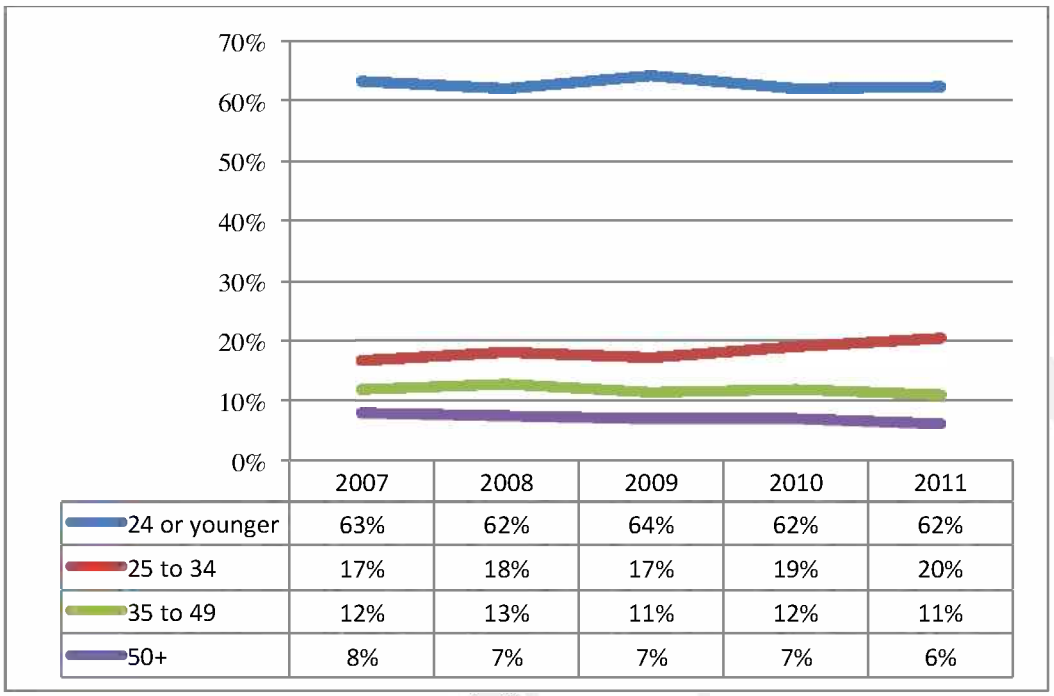
year-old group. Throughout the state the 24 or younger group averages 55% of all students during these fall semesters and that group has grown the most (4%) between 2007 and 2011.

**Fall Term Distribution by Age Ranges**




| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| 24 or younger | 63% | 62% | 64% | 62% | 62% |
| 25 to 34 | 17% | 18% | 17% | 19% | 20% |
| 35 to 49 | 12% | 13% | 11% | 12% | 11% |
| 50+ | 8% | 7% | 7% | 7% | 6% |

Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC



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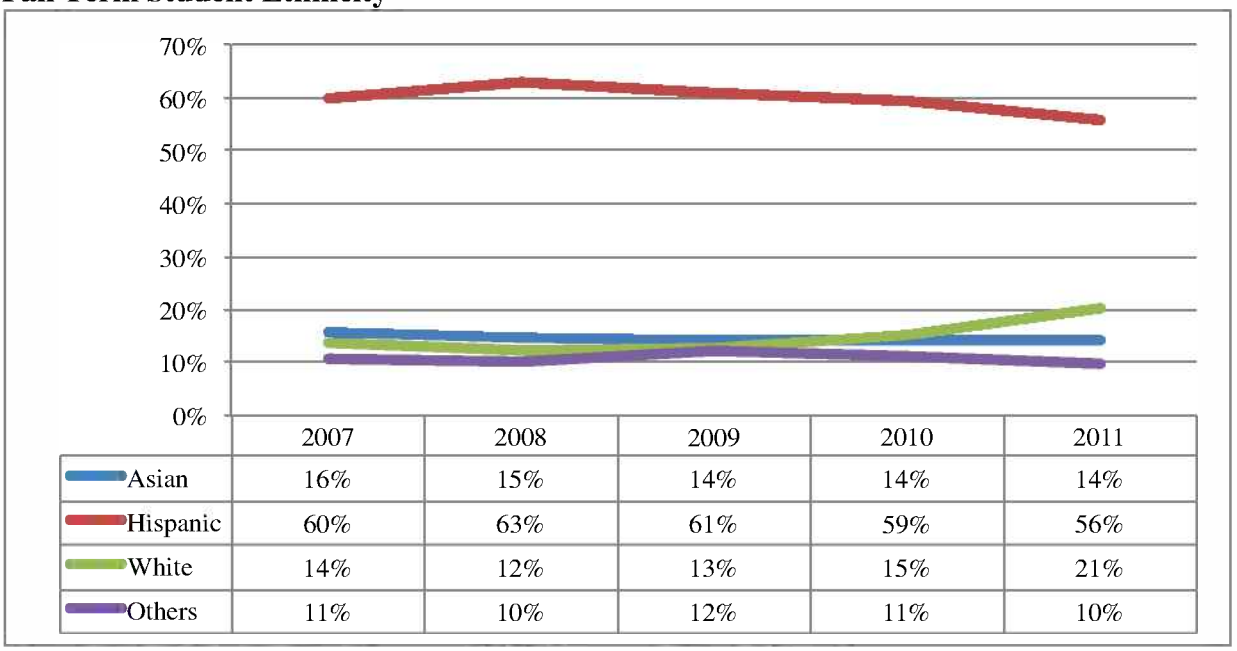
Over the last four fall terms, the largest ethnic group attending the College has been on average Hispanic (60%). Asian including Filipino and Pacific Islander (15%), and White non-Hispanic (15%) have been on average a much smaller part of the student body. As illustrated below the trend shows a slight decline (-4%) in the share of Hispanic students within the student body from 2007 to 2011. Conversely, over this period of time the portion of the student population who self-report as White non-Hispanic has risen by 7%. Statewide the Hispanic and White non-Hispanic groups are represented 32% and 33% respectively.

**Fall Term Student Ethnicity**




| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Asian | 16% | 15% | 14% | 14% | 14% |
| Hispanic | 60% | 63% | 61% | 59% | 56% |
| White | 14% | 12% | 13% | 15% | 21% |
| Others | 11% | 10% | 12% | 11% | 10% |

Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC

From an access equity perspective the portion of the student population attending the College in 2010 who self-report as being Hispanic (59%) substantially exceeds the Hispanic portion of the population (45%) in the effective service area with respect to ethnicity. A much lower percentage of White non-Hispanic students were enrolled at the College in 2010 (15%) than are found in the effective service areas as a whole (54%).

As is commonly the case at public community colleges, most SWC students attend college part-time, taking less than 12 credit hours per term. On average in the last five fall terms, 60% of the students at the College completed a unit load of less than 12 units while one-third completed 12 units or more as full-time students. Between 2007 and 2011 the full-time students increased by 5%. On average only 7% of the students were enrolled exclusively in noncredit offerings. Over these five fall terms the noncredit group shrank by 4%, largely due to restrictions on the numbers of noncredit courses offered.

Within the broad categories of full-time vs. part-time, there are three notable concentrations of student unit loads. Among all students, 26% are completing 12 to 14.9 semester units or four to five courses. Another 21% are completing a 3 to 5.9-unit load or commonly one course per term.



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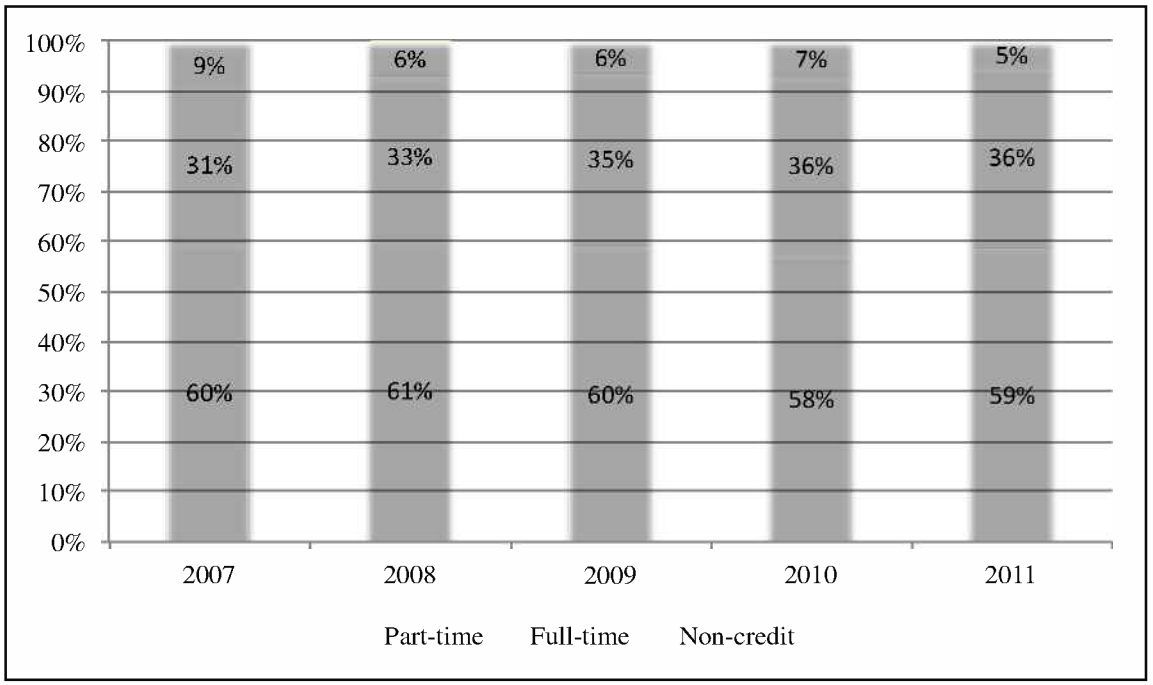
Approximately 33% of the students are completing a heavier part-time load of 6.0 to 11.9 units or two to four courses.

**Fall Term Full-time vs. Part-time Student Status**




Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC

Throughout the state 61% of students attending a California community college are enrolled in the part-time category of less than 12 units, 28% attend full-time with a student load of 12 or more units, and 11% are enrolled exclusively in noncredit offerings. The noncredit enrollment group has shrunk by 2% from 2007 to 2011 while the full-time enrollment group has also increased by 2%. A recent Economic Impact Report prepared for the College estimated that 75% of the students who reported their employment status were employed.[19] That level of employment impacts the numbers of credits in which a student can successfully enroll and complete and may adversely impact their progress toward a goal and college completion.[20]

On average over the fall terms from 2007 to 2011, a very large portion (73%) of the students attends the College during the day, whereas 21% attend only in the evening. Evening classes are defined as those that start at or after 4:30 pm. A small group representing 6% had an unknown attendance pattern, which may mean they were enrolled in a class where the meeting times were to be arranged such as an online distance education course or the students are attending both day and evening classes. From 2007 to 2011 the portion of students attending in the evening has dwindled 5% while the day population has increased 4%.

[19] Economic Modeling Specialists, Inc. *Economic Contribution of Southwestern Community College District.* EMSI, Moscow, ID April 2012.
[20] Katherine Mangan. "New Tally Counts All Graduates, Even Transfers," *The Chronicle of Higher Education.* November 23, 2012 p. 1.



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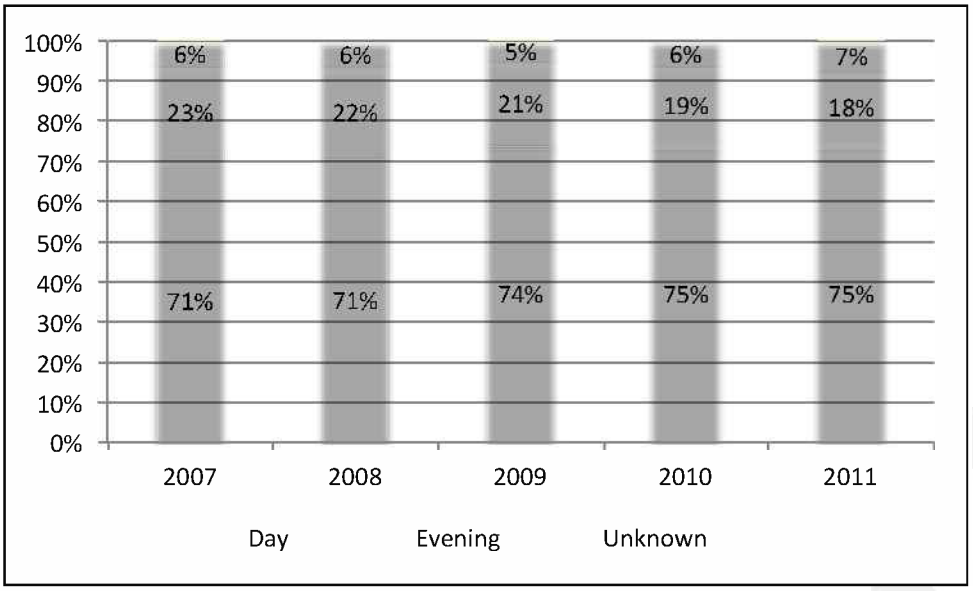
**Fall Term Time of Day Attending**




Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC

From a system-wide perspective 69% of the California community college students attend classes during the day. Some 23% attend evening classes and 8% participate in classes where the starting time is unknown or they attend both day and evening. Between fall 2007 and 2011 the portion of students attending day classes throughout the community college system rose by 7% while the evening attendance dropped by 6%.

In considering the academic preparation of the first-time students, it should be noted that one-third of the students place into English composition classes that are one level below the transfer level composition course. 43% placed into the first semester of transfer English composition and 23% placed into the second semester English composition course. Across the terms of fall 2009 to spring 2012, there was a 2% drop in the number of students recommended to the composition course one level below transfer, English 71. At the same time, the proportion of students recommended to the first transfer level composition course increased by 2%. Comparable placement recommendation information across the state or among community colleges is not available.



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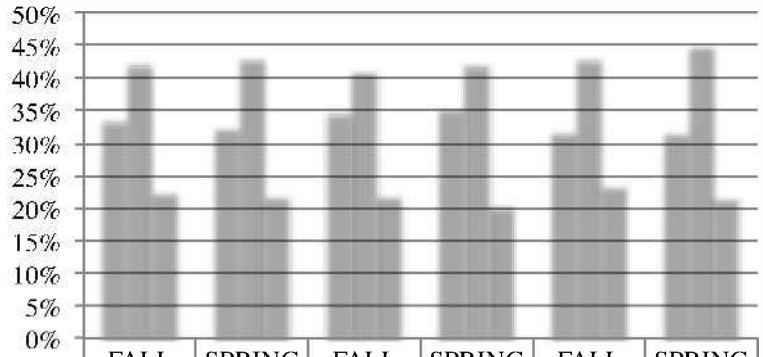
**English Composition Placement Recommendations Fall 2009 to Spring 2012**




| | FALL 2009 | SPRING 2010 | FALL 2010 | SPRING 2011 | FALL 2011 | SPRING 2012 |
|---|---|---|---|---|---|---|
| ENGLISH 71 | 34% | 33% | 35% | 36% | 32% | 32% |
| ENGLISH 114 | 43% | 43% | 41% | 42% | 43% | 45% |
| ENGLISH 115 | 23% | 22% | 22% | 21% | 24% | 22% |

Source: Southwestern College Assessment Office; analysis by Cambridge West Partnership

The percentages of students recommended to English 71 translate to 5,178 students over the fall 2009 to spring 2012 terms. The percentages placed into English 114 represent 6,602 students while the percentages placed into English 115 represent 3,494 students.

In considering the academic preparation of English language learners, it should be noted that a very small percentage of the students place into a transfer-level ESL course. The core of the ESL program is to prepare these learners for college-level curriculum. ESL 49A, B, C are courses considered to be three levels below the transfer level of ESL. On average, in recent terms only 13% of the students are recommended to this level. The bulk of the students (86%) completing the ESL placement process are recommended to curriculum that is considered four or five levels below transfer. Comparable placement recommendation information across the state or among community colleges is not available.



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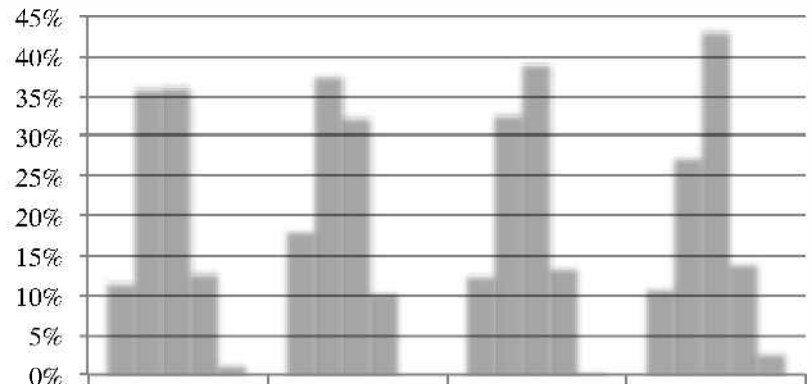
**English as a Second Language Placement Recommendations Fall 2010 to Spring 2012**




| | FALL 2010 | SPRING 2011 | FALL 2011 | SPRING 2012 |
|---|---|---|---|---|
| ESL 295A1,A2 | 12% | 19% | 13% | 11% |
| ESL 29A,B,C | 36% | 38% | 33% | 28% |
| ESL 39A,B,C | 37% | 33% | 39% | 44% |
| ESL 49A,B,C | 13% | 11% | 14% | 14% |
| ESL 59A,B;159A,B | 2% | 0% | 1% | 3% |

Source: Southwestern College Assessment Office; analysis by Cambridge West Partnership

The small percentages recommended for ESL 295A1 and A2 represent 182 students while at the other end of the curriculum hierarchy the percentages of students placed into ESL 59A-B and ESL 159A-B account for only 17 students from fall 2010 to spring 2012. Most students work their way through the ESL curriculum to arrive at the top levels. ESL 29A-C recommendations account for 469 students, ESL 39A-C placements account for 518 students, and ESL 49A-C placements account for 180 students.

The reading abilities of the first-time students indicate that, on average, 41% of the students participating in the placement exam are judged to be proficient readers using standards developed by the College. Another 23% are ready for instruction in college-level reading, a transferable course to the CSU. A combined 25% are in need of some remedial instruction in reading to prepare them for college-level instruction. The proportion of students who are recommended to these various levels of reading instruction or declared reading proficient have remained fairly stable between the fall terms of 2009 to spring 2012. Comparable placement information across the state or among community colleges is not available.



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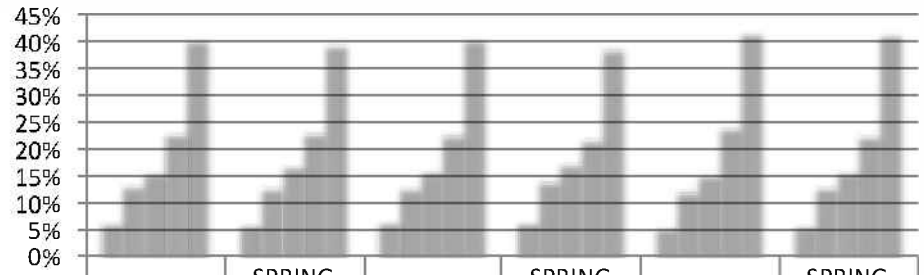
**Reading Placement Recommendations Fall 2009 to Spring 2012**




| | FALL 2009 | SPRING 2010 | FALL 2010 | SPRING 2011 | FALL 2011 | SPRING 2012 |
|---|---|---|---|---|---|---|
| READING 52 | 7% | 6% | 7% | 7% | 6% | 6% |
| READING 54 | 14% | 13% | 13% | 14% | 12% | 13% |
| READING 56 | 16% | 17% | 16% | 18% | 15% | 16% |
| READING 158 | 23% | 23% | 23% | 22% | 24% | 23% |
| PROFICIENCY | 41% | 40% | 41% | 39% | 42% | 42% |

Source: Southwestern College Assessment Office; analysis by Cambridge West Partnership

Some 1,697 students are represented by the percentages of students placed into Reading 52 from fall 2009 to spring 2012. The percentages of recommendations for Reading 54 represent 3,526 students. The placements into Reading 56 account for 4,315 students. The Reading 158 percentages represent 6,233 students. The largest block of students, 10,886, are found in the percentages of students judged to be reading proficient.



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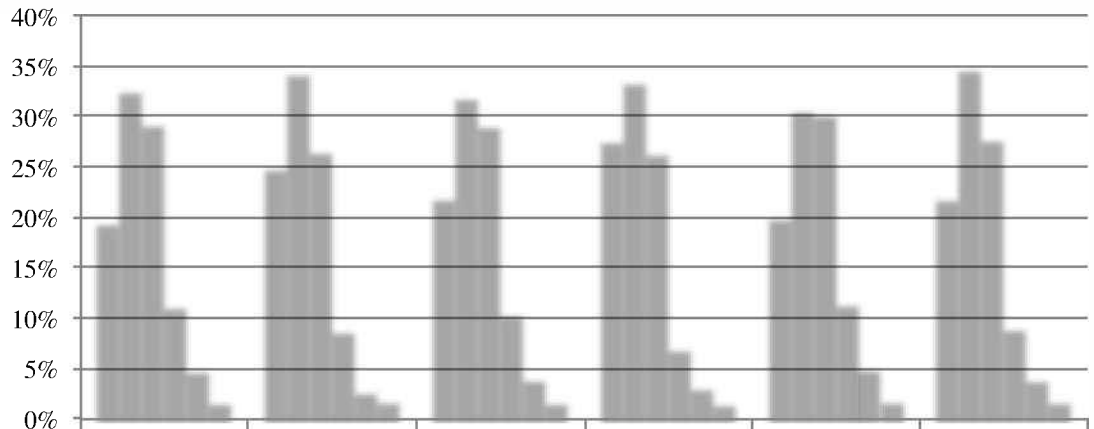
On average between fall 2009 and spring 2012, 98% of the students placed into courses below the transfer level, MATH 101 or higher. Approximately 22% of the students assessed during this time placed into basic mathematics (MATH 20), four levels below transfer mathematics curriculum. On average some 61% of the students place into either pre-Algebra (MATH 35) or Elementary Algebra (MATH 45) instruction. The Intermediate Algebra curriculum is presented in two courses at the College (MATH 60 and 70) but on average only 15% of the students place there. While these two math courses are not a transferable level of math instruction, it is the graduation level of mathematics competence for the Associate of Arts degree. Comparable placement recommendation information across the state or among community colleges is not available.

**Math Placement Recommendations Fall 2009 to Spring 2012**




| | FALL 2009 | SPRING 2010 | FALL 2010 | SPRING 2011 | FALL 2011 | SPRING 2012 |
|---|---|---|---|---|---|---|
| MATH 20 | 20% | 25% | 22% | 28% | 20% | 22% |
| MATH 35 | 33% | 34% | 32% | 34% | 31% | 35% |
| MATH 45 | 29% | 27% | 29% | 27% | 30% | 28% |
| MATH 60 | 11% | 9% | 11% | 7% | 12% | 9% |
| MATH 70 | 5% | 3% | 4% | 3% | 5% | 4% |
| MATH 101 | 2% | 2% | 2% | 2% | 2% | 2% |

Source: Southwestern College Assessment Office; analysis by Cambridge West Partnership

At the top of the curriculum hierarchy the small percentage of students recommended into Math 101, College Algebra, account for 484 students. Most students work their way through the curriculum to arrive at the Math 101 course as preparation for transfer. At the lowest level, Math 20, percentages represent 5,512 students and Math 35 percentages account for 8,283 students. Math 45, Elementary Algebra, percentages account for 7,414 students. The Intermediate Algebra, divided into two courses, Math 60 and 70, is required for the Associate Degree but it is not transfer-level curriculum. The percentages of recommendations from fall 2009 to spring 2012 for Math 60 account for 2,687 students while Math 70 accounts for 1,141 students.



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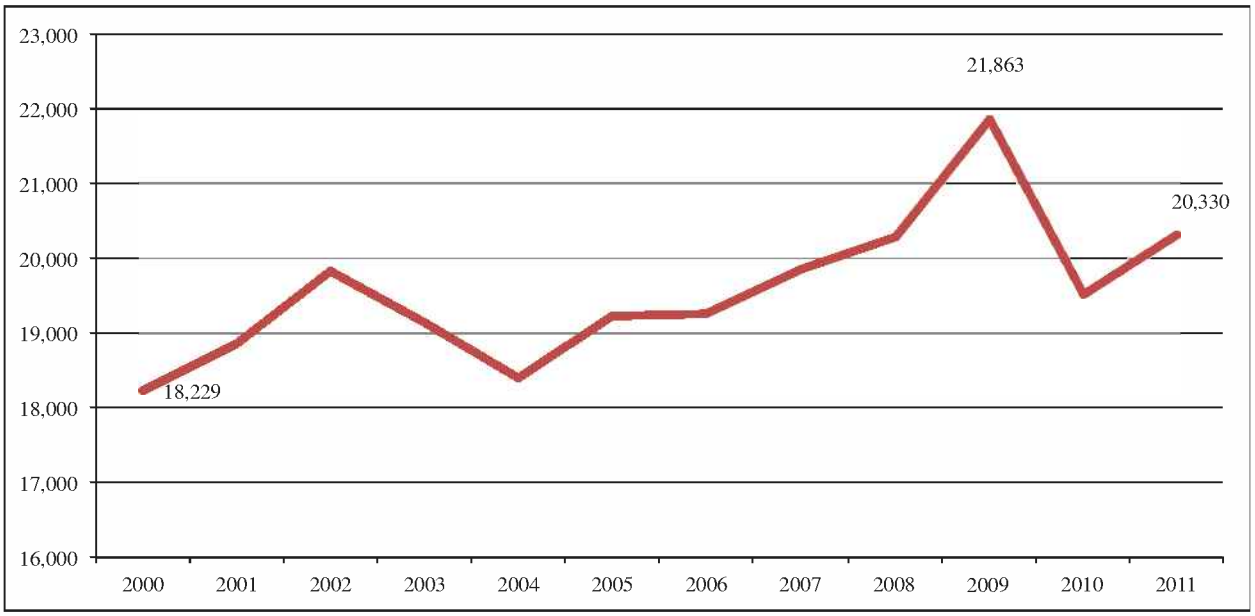
The Institution from Within

From Fall 2000 to Fall 2011, the College increased the unduplicated student headcount by .96% annually. Within the overall headcount, the period from 2000 to 2006 was a time of slightly higher annual increases (.81%) compared to the annual increase over the period from 2007 to 2011 (46%). The sharp drop from the high point in 2009 to a lower level of student headcount in 2010 was the result of a sever revenue constraint imposed by the state.

**Fall Term Unduplicated Student Headcount**




Source: Southwestern College Office of Institutional Research; analysis by Cambridge West Partnership, LLC

From 2007-08 to 2011-12 the annual Full-time Equivalent Student (FTES) produced at the College decreased by -6% or 896 units of FTES. Over this period of time the noncredit FTES has dropped from 5% of the total in 2005-06 to only .8% of the total in 2010-11. Conversely, credit FTES has moved from 95% of the total in 2005-06 to 99.2% of the total in 2010-12. These changes are the direct result of funded workload reductions from the state.



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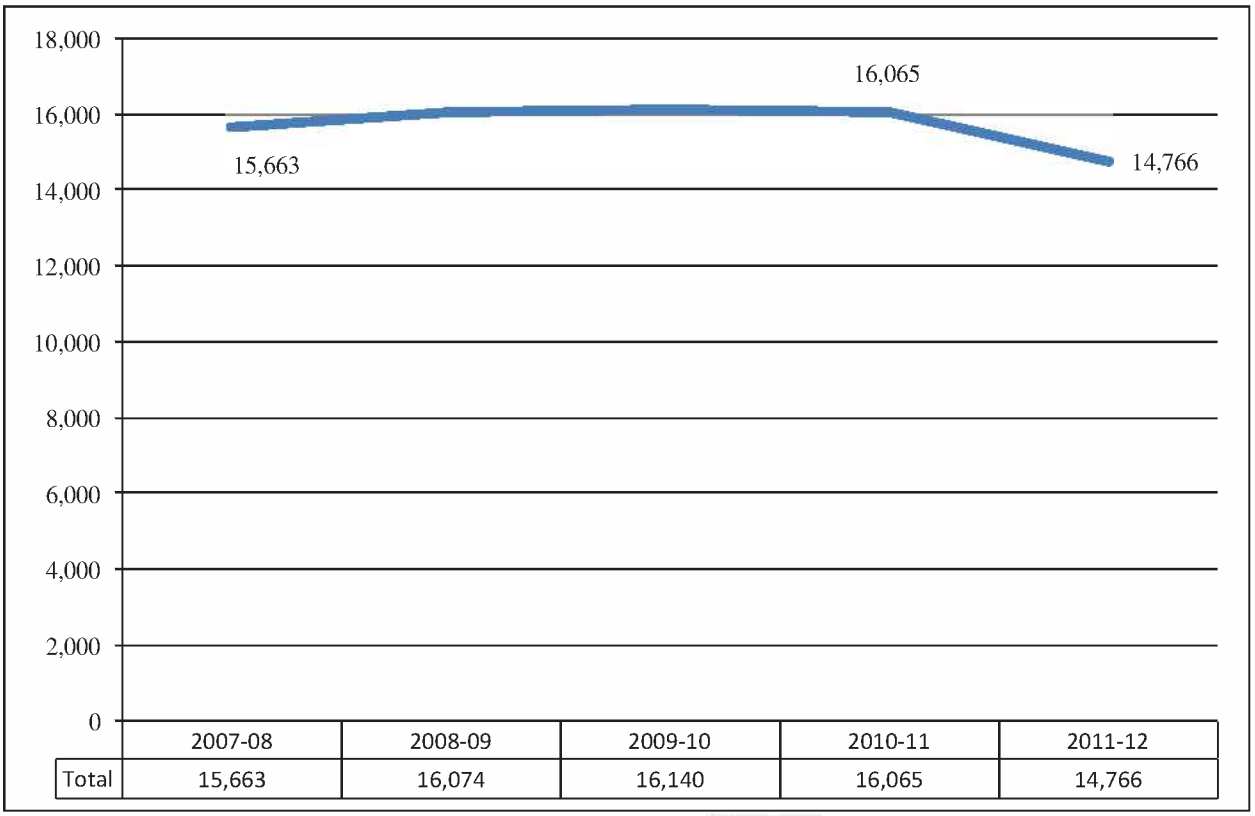
**Fiscal Year Funded FTES Trends**




Source: Apportionment Reports 2007-08 retrieved September 11, 2012 from http://extranet.cccco.edu/Divisions/FinanceFacilities/FiscalServicesUnit/Reports/ApportionmentReports.aspx; analysis by Cambridge West Partnership, LLC

From fall 2007 to fall 2011 the College has increased the numbers of classes offered through distance learning by 62 offerings or a 39% increase. Recently TecEDge has rated the College as the fourth largest producer of distance education offerings among the California community colleges.[21]

In the process of seeking admission to the College new students are asked to select from a list of 16 goals to indicate their primary purpose for attending the institution. Among the first-time students in the Fall 2010 term, the majority (37%) did not respond. Another 21% indicated that they were undecided as to their goal or purpose for attending. As the College is an open admission institution it is not entirely surprising to find that a large percentage of these students reported that they were undecided as to their goal or purpose for attending.

However, 26% indicated that they intended to transfer to a four-year institution. A scant 4% reported an interest in an Associate Degree without transfer but 9% indicated some form of career and technical education goal that did not involve transfer. The expression of a goal on the application for admission is considered to be an uninformed statement of intent as it is made

[21] TecEDge, Update: Distance Education Courses at California Community Colleges, 11/9/11, retrieved September 28, 2012 from http://ccctechedge.org/news/miscellaneous/246-update-distance-education-courses-at-california-community-colleges



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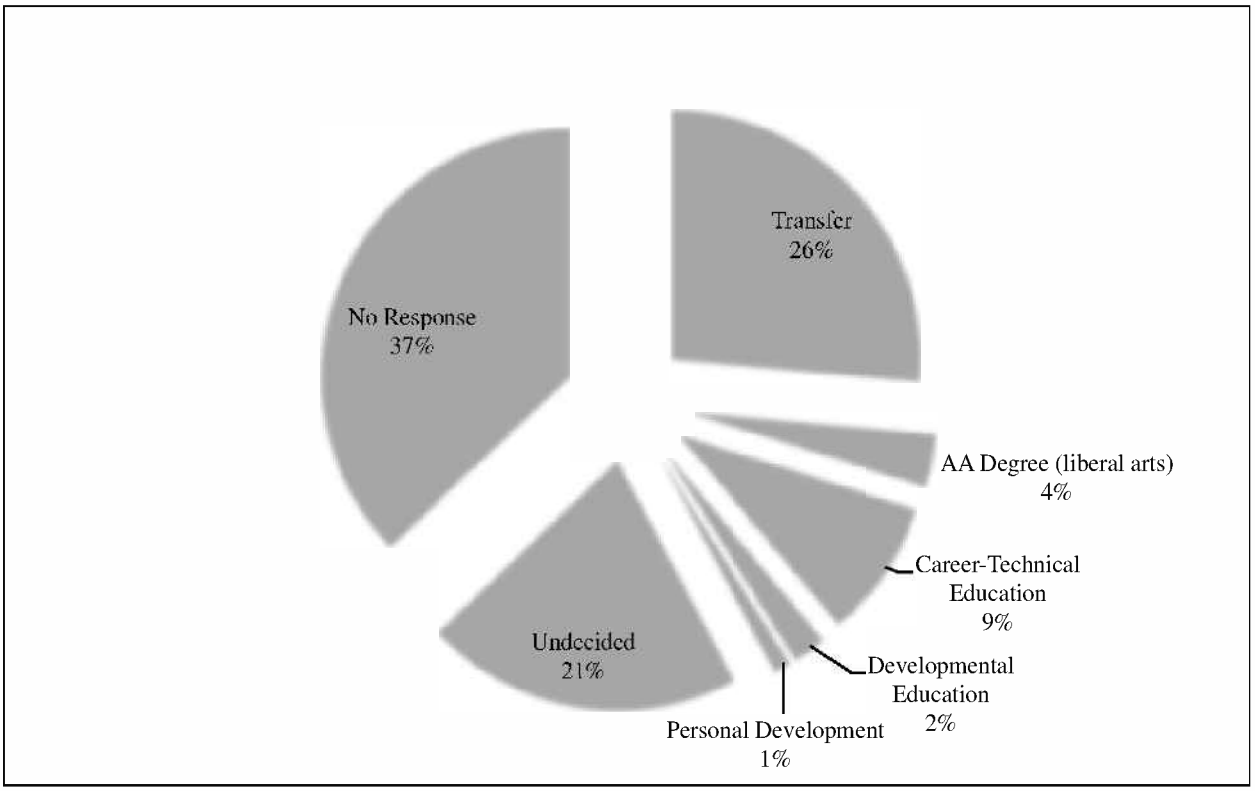
before the student has experienced the placement examination process, had those results interpreted, or completed an orientation to the college. New provisions in public policy created as a part of the Student Success Task Force will give registration preference to those students who have declared a goal and completed an education plan. The large numbers of students who indicated undecided or provided no response represents a real challenge to the College and new groups of first-time students in the coming years.

**Fall 2010 First-time Student Goals Declared on the Application for Admission**




Source: MIS Referential files; analysis by Cambridge West Partnership, LLC

Current Program of Instruction

The current program of instruction provides a starting point for assessing the current needs for space. These needs are determined by the capacity to produce weekly student contract hours (WSCH). It will also be used as the baseline from which future needs for space will be determined. The detailed analysis conducted relative to the current program of instruction is extremely important as it involved a section-by-section review at the discipline/program level. A comprehensive breakdown of this review can be found in the Appendix section of this Plan.

As of academic year 2011-12, the College is offering 333 programs (degrees and certificates). In many cases the career and technical programs offer a degree plus one or two certificates commonly characterized as basic or advanced. In some programs separate awards have been created if the instruction is offered in an intensive format.



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The fall 2011 program of instruction for the whole college (all locations) consisted of 2,122 sections, which generated 223,451 weekly student contact hours (WSCH). Enrollments (seats) per section averaged 32 and a WSCH per section of 105.1. In terms of instructional modality, lecture hours outpaced laboratory hours by a ratio of 3.1 to 1.

Key elements that characterize the program of instruction by location are captured in the following table.

### Fall 2011 Key Measures for the Program of Instruction, Chula Vista Campus

| Program of Instruction | Net Sections | Seats | Seats/ Sec | WSCH | WSCH/ Sec | FTES | Lec Hrs % | Lab Hrs % |
|---|---|---|---|---|---|---|---|---|
| Arts & Communications | 206 | 6,589 | 31.99 | 23,013.4 | 111.7 | 767.11 | 59.0% | 41.0% |
| Health, Exercise Science, Applied Technology | 284 | 8,866 | 31.22 | 32,011.7 | 112.7 | 1,067.10 | 43.0% | 57.0% |
| Language & Literature | 354 | 9,678 | 27.34 | 37,859.4 | 107.0 | 1,262.00 | 99.0% | 1.0% |
| Mathematics, Science & Engineering | 317 | 10,808 | 34.09 | 42,570.8 | 134.3 | 1,419.00 | 73.0% | 27.0% |
| Social Science, Humanities, Business | 334 | 12,057 | 36.10 | 36,817.0 | 110.2 | 1,227.20 | 86.0% | 14.0% |
| Other and Noncredit | 108 | 7,040 | 65.19 | 7,766.6 | 71.9 | 258.89 | 65.0% | 35.0% |
| ***Fall 2011 Total*** | ***1,603*** | ***55,038*** | ***34.33*** | ***180,038.8*** | ***112.3*** | ***6,001.30*** | ***74.0%*** | ***26.0%*** |

Source: Southwestern College Admissions and Records Office; analysis Cambridge West Partnership, LLC

### Fall 2011 Key Measures for the Program of Instruction, Otay Mesa HEC

| Program of Instruction | Net Sections | Seats | Seats/ Sec | WSCH | WSCH/ Sec | FTES | Lec Hrs % | Lab Hrs % |
|---|---|---|---|---|---|---|---|---|
| Arts & Communications | 2 | 58 | 29.00 | 201.1 | 100.6 | 6.13 | 66.7% | 33.3% |
| Health, Exercise Science, Applied Technology | 6 | 115 | 19.17 | 508.2 | 84.7 | 16.94 | 28.3% | 71.7% |
| Language & Literature | 8 | 209 | 26.13 | 916.5 | 114.6 | 30.55 | 100.0% | 0.0% |
| Mathematics, Science & Engineering | 17 | 496 | 29.18 | 2,169.6 | 127.6 | 72.32 | 56.7% | 43.3% |
| Social Science, Humanities, Business | 45 | 1,207 | 26.82 | 4,879.2 | 108.4 | 162.64 | 53.9% | 46.1% |
| Health Occupations | 76 | 1,529 | 20.12 | 6,355.5 | 83.6 | 211.85 | 23.9% | 76.1% |
| Other | 13 | 273 | 21.00 | 680.8 | 52.4 | 21.20 | 100.0% | 0.0% |
| ***Fall 2011 Total*** | ***167*** | ***3,887*** | ***23.28*** | ***15,711.0*** | ***94.1*** | ***521.63*** | ***39.0%*** | ***61.0%*** |

Source: Southwestern College Admissions and Records Office; analysis Cambridge West Partnership, LLC

### Fall 2011 Key Measures for the Program of Instruction, National City & Crown Cove HEC

| Program of Instruction | Net Sections | Seats | Seats/ Sec | WSCH | WSCH/ Sec | FTES | Lec Hrs % | Lab Hrs % |
|---|---|---|---|---|---|---|---|---|
| Arts & Communications | 9 | 275 | 30.56 | 1,029.0 | 114.33 | 34.30 | 93.1% | 6.9% |
| Health, Exercise Science, Applied Technology | 18 | 336 | 18.67 | 878.1 | 48.78 | 29.27 | 74.1% | 25.9% |
| Language & Literature | 18 | 510 | 28.33 | 2,156.1 | 119.78 | 71.87 | 100.0% | 0.0% |
| Mathematics, Science & Engineering | 28 | 883 | 31.54 | 3,351.6 | 119.70 | 111.72 | 80.2% | 19.8% |
| Social Science, Humanities, Business | 39 | 1,093 | 28.03 | 3,078.7 | 78.94 | 102.62 | 85.1% | 14.9% |
| Health Occupations | 65 | 1,270 | 19.54 | 3,333.3 | 51.28 | 111.11 | 36.6% | 63.4% |
| Noncredit | 7 | 210 | 30 | 90.3 | 12.90 | 3.01 | | |
| ***Fall 2011 Total*** | ***184*** | ***4,577*** | 24.88 | ***13,917.1*** | 75.64 | ***463.90*** | ***69.0%*** | ***31.0%*** |

Source: Southwestern College Admissions and Records Office; analysis Cambridge West Partnership, LLC

### Fall 2011 Key Measures for the Program of Instruction, San Ysidro HEC



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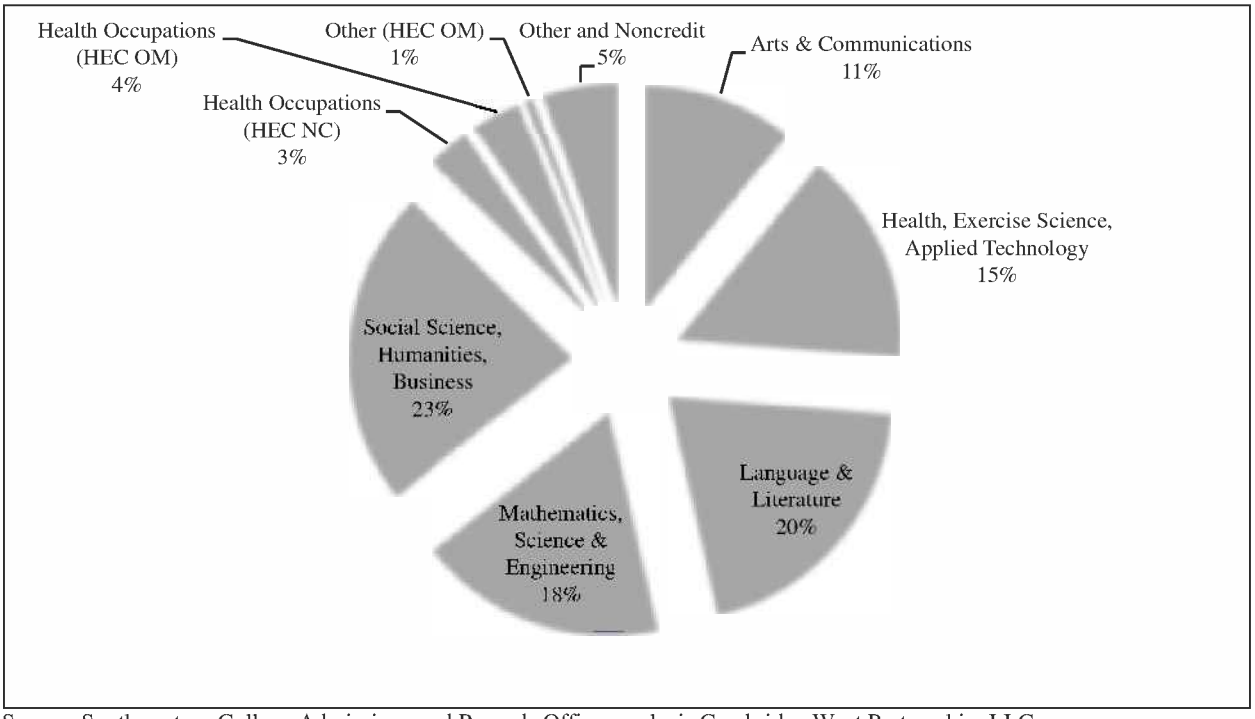
| Program of Instruction | Net Sections | Seats | Seats/ Sec | WSCH | WSCH/ Sec | FTES | Lec Hrs % | Lab Hrs % |
|---|---|---|---|---|---|---|---|---|
| Arts & Communications | 13 | 330 | 25.4 | 1,111.0 | 85.46 | 37.03 | 63.6% | 36.4% |
| Health, Exercise Science, Applied Technology | 18 | 428 | 23.8 | 1,225.8 | 68.10 | 40.86 | 52.9% | 47.1% |
| Language & Literature | 50 | 1,247 | 24.9 | 4,870.2 | 97.40 | 162.34 | 95.8% | 4.2% |
| Mathematics, Science & Engineering | 18 | 624 | 34.7 | 2,392.8 | 132.93 | 79.76 | 100.0% | 0.0% |
| Social Science, Humanities, Business | 69 | 1,708 | 24.8 | 4,183.6 | 60.63 | 152.26 | 80.8% | 19.2% |
| ***Fall 2011 Total*** | ***168*** | ***4,337*** | ***25.8*** | ***13,783.4*** | ***82.04*** | ***472.25*** | ***84.0%*** | ***16.0%*** |

Source: Southwestern College Admissions and Records Office; analysis Cambridge West Partnership, LLC

The divisions of the college were used to determine percentage shares of the sections offered at all locations. In this analysis the Social Science, Humanities & Business division had the greatest share of the curriculum offerings at 23%. The next largest division was Language and Literature at 20% followed by the Mathematics, Science & Engineering division at 18%. Collectively these three divisions account for 61% of all sections offered.

**Fall 2011 Distribution of the Curriculum Offerings (sections)**




Source: Southwestern College Admissions and Records Office; analysis Cambridge West Partnership, LLC

Using the same divisions from the previous analysis, the distribution of attendance (WSCH) was analyzed for all locations. The Mathematics, Science & Engineering division generated the most WSCH (23%) followed by the Social Science, Humanities & Business division (22%). Following these two divisions was the Language and Literature division (21%). Collectively these three divisions accounted for 65% of the College WSCH.



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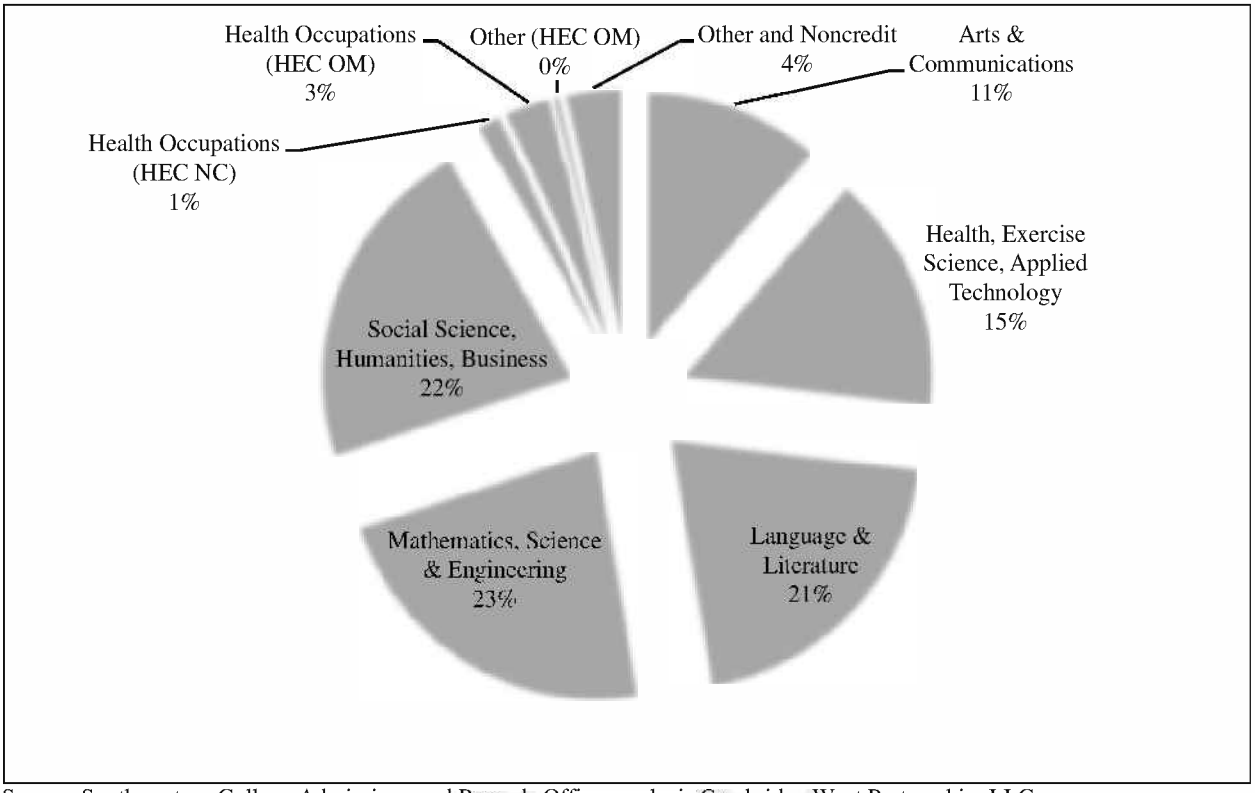
**Fall 2011 Distribution of Attendance (WSCH)**




Source: Southwestern College Admissions and Records Office; analysis Cambridge West Partnership, LLC

Both the distribution of curriculum and WSCH graphics reflect the dominant position of the general education courses at the College. As is the case at institutions where a large number of students are intending to transfer to a four-year school, the courses in greatest demand are those from the disciplines represented in the required general education patterns. Those courses commonly come from the traditional liberal arts disciplines of the institution.



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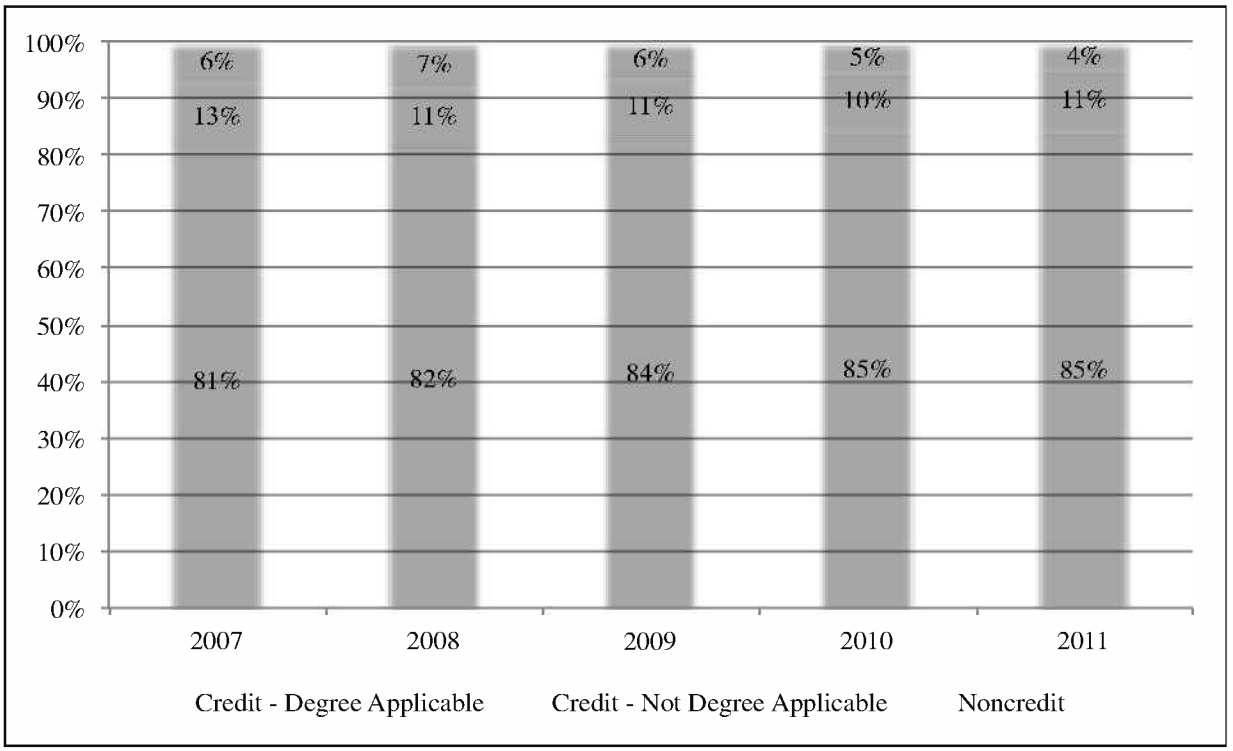
The relative portion of total classes scheduled by credit status of the course has remained fairly stable during the last five fall terms. On average the credit degree-applicable offerings represent 83%, credit but not degree-applicable about 11% and noncredit roughly 6% of the total FTES. From 2007 to 2011 degree-applicable classes have increased by 4% of total offerings, non degree-applicable and noncredit offerings have decreased 2% each.

**Fall Class Offerings by Credit Status**




Source: MIS Referential files; analysis by Cambridge West Partnership, LLC

The relative portion of total classes scheduled by transfer status of the course has remained fairly stable during the last five fall terms. On average the course offerings transferable to both the University of California (UC) and the California State University (CSU) represent 56%, those transferable only to CSU have been about 23% and the nontransferable offerings have been roughly 20% of all the sections scheduled. From 2007 to 2011 nontransferable classes have decreased by 1% of total offerings while the courses transferable only to CSU have increased 2%.



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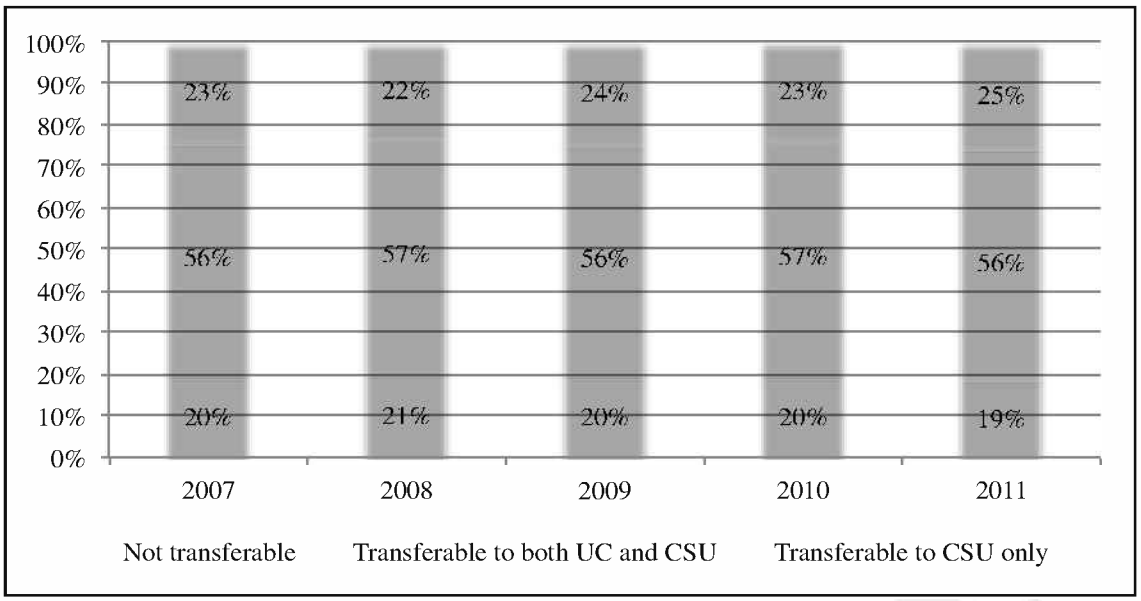
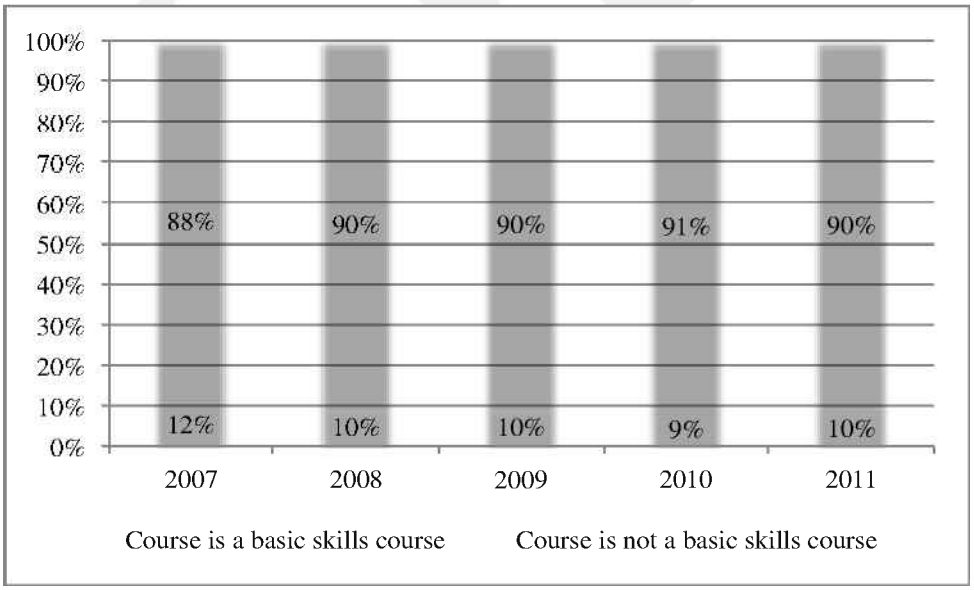
**Fall Class Offerings by Transfer Status**




Source: MIS Referential files; analysis by Cambridge West Partnership, LLC

The relative portion of total classes scheduled by basic skills status of the course has remained fairly stable during the last five fall terms. On average the non-basic skills offerings represent 90% of the offerings while basic skills classes have been roughly 10% of the total classes scheduled. From 2007 to 2011 non-basic skills classes have increased by 2% and the basic skills offerings have decreased 2%.

**Fall Class Offerings by Basic Skills Status**




Source: MIS Referential files; analysis by Cambridge West Partnership, LLC



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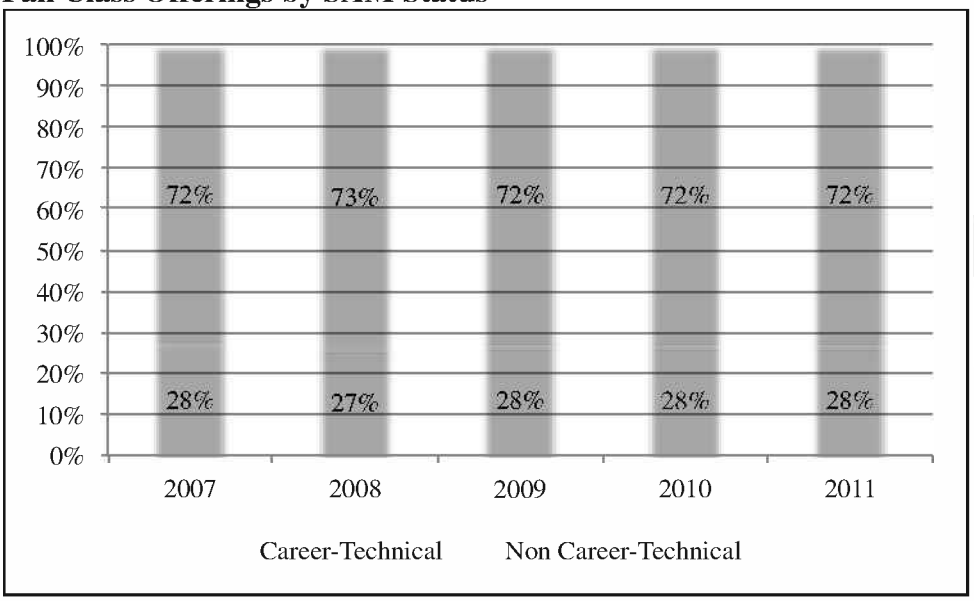
The relative portion of total classes scheduled by the Student Accountability Model (SAM) status of the course has remained very stable during the last five fall terms. The SAM coding of courses is intended to distinguish the career and technical curriculum from the non-career and technical courses. On average the non-career and technical offerings represent 72% of the offerings while career and technical classes have been 28% of the total classes scheduled.

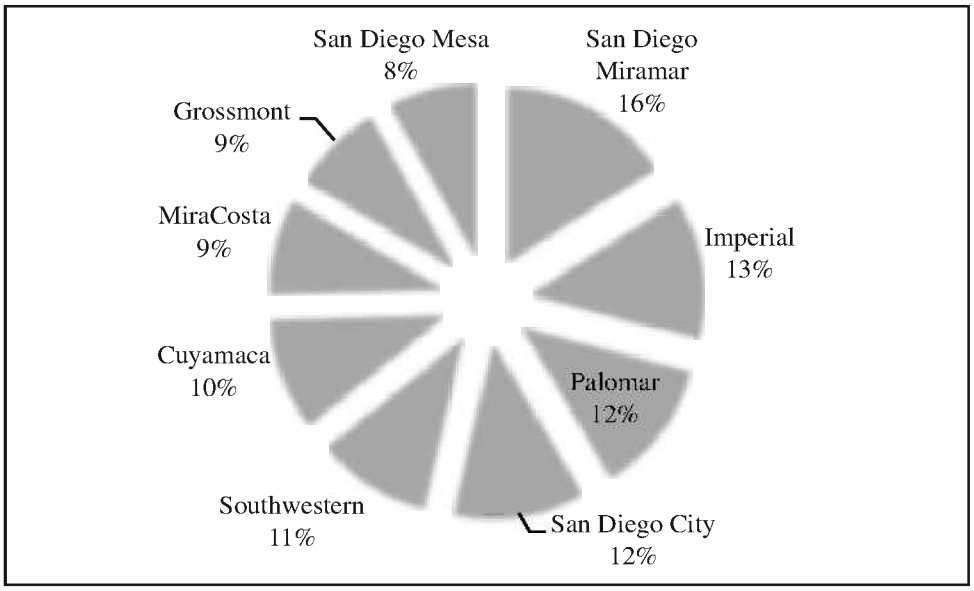
**Fall Class Offerings by SAM Status**




Source: MIS Referential files; analysis by Cambridge West Partnership, LLC

Compared to other community colleges in the San Diego-Imperial County region, Southwestern ranks comparably in the middle with respect to the portion of FTES generated by career and technical education offerings.

**Career and Technical Education FTES 2001-2011**




Source: Chancellor's Office Economic and Workforce Development Division



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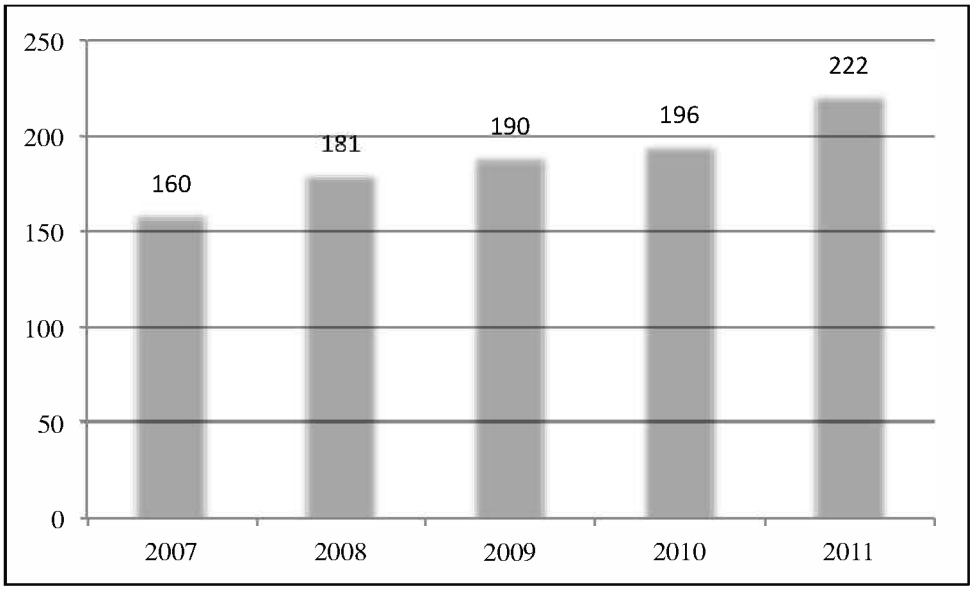
Most classes offered by the College are presented as traditional face-to-face offerings as compared to distance education classes. However, the numbers of classes presented by distance education has been growing (39% increase or 62 classes). Over the past five fall terms, the numbers of distance education classes has average 190 classes per term.

**Fall Classes Offered by Distance Education Mode of Instruction**




Source: MIS Referential Files; analysis by Cambridge West Partnership, LLC

As noted previously, a recent article by TecEDge indicated that the College is the fourth largest provider of distance education.[22] However, the College has temporarily stopped creating new distance education offerings while a review of services provided to support those students is conducted. One of the strategic priorities created by the College in 2011 is student access with one of the objectives under that priority being "Increase student access through the use of technology (e.g., interactive website, online support services, etc.)". Another priority is student success, with one of the objectives being "Promote student success by providing identical student and instructional support services for online students as are available for students who attend classes on campus".

Non-Instructional College Resources to Support the Educational Mission

Support Service Offices

The College provides a diverse set of programs to support student learning which do not necessarily generate FTES. These programs make an important contribution to the college experience. They focus support on students who are at greatest risk of failure in higher education. These include students who are the first generation in the family to attend college,

[22] TecEDge, Update: Distance Education Courses At California Community Colleges, retrieved November 9, 2011 from http://ccctechedge.org/news/miscellaneous/246-update-distance-education-courses-at-california-community-colleges



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have minority backgrounds, are from low-income families, or who have physical, mental, or emotional disabilities.

In the *administrative services* area, these support services include:

- Bookstore and food services
- Facilities, grounds, janitorial (classroom preparation and maintenance)
- Public Safety (fostering a safe environment for students and staff)
- Child Care Center
- Office Support Services (Copy Center, mailroom)
- Continuing Education (Not-for-Credit Instructional Programs)
- Facilities Construction

In the *executive* area, these support services include:

- Institutional Technology Support Services (campus network and computer equipment maintenance)
- Staff Development (Human Resources)
- Foundation and Community Relations
- Institutional Research & Planning

In the *instructional support* area, these support services include:

- Academic Success Center (Tutoring, Reading and Writing Center)
- Articulation
- Athletics
- Interdisciplinary Tutorial Center
- Library (books, AV materials, electronic databases, reference resources)
- Math Lab
- Puente Program
- Student Computer Center

In the *student services* area, these support services include:

- Admissions and Records
- Assessment Center (placement testing and orientation)
- CalWORKs/Re-entry
- Career Center
- Center for International Studies
- Center for Technical Education and Career Success
- Counseling and Guidance
- Disability Support Services (DSS) and High Tech Center
- Extended Opportunity Programs and Services (EOP&S)/CARE
- Transcript Evaluations (Admissions and Records)
- Financial Aid
- Outreach (college preparation and opportunity information)
- Student Health Center
- Student Activities/ Intercultural Center



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- Student Employment Services
- Transfer Center
- Veteran's Services
- Women's Resource Center

Many of the services offered to support students are available, at least in part, via online technology. The following list was compiled as of October 2012.

**Southwestern College Online Student Support Services**

| Service Area & Service | Online Interactively | Notes |
|---|---|---|
| *Admissions & Records* | | |
| Apply online | X | |
| Enroll in classes, add/drop classes, view class schedule | X | |
| Manage wait list | X | |
| Email students of incoming transcripts, send electronic transcripts to other institutions in California, view transcripts & GPA, request transcripts | X<br>Coming soon | |
| Update contact information | X | |
| SWC Facebook page | X | |
| Make payments | X | |
| Receive student & faculty emails; | X | |
| Send student petition responses to students | X | |
| Printable forms | X | Students can print forms and submit in person, by mail or FAX |
| *Articulation* | | |
| Articulation transfer agreements | X | Via ASSIST.org |
| *Assessment* | | |
| Practice tests and test guides | | |
| Schedule appointments | X | |
| Testing schedule | | |
| *Career Center* | | |
| Activities calendar | | A virtual career center |
| California Career Café | X | Via Bridges.com |
| Career/Major exploration links | X | Career/Major interest |
| Choices Planner | X | assessment tool |



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**Southwestern College Online Student Support Services (continued)**

| Service Area & Service | Online Interactively | Notes |
|---|---|---|
| *Center for International Studies*<br>Basic information and forms available | | |
| *Counseling*<br>e-Counselor available<br>Online orientation | <br>X | <br>For basic information and questions only |
| *Center for Technical Education and College Success (CTECS)*<br>Basic information and forms available | | |
| *Disability Support Services*<br>Basic information and forms available | | |
| *Equal Opportunity Programs & Services (EOPS)*<br>Point & click contact services<br>e-EOPS counseling available<br><br>Enroll online | <br>X<br>X<br><br>X | <br>Students can contact the director from the website.<br>For extenuating circumstances only.<br>Fall and Spring only. |
| *Evaluations*<br>Basic information and forms available<br>Online receipt & transfer of transcripts<br>Degree audit (pilot spring 2013) | <br><br>X<br>Coming soon | |
| *Financial Aid*<br>Net calculator available;<br>Apply for financial aid online<br>Online scholarship application<br>Electronic funds transfer | <br>X<br>X<br>X<br>Coming soon | |
| *Health Services*<br>Basic information and forms available | | |
| *Library*<br>Online resources & check out books | <br>X | |
| *Online Instructional Supports*<br>Online writing labs<br>Online tutoring<br>Online learning center | <br><br><br>X | |
| *Outreach*<br>Apply online<br>Enroll online<br>Facebook page<br>Send and receive student emails<br>Twitter<br>YouTube tutorial on Web Advisor<br>Online student orientation | <br>X<br>X<br>X<br>X<br>X<br>X<br>X | <br>For Early Admission students<br>For Early Admission students<br>For Early Admission students<br>For Early Admission students<br>For Early Admission students<br>For Early Admission students |
| *Prerequisites*<br>Basic information and forms available | | |



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**Southwestern College Online Student Support Services (continued)**

| Service Area & Service | Online Interactively | Notes |
|---|---|---|
| *Parking*<br>Online parking permits | Coming soon | |
| *Student Activities*<br>Basic information and forms available | | |
| *Student Accounts (Cashering)* | X | |
| *Student Bookstore*<br>Order or rent texts online | X | |
| *Student Employment Services*<br>California Career Café<br>Job fair information<br>Job/internship/volunteer listings<br>Resume and interview prep assistance<br>Twitter | X<br><br><br><br>X | A virtual career center |
| *Transfer Center*<br>External transfer links available<br>Workshop/Activities calendar<br>Workshop registration<br>Workshop handouts/information<br>Online steps to transfer workshops<br>Email listserve registration<br>Transfer assistance links | X<br>X<br><br>X | Via ASSIST.org |
| *Veterans' Services*<br>Term calculator available | X | |
| *Women's Resource Center*<br>Soroptimist International Women's Opportunity Award online application | X | |

Source: Student Affairs Online Services Inventory, July 2012

Services in all of these areas have been reduced by the current shortfall of revenue. The areas are being supported by a combination of categorical funding, general funds and funds from the Associated Student Body and other ancillary funds.

It is important to the College that students succeed, persistently enroll in one term after the next, and achieve their educational goals. The above listed services represent a commitment to support student efforts However, recent budgetary challenges threaten the capacity to continue the



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services at the same level, and to meet larger future demands for assistance. The College will need to be creative in finding ways to sustain or more efficiently provide some of these services. If not, SWC may be faced with difficult choices regarding the extent of support to selected areas, if policymakers at the state level do not pre-empt the campus leadership in that regard. The College program review process may provide some assistance in this decision making process.

Library and Learning Resources

A new Library/Learning Resources Center opened in 2002. The three-story facility is located at the main north entrance to the campus. The new building incorporates a variety of services including the Library, multimedia center, staff development facilities, a teaching and learning center (TLC), the telemedia center and the interdisciplinary tutoring center plus staff offices, conference and meeting rooms. Students are offered a number of study spaces for group work or media viewing, wireless Internet and a growing collection of print and non-print media.

The building is a modern, technologically enhanced structure that takes advantage of changes in the information environment to support student learning. The new building will allow the library staff to develop strategies that adapt to twenty-first century student demands and needs. The book, periodical, and media collection support the academic program of instruction at the College. Books may be checked out for four weeks while periodicals are available for use in the Library. There is an online e-book collection and full-text periodical databases for students to use. Students can also access DVDs, CDs, CD-ROMs, audiocassettes; sound filmstrips and sound slide sets. These media are for in-Library use only and private viewing carrels are also provided. The media production unit assists faculty and staff with services such as the preparation of posters, flyers, personal websites and digital media.

Academic support functions, such as the interdisciplinary tutoring services, are located on the third floor. The services offer students access to more than 100 computer stations with standard computer tools for accomplishing class work and research. From this center students have access to periodical and information databases, the Internet, Microsoft Office suite (Word, Excel, Access and Power Point), the Library catalog, e-books and other software. Photocopiers are available on the second and third floors.

The telemedia facility includes a studio, control room, audio booth, lab for editing and post-production, as well as several production software suites perfect for group productions. The Teaching-Learning Center (TLC) is a place where College faculty and staff learn, have discussions about learning and receive support for their efforts to improve teaching. The center provides resources, workshops, training and the opportunity to develop and refine skills or to experiment with innovative instructional strategies. The TLC has a variety of hardware, software and equipment to support both Mac and PC computing platforms. The TLC is part of the staff development program and is coordinated by the staff development coordinator, training services coordinator, and the staff development program assistant.

The library faculty collaborates with classroom faculty. The library is a vital resource for students who need to complete the information literacy graduation requirement. Faculty can help students meet this requirement by increasing the number of assignments that require library and information systems use. However, some of the resource reductions pose a significant challenge



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to the library staff to maintain their electronic equipment and resources. The library staff has been dwindling due to retirements so that the staffing level threatens the unit's ability to effectively serve the faculty and students.

College-wide Staffing Patterns

Since 2007, the overall workforce at the College has declined. The number of classified administrators declined the most, 19.4%, over this period of five years. In addition to these changes, a number of positions have remained vacant as part of a strategy to conserve resources. Tenured faculty has declined by 9.8% while educational administrators have declined by 4.6%.

**Employee Groups by Full-time Equivalency**

| Employee Group | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Educational Administrators | 26.2 | 23.1 | 24.0 | 23.3 | 25.0 |
| Tenured/Tenure Track Faculty | 202.5 | 201.8 | 208.1 | 199.4 | 182.7 |
| Academic Temporary | 252.5 | 244.6 | 260.0 | 269.9 | 282.7 |
| Classified Administrators | 36.6 | 34.2 | 33.5 | 34.8 | 29.5 |
| Classified Support | 339.5 | 342.7 | 327.5 | 349.9 | 331.1 |
| ***Total*** | ***857.3*** | ***846.4*** | ***853.1*** | ***877.3*** | ***851.0*** |

Source: Chancellor's Office Data Mart 2.0; analysis by Cambridge West Partnership, LLC

A second view of the employees, grouped by age ranges, reveals that 26% of the educational administrators have reached the typical retirement age. Approximately 19% of the tenured faculty and 20% of the academic temporary faculty are also at that point in their lives. Over the next six to ten years, an additional 35% of the administration and 22% of the full-time faculty (tenure track and tenured) will reach the typical retirement age. There is no requirement that an employee retire at a particular age but this information is based on present averages.

**Employee Groups by Age Ranges**

| Employee Group 2011 | <=34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65+ |
|---|---|---|---|---|---|---|---|---|
| Educational Administrators | | 4.3% | 8.7% | 8.7% | 17.4% | 34.8% | 21.7% | 4.3% |
| Tenured/Tenure Track Faculty | 3.9% | 8.4% | 16.7% | 11.8% | 22.2% | 18.2% | 12.3% | 6.4% |
| Academic Temporary | 17.6% | 12.0% | 11.3% | 12.6% | 13.3% | 13.1% | 9.9% | 10.2% |
| Classified Administrators | 6.9% | 13.8% | 13.8% | 13.8% | 20.7% | 24.1% | 3.4% | 3.4% |
| Classified Support | 20.1% | 11.9% | 13.4% | 13.4% | 18.0% | 14.0% | 7.0% | 2.3% |

Source: Chancellor's Office Data Mart 2.0; analysis by Cambridge West Partnership, LLC

Given that a significant percentage of employees in key classifications are of retirement age, this is the time to consider priorities to guide the decisions about replacement personnel. In the current and near-term environment the financial resources available to the College are insufficient to sustain all areas of the institution at optimal staffing levels.



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Budget to Support Instruction and Student Support Services
The budget development process at the College historically has been completed as a "rollover" process. The managers of departments were provided with budget development sheets that displayed their discretionary accounts, and they were allowed to move their budget from one category to another to better serve their needs. In 2012-13, with the State budget information the College received, it was decided that some contingency plans should be create in case there were mid-year reductions.

The following risks were acknowledged in developing the 2012-13 budget. These points illustrate the revenue stresses the College has faced in recent years.[23]

- Deficit spending on the order of $2.2 million will call for significant reductions in expenditures
- The current year deficit is financed with one-time solutions (5% salary reduction, $1 million Other Post-Employment Benefits (OPEB), reserve reductions, etc.)
- If proposition 30 fails, a mid-year cut of approximately $4.8 million will have to be addressed. There is only $1.1 million available to address additional current year cuts leaving an additional $3.7 million in reductions to be identified.
- No apportionment deficit factor was built into the budget. A deficit factor will result from a State revenue shortfall mid-year.

The following expenditure reductions and strategies were used to develop the 2012-13 budget.

- A 5% one-time salary reduction for all employees.
- The reserve was reduced from 7% to 5% by a $2.2 million drawdown.
- Step and column increases of $647,000 with benefits.
- $1 million reimbursement from the OPEB trust.
- SERP payment of $598,000 (second of five years of payments).
- Additional employee health insurance of $475,000 above the bargained amount of $5,200 per employee.
- Estimated workload reduction of 809 FTES. However, the fall 2012 and spring 2013 schedules were planned to absorb a reduction of 1,032 FTES in anticipation that proposition 30 would not pass.
- Better management of the part-time overload designated for instructional and non-instructional personnel expenses guaranteed that $11.5 million is allocated for those purposes.

The College departments operated extremely efficiently for the 2011-12 fiscal year. If that behavior can be continued in 2012-13, it will hopefully allow the campus to achieve necessary savings.

In recent years budget development has been extremely difficult. With many unknowns at the State level, the College has created alternative scenarios taking into consideration various possible options. Vacancies created through attrition from resignations and retirements are being reviewed on a case-by-case basis with many of the positions being frozen to help the campus meet its revenue reduction targets.

[23] SWC FY 2012-13 Proposed Adopted Budget. Retrieved 10/4/12 from http://www.swccd.edu/3rdLevel/index.asp?L2=612



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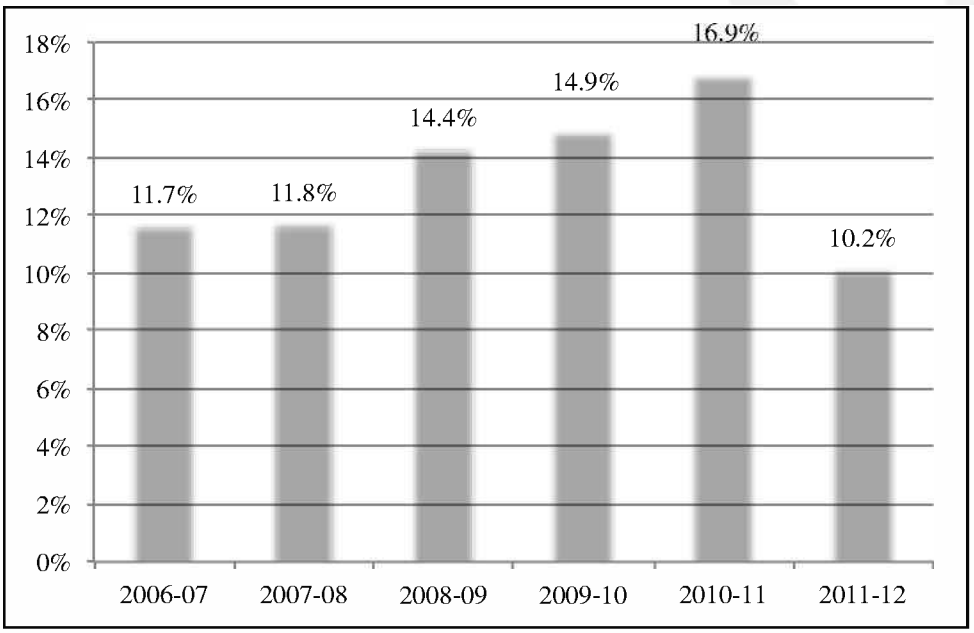
The Budget Committee and Shared Consultation Council (SCC) play vital roles in the budgeting process. On an annual basis, both committees are presented with a summary of expenditures from the previous year and a breakdown of those expenditures by major category (salaries, utilities, supplies, etc.). In that same report, the current fiscal year budget is broken down in the same way. This allows the constituents that serve on the committee to understand where the expenditures were made in the previous year, as well as where the expenditures are anticipated to be in the coming year. With the budget challenges that the College is facing, the committee gets regular updates, as new information is made available from the State to ensure that everybody has an overall understanding of the financial state of the College. The task of the Budget Committee is to provide recommendations to the SCC for budgetary decision making and funding of the priorities established by the SCC to the extent funds are available.

The College has been facing some very serious budget challenges in recent years and will continue to be facing revenue challenges in the next 2-3 years, possibly longer, given the economic circumstances of the State. The College is doing it's very best to prepare for these future unknowns, but it will be extremely challenging given the reductions that have already been taken, both in financial resources and human resources.

**Five-Year Ending Balance as Percent of Expenditures**




Source: Fiscal Data Abstracts 2007-2011, Table IX; SWC Annual Financial and Budget Report for 2011-12; analysis by Cambridge West Partnership, LLC

The ending balance is an indicator of the College's overall fiscal health. Fixed costs of salary and benefits continue to claim the majority of the revenues. The College experienced years where the ending balance was small in comparison to its overall expenditures. In 2010-2011, the College had the healthiest ending balance in the last six fiscal years. In addition to the College general fund ending balance, SWC maintains a fund for capital expenditures and emergencies.



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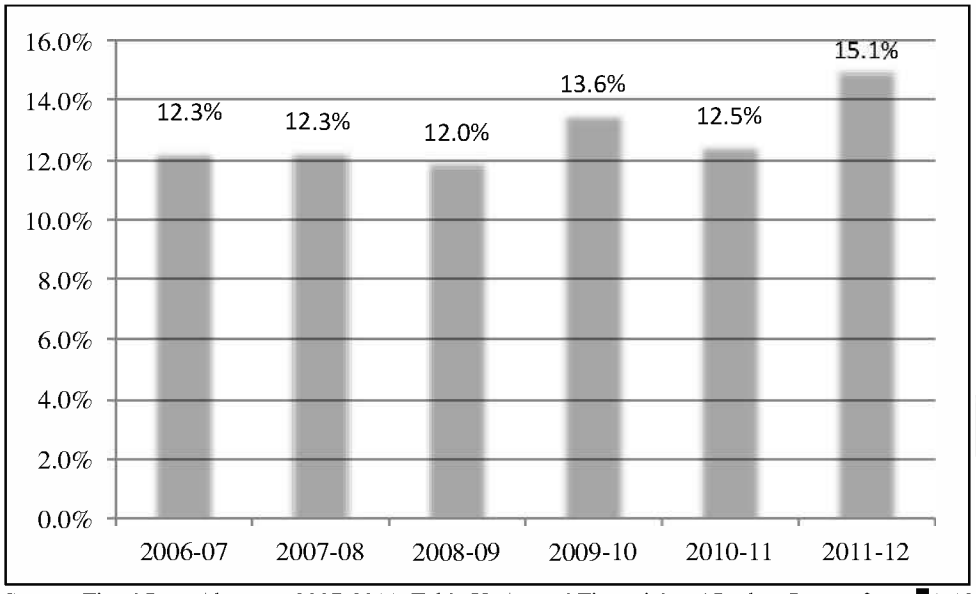
**Percentage of Discretionary Budget, Five-Year History of Expenditures**




Source: Fiscal Data Abstracts 2007-2011, Table V; Annual Financial and Budget Report for 2011-12: analysis by Cambridge West Partnership, LLC

With the majority of the College budget being spent on salaries and benefits, there are very few discretionary funds available. These funds represent expenditures categorized in the object of expense codes 4000 and 5000 series. Discretionary budgets will be squeezed further as the College experiences significant reductions in state funding.

Most revenues come to the college through the apportionment process that is tied to enrollments and instructional contact hours. In the past the College has achieved its FTES cap by offering courses in summer school. Unfortunately, resources to continue offering a robust summer term are dwindling. In spite of increases in student enrollment fees, combined with changes in the demographics of the population served and unemployment levels induced by the great recession, the College has sustained the desired enrollments through the primary terms and a more modest summer offering. Workload reductions from the State have caused the College to turn away thousands of prospective students. Effective strategies for enrollment management, outreach, scheduling and facilities utilization have been implemented and will be needed into the future.

In the past year the College has introduced a new enrollment management effort and scheduling tool to improve the quality and accuracy of the College's course scheduling practices. As such, the College has been able to project enrollments more accurately. Additionally, to respond to the significant budget cuts imposed by the State, the College has been able to introduce scheduling models that reduce the instructional budget while reducing the impact on enrollment. The College plans to further improve and augment these models by introducing and evaluating course scheduling priorities and integrated scheduling models. These efforts will ensure that students are offered the most efficient scheduling patterns that decrease the time required to complete certificates, graduate and transfer.

Technology



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The 2011-15 Technology Plan articulates a vision for using sophisticated technology to enhance learning and instruction, promote personalized student services and provide effective administrative processes. It is available with the status of prioritized action items at this URL http://www.swccd.edu/techplan. The Plan is a product of intensive and extensive campus collaborations from spring 2010 to spring 2011. The Plan addresses technology services goals in the following summarized ways:

1. Provide secure student access to learning resource and support services for all college locations.
2. Support the success of students through the development of instructional technologies, including the delivery of instruction media for use on and off-campus.
3. Develop, update, and implement student services information system and communication services.
4. Develop and improve secure and reliable computing systems to increase institutional effectiveness.
5. Upgrade and maintain the network infrastructure to support comprehensive wireless, voice, video and data communications with high availability and recoverability.
6. Provide ongoing training, staff, funding and technology support services to meet the needs of students, faculty, staff and administrators.
7. Develop and support multiple, digital means of communication between the college, community and all constituencies.

Goals, strategies and 99 action items of the Plan were developed from program reviews, assessment of current needs and a review of external trends in higher education computing. Some 66 action items were scheduled to begin in 2011. Of the 39 items classified as high or medium priority, 32 have been completed or are in progress as of August 2012. As is the case throughout the College, the Information Technology group is hampered by vacancies in key positions and a shortfall of funds, otherwise even more progress would have been achieved.

A number of new administrative technology initiatives are being addressed by the Plan. A financial and a human resources module are being added to the College integrated information system (Datatel Colleague, now known as Ellucian). With the addition of these two modules, the overall system will allow users to "work smarter".

A number of instructional technologies were funded by proposition AA dollars and introduced from 2001 to 2006. On the campus many classrooms have become multimedia-teaching environments with white boards, a computer, a projector and a built-in screen. Today, approximately 96% of the classrooms across all locations are characterized as "smart classrooms"; however, the instructional technology installed "back then" may not be as useful today as it once was. The pace of change is a challenge for the College Technology Plan.

Proposition AA resources had funded these technological acquisitions. A new revenue source will be required to provide ongoing support, to hire technical personnel, to replace worn equipment, and to provide training to the general staff in the use of the equipment and software.



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The plan sets an ambitious pace for activity to support teaching and learning over the next several years. Within one to three years the College network, the enterprise-wide wireless system, and the district data center need to be modernized. Over the next three to seven years a fiber optic infrastructure should be developed, the telecommunications room modernized, and a data center potentially relocated.

# VI. Institutional Effectiveness

## A. Assessment of Institutional Performance

Institutional Mission and Effectiveness Goal

The College has evaluated data about its own performance with respect to the goals it has established. The SWC District has identified seven Institutional Performance Indicators (IPIs) to track progress toward accomplishing the Mission and Strategic Planning Priorities. These IPIs include:

- retention rates
- success rates
- persistence rates
- transfer preparedness
- overall student satisfaction
- employment preparation
- licensure/certification pass rates
- student goal attainment

The current statewide accountability-reporting framework, Accountability Reporting for Community Colleges (ARCC), captures most of these IPSs. Its outcome indicators can be used to determine the extent to which the College has reached its goals. Overall student satisfaction and the indicators related to licensure/certification pass rates are not a part of that statewide framework. Student satisfaction has been captured by a locally developed opinion survey that was last administered in spring 2011. The licensure/certificate pass rates data is very difficult to obtain, except in a limited number of career and technical programs where there are examinations. The annual review of these indicators and the related creation of new plans of action are activities that illustrate the culture of evidence at the College.

ARCC Outcomes

The ARCC statewide accountability framework began in response to legislative action in 2007. It was a successor system to the Partnership for Excellence (PFE) initiative from the community college system. The PFE system provided a public report to California policy makers and had some funding associated with the efforts. The difference between the two accountability approaches was that ARCC framework provided both a system and a college-specific public report and did not have any incentive funds associated with the reporting. Colleges were encouraged to develop their own goals for improvement on the outcome measures. Both systems had agreed upon outcome measures about which each college in the system had an opportunity to offer comments and suggestions.



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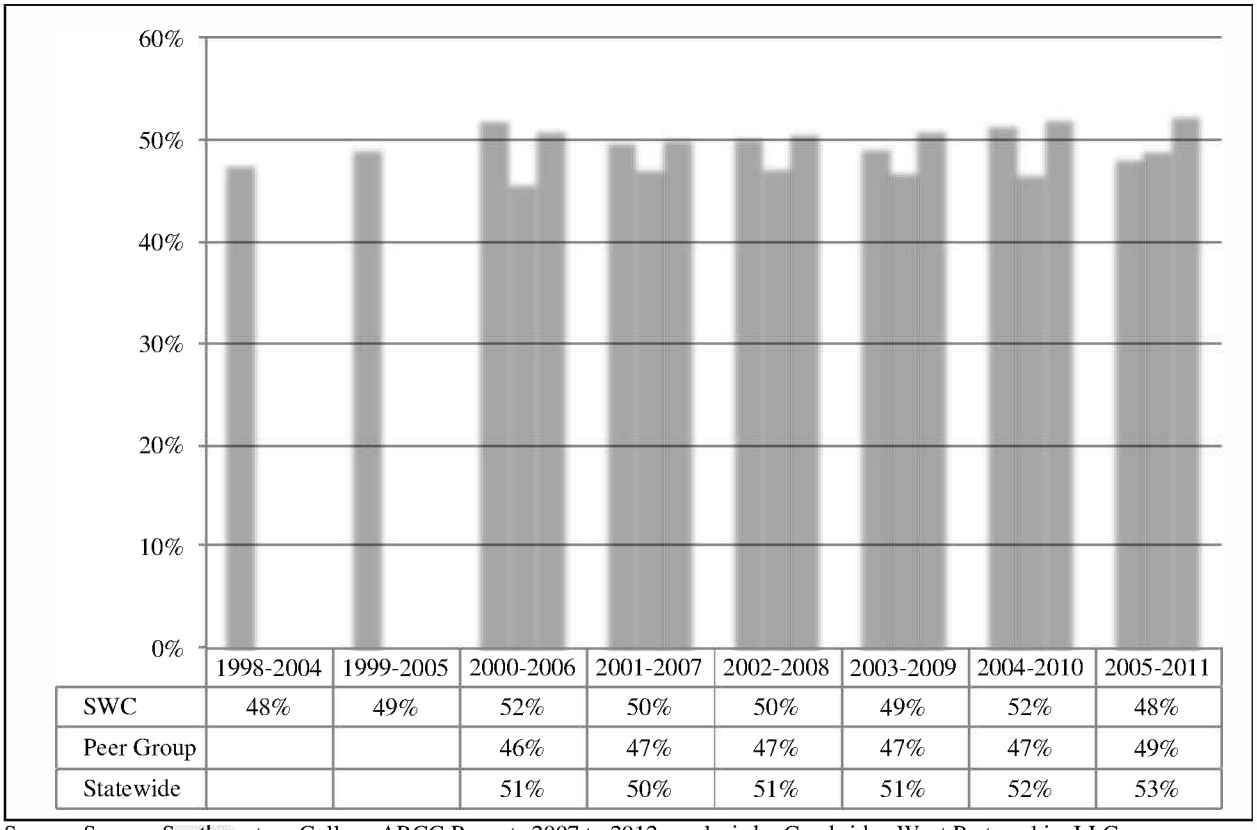
The annual ARCC reports[24] show that in recent years the SWC Student Progress and Achievement (SPAR outcome) has been on par with the statewide rate and the performance rate reported for a peer-group of California community colleges. For the cohort of students covering 2005 to 2011 the College rate slipped below that of the statewide rate by 5%. These results are based on the SPAR outcome indicator.

**Student Progress and Achievement Rate**




| | 1998-2004 | 1999-2005 | 2000-2006 | 2001-2007 | 2002-2008 | 2003-2009 | 2004-2010 | 2005-2011 |
|---|---|---|---|---|---|---|---|---|
| SWC | 48% | 49% | 52% | 50% | 50% | 49% | 52% | 48% |
| Peer Group | | | 46% | 47% | 47% | 47% | 47% | 49% |
| Statewide | | | 51% | 50% | 51% | 51% | 52% | 53% |

Source: Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

In this analysis the denominator (bottom number) of the ratio consists of first-time students in the California community college system. They were followed for a period of six academic years and placed into the denominator count if they earned 12 units and attempted a transfer math or English composition course. These students are also included in the numerator (upper number) of the ratio if they were awarded a degree or certificate, or if they became transfer directed or prepared, or actually transferred.

The number of degrees and certificates of achievement can be identified on an annual basis. These are key performance indicators that are monitored by the College. The numbers of awards decreased by 30% from 2007-08 to 2011-12. The area in which the decrease has been the greatest is the certificate requiring 6 to less than 18 units, but for which there is no Chancellor's Office instructional program approval.

[24] A copy of the current and past reports, which contain a detailed methodology section, can be extracted from http://www.cccco.edu/ChancellorsOffice/Divisions/TechResearchInfo/ResearchandPlanning/ARCC



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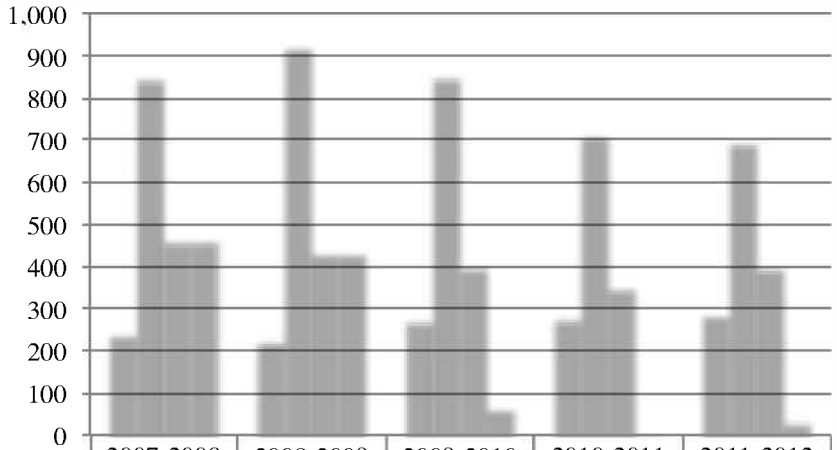
Between 2007-08 and 2011-12, the Chancellor's Office staff had shifted its public policy position regarding certificate awards requiring 12 to 17.5 units. Initially, the staff had not considered these programs for approval. During this time the staff agreed to accept program proposals for review and issued authorizations for these "lower level" certificate awards. Also, the Chancellor's Office encouraged colleges to file an application for authority to grant a certificate of achievement to those students who completed either the IGETC or the CSU GE Breadth requirements. Over this five-year period, (2008-2012) the College has conferred an average 1,685 awards annually.

**Degrees and Certificates of Achievement Awarded**




| | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 |
|---|---|---|---|---|---|
| Associate of Science (A.S.) degree | 244 | 228 | 276 | 281 | 290 |
| Associate of Arts (A.A.) degree | 851 | 924 | 854 | 714 | 698 |
| Certificate requiring 6 to < 18 semester units, Approved | 465 | 436 | 403 | 354 | 400 |
| Certificate requiring 6 to < 18 semester units, Not Approved | 465 | 436 | 67 | 6 | 35 |

Source: Chancellor's Office Data Mart and MIS Referential files; analysis by Cambridge West Partnership, LLC

The College has explored the comparative success of students in earning a degree or certificate based upon their self-reported race and ethnicity in a report updated June 2009.[25] Several groups showed a lower likelihood to earn a certificate, but the same groups earned a degree at rates equivalent to the majority.

The College has set a goal to increase the number of degrees and certificates awarded from an average (2007-08 to 2011-12) of 1,500 to 3,000 over the next two years. A more detailed view of the past awards is provided below.

[25] SWC *Student Equity Plan Status and Data Update*. June 2009



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## Details of Most Often Awarded Degrees and Certificates

| Program Type - TOP2 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | % | Average | % Change |
|---|---|---|---|---|---|---|---|---|---|
| Interdisciplinary Studies-49 | 572 | 579 | 483 | 415 | 312 | 2,361 | 32% | 472.2 | -45.5% |
| Public and Protective Services-21 | 149 | 181 | 234 | 188 | 242 | 994 | 13% | 198.8 | 62.4% |
| Health-12 | 148 | 152 | 161 | 212 | 199 | 872 | 12% | 174.4 | 34.5% |
| Business and Management-05 | 222 | 184 | 135 | 140 | 130 | 811 | 11% | 162.2 | -41.4% |
| Family and Consumer Sciences-13 | 142 | 107 | 104 | 29 | 56 | 438 | 6% | 87.6 | -60.6% |
| Engineering and Industrial Technologies-09 | 57 | 82 | 97 | 78 | 75 | 389 | 5% | 77.8 | 31.6% |
| Psychology-20 | 37 | 48 | 50 | 36 | 70 | 241 | 3% | 48.2 | 89.2% |
| Social Sciences-22 | 33 | 43 | 45 | 34 | 77 | 232 | 3% | 46.4 | 133.3% |
| Media and Communications-06 | 42 | 30 | 32 | 34 | 44 | 182 | 2% | 36.4 | 4.8% |
| Fine and Applied Arts-10 | 34 | 33 | 38 | 33 | 37 | 175 | 2% | 35.0 | 8.8% |
| Law-14 | 38 | 25 | 38 | 20 | 24 | 145 | 2% | 29.0 | -36.8% |
| Information Technology-07 | 13 | 39 | 27 | 22 | 23 | 124 | 2% | 24.8 | 76.9% |
| Humanities (Letters)-15 | 13 | 21 | 19 | 29 | 22 | 104 | 1% | 20.8 | 69.2% |

Source: MIS Referential Files; analysis by Cambridge West Partnership, LLC

After 2005-06, the College began to award Associate Degrees in specific discipline areas; therefore, the decline in Interdisciplinary Studies awards is a little misleading. Nevertheless, the three discipline areas with the most awards are Interdisciplinary Studies (32%), Public and Protective Services (13%), and Health (12%). Until 2009-10, the term Interdisciplinary Studies was used to denote the transfer preparation Associate Degree program offered by the college.

It is useful to consider the transfer experience of students who attended the College and are now enrolled at one of the two public university systems in California. This information is incorporated into the SPAR outcome measure in the ARCC framework. Over the last seven years, the College has averaged an annual transfer count of 703 students to CSU and 122 to UC. A lack of revenue being provided to the public universities has required them to restrict the number of community college transfer students they can accept. San Diego State University (SDSU), in particular, is a very impacted institution but is the primary campus to which Southwestern College students transfer. SDSU sharply curtailed the numbers of accepted transfer students in 2008-09.

The College's success in sending students to the two in-State public university systems is illustrated in the graphic below. The overall count of students who transferred in the most recent year for which data is available (2010-11) was 1,048. After a decline from 2006-07 to 2008-09, the transfers to the CSU system are starting to rebound. Transfer preparation is a major function of the community college system but acceptance of those students within the public university systems depends on the resources available to those systems.



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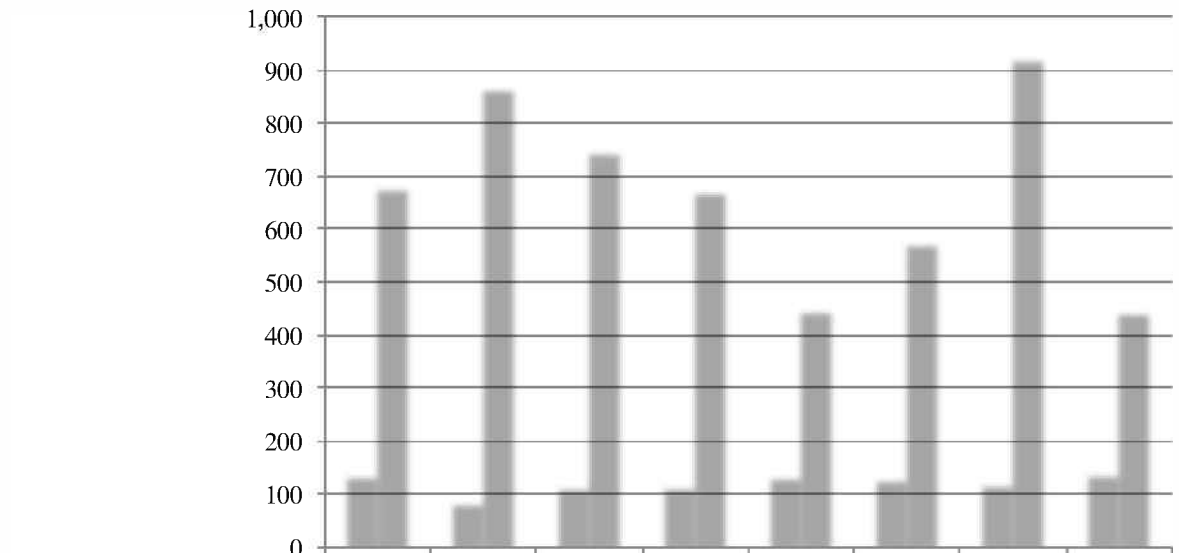
**Annual, Full-Year Transfers to CSU and UC**




| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 |
|---|---|---|---|---|---|---|---|---|
| University of California | 139 | 88 | 117 | 118 | 137 | 133 | 123 | 142 |
| California State University | 681 | 869 | 749 | 674 | 449 | 576 | 925 | 446 |

Source: California Postsecondary Education Commission, UC 2011-112source- STUDENT_UAD_ALL_APPLIC in DWH, CSU 2011-12 source- retrieved December 5, 2012 from http://www.calstate.edu/as/ccct/index.shtml; analysis by Cambridge West Partnership, LLC

As an alternative, transfer-bound students from the College have been seeking entrance to in-state private institutions and out-of-state schools. The number of students from the College who have successfully transferred to in-state private or out-of-state institutions has been steadily climbing over the academic years for which data is available (2009-10 is the most recent year). On average, from 2004-05 to 2009-10, the College annually has sent 501 students to private institutions in the state and 227 students to out-of-state schools. From 2004-05 to 2009-10, there has been a 64% increase in the numbers of students accepted at in-state private schools and a 52% increase in the numbers accepted at out-of-state institutions.

Among the in-state private schools, the most popular are: (1) University of Phoenix (annual average of 250 students); (2) National University (annual average of 139 students); (3) ITT Technical Institute (annual average of 29 students); (4) New School of Architecture and Design (annual average of 26 students); and (5) University of San Diego (annual average of 20 students). Over this period of time, the leading out-of-state institutions are (1) Ashford University, a large provider of distance education located in Iowa, (annual average of 39 students); (2) University of Maryland-University College (annual average of 14 students); and (3) Excelsior College, a New York institution providing distance education (annual average of 11 students). Ashford is owned by the Bridgeport Education Inc., an organization based in San Diego.



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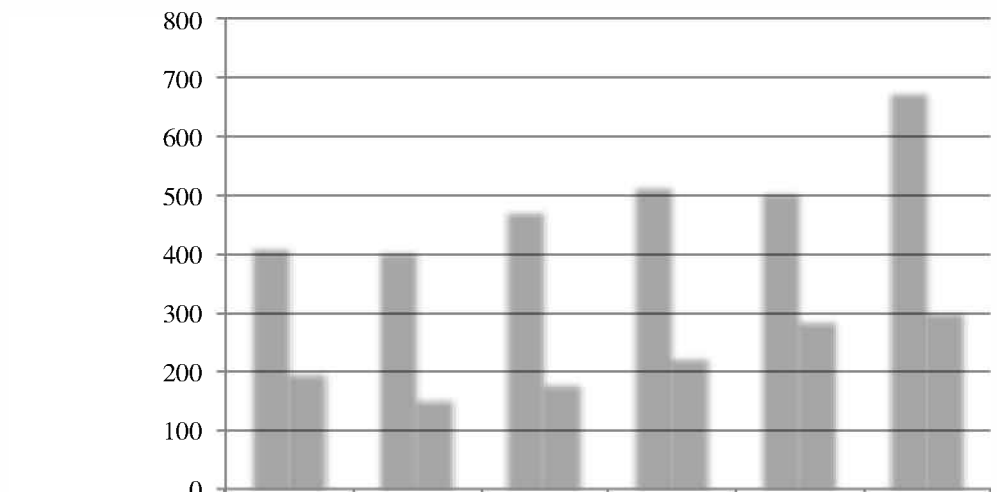
**Full-Year Transfers to Out-of-State (OOS) and In-State Private (ISP) Schools**




| | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 |
|---|---|---|---|---|---|---|
| In-State Privates | 415 | 408 | 477 | 519 | 508 | 679 |
| Out-of-State | 201 | 157 | 183 | 227 | 290 | 305 |

Source: California Community College Chancellor's Office, Research, Analysis and Accountability Unit Reports; analysis by Cambridge West Partnership, LLC

The analysis above considers the transfer phenomenon from the perspective of a transition year in which the community college student effects a transition to a four-year institution by enrolling in the senior institution. The analysis does not consider the length of time it took the community college student to complete the preparation for transfer, then to make the transfer to the four-year school. If a cohort approach were taken to the transfer phenomenon, some additional insights come to light. A cohort methodology has been developed by the Chancellor's Office. The method tracks cohorts of first-time community college students for six years to determine if they show "behavioral intent to transfer". A student becomes eligible to potentially enter a transfer cohort by enrolling for the first time at any California Community College (CCC). Students may be concurrently enrolled in high school (aka "special admits"), may be high school dropouts, or may be high school graduates at the time of their initial enrollment. Students are assigned a cohort year according to the academic year in which they first enroll at a CCC. Transfer cohort students are attributed uniquely to one "home" community college based on where they earned most of their units.

The initial group or cohort of first-time students is evaluated six years after initial enrollment in order to determine if they have shown behavioral intent to transfer. If by six years after initial enrollment a student has completed twelve credit units and attempted transfer-level math or English, the student then enters into the transfer cohort and that student's transfer outcome is calculated for a variety of time frames ranging from three years after initial enrollment to as high as sixteen years after initial enrollment, time allowing. More recent cohorts will have a smaller range of time windows available with the more recent cohort showing transfer rates for just three years, four years, five years, etc. after initial enrollment at a CCC.



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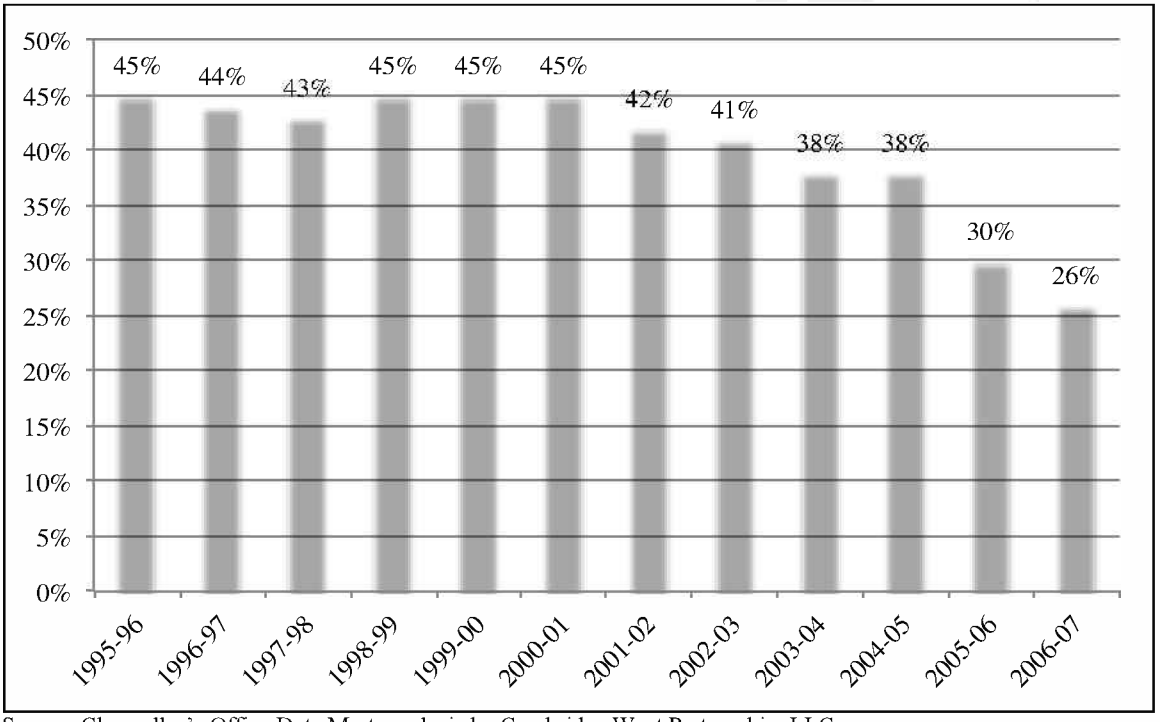
The outcome is transfer to a four-year institution within a given time period subsequent to initial enrollment. A data match with the National Student Clearinghouse (NSC), University of California (UC) and California State University (CSU) provided information on the enrollment of former CCC students at public and private four-year transfer institutions within the United States.[26]

Past research sponsored by the Chancellor's Office has generally concluded that most students complete the transfer process by year six after their initial enrollment.[27] An extended analysis of Southwestern College transfer data suggests that indeed after the sixth year, the trend of steady increase in the numbers of students who transfer begins to reverse. However, students from the initial cohort do continue to transfer and their cumulative numbers do drive the transfer rate higher than is generally publicized. As illustrated below, when students are followed for an extended period of time as many as 45% of the cohort does in fact transfer.

**Extended Transfer Rates, 1995-96 to 2006-07 SWC Cohorts**




Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC

[26] Transfer Methodology document retrieved on September 5, 2012 from http://datamart.cccco.edu/Outcomes/Transfer_Velocity.aspx

[27] Bahr, P., Hom, W., & Perry P. (2005). College Transfer Performance: A Methodology for Equitable Measurement and Comparison, *Journal of Applied Research in the Community College*, 13(1), 73-87



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However, when the transfer time frame is constrained to six years, on average only 30% of the students complete the transfer.

**Six-Year Transfer Rates, 1995-96 to 2006-07 SWC Cohorts**

| Cohort Yr | Cohort Size | 6 Yrs, # Transferred | 6 Yrs, % of Cohort Transferred | 6 Yrs, % of Cohort Not Transferred |
|---|---|---|---|---|
| 1995-96 | 2,462 | 702 | 29% | 71% |
| 1996-97 | 2,455 | 654 | 27% | 73% |
| 1997-98 | 2,467 | 696 | 28% | 72% |
| 1998-99 | 2,429 | 713 | 29% | 71% |
| 1999-00 | 2,617 | 822 | 31% | 69% |
| 2000-01 | 2,688 | 844 | 31% | 69% |
| 2001-02 | 2,671 | 881 | 33% | 67% |
| 2002-03 | 2,904 | 916 | 32% | 68% |
| 2003-04 | 2,492 | 776 | 31% | 69% |
| 2004-05 | 2,554 | 835 | 33% | 67% |
| 2005-06 | 2,548 | 773 | 30% | 70% |
| ***Average*** | ***2,572*** | ***783*** | ***30%*** | ***70%*** |

Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC

In the June 2009 Student Equity Report the College concluded that transfer rates reflected a disparity among several racial/ethnic groups where transfer had been reported as a goal. Latino, ESL, disabled and low-income students had lower transfer rates than other groups.

The College is also substantially above the statewide performance level on the ARCC indicator of the "Percent of Students Earning 30 units". For career and technical education students who neither transfer to a four-year institution nor receive an award from the community college, the completion of 30 units translates to substantial gains in wages upon leaving college.[28] Two years after leaving the community college, these students have been shown to earn about as much as the vocational student who completes an occupational degree or certificate. For those students intending to transfer, completing 30 credit hours is an important momentum milestone because it indicates that they are halfway to the transfer point.

[28] Brian Bosworth *Certificates Count: An Analysis of Sub-baccalaureate Certificates*. (Washington, DC: Complete College America, 2010); Louis Jacobsen and Christine Mokher *Pathways to Boosting the Earnings of Low-income Students by Increasing their Educational Attainment* (Washington, DC: Hudson Institute Center for Employment Policy and CNA Analysis and Solutions, 2009); Tom Bailey. al.al. *The Return to a Sub-baccalaureate Education: The Effects of Schooling, Credentials and Program of Study on Economic Outcomes* (Washington, DC: U.S. Department of Education, 2004); Dana Furchtgott-Roth. al. *Strengthening Community Colleges' Influence on Economic Mobility* (Washington, DC: The Pew Charitable Trusts, 2009); and Davis Jenkins *A Short Guide to "Tipping Point" Analyses of Community College Student Labor Market Outcomes* (New York, NY: Columbia University, Teachers College, Community College Research Center Research Brief #3, April 2008)



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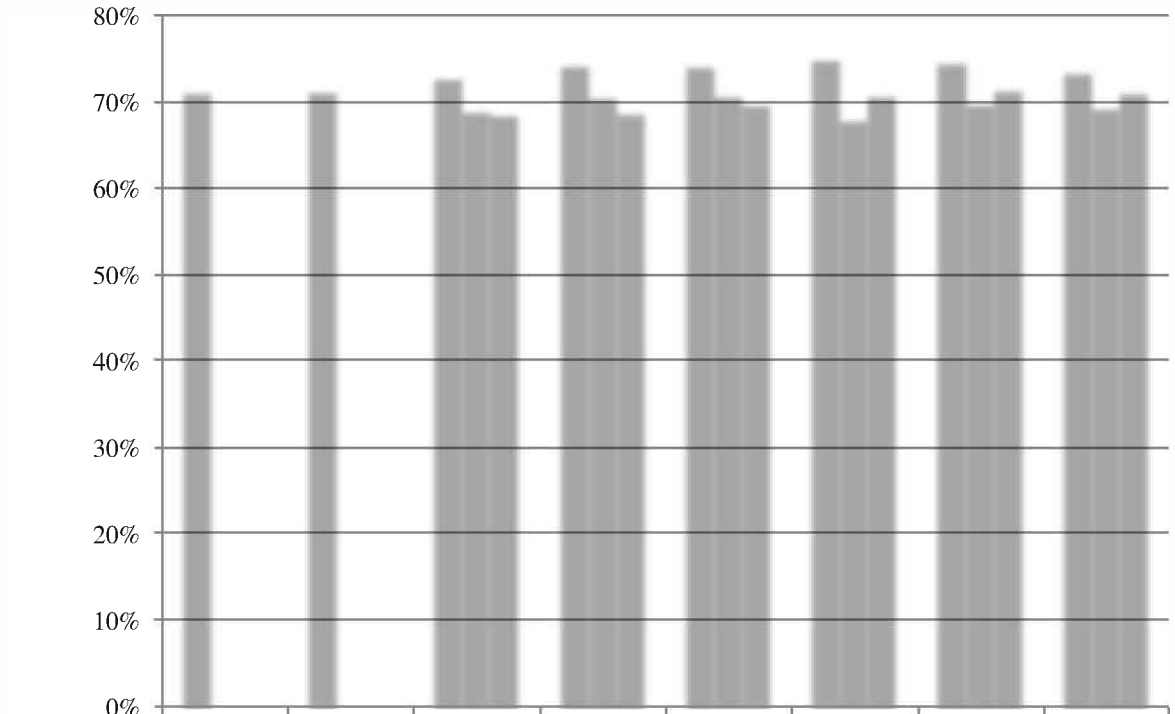
**Percent of Students Who Earned at Least 30 Units**




| | 1998-2004 | 1999-2005 | 2000-2006 | 2001-2007 | 2002-2008 | 2003-2009 | 2004-2010 | 2005-2011 |
|---|---|---|---|---|---|---|---|---|
| SWC | 72% | 72% | 73% | 75% | 74% | 75% | 75% | 74% |
| Peer Group | | | 69% | 71% | 71% | 68% | 70% | 70% |
| Statewide | | | 69% | 69% | 70% | 71% | 72% | 71% |

Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

In this analysis, the denominator of the ratio is the same as the student progress and achievement indicator. The students who successfully complete 30 credit hours are the only students included in the numerator.

Another outcome found in the ARCC framework is the percentage of students who begin as a cohort in one fall term and remain enrolled the following fall semester. Over the period of time from fall 2004 to 2010 the College has done better than its peer group and the statewide experience.



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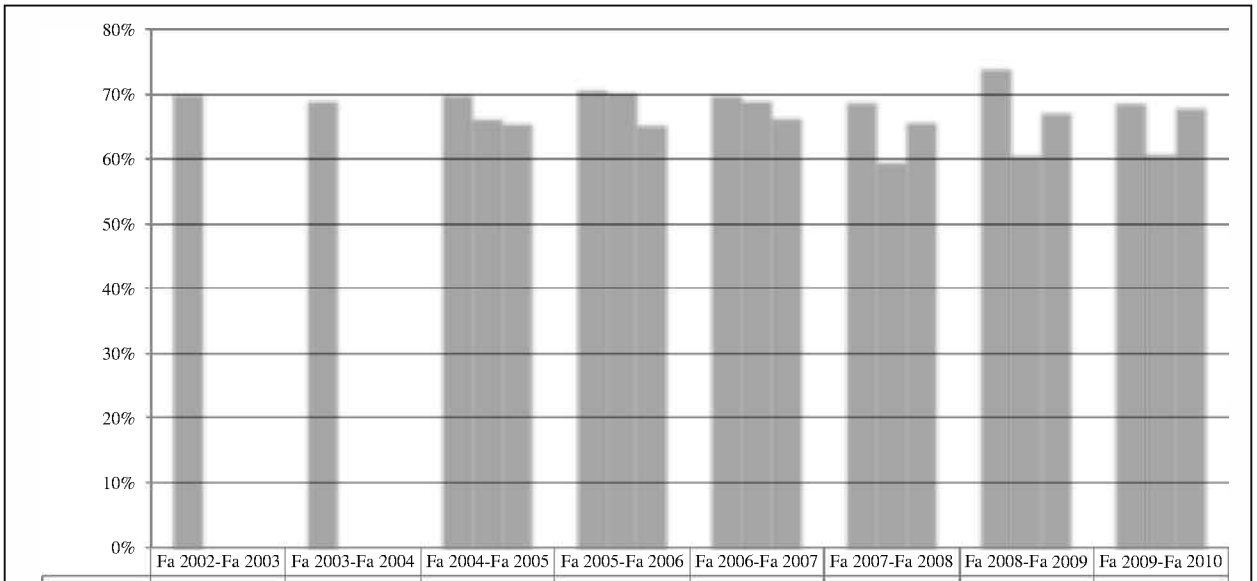
**Fall Term Persistence**




| | Fa 2002-Fa 2003 | Fa 2003-Fa 2004 | Fa 2004-Fa 2005 | Fa 2005-Fa 2006 | Fa 2006-Fa 2007 | Fa 2007-Fa 2008 | Fa 2008-Fa 2009 | Fa 2009-Fa 2010 |
|---|---|---|---|---|---|---|---|---|
| SWC | 70% | 69% | 70% | 71% | 70% | 69% | 74% | 69% |
| Peer Group | | | 67% | 71% | 69% | 60% | 61% | 61% |
| Statewide | | | 66% | 66% | 67% | 66% | 68% | 68% |

Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

In future years the state-sponsored accountability framework for the California community colleges will continue to focus on the fall to fall persistence rate, but will be adding an extended persistence view that includes a third primary semester for a total of 18 months. The College has not yet set a key performance indicator goal for basic skills successful course completion rate.

A common measure of organizational performance is the success rate of students enrolled in the credit instructional program. The rate is calculated by comparing the number of students who earned a grade of C or better to the number of all students who were still enrolled after the normal add and drop period ended. Students attending the College have had steady increases in the amount of success they have experienced in their courses with the exception of transferable curriculum.



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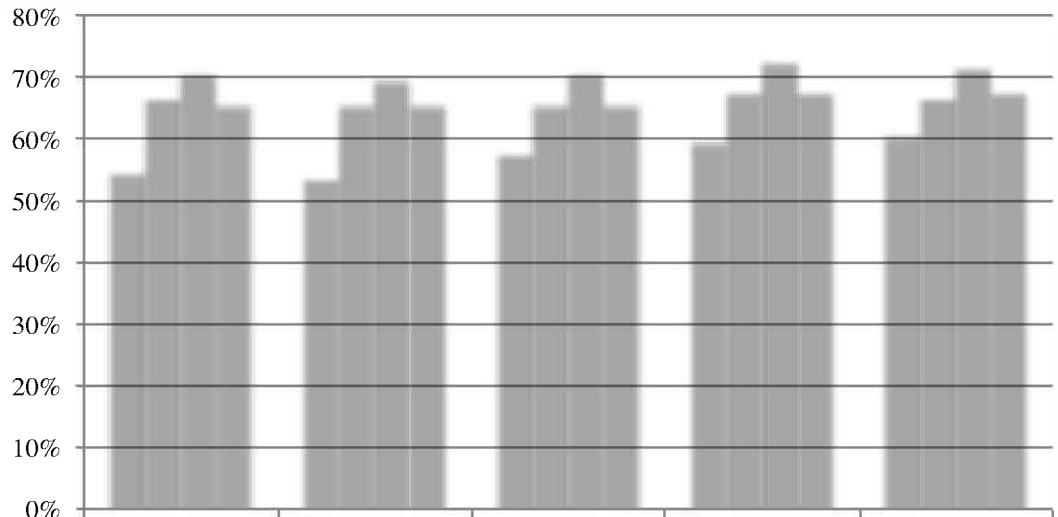
**Fall Term Student Success Rates Overall and by Type of Course**




| | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|
| Basic Skills | 55% | 54% | 58% | 60% | 61% |
| Transferable | 67% | 66% | 66% | 68% | 67% |
| Vocational | 71% | 70% | 71% | 73% | 72% |
| Overall | 66% | 66% | 66% | 68% | 68% |

Source: Chancellor's Office Data Mart; analysis by Cambridge West Partnership, LLC

The June 2009 Student Equity Report documented some success disparities among various groups of students based on their self-reported race/ethnicity. With respect to successful basic skills course completion, there was evidence of a disparity among American Indian/Alaskan Native students and Pacific Islander students. However, the size of these two groups is very small. Differences were also found based on gender, with male students generally succeeding at lower rates than female students. Among all degree applicable courses, Pacific Islander students did not succeed as well as other groups. In this slice of curriculum, female Asian and Black students as well as ESL students outperformed male students. There was no significant disparity found among groups enrolled in transfer or vocational courses. In both curriculum areas, males were less successful, but the difference compared to females was less than 10%.

Although it is not a part of the ARCC reporting framework, the College has considered the differences in outcomes based on the mode of instructional delivery: online, hybrid and face-to-face instruction. A study of course offerings from fall 2010 to summer 2012 was completed and produced the following summary evidence.



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**Course Success Based on Method of Instruction**

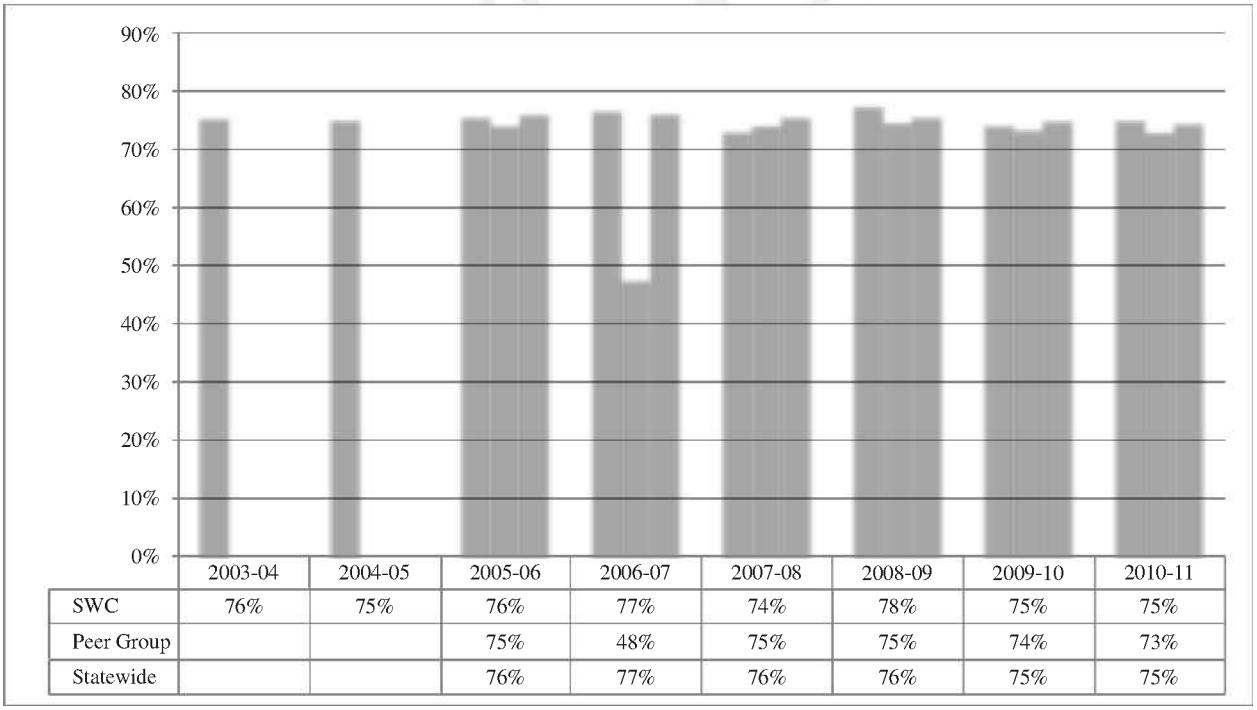
| | Method of Instruction | | | |
|---|---|---|---|---|
| **Outcome** | **Online** | **Hybrid** | **Fact-to-face** | **Total** |
| Course Completion | 81.2% | 81.3% | 81.7% | 81.6% |
| Course Success | 60.7% | 62.4% | 65.8% | 65.1% |
| Course GPA | 2.47 | 2.55 | 2.63 | 2.61 |

Source: SWC Office of Grants, Research and Planning. *Comparison of Hybrid, Online and Lecture (Face-to-Face) Courses.* December 2012

On an annualized basis the ARCC reporting framework provides an opportunity to view the performance of the College compared to a peer group using the credit vocational and credit basic skills success rates. Students at the College who are enrolled in career and technical education curriculum are succeeding at a higher rate than is the case at peer colleges from 2005-06 to 2010-11 and generally on par with the statewide student experience.

In this analysis the denominator of the ratio consists of students enrolled in one or more credit career and technical education courses during 2005-06 through 2010-11. Successful students, defined as those who earned a final course grade of A, B, C or pass, are also placed into the numerator count.

**Annual Credit Vocational Successful Course Completion Rate**




| | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|
| SWC | 76% | 75% | 76% | 77% | 74% | 78% | 75% | 75% |
| Peer Group | | | 75% | 48% | 75% | 75% | 74% | 73% |
| Statewide | | | 76% | 77% | 76% | 76% | 75% | 75% |

Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

The College has not yet set a key performance indicator goal for vocational course successful course completion rate.



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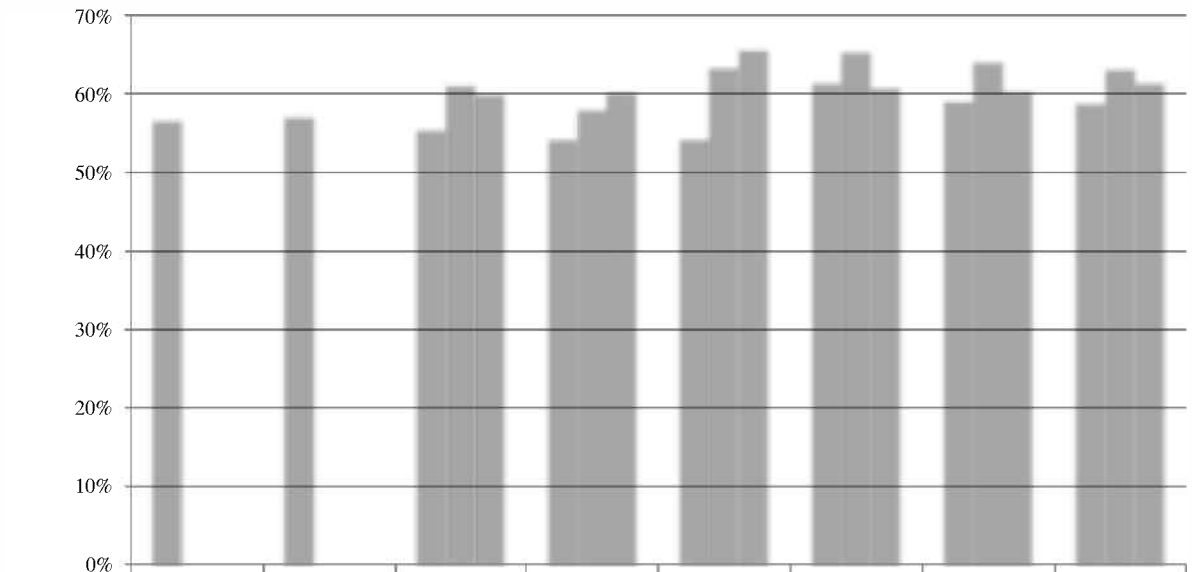
As expressed in the ARCC framework on an annualized basis, students enrolled in basic skills curriculum at SWC were less successful compared to students enrolled at colleges in the peer group. They were also less successful on the statewide performance Basic Skills Credit Course Success Rate indicator.

In this analysis, the denominator of the ratio consists of students enrolled in one or more credit non-degree applicable basic skills courses during 2005-06 through 2010-11. Successful students, defined as those who earned a final course grade of A, B, C or pass, are also placed into the numerator count. This performance indicator is important because many incoming students are placed into basic skills curriculum in English composition (34%), reading (36%), and math (98%).

**Annual Credit Basic Skills Successful Course Completion Rate**




| | 2003-04 | 2004-05 | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|---|---|
| SWC | 57% | 57% | 56% | 55% | 55% | 62% | 59% | 59% |
| Peer Group | | | 61% | 58% | 64% | 66% | 64% | 64% |
| Statewide | | | 60% | 61% | 66% | 61% | 61% | 62% |

Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

The College has not yet set a key performance indicator goal for the basic skills successful course completion rate.

The June 2009 Student Equity Report concluded that disabled students and most racial and ethnic groups showed a success rate lower than 80% of the majority group in basic skills mathematics. A similar trend was found in basic skills English curriculum, but the disparity was not as severe as the mathematics case.

As expressed in the ARCC framework, in the 2008-2011cohort the College had slightly higher than statewide performance levels on the Basic Skills Improvement Rate (60%) indicator. In this analysis the denominator of the ratio consists of students enrolled in one or more credit basic



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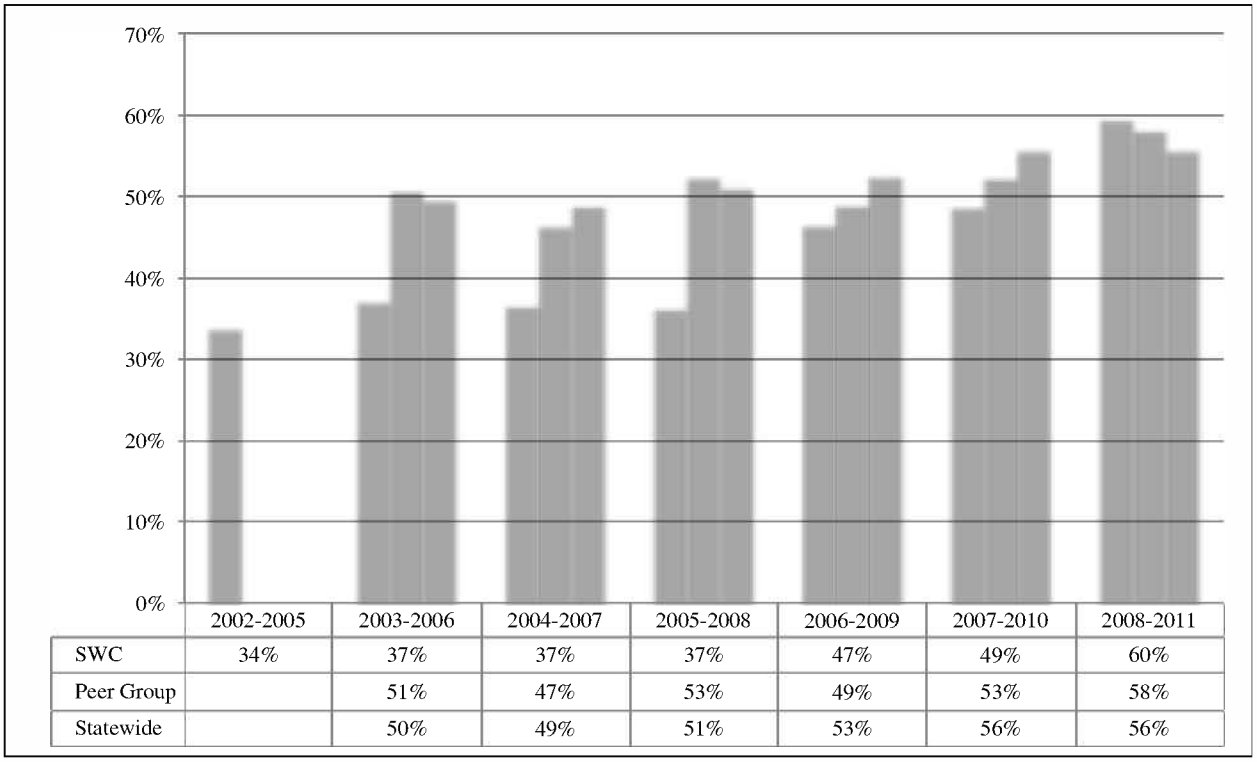
skills math, English composition, or reading courses below the transfer level during 2003-04 to through to 2008-09. Successful students were defined as those who earned a final course grade of A, B, C or pass. They were followed respectively for three academic years (e.g. 2006-07 to 2008-09), including the term of qualifying enrollment, and placed into the numerator count if they successfully completed a higher-level course in the same discipline.

**Basic Skills Credit Course Improvement Rate**




| | 2002-2005 | 2003-2006 | 2004-2007 | 2005-2008 | 2006-2009 | 2007-2010 | 2008-2011 |
|---|---|---|---|---|---|---|---|
| SWC | 34% | 37% | 37% | 37% | 47% | 49% | 60% |
| Peer Group | | 51% | 47% | 53% | 49% | 53% | 58% |
| Statewide | | 50% | 49% | 51% | 53% | 56% | 56% |

Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

The College has embraced a key performance indicator goal in the area of credit basic skills improvement rate to advance as many students as possible from two-levels below college-level instruction in English, reading and mathematics to college-level instruction.

As expressed in the ARCC framework, in the 2008-2011cohort the College had slightly higher than statewide performance levels on the ESL Improvement Rate (54%) indicator. In this analysis the denominator of the ratio consists of students enrolled in one or more credit ESL courses below the transfer level during 2002-03 to through to 2008-09. Successful students were defined as those who earned a final course grade of A, B, C or pass. They were followed respectively for three academic years (e.g. 2006-07 to 2008-09), including the term of qualifying enrollment. These students were placed into the numerator count if they successfully completed a higher-level course in the same discipline.



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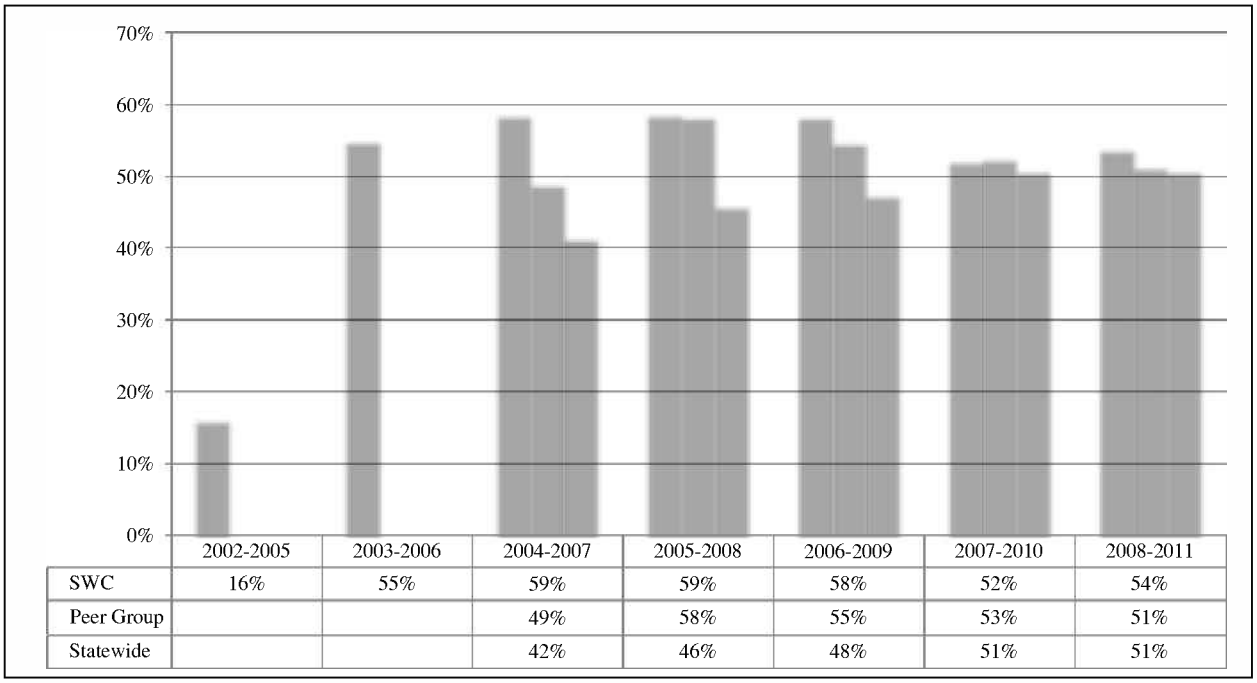
**English as a Second Language Credit Course Improvement Rate**




| | 2002-2005 | 2003-2006 | 2004-2007 | 2005-2008 | 2006-2009 | 2007-2010 | 2008-2011 |
|---|---|---|---|---|---|---|---|
| SWC | 16% | 55% | 59% | 59% | 58% | 52% | 54% |
| Peer Group | | | 49% | 58% | 55% | 53% | 51% |
| Statewide | | | 42% | 46% | 48% | 51% | 51% |

Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

In recent years, the College has reconfigured the ESL curriculum. The intent is to prepare students for collegiate-level academic curriculum. In some cases the "behind the scenes" curriculum hierarchy coding that influences these data may not have kept pace with the curriculum changes. As a result, these data should be interpreted with caution.

The College has set a goal to increase the number of students who begin at the mid-level of the ESL program and successfully move them to college-level English or reading.

Although not all colleges have offered a career development and college preparation curriculum, the College has sponsored several of these programs. The ARCC framework considers the effectiveness of these programs with an outcome measure. That measure is expressed as the percentage of a cohort of first-time students who in their initial term at a CCC or their initial term plus the successive term (fall to spring, spring to fall, fall to winter, etc.) complete a minimum of 8 attendance hours in any single Career Development and College Preparation (CDCP) course or series of CDCP courses and who did NOT enroll in any credit course(s) in their first term, who are shown to have achieved ANY of several outcomes within three years of entry. The framework provides for an outcome measure that requires a student in the cohort to successfully achieve one or more of the following six outcomes within the cohort period: (1) complete a degree-applicable credit course, excluding PE; (2) become transfer directed; (3) become transfer prepared; (4) earn an Associate Degree; (5) earn a certificate; or (6) transfer to a four-year institution. Comparisons to other peer colleges or statewide is not available.



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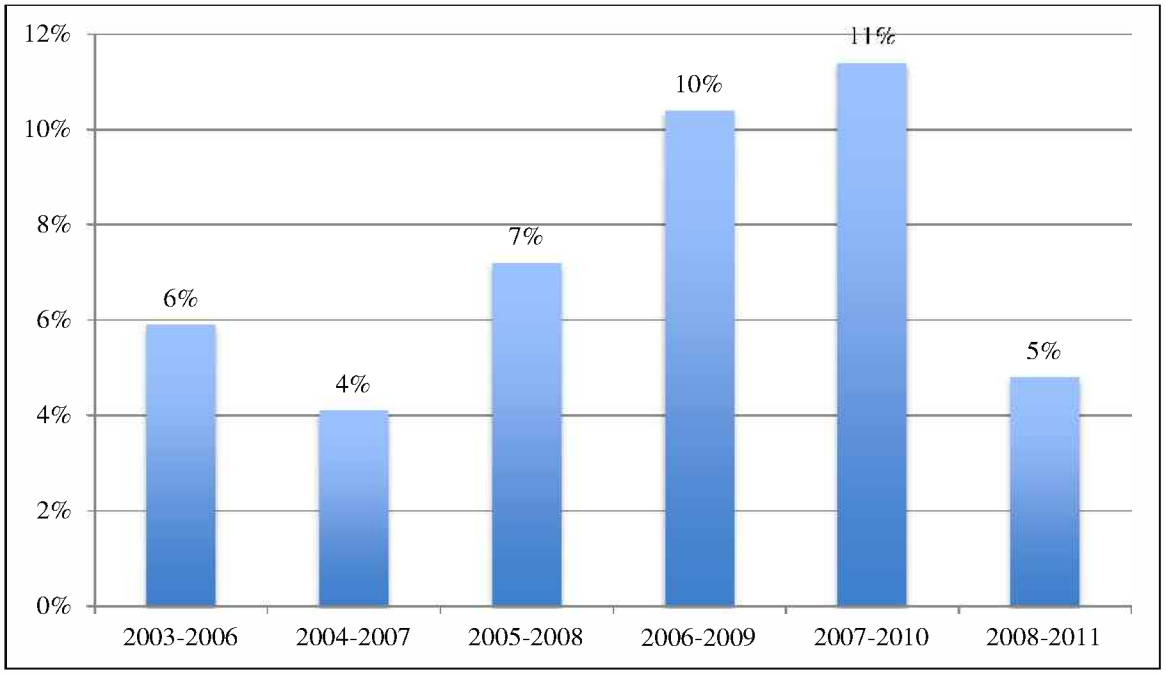
**Career Development and Career Preparation (CDCP) Outcomes**




Source: Southwestern College ARCC Reports 2007 to 2012; analysis by Cambridge West Partnership, LLC

Basic Skills Initiative

The Board of Governors earmarked funds for a system-wide basic skills instructional improvement effort. Dollars were allocated to each college based on the FTES generated from courses marked as basic skills.

To address the needs of basic skills students the College has funded a variety of projects using targeted basic skills funding. The Basic Skills Initiative Steering Committee (BSI-SC) began work at the end of Fall 2007 with the goal of moving basic skills instruction to the forefront of SWC institutional priorities. The BSI-SC promoted strategies that were highly coordinated and integrated the areas of instruction, student services, and supplementary services to further the academic success of this student population.

The group completed the required self-assessment to establish a baseline measure and document how the current College practices fit with and reflect the findings from the literature regarding effective practices for basic skills students.[29] A Blackboard BSI-SC site was created to be a central place for input and dissemination of relevant information. At that time, funds were designated for ongoing projects, with subsequent approval by the Superintendent/President. Faculty was surveyed to identify strategies they employed to address academic issues related to basic skills students in their classes. A Five-Year Plan was crafted in 2007-08 to guide the work in this area.

[29] Research and Planning Group of the California Community Colleges. *Basic Skills as a Foundation for Success in the California Community Colleges.* July 2007.



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The funded institutional responses followed the suggestions in the Basic Skills as a Foundation for Success in the California Community Colleges. That is to say, steps have been taken with regard to organizational and administrative practices. Various program components have been tried, professional development has been afforded to faculty and staff, and several instructional practices have been altered. Periodic evaluations and reports to the Chancellor's Office on how funds have been allocated, mark the trail of efforts over the years.[30] Early in the efforts, the College made a commitment to hire five full-time faculty members exclusively to teach basic skills curriculum. Unfortunately, the amount of dedicated funding for basic skills interventions has dwindled since the initial years.

Several interventions proved to be helpful in promoting student success and retention. Preparation, Achievement, Interdependence, Responsibility (PAIR) learning communities matched a discipline course with a learning skills course. Initially, they were taught with a team of instructors but more recently taught by the same instructor. Supplemental instruction (power study program) was added to the PAIR curriculum package. The learning community strategy also included counseling, support, tutorial services through a Power Study Program (supplemental instruction) and other program elements. Evaluations have demonstrated the very positive impacts of that intervention for students who participated compared to those who used the services minimally or not at all.

The ESL department used this approach as it worked through a redesign of the curriculum sequence to focus on Learning English for Academic Purposes (LEAP). Reflection on the results of some efforts has encouraged the College leadership to believe that a stronger link between the ESL program and student services at the earliest stage possible would be helpful to those students. Were it not for the basic skills initiative funding this curriculum redesign likely would not have been possible.

As is the case with most institutions of higher learning in the United States, most basic skills students are challenged to master the fundamentals of mathematics. A migration study of students in the basic skills math sequence has documented the difficulty in getting students through the early math sequence and into Math 60, Intermediate Algebra, needed for graduation with the Associate Degree. Evaluation studies have indicated that the PAIR course strategy does help with the persistence problem, although only a few sections can be offered using that strategy. Over the years the mathematics faculty have approached the challenges of learning mathematics by creating a departmental final exam and studying those assessment results for clues to further enhancements, implementing a technology-based, interactive instructional delivery mode, offering modularized units of study, and creating curriculum alternatives that include an optional laboratory course.

The long-run goals of the College are:

1. To get the number of students who begin two levels below College level curriculum in the basic skills disciplines to successfully complete college-level instruction in English, reading, and mathematics.
2. To increase the number of students who begin at the mid-level of the ESL program and successfully progress to college-level English or reading.

[30] SWC *Basic Skills Initiative Annual Reports, 2008-09 through 2011-12*



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Licensure and Certification Pass Rates
The College offers several career and technical education programs that prepare students for required licensure and /or certification examinations in their fields of study. These include Associate Degree (RN) and Vocational Nursing, Certified Nursing Assistant, Dental Hygiene, Paramedic, Emergency Medical Technician. Recent exam pass rate data is provided below to illustrate the quality of these programs.

**Licensure Exam Pass Rates**

| Program | 2010-11 | 2011-12 |
|---|---|---|
| Certified Nursing Assistant | 95% | 95% |
| Dental Hygiene | 100% | 100% |
| Licensed Vocational Nursing | 78% | 78% |
| Associate Degree Nursing | 74% | 83% |
| Emergency Medical Technician | 78% | 72% |
| Paramedic | 86% | 100% |
| Medical Laboratory Technician | 95% | 100% |

Source: SWC Annual Reports to ACCJC and Office of Instructional Support Services

Student Learning Outcomes
The College began its work on student learning outcomes in 2003. When the academic program review process was revised in 2005 learning outcomes was added as a component. Increased attention to faculty training was given between 2004 and 2006. By 2007 the CurricuNET software was being used to capture and map learning outcomes from course to program to the institutional level. During the 2008-09 academic year, attention was given to student services learning outcomes and administration unit outcomes. Program learning outcomes were revisited for degrees, certificates, transfer plans and life-long learning. In 2009 the eLumen software program was adopted as a tool to track learning outcomes work, but was not fully implemented until 2011. An important feature of this software is that it allows assessment work completed on individual course learning outcomes to be rolled up to program and institutional outcomes based upon the curriculum mapping that the faculty have completed.

In fall 2012 the College reported its learning outcomes and the assessment of learning activities as being in the proficiency stage of a rubric prepared by the Accrediting Commission for Community and Junior Colleges (ACCJC).[31] The College's mission statement begins, "Southwestern Community College District promotes student learning and success by committing to continuous improvement that includes planning, implementation and evaluation." The progress the College has achieved in articulating and assessing learning outcomes is illustrated in the graphic below.

[31] Southwestern College. *Student Learning Outcomes Status Report,* October 2012



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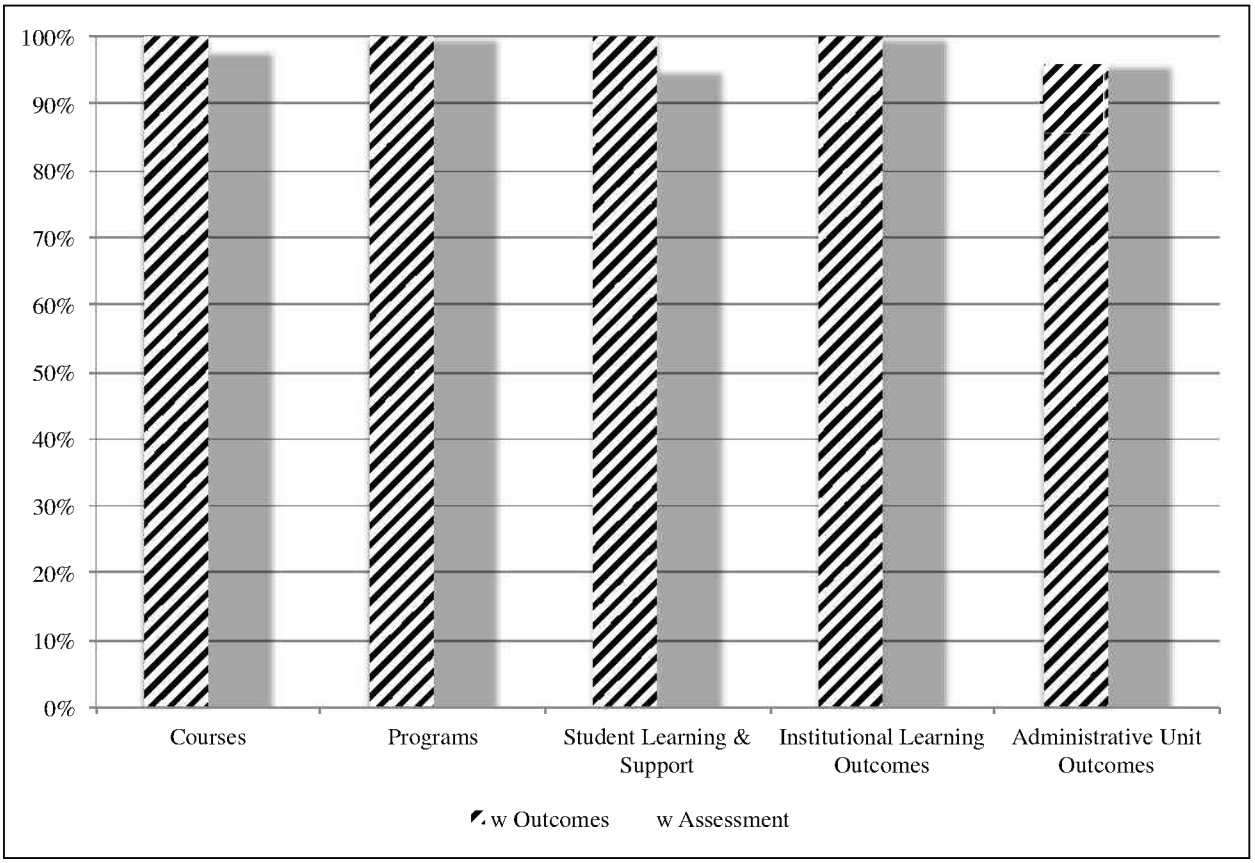
**Percent of SLO Assessments in Evidence**




Source: Southwestern College Student Learning Outcomes Status Report, October 2012

All courses have student learning outcomes (SLOs) and all but two percent have completed an assessment with a plan for improvement. All programs have program level learning outcomes (PLOs) and all have completed assessment with associated plans for improvement. All units in student services have articulated outcomes and all but two have conducted assessment work with related plans for improvement. A few of the student services units have completed three cycles of assessment. Of the 49 administrative units at the college, 47 have administrative unit outcomes and have assessed them. All of the courses offered at the College have had their outcomes mapped to one or more of the eleven institutional learning outcomes (ISLOs).
As illustrated below, most (45,686 scores in 2011-12) of the assessment work has been concentrated on ISLO #5, "assess and analyze data and information as they investigate issues and solve problems." The second most popular (30,390 scores in 2011-12) ISLO was #2, "present their ideas in a clear and organized way to others." The third most popular (22,648 scores in 2011-12) ISLO was #4, "formulate and share ideas, analyze data and information as they analyze ideas of others integrate them into their thinking." ISLO #1 falls within the communications cluster of learning outcomes while both ISLO #4 and #5 fall into the thinking and reasoning cluster of learning outcomes.



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## Institutional Learning Outcomes, Level of Effort 2011-2012

| | | Total Number of Scores |
|---|---|---|
| **Communication Skills (Listening, Speaking, Reading, Writing)** | | |
| ISLO #1 | Listen and speak actively and critically to identify a person's position and then analyze it to determine its quality. | 3,459 |
| ISLO #2 | Present their ideas in a clear and organized way to others. | 30,390 |
| ISLO #3 | Analyze and evaluate text in writing. | 8,824 |
| **Thinking and Reasoning (Creative Thinking, Critical Thinking, Quantitative Reasoning)** | | |
| ISLO #4 | Formulate and share ideas, analyze the ideas of others integrate them into their thinking. | 22,648 |
| ISLO #5 | Assess and analyze data and information as they investigate issues and solve problems. | 45,686 |
| ISLO #6 | Use quantitative reasoning to identify, analyze and solve quantitative problems. | 5,912 |
| **Information Competency (Research and Technology)** | | |
| ISLO #7 | Research topics by identifying, analyzing and assessing the ideas from a variety of sources to conduct research. | 5,816 |
| ISLO #8 | Students will use print material and technology to identify research needs and develop and evaluate information effectively and responsibly. | 8,473 |
| **Global Awareness (Social, Cultural and Civic Responsibility)** | | |
| ISLO #9 | Collegially work with diverse groups of people. | 2,437 |
| ISLO #10 | Identify and examine the cultural values of different ethic groups in a sensitive and respectful manner. | 5,121 |
| ISLO #11 | Analyze and assess historical, political, economic, scientific and social issues in a way that enables them to participate in their community, nation and world. | 2,837 |

Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

Student work was evaluated by faculty using a rubric that ranged from mastery down to no proficiency with respect to the expected learning outcome performance. The scores when summarized by level of proficiency for the communications cluster of three ISLOs were quite high.

For example, when the portion of the students that were rated as having achieved mastery, high proficiency, or proficiency are added together for the first ISLO, the combined total represents 92% of the scores. When the same rating categories are combined for ISLO two, the total represents 83% of the scores. ISLO three is the lowest combined rating, but these three categories account for 76% of the scores.



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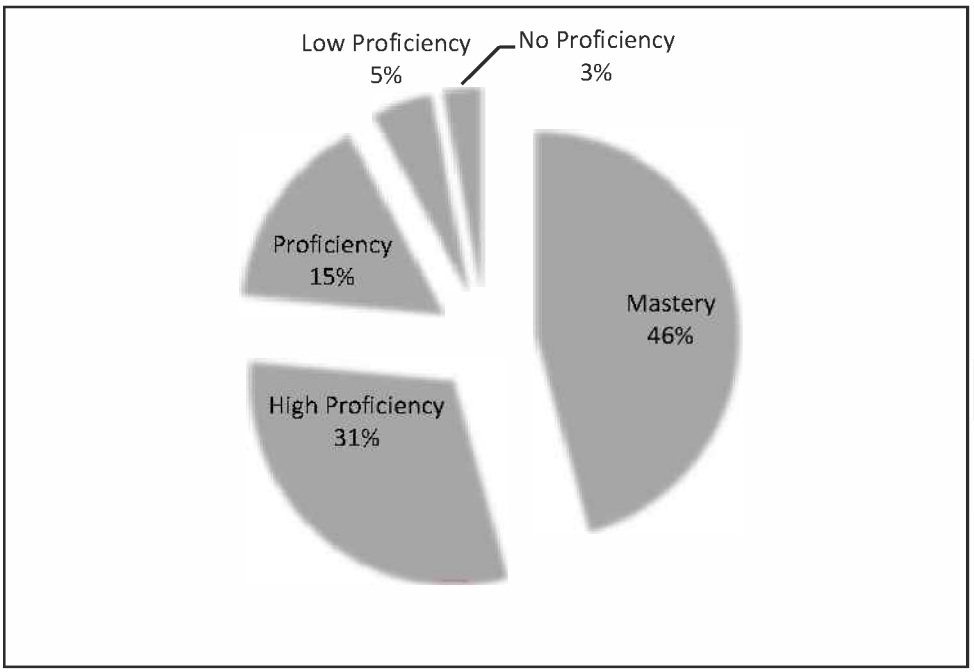
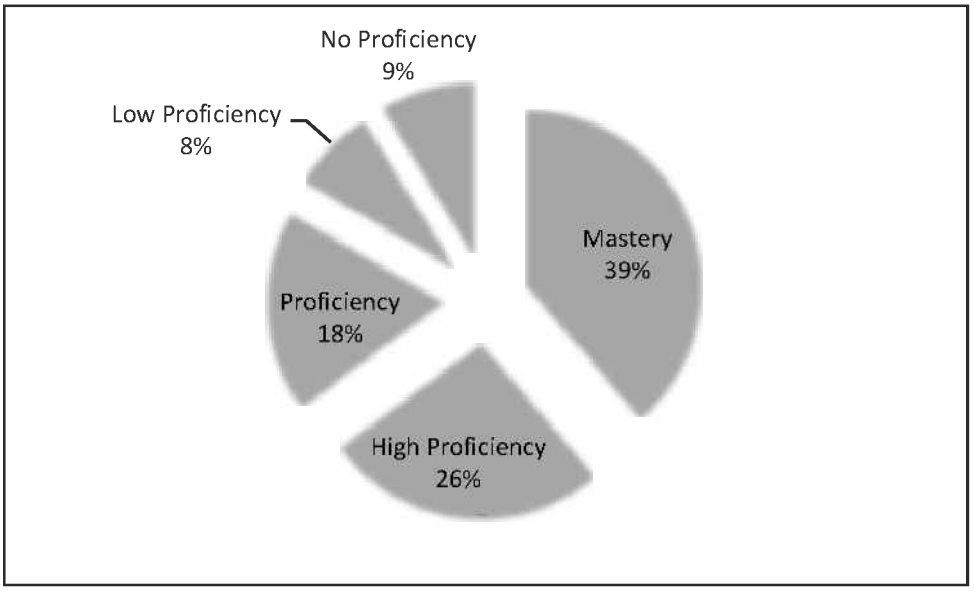
**ISLO #1, Listen and speak actively and critically in order to identify a person's position and then analyze it to determine its quality, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

**ISLO #2, Present their ideas in a clear and organized way to others, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership



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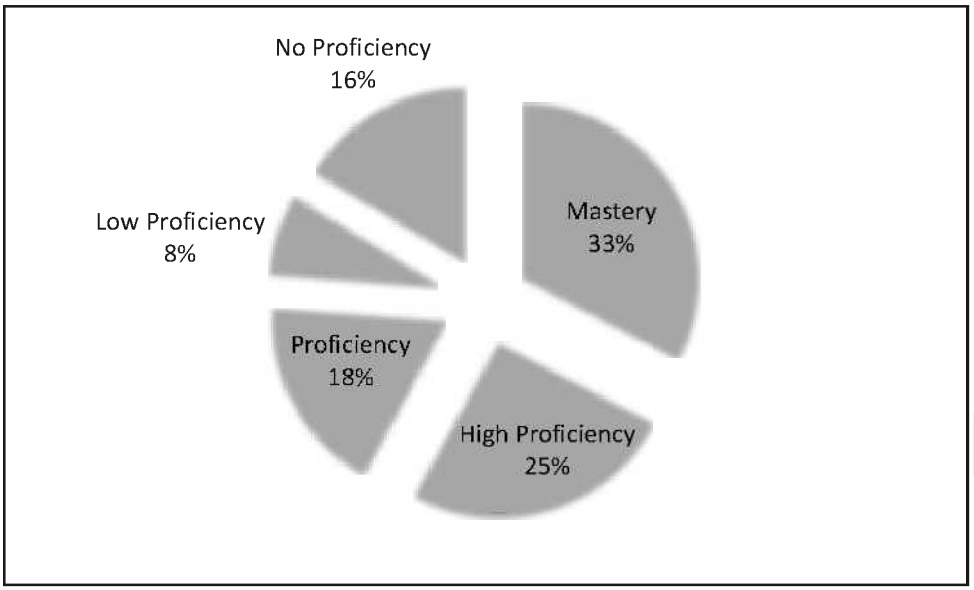
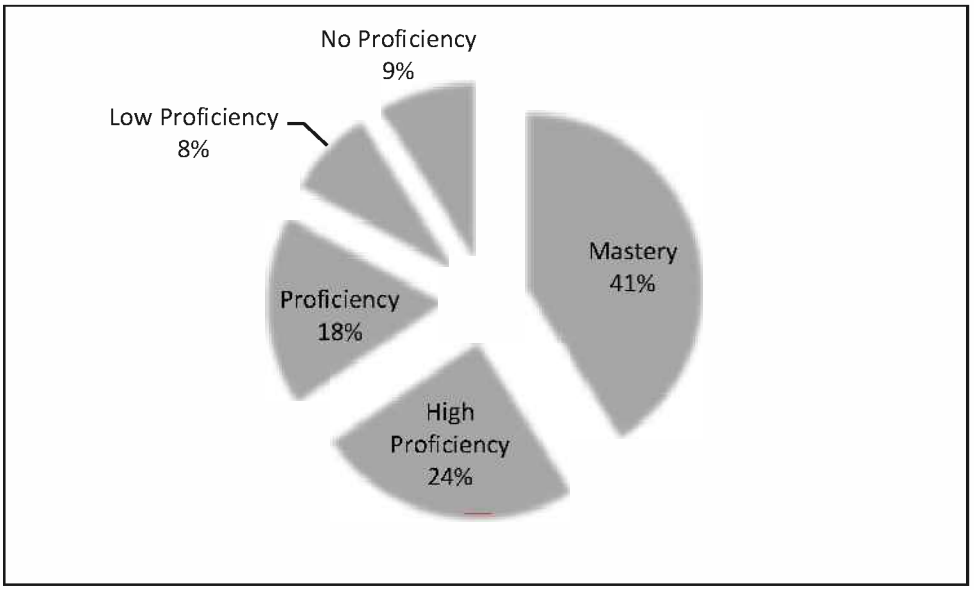
**ISLO #3, Analyze and evaluate text in writing, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

The scores when summarized by level of proficiency for the thinking and reasoning cluster of three ISLOs also were quite high. When the portion of the students that were rated as having achieved mastery, high proficiency, or proficiency are added together for ISLO #4, the combined total represents 83% of the scores. When the same rating categories are combined for ISLO #5, the total represents 89% of the scores. ISLO #6 is in the middle of the combined ratings as these three categories account for 86% of those scores.

**ISLO #4, Formulate and share ideas, analyze the ideas of others, integrate them into one's own thinking, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership



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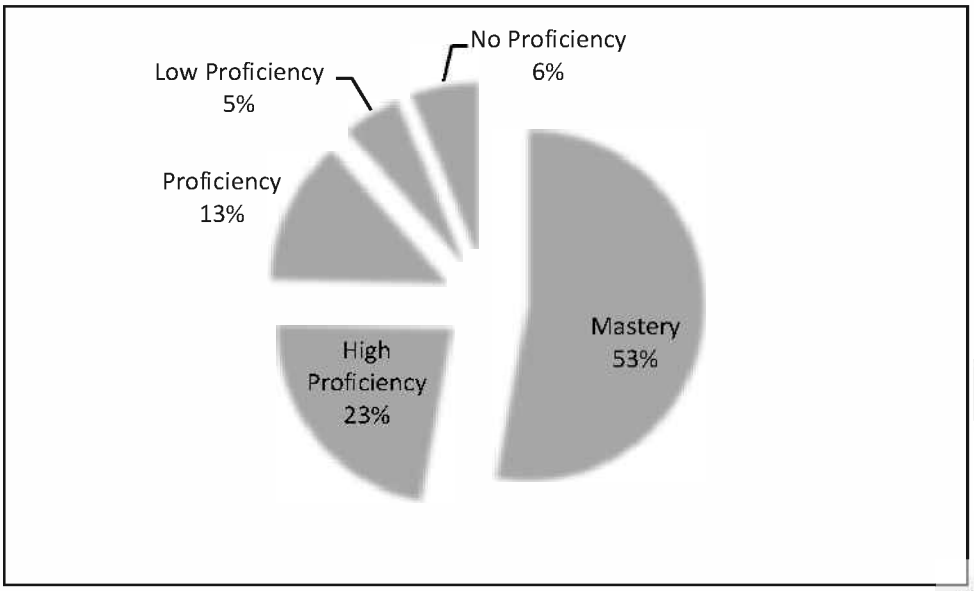
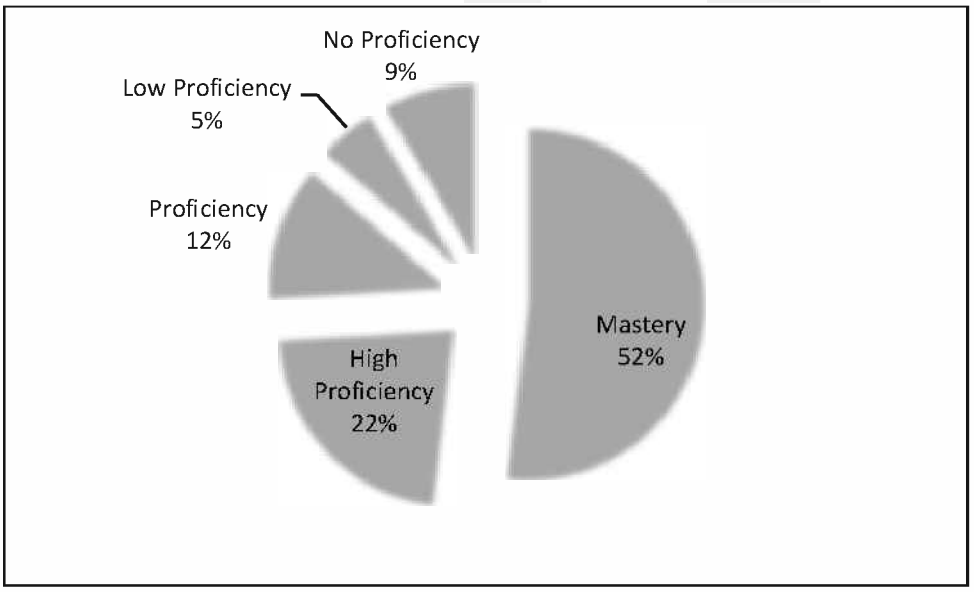
**ISLO #5, Assess and analyze data and information as one investigates issues and solve problems, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

**ISLO #6, Use qualitative reasoning to identify, analyze and solve quantitative problems, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

The scores when summarized by level of proficiency for the information competency cluster of two ISLOs, were high as well. When the portion of the students who were rated as having attained mastery, high proficiency, or proficiency are added together for ISLO #7, the combined



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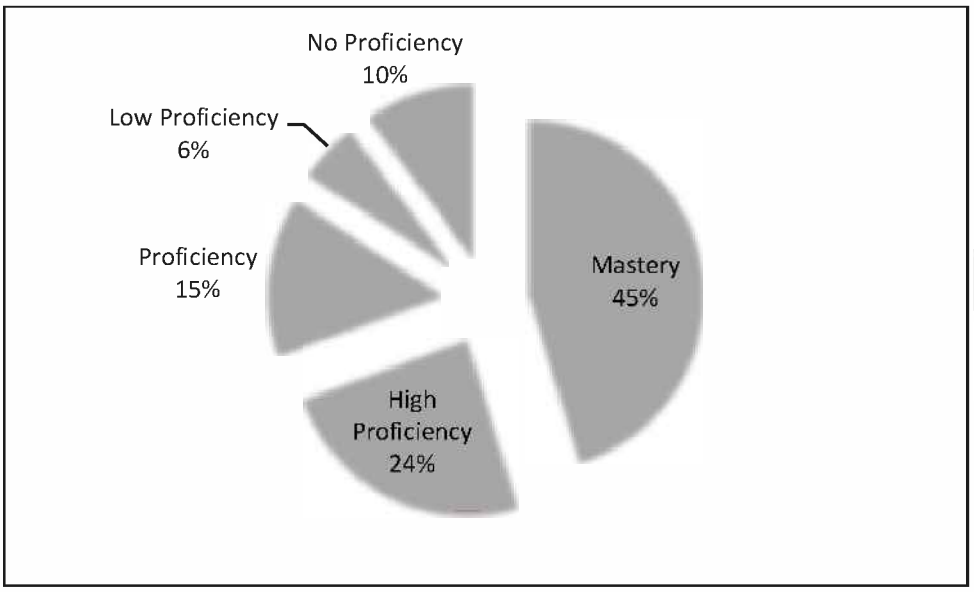
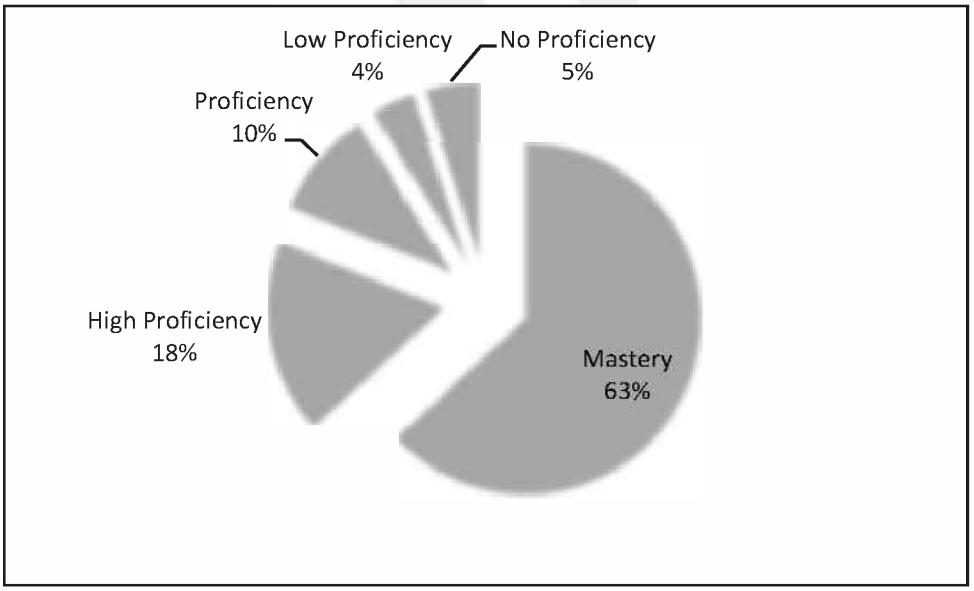
total represents 84% of the scores. When the same rating categories are combined for ISLO #8, the total represents 91% of the scores.

**ISLO #7, Research topics by identifying, analyzing and assessing the ideas from a variety of sources to conduct research, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

**ISLO #8, Use print material and technology to identify research needs, and develop and evaluate information, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership



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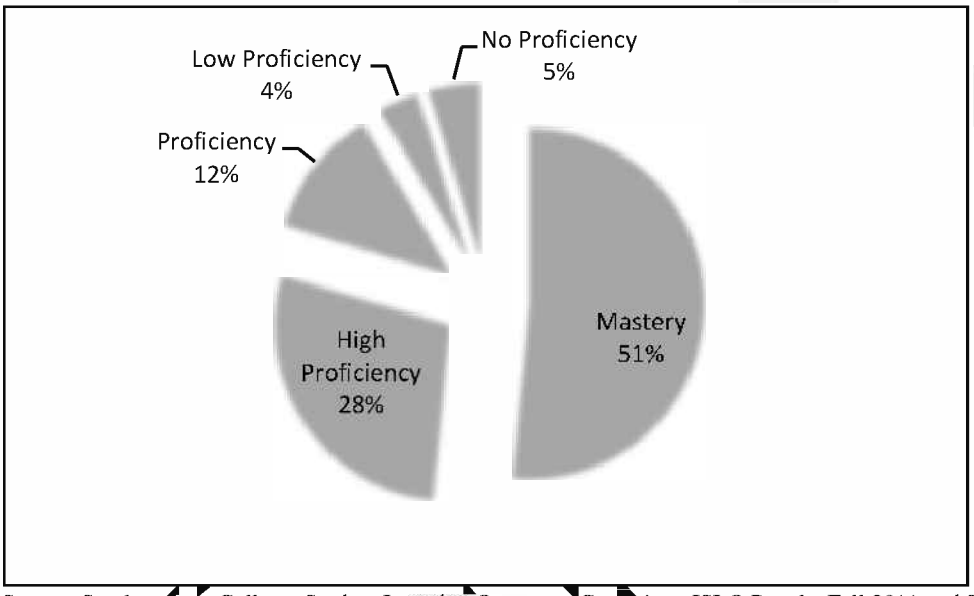
The scores when summarized by level of proficiency for the global awareness cluster of three ISLOs also were quite high. When the portion of the students who were rated as having attained mastery, high proficiency, or proficiency are added together for ISLO #9, the combined total represents 92% of the scores. When the same rating categories are combined for ISLO #10, the total represents 64% of the scores. ISLO #11 is in the second place with the combined ratings as these three categories account for 85% of those scores. The global awareness outcomes were the ones where the fewest scores were reported. For example, ISLO #9 had the least scores of all eleven outcomes with only 2,437 observations.

**ISLO #9, Collegially work with diverse groups of people, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership



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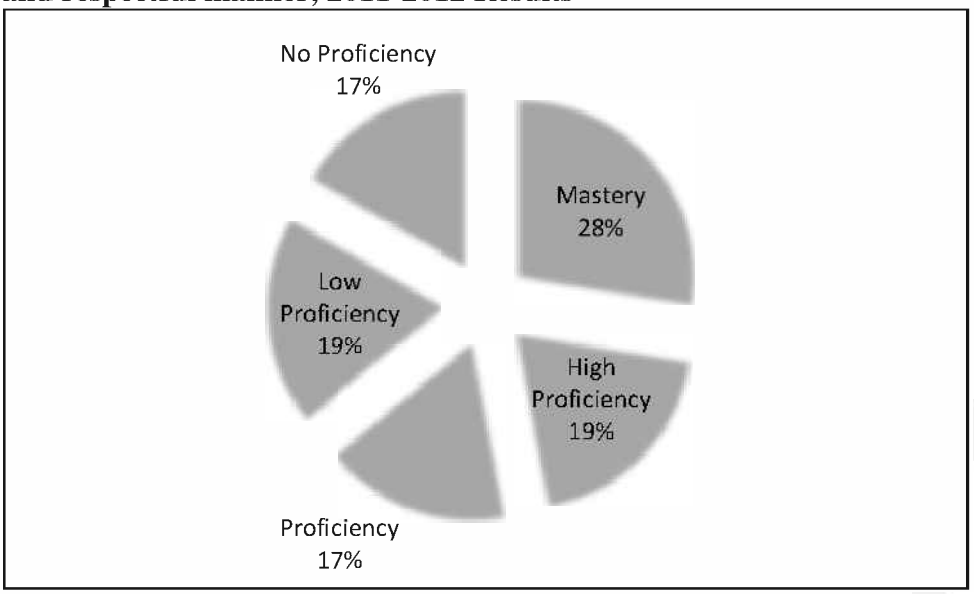
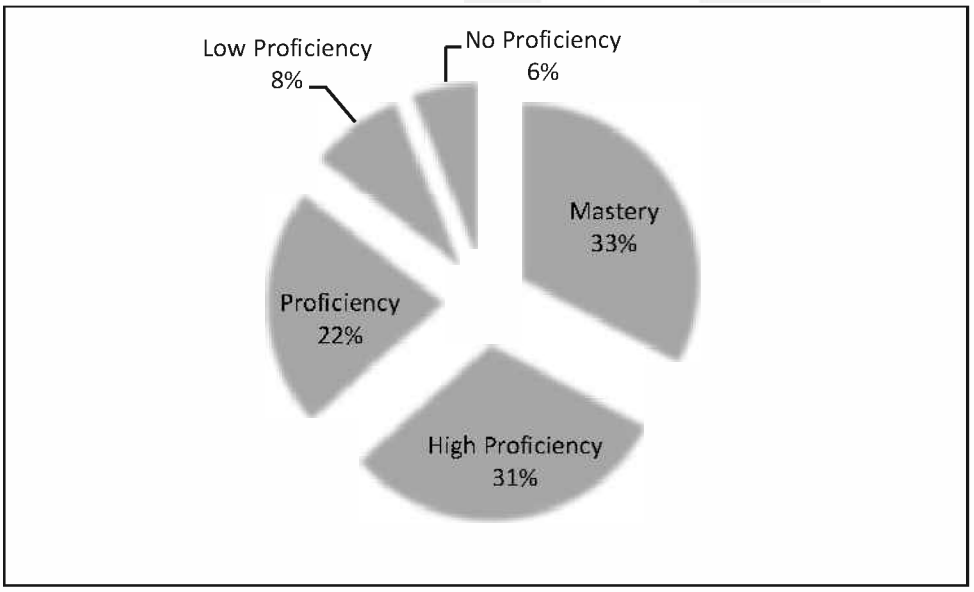
**ISLO #10, Identify and examine the cultural values of different ethnic groups in a sensitive and respectful manner, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

**ISLO #10, Analyze and assess historical, political, economic, scientific, and social issues in a way that enables the student to participate in his/her community, nation and world, 2011-2012 Results**




Source: Southwestern College, Student Learning Outcomes Committee ISLO Results Fall 2011 and Spring 2012; analysis by Cambridge West Partnership

The College SLO committee has discussed the assessment findings and designed a process in which ISLO assessment results are distributed to the campus and units completing program review are encouraged to discuss the results and use them in their program reviews. The details



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of what it means to be at the sustainable continuous quality improvement level will be determined based on the outcomes of the assessment work.

The assessment of student learning outcomes provides an opportunity for the College to assure the competence of those who graduate with a degree, certificate, or transfer to a four-year institution. Findings from recently published studies support the efforts of regional accreditors to require member institutions to take steps to assess learning and assure that the students are accomplishing the competencies envisioned by the faculty.[32],[33]

Student Satisfaction

In May 2011 the College launched a very comprehensive student satisfaction survey to elicit student opinions about 23 services, offices or facilities with which they had contact at the College. An email invitation was sent to 16,539 students and a reminder was sent as a follow-up to non-responders. Just over 800 students answered the survey (5% response rate). The survey was repeated in February 2012 when an email invitation was sent to 19,367 students and a follow-up was sent to non-responders. Just over 1,300 students responded in 2012 (7% response rate). In both years there were seven student services for which at least 60 percent of the students reported as something with which the students were very familiar, familiar or somewhat familiar. These services are listed in the table that follows.

**Most Familiar Student Services**

| | Very Familiar, Familiar, Somewhat Familiar | |
|---|---|---|
| **Service** | **Spring 2011** | **Spring 2012** |
| Admissions & Records | 95% | 94% |
| Counseling | 91% | 87% |
| Assessment | 87% | 87% |
| Financial Aid | 85% | 83% |
| Career Center | 74% | 74% |
| Transfer Center | 73% | 66% |
| Health Services | 66% | 63% |

Source: SWC Research and Planning Office. *Student Satisfaction Survey.* May 2011 and February 2012

The Admissions and Records area was the office with which students were most familiar. In the 2011 survey eighty-two percent of the students reported being very satisfied or satisfied with the core services of Admissions and Records (application and student ID processing) but only 77% were reporting at that level of satisfaction regarding the registration process itself. Almost identical results were reported in the 2012 survey. Perhaps this is a reflection of the difficulty students were experiencing in getting classes they wanted.

In 2011 seventy-nine percent of the students had reported that they used the services of the Counseling Center and of those 89% reported that the Center met their needs. In the 2012 survey

[32] Charles Blaich and Kathleen Wise. *From Gathering to Using Assessment Results: Lessons from the Wabash National Study.* (University of Illinois at Urbana-Champaign: IL, National Institute for Learning Outcomes Assessment (NILOA) January 2011)

[33] Richard Arum and Josipa Roksa. *Academically Adrift: Limited Learning on College Campuses.* (Chicago, IL: University of Chicago Press, 2010)



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85% reported the Center met their needs. Eighty percent of the students indicated they were very satisfied or satisfied with the helpfulness of the Counseling Center staff whereas 77% reported satisfaction with the overall experience at the Counseling Center in 2011. Those exact questions were not repeated in the 2012 survey, but 75% of the responding students were very satisfied or satisfied with the counseling appointment session experience, whereas only 61% of the students reported at those levels of satisfaction from a walk-in counseling service.

In the spring 2011 survey eighty percent of the students who answered the survey indicated they had taken the placement exams in their first semester at the college, but only 70% responded that way in the spring 2012 survey. Eighty-one percent of the 2011 responding students and 82% of the spring 2012 students indicated that they understood how to select courses based on the placement exam results.

Seventy-three percent of the students who used Financial Aid gave the office an overall quality of service rating of very satisfied or satisfied in 2011. That level of response dropped to 68% in the spring 2012 survey. Fewer students were pleased at that level (very satisfied or satisfied) when it came to the specifics of staff helpfulness (67%) and timeliness of disbursements (62%) in the 2011 survey. The level of satisfaction on those two aspects of service dropped even further in the spring 2012 survey. Only 62% reported very satisfied or satisfied with the staff helpfulness and a low 48% reported very satisfied or satisfied with respect to the timeliness of disbursements.

Seventy-nine percent of the students who used the reported that they were very pleased with the overall experience at the Career Center in 2011 whereas 72% reported that level in the 2012 survey.

In 2011 eighty-five percent he students who used the Transfer Center reported being very satisfied or satisfied with the amount of information provided and 80% were equally pleased with the accuracy of the information. However, in the 2012 survey only 36% reported being very satisfied or satisfied with the overall experience, a large group (58%) were neutral.

Eighty-four percent of the students visiting the Health Services office were very satisfied or satisfied with their experiences in the 2011 survey. That level of satisfaction increased to 87% in the spring 2012 survey.

In both years there were four institutional support services for which at least 80 percent of the students reported as something with which the students were very familiar, familiar or somewhat familiar. These services are listed in the table that follows.

**Most Familiar Institutional Support Offices**

| | Very Familiar, Familiar, Somewhat Familiar | |
|---|---|---|
| **Service** | **Spring 2011** | **Spring 2012** |
| Bookstore | 97% | 96% |
| Food Services | 85% | 83% |
| Cashiering | 84% | 80% |
| Facilities | 81% | 79% |

Source: SWC Research and Planning Office. *Student Satisfaction Survey.* May 2011 and February 2012



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The College Bookstore was the institutional support office with which students were most familiar. In both the 2011 and 2012 surveys the students gave high marks (very satisfied or satisfied) to the courtesy of the staff, 82% of the responses were at that level, and cleanliness of the store, was rated favorably at 85%. Over three-fourths of the students were very satisfied or satisfied when it came to the staff knowledge about textbook selection and product information.

When asked about food services in the cafeteria in the 2011 survey, 68% of the students indicated they were very satisfied or satisfied with the friendliness of the staff and 65% were satisfied with the courtesy of the staff. However, only around 55% of the students were satisfied in regard to the selection of cold and hot items, wait times and the amount of food available. Only 39% of the students felt very satisfied or satisfied with the prices charged for the food items in the cafeteria. In the 2012 survey ratings for the friendliness of the staff and courtesy of the staff increased to 71%. In 2012 the very positive responses to the questions about selection of cold and hot items also increased to 60% of the students responding this way. However, satisfaction with the prices of food items remained about at the same level of satisfaction. This level of satisfaction is common in higher education.

The Cashiering Office drew modest praise from students with 70% of the respondents indicating they were very satisfied or satisfied with the efficiency with which the office processed transactions in 2011 and 74% providing the same level of response in the 2012 survey. Sixty-nine percent of the students were very satisfied or satisfied with the friendliness and courtesy of the staff in 2011 and about the same portion of responses had the same high regard in 2012.

Fifty-seven percent of the responding students reported very satisfied or satisfied that the campus facilities met their educational needs in the 2011 survey. In the 2012 survey the very satisfied or satisfied responses to that question rose to 72% of the participating students.

Collectively, this information, and other responses on the survey, provides the College offices with some valuable insights regarding the effectiveness of the services and the College as a whole.

## B. Program Review Highlights

Program Review Framework

Program review is the primary mechanism by which the College identifies the objectives and resources needed to fulfill its educational mission. All programs and units (instructional and non-instructional) are now expected to complete a comprehensive review on a three-year cycle using a template of prompt questions. In the off years each program and unit prepares a snapshot form to report on progress with action plans/goals as well as to make requests for resources. Programs that do not complete their report are not eligible to receive additional funding for one-time requests, classified positions, faculty positions, or facilities requests.

The instructional program review report follows the format of components listed below.

- Component I: Academic Program Course Review Form
- Component II: Program of Studies/Major Review Form
- Component III: Response to Previous Review
- Component IV: Review of SWC Statistical Data



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- Component V: Criteria for Academic Program Review
- Component VI: Academic Program's Recommendations
- Component VII: Academic Program's Executive Summary
- Component VIII: Academic Program Review Snapshot

However, the snapshot portion also contains sections for departments/disciplines to:

- Summarize program/unit action plans for the year,
- Report on student learning outcomes assessments,
- Requests for resources (new equipment, supplies/minor equipment, facilities, human resources, and technology needs)

The comprehensive student affairs program review template is a little different as it follows this format of topics to be addressed:

- Faculty and staff involvement in service area and student learning outcomes
- Faculty and staff qualifications
- Efficiency of service area procedures and contribution to accomplishing goals
- Technology availability and support
- Adequacy of service area resources to reach goals and student learning outcomes
- Extent to which service area effectively meets student needs (reference survey results)
- Extent to which service area interactions with constituencies are timely and effective
- Service area contributions to student access and success

The snapshot portion of the student affairs report is the same document as is used for instructional programs.

The comprehensive administrative unit program review template differs slightly from the instructional and student affairs templates as it follows this format of topics to be addressed:

- Functions and goals of the unit
- Quantitative description of the unit
- Internal variables affecting the unit
- External variables affecting the unit
- Evidence of the unit's effectiveness
- Student success

The snapshot portion of the administrative unit report is the same document as is used for instructional programs.

The details of each discipline/unit's completed program review report and snapshot resource request can be found on the College intranet. From those reports and interviews conducted with representatives from each school and unit in fall 2012, a short overview of each area and a brief description of their planning intentions for the next several years has been extracted and summarized below. The discussion below is organized by area of the College, starting with the instructional program.



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Academic Affairs
The instructional area of the college is organized into five schools and three Higher Education Centers. The Instructional Support Services office provides the primary staff support to the instructional area of the College. That office also handles continuing education (contract education, fee-based community services, and noncredit instruction) as well as some aspects of economic and workforce development, and the Library and Learning Assistance Services.

*School of Arts and Communications*
This school consists of instructional programs in three clusters: (1) Visual Arts; (2) Performing Arts; and (3) Communications. The school office itself has not been remolded for over 30 years and needs attention to become a more efficient use of space.

Visual Arts Overview
Visual Arts covers the disciplines of Art, Graphic Design, and Photography, Telemedia and Recording Arts Technology. All disciplines meet transfer and Associate of Arts degree requirements. The scope of the Art discipline includes courses in art history and the studio arts of drawing, painting, ceramics, sculpture, printmaking and graphic design. The department maintains a museum/gallery, showcasing the work of students, faculty, community members and international artists.

The Graphic Design program has inactivated the Certificate of Proficiency, as it was determined that the learning outcomes were not sufficient to professionally prepare students to compete in the current job market.

Photography focuses on improving visual skills as well as aesthetic and technical means to improve camera use and application. With the renovation of building 570 the program has established a comprehensive professional practice-oriented curriculum.

Telemedia and Recording Arts Technology provide instruction in the production and fundamentals of film recording, editing, writing, and directing

Visual Arts Planning
Support facilities for the Visual Art disciplines are in need of repairs and upgrades (i.e. kiln and an outdoor work area for ceramics adjacent to room 712, classrooms 751 to 755 and outdoor work areas). There is need for an additional full-time faculty member to teach Art History. The department would like to reclaim room 705 and use part of it to enlarge room 704a so that it is more suitable as a drawing studio. The proposal is to use the remainder of 705 to relocate the slide library (currently in building 750). The current drawing classroom is 711, is not adequate for the numerous sections of foundation drawing courses offered. Media-specific courses have to be scheduled in the same classroom, which creates a conflict and restricts instruction.

The Telemedia program recognizes a need to upgrade the studio facilities and implement a new Cinema Media Arts (CMA) curriculum. Space in the Learning Resource Center is provided for this program; however several deficiencies in the current spaces associated with rainwater leakage (East End hallway and L 108), power outage problems (L113C), and broken outlets and unsafe power cords (L104) require attention. The Recording Arts faculty has noticed a sharp



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decline in applied skills in upper level courses. Additional mixing and mastering laboratory space and equipment would allow advanced students more hands-on time with advanced student equipment similar to that used in the industry. These facilities might also create revenue opportunities for the program and students.

Performing Arts Overview

The performing arts programs include Dance, Music and Theater Arts. They offer general education courses for the Associate of Arts degree with a major in those disciplines plus transfer to upper division programs at four-year colleges and universities. In addition to classes, the department offers public performances, master classes and workshops, fundraising opportunities, concert tours, adjudication, and outreach to new students.

The Music Department offers a variety of courses for general education, transfer, and the music major. A primary component of the music curriculum is musical performance, which provides opportunities for individual skill development in applied ensemble and live performance settings. Four core components are available to complete a lower-division music major: applied music, music theory, large performance ensembles, and classic piano.

The Theater Arts department provides training and performance opportunities for all levels of students. The courses offered by this department teach students acting, stage management, and backstage technical and design skills. The Theater Arts Department offers productions each academic year in Mayan Hall as well as several student productions in the Black Box Theater. The Theater Arts department is continually refining and broadening its production process to improve the programs it presents. Performance selections are chosen based on the abilities and resources of staff and students. The department strives to present material that will challenge the students, yet be meaningful and interesting to the audience.

Performing Arts Planning

Faculty in the performing arts disciplines have identified an overall need for an adequate performing arts venue.

The Dance program needs an additional studio about the size of room 1006 and also recognizes that it needs to complete some curriculum revision work to separate levels of the dance offerings.

The Music faculty, in the process of adding the SB 1440 Music Transfer Degree, has overhauled several current music major courses. The discipline has identified a need for additional full-time faculty to direct the orchestra and concert band. The faculty has requested wireless Internet in rooms 800 and 850, soundproofing for the practice rooms adjacent to room 802 (overlooked in the building remodel), and budget support for a music laboratory.

A primary concern for the Theater Arts faculty and staff is the replacement of Mayan Hall with a larger, better designed and equipped theater. The building is about 50 years old and has never been renovated. It has insufficient seating for large campus meetings. The technical shop area is vastly too small to handle the class sizes and equipment used. Storage space is limited and there is no space for rehearsals. The department has also identified the need for an additional full-time



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faculty member. If a new theater facility were provided, the faculty are interested in building out a technical theater emphasis.

Communications Overview

The Communication Department serves the general education, elective, and transfer needs of students for communication and critical thinking. The course offerings focus on critical thinking, listening, and speaking skills. The department also offers Journalism, the study of which provides instruction in the writing, editing, design and photography for news media including newspapers, magazines, broadcast, web and public relations. Programs and courses in this department include interpersonal communication, public speaking, small group dynamics and debate.

Communications Planning

The Communication faculty has identified a need to create two new classrooms used for performance-based courses. The faculty requested a better facility for the forensics team (classroom to seat 35, office and storage for research materials and a conference room for meetings and debate preparation). The addition of Vid Oral booths to rooms 432-435 has resulted in the rooms being too small for fully-enrolled classes. Expansion by 10% to 15% would be ideal. Both the Communications and Journalism disciplines have requested one additional full-time faculty member. Journalism indicated a need for a larger classroom, the replacement of student laboratory equipment that no longer operates, and replacement of computer and printing equipment that is ten years old. The Journalism faculty articulated a need to add "smart" classroom technology and a cable/satellite system connection to the laboratory equipment.

*School of Mathematics, Science and Engineering*

This school is organized into two broad areas: (1) Mathematics; and (2) Sciences. There is a very limited number of Engineering courses offered. The mathematics and science offerings are split between those general education service courses and the curriculum provided for majors in these fields.

Mathematics Overview

Mathematics offers basic skills courses in arithmetic, pre-algebra, elementary and intermediate algebra, and higher level courses required for transfer. These courses are required for students who intend to major in business, social sciences, education, physical and life sciences and other STEM related disciplines. The impact of large numbers of remedial students has placed pressure on the department to provide additional basic skills courses, tutoring and support services. Over the years the math faculty have experimented with a number of interventions and curriculum configurations to assist students to master mathematics. For over a decade the department has sponsored a common departmental final in key courses and used those results to guide interventions and changes.

Mathematics Planning

Demand for all level of Mathematics enrollment is expected to remain high and may grow at a faster rate than the other disciplines offered by the College. The department is considering the introduction of a "QUANTway" course strategy, developed by the Carnegie Foundation, which will facilitate quick movement through the mathematics curriculum for non-math majors. A new



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course, Technical Math for the Building Trades, also is being investigated. With the heavy demand for developmental math courses, the department has created three modules for Math 20, a course with one of the lowest retention and success rates. The faculty has requested resources to purchase classroom management software for the 72 computers in the Math Center. Were a new math and science building to be constructed the faculty would like to enlarge the Math Lab and surround it with faculty offices. That would provide a platform for a Math Emporium approach to some of the basic skills math offerings. Due to an aging faculty, recent retirements and increased demand for mathematics courses, the Mathematics Department will continue to need administrative support to aid the department's efforts to hire additional full-time faculty.

Physical Sciences Overview

Physical Science covers the disciplines of Astronomy, Chemistry, Engineering, Earth Sciences (Geology, Geography, Physical Sciences), and Physics. All courses within these disciplines transfer to four-year institutions and satisfy requirements for an Associate of Arts degree. Supporting these science programs are laboratory stockrooms and an audio-tutorial computer laboratory facility. In the last several years the Earth Sciences have earned three National Science Foundation Advanced Technology Education (NSF ATE) grants that have increased program technology for instruction, provided support for staff development, and supported development of new courses.

Physical Sciences Planning

The department has a shortage of full-time faculty for both Geology and Chemistry. The current offerings are limited by load factors that affect the availability of part-time faculty to provide instruction in the department. Currently, the number of lab sections is constrained by the amount of available laboratory space. The Astronomy faculty has expressed interest in a major renovation to the planetarium, laboratory and a large-seat (100 students) lecture hall. The Earth Sciences faculty has requested classroom renovations, an additional laboratory, wireless connectivity in instructional spaces, and additional colleagues to shoulder the wide range of courses offered and to develop geology and oceanography offerings. Chemistry has asked for additional full-time faculty, fiscal support for equipment and supplies, and additional laboratory space (particularly for Organic Chemistry). The Chemistry faculty is willing to consider new curriculum in the area of nanotechnology, materials science, and green technology. The Engineering faculty is offering online courses in their discipline. University programs in engineering have increasingly developed diverse core curriculums. However, statewide meetings and communications about a new transfer model curriculum may lead to a revision of the offerings at the College. The Physics faculty has been addressing student learning difficulties by utilizing online homework systems (MateringPhysics and WebAssign) to provide instant feedback to the students and have posted videos of homework solutions online at iTunes U. They are requesting assistance to update and replace laboratory equipment as well as to secure necessary supplies on an annual basis.

Life Sciences Overview

The Life Sciences program offers complete transfer curriculums in Biology, Anatomy and Physiology, Botany, Ecology, Marine Life, Microbiology, and Zoology. The program provides opportunities for both majors and non-majors to complete certificates and/or transfer to the CSU or UC systems. A set of curriculum tracks are offered in the Biotechnology Program to develop a



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marketable skill set that prepares students for careers in that field. Curriculum in Baja California Studies is also offered to complement any major. While largely lecture-laboratory format, a number of courses are lecture only and some are available for students as online/hybrid courses. The Life Science programs highlight transfer options and meet general education requirements. A number of courses support the occupational programs - specifically pre-nursing curricula. Program and enrollment demands remain high, particularly in the prerequisite courses for the allied health programs.

Life Sciences Planning

The department has a critical need for additional laboratory space to support the current instruction and to accommodate additional students. As a number of the faculty are engaged in research projects they would like to share with students, there is an interest in facilities to support those efforts. They have identified a critical need to replace the 40-year old peristaltic pump used to pour media plates used in microbiology, cell biology and biotechnology laboratory courses. There is also a need to replace irreparable microscopes used in key courses offered in the discipline. If the department moves to promote biotechnology as a field of study, a specialized laboratory will be needed. The discipline has also identified a need for additional full-time faculty.

*School of Health, Exercise Science, Athletics & Applied Technology*

This school is organized into three broad areas: (1) Exercise Science and Health; (2) Athletics; and (3) Applied Technology.

Exercise Science, Health and Athletics Overview

The Exercise Science and Health curriculum encompasses all of the courses in the school not associated with intercollegiate athletics. These courses include health education courses, several professional physical education theory courses, and a variety of physical education activity courses. The Health offerings in particular strive toward enabling the students to move toward a holistic approach to wellness. The athletic department currently offers 13 intercollegiate athletic teams. To qualify for athletic competition, each student-athlete is required to take a minimum of 12 units per semester with at least 9 of the units being transferable, vocational, or remedial. The primary goal of each of the student-athletes involved with the program is to transfer to a four-year institution within two to three years.

Exercise Science, Health and Athletics Planning

The Athletics program has identified the need for: a full-time faculty member; an academic success counselor; and replacement of fitness equipment in the Fitness Education Center; power-lifting equipment for student-athletes to use in the new field house; and, portable bleachers for the football stadium. The Exercise Science and Health faculty would like to revive the health assessment/testing offering and associate it with the Wellness Center. Health offerings have moved toward providing more hybrid and online classes. Those two disciplines have requested an additional full-time faculty, a wellness director, and several additional classified staff.

Applied Technology Overview

The applied technology area includes a diverse range of instructional programs in Automotive Technology, Administration of Justice, Architecture, Computer Aided Design, Construction



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Inspection, Computer Information Systems, Computer Literacy, Computer Science, Environmental Hazardous Materials, Electronics, Landscape Architecture, Landscape and Nursery Technology, Sustainable Energy Studies (SES), and Horticulture. Most of these programs are not designed as transfer curriculum; rather they prepare students for immediate entry-level employment or career advancement.

The Automotive Technology program prepares students for careers in the automotive industry. Certified by the National Automotive Technicians Education Foundation (NATEF), the courses align with NATEF requirements and standards. The program is also recognized by the State as a Certified Training Institution for the State's Smog Program. The National Institute of Automotive Service Excellence certifies each automotive instructor. The program of instruction offers co-operative work experience opportunities to students to intern in the real world and also offers training to military personnel who are about to be discharged.

The Administration of Justice is the study of matters pertaining to the criminal justice system. The program offers an Associate in Arts degree as a transfer preparation major. In addition, the department offers an Associate in Science degree with emphasis in corrections, forensics law enforcement and crime scene investigation. Over the last five years the program has developed more online and hybrid course offerings. A Transfer Model Curriculum Degree (SB1440) for Administration of Justice was completed and approved by the Curriculum Committee in fall 2012. The faculty in this program has offered a number of classes at the HECs and also provided a number of "College Bound" classes at select local high schools where qualified high school students take a college level Administration of Justice course and receive both high school and college credits.

The Architecture and Computer-Aided Design and Drafting (CAD) programs follow an educational paradigm of "learn by doing" in that they teach problem-solving strategies and promote a collaborative environment for students to explore creative approaches to design. The program is designed to facilitate transfer to an institution specializing in architectural instruction. The CAD courses are designed to teach students relevant skills and technical knowledge used in a variety of engineering disciplines.
The curriculum offered by the Construction Inspection and Management programs prepares students for careers as inspectors, estimators or apprentices in various construction trades. The Sustainable Energy Studies curriculum provides students the scientific education that underlies contemporary issues about energy resources and conservation.

Students in the Computer Information Systems (CIS)/Computer Literacy program prepares students for careers in the computing world as diverse as data technician, systems analyst, computer maintenance technician, programmer, systems administrator, web designer, database administrator, and personal computer specialist.

The Computer Science (CS) program at the College is in a growth and revitalization phase. All core course outlines have been reviewed and updated within the last three to four years. The curriculum is in alignment with the best practices and content that is suggested by nationally recognized professional, educational, and/or scientific computing societies, the Institute of



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Electrical and Electronics Engineers (IEEE) and the Association for Computing Machinery (ACM).

The four foundation level courses of the CS program are Math 130 (Introduction to Computer Science), Math 140 (Data Structures and Algorithms), Math 230 (Computer Organization and Architecture), and Math 260 (Discrete Mathematics). These courses use a host of tools in order to introduce students to relevant and topical Computer Science knowledge kernels such Eclipse, NetBeans, BlueJ, jUnit, pcSpim, MARS, and others. The faculty closely engages with the students in project-based-learning activities. This pedagogy has proven to be an element of the computer science program that has helped increase rates of success, retention and transfer to four-year institutions. The program's relationship with surrounding institutions (UCSD and SDSU) has also been critical to the direction and growth of the CS program. Starting in 2012-2013 all four of the core courses will articulate to both UCSD and SDSU.

The Environmental Hazardous Materials Technology Program incorporates the principles of science, communication, regulations, safety and engineering as these pertain to environmental management and occupational safety and health. The curriculum allows for students to apply the scientific method, seek out scientific information, be familiar with applicable regulatory requirements, and learn to use instrumentation and personal protective equipment while applying these processes to ensure health and safety to people and the environment.

Applied Technology Planning

In general the instructional programs in this department have requested additional electrical power supply to meet ever-growing electrical demands of equipment used in the instructional activities and to ensure safety. Inadequate storage is a second cross-cutting area of concern as is the need for increased and improved local internet connectivity and hard-wired computer labs and smart classrooms.

The Automotive Technology Program facilities date back to the early 1960's without any major renovations since its inception, therefore presenting a very outdated look and appearance.
Among the most outstanding facility needs for the program are heavy-duty shelving to store heavy training aides (engines, transmissions, differentials, etc., a covered storage area in which to locate large training aides, and a computer laboratory. The program needs to acquire training aides, tools and equipment, which will replace old/outdated equipment and also to reduce the student-to-equipment ratio. The faculty has identified a need for a third full-time instructor.

The Administration of Justice Program proposes to renovate the existing Forensic Laboratory/Classroom. Although the construction of the forensics lab has been delayed, significant equipment purchases have been completed to furnish and equip the lab. Space had previously been designated for the lab (510 building), however, that space was reallocated for classroom use. A portion of the structure in the 550 building has been earmarked for the lab and the program is optimistic about the promise of the new lab becoming a reality.

The faculty in the Architecture and CAD programs has identified the need for additional full-time faculty members, one of whom will direct the CAD program. They envision the construction of a large-screen lecture hall with an adjacent jury/gallery space that will provide



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students with an opportunity to practice and develop important oral communications skills. This facility will be shared with visual arts programs, photography in particular. Both programs require upgrades to software used in the instructional activities. The CAD program in particular would like to expand offerings in continuing education as a means to recruit new students.

The faculty in the Construction Inspection and Construction Management Planning programs would like to develop internships with local governing agencies and have requested a full-time faculty member to coordinate the two programs. The Sustainable Energy Studies (SES) faculty intends to promote the curriculum within the South Bay while seeking a more coordinated and complete budget.

The Computer Information Systems (CIS)/Computer Literacy faculty has indicated a critical need to replace full-time colleagues who have retired. The web designer and web authoring courses and program are most impacted by retirement losses. Community demand in the beginning Dreamweaver and Universal Design courses, required for every web-major, suggests that additional offerings at the higher education centers or in the evening/weekends could be supported. Web design programs are driven by industry standards software; therefore, the program needs the Adobe Creative Suite Web Premium software to be upgraded on a regular schedule, as is performed in industry, about every 18 months. Two software upgrades during this a three-year program review cycle, CS6 and CS7, or whatever the industry adopts, will be required to keep current. The faculty has indicated the program will need hardware upgrades such as 8-10 gigs of RAM, faster processing speed, larger monitors, and wireless in the classrooms in order to run the programs. As the digital world expands into the use of portable devices, student web developers must be taught to design by actually using such equipment. Students, therefore, need access to these devices to use and test modern portable device designs. This instructional program will need to purchase portable devices that can be checked out (during class sessions only) to enable instruction: iPads, iPods, netbooks, etc. The essential infrastructure needs arising from this curriculum direction are sufficient wireless and electrical connections for students with mobile devices. A NETLAB one-year maintenance agreement is a substantial but vital investment. Netlabs is a proprietary learning environment required by Cisco. It is a foundational tool that prepares students for industry and proprietary certifications and allows for instructor-facilitated, student-remediated learning, and scenario problem-solving of complex network configuration and maintenance.

Computer Science faculty believe there is an immediate need to transition to cloud-based curriculum-delivery technology solutions. The unit is currently modifying the curriculum and has submitted new facility needs and modification of existing facilities to meet the needs of student success. The future of technology may require a studio-lab design vs. a traditional class format. The faculty has identified a need to replace the five-year old computers in room 394 with Apple computers so that the students can learn to write programs for the major brands of mobile devices. Also, the long tables in that laboratory room need to be replaced with moveable tables and chairs that will facilitate student group work. The CS program will continue a strong connection to the campus Math, Engineering, Science Achievement (MESA) program and the Computer Science Club.



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The Environmental Hazardous Materials Technology Program faculty would like to have a dedicated classroom and storage area at the HEC OM so that equipment and materials are easier to access. It would be helpful to have a computer laboratory available at times commensurate with evening student needs. The faculty intends to offer more hybrid courses in the future.

*School of Language and Literature*
The curriculum of this school is organized in four areas: (1) English (composition and literature); (2) English as a Second Language; (3) Reading; and (4) World Languages.

English Overview
The English Department offers college-level composition courses to meet transfer and Associate Degree requirements. It provides courses in creative writing and literature. Basic skills preparation has become the central focus of the department. All courses emphasize improving both reading and writing skills. The department offers innovative learning opportunities at several remedial levels, as well as self-paced mini-courses for individual instruction. The department, who wants to prepare students interested in careers as educators in the public school systems, also sponsors a liberal studies/education program. The department maintains high academic standards to ensure transferability of its courses.

English Planning
The English faculty has identified a need for additional full-time faculty. They plan to develop a new degree in creative writing and hope to sustain or increase the number of Preparation, Achievement, Interdependence, and Responsibility (PAIR) offerings. The faculty intends to also develop honors program courses and a transfer model curriculum for the liberal studies program and revise it to align with the comparable San Diego State University (SDSU) program. It would be helpful to have new computers for classrooms and new document cameras to support the instructional activities. The composition sequence has two courses with a fixed amount of laboratory time in the course outline of record. Two other courses use the writing laboratory at the discretion of the instructor. The composition curriculum has outgrown the laboratory space allocated to it.

English as a Second Language (ESL) Overview
Basic skills and advanced courses for non-native speakers are offered by the department to prepare students for college-level instruction through the Learning English for Academic Purposes (LEAP) emphasis. This initiative uses a sustained theme content-based instruction (CBI) approach to language teaching. As of fall 2010 the curriculum has been recast to require students to take 10 to 12 units in one term.

ESL Planning
The ESL offerings have been greatly dependent on state Basic Skills Initiative dollars; hence the decline in these funds has curtailed a number of supports to the instructional program. The faculty has identified a need for additional full-time instructors and an enhanced budget. ESL has no building dedicated to the discipline. The instruction is spread throughout the campus. There are plans to offer some hybrid courses and establish a matriculation path between ESL and the English Department classes.



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Reading Overview
The reading program became a department in 2005 and has experienced considerable growth since then, as increasing numbers of students are in need of basic skills instruction in reading. For many students, the reading curriculum is the gateway to all other courses at the college.

Reading Planning
The program is located in the Academic Success Center, 420 building, and uses rooms 427 to 429 that were designed expressly for the program. They also use rooms throughout the Chula Vista campus as they are available. The faculty would like a computer laboratory dedicated to their discipline as they currently share a lab with the English Department. As no tenure track faculty have been hired since 2006, the department has identified a need for additional full-time faculty members. The program believes that the online learning center needs additional staff to help faculty with this new and different instructional modality. The faculty plans to offer more sections via online, hybrid and fast-track modalities.

World Languages Overview
The department offers a wide range of foreign language instruction but adheres to the Foreign Language National Standards and the American Council for the Teaching of Foreign Languages (ACTFL) guidelines in teaching the primary language offerings of Spanish, French, Italian, and Portuguese.

World Languages Planning
The faculty would like to offer a more robust study abroad program. They have identified a need for additional full-time faculty members. The program does not operate with enough laboratory space where the instruction is computer-assisted and therefore needs a larger laboratory area. The department uses a variety of computer technology in the instructional program and needs support to acquire upgrades and additional software.

*School of Social Sciences, Humanities and Business*
The curriculum of this school is organized into three areas: (1) Social Sciences; (2) Humanities and (3) Business and Legal. The business and legal curriculum was added to the school in June 2012. All courses in the Social Sciences and Humanities are designed for transfer. The Business curriculum is intended for both transfer and preparation for immediate employment.

Social Science and Humanities Overview
The Social Sciences and Humanities at the College include the disciplines of Economics, Political Science, Psychology, Sociology, Anthropology, History, and Ethnic Studies. The Humanities offerings address Philosophy, History, and Art in the context of civilizations. All courses and disciplines meet the Associate of Arts degree requirements. Those courses in the Social Sciences and Humanities Departments transfer to the four-year colleges and universities. The Humanities and Social Sciences have also revitalized/revisited the curriculum to prepare appropriately for increased globalization, the need for multicultural literacy, and the changing composition of the student body.



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Social Science and Humanities Planning
The department has identified a need for full-time faculty in several disciplines. Faculty in several of the behavioral sciences disciplines would like to acquire a site license for the Statistical Package for the Social Sciences (SPSS). Faculty in the department recognizes the need to engage in additional face-to-face outreach efforts with colleagues at regional universities as well as faculty in the public school district. Additional faculty professional development in the use of technology to provide online and hybrid instruction is desired.

Business /Legal Overview
The Business program offers a variety of majors and certificates that lead to an Associate of Arts degree and/or transfer to a four-year college or university. These are represented by these disciplines: Accounting, Paralegal Studies, Hospitality and Tourism Management (Culinary Arts, Event and Convention Planning, Travel and Tourism), Business, Finance, Management, Marketing, Insurance, and Real Estate.

Business/Legal Planning
The business curriculum, and most recently the accounting area, has increasingly taken an international focus as the world shrinks around them. The faculty has identified a need to replace a retiring accounting instructor. The demand for business education has surged worldwide and should remain on an upward path for the foreseeable future.

The culinary arts program of study began as an ROP program with the thought of preparing men and women for entry level/kitchen preparation employment. No longer an ROP program and now a for credit program, interest and enrollment has been steadily increasing with consistent waiting lists. A component of the program's evolving vision is to prepare students with transferable professional skill-sets to be marketable in a fast-pace changing industry, while servicing a diverse student population, and integrating with a community that is hospitality centered. The long-term purpose, vision, and sustainability of the culinary program must be addressed the next five, ten and twenty plus years. In order to achieve this goal, the answer rests in the development of the Facilities Master Plan.
The Paralegal Studies program would like to secure accreditation from the American Bar Association. Additional access to legal research databases and updates to law books in the Library are requested to support the program.

*Instructional Support Services and Continuing Education*
This unit of Academic Affairs offers both instruction and provides a range of support services to the instructional program. The units providing support services include: (1) Instructional Support Services; (2) Perkins Program Technical Preparation; (3) Articulation Office; (4) Online Instructional Support Services; and (5) Accreditation Liaison. The units providing instruction include: (1) Academic Success Center; (2) Continuing Education, Contract Education and Economic Workforce Development; (3) Library; and (4) Learning Assistance Services Center.

Learning Assistance Services (LAS) Overview
The program provides tutorial support to students at all levels of the College experience. It is centrally administered from the Academic Success Center (ASC) with satellite services in the Chula Vista campus library and the three higher education centers. Two strengths of the program



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are the intensive, certified training required of all tutors and the collaboration between LAS staff and every component of the College community. LAS services include free tutoring to enrolled SWC students, supplemental instruction (power study program), test proctoring, fee-based tutoring to teens and tweens plus throughout San Diego County, workshops on academic study skills, orientation to the services, in-class visitations, and website links. Tutors are provided three levels of training through a series of two-unit courses (ED 100 to 102). The ASC was remodeled in 2005 to provide approximately 5,900 square feet of space for LAS use.

Learning Assistance Services Planning

The LAS Department is actively pursuing online tutoring services to increase the effectiveness of the overall program and to meet rising demand for tutoring services. Discussions are taking place with the Veterans Services staff to develop a program of early intervention for students, including assessment test preparation. The Academic Success Center (ASC), which includes the Writing Center, Women's Math Network and ITC labs, is already over capacity during prime time morning and evening hours. Throughout the day, the ASC study areas are often full and the study rooms occupied. Additionally, synchronous online tutoring will require space for additional computers, but also for quiet areas, so tutors are able to conference online with a minimal amount of distraction. All of this points to a need for more space. The Department would prefer more sound-sensitive study rooms as opposed to the open study areas that currently represent the majority of LAS Department space. The Department has also identified a need for a permanent director with a 12-month assignment to coordinate the services that are offered throughout the year. To increase the efficiency in collecting and collating attendance data, the Department has requested laptops or tablets to facilitate the entry of tutor contact data.

Library Overview

The Library serves the College as the primary source of information in its various forms, be they book (print), electronic, or via off-site Internet services. In addition, the library provides modes of instruction including face-to-face contact, classroom orientations, and online services. The Library information system provides students with the skills to locate, evaluate and use information for educational and/or research purposes, and its instructional program is integrated into every academic department.

Library Planning

Through retirements the faculty of the Library Department has been depleted and must be replaced. Budget resources for the maintenance of the collection, including electronic databases, tools and services have been reduced and need to be augmented. Although signature programs at Otay Mesa and National City have accreditation requirements that require instructional resources to be comprehensive and up-to-date, there is no established budget for books or periodicals at any of the three centers. This area needs attention in the near future. The Department has indicated that there is a need to upgrade the Horizon integrated library information system.

Continuing Education Overview

Community Education Services strives to identify and meet the needs of the community that are not met by the college credit programs. Some of these services are self-supporting and fee-based. These include educational, holistic health, recreational, professional, personal enrichment, vocational and certificate programs. Other services are noncredit courses of instruction. The



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customized computer training opportunity offered by the Department has not taken off, perhaps due to the high hourly rate ($195/hour). The college does offer online computer training through online classes sponsored by the ed2go organization. That organization keeps 60% of the income, the Department keeps 40%. A separate schedule of classes is published for all of these offerings. A limited number of instructional experiences are provided through contract education arrangements. Community Services programs are available with a variety of options to meet various learning styles including lectures, hands-on workshops, and online programs. To meet the needs of participants with busy schedules and limited time, programs are offered during evening hours, on the weekends, during weekdays, and online. An extensive variety of programs are available for people of all ages from children to seniors. Several programs are offered in two or three levels of instruction to accommodate more advanced learners as well as beginners.

Continuing Education Planning

In light of the continued downward spiral of state funding the College has directed the Department to curtail some of the noncredit offerings. The program's staff vision is that 5, 10, 15 years into the future there will be more of a need for noncredit, basic skills, vocational, and career preparation due to changes in the economy and the aging of the baby boomer population. The Department would like to develop more distance education options for students. Two different computer labs are needed due to student software/program needs, i.e., College for Kids and Customized Computer Training. The Department had proposed a Foundation Skills Academy that would be a safety net for credit students, provide some protection regarding new repeatability rules. The proposed Academy would offer flexible scheduling in ESL, computer literacy, and retraining for the workforce where writing and reading skills need to be addressed. The Adult Basic Education offerings in the south bay area operate like the high school with a rigid semester schedule and no flexibility. Unfortunately, neither the reading nor the math faculty is willing to support the Foundation Skills Academy idea. The Department has identified a need for a full-time faculty member to direct the noncredit instructional area and to supervise the roughly 80 adjunct faculty working in the Department. There is also a need for a dedicated instructional space beyond the two classrooms assigned (rooms 1680 and 662) plus offices in room 661. These areas are in the back of the College, not adjacent to one another, and neither is close to one-day parking permit machines. The Continuing Education Program currently has no room for growth and the program has to compete with the college for room availability in order to meet its diverse and growing program needs.

Instructional Support Services (ISS) and Online Learning Support Overview

The ISS unit provides information, expertise and resources that support the academic areas of the College. They are involved with scheduling, curriculum development, CurricUNET training, and the development of the College catalog. As noted in the 2010 Substantive Change Proposal, the College offers a number of degrees through distance education. The Online Learning Support unit assists faculty to learn how to teach an online course and use the Blackboard Learning Management tools that are used by those instructors teaching an online course and by others extensively throughout the College. The Online learning Support unit also assists students to discover how to be a successful online learner and students have the option to take a one-unit online learning orientation course.



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Instructional Support Services (ISS) and Online Learning Support Planning
ISS has identified a need for additional support staff and a more cohesive office space configuration that will be quieter and allow staff to complete their data intensive tasks. The unit has also identified a need to acquire and use scheduling software that will provide consistent, reliable, and an accurate submission of schedules. There are several reporting needs that the ISS staff has proposed to the Institutional Technology unit. The Online Learning Support unit has identified a need for additional staff as the numbers of courses offered in that modality have increased and quality control of the instruction is a major area of concern for the College and the regional accrediting agency. The provision of comparable services for both the student attending on campus and the online student is of concern, particularly in tutoring and counseling. The unit is considering a proposal to make the optional one-unit orientation course mandatory.

*Higher Education Center, Otay Mesa (HEC OM)*
The HEC OM is a state approved higher education center that opened in August 2007. Classes are offered six days a week Monday through Saturday. It hosts a cluster of related Nursing programs (Associate Degree/Registered Nursing, Vocational Nursing, Certified Nursing Assistant, Operating Room Nurse, and Surgical Technology), several first-responder programs (Police Academy, Fire Science, Emergency Medical Technician, Emergency Medical Technician and Paramedic, Environmental Hazardous Materials Technology) and applied business programs (Leadership and Supervision, Administrative and Legal Office Assistant-Bilingual, Virtual Office Professional, Community/Economic and Urban Development, International Business, International Logistics and Transportation, Payroll Clerk, Travel and Tourism), plus a range of general education and basic skills course offerings. The Center also provides oversight and office space to the Center for International Trade and Development (CITD). The HEC OM is a 75,000 square-foot facility built to serve 5,000 students. However, when constructed the HEC OM did not provide an adequate outdoor facilities (police physical ability testing and training area, storage for fire, police and EMT program materials) to support the needs of several programs located at the Center.

The Library needs access to an instructional computer laboratory to provide orientation and workshop sessions. Many of the Library resources are in electronic databases; therefore, instruction in how to access and use those resources is essential. Also, the Library does not have, but needs a dedicated budget line to support the resources in the Library. Library services (reference desk transactions, queries regarding books, chat references, attendance at Library orientations, etc.) have continued to increase.

There have been reported difficulties with network connectivity at the Center back to the main campus in Chula Vista, in spite of Institutional Technology upgrade efforts. There also have been reported difficulties with AT&T telephone service to the Center. The problems persist in spite of efforts by AT&T to correct them.

Police Academy Overview
The HEC OM offers a P.O.S.T. approved law enforcement academy. It is one of three in San Diego County and one of two offered in an extended format for pre-service/non-sponsored students. The academy program is offered evenings and Saturdays to accommodate the pre-service candidates who are fully employed in other occupations. Some form of a police academy



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has been offered through the College for over 25 years. Graduates are issued a certificate from P.O.S.T. that gives them three years to enter a law enforcement agency as a "lateral" entry person without taking a written or physical agility exam.

Policy Academy Planning

There continues to be a lull in the hiring of State and local public safety personnel. Agencies that are hiring show a preference for individuals who have attended a P.O.S.T. approved academy. The program needs to update some unique and expensive equipment such as the firearms training simulator. If that type of facility could become a regional asset, it would be even better for the academy programs. Although an outdoor track was provided during initial construction of the HEC OM, it and related physical agility testing facilities do not meet the requirements of the program. The HEC OM does not have an appropriate and dedicated area to conduct scenario training but has discussed with the fire science program the possibility of a joint use facility to include a fire tower and rooms for realistic training for students in both programs. The program also needs additional office spaces. The program has planned a campaign to recruit students to enhance the diversity of the population and profession it supports. The program leaders are also discussing the acceptance of transfer credits with neighboring four-year universities. There are plans to consider new curriculum that might be offered for advanced law enforcement training prescribed by P.O.S.T. and curriculum that might meet the needs of corporate security personnel.

Fire Science Overview

The HEC OM offers a pre-service curriculum, the California Fire Marshall courses and electives for in-service training (fire officer, fire education specialist, fire instructor, etc.), and, as of June 2006 a Wild land Firefighter Academy in partnership with the U.S. Fire Service. The latter two efforts are fee-based offerings. The program has been offered in some form for over 20 years but moved to the HEC OM in 2007. The core, pre-service courses are offered online and in hybrid course format.

Fire Science Planning

Career trends indicate that fire science candidates will face increased requirements for education to gain access to employment opportunities. The program is starting to provide training via contract education to in-service personnel as a complement to its traditional pre-service training activities. The faculty is considering a new area of emphasis in wild land fire fighting as no such program exists in San Diego County and there is a national curriculum available as a model. The program leaders are also interested in the possibility of a program in emergency or disaster preparedness. The program needs appropriate outdoor space for physical fitness instruction and testing. Expensive, specialized equipment for student use in the training programs has been requested. There has been discussion, with the police academy, to share an outdoor facility that would provide a more realistic training environment for students in both programs. The program leaders would like to provide a physical fitness and agility testing service to the neighboring fire agencies. A vehicle enclosure to house motorized fire apparatus and support equipment has been requested.

Nursing and Related Programs Overview

The College offers several Nursing and related programs at the HEC OM. Associate Degree Nursing Program provides: (1) a four-semester college-level core program, (2) a bridge course



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for Licensed Vocational Nurses to enter into the program at a level commensurate with their knowledge and experience, and (3) elective Nursing courses that augment the core Nursing Program. A Certified Nursing Assistant (CNA) program is offered for immediate job entry or entrance into the Associate Degree or Vocational Nursing programs. Graduates of the CNA program are eligible to take the State certification exam to work in skilled nursing facilities. An additional course in acute care provides access to employment in an acute care setting. The Central Service Technology program trains students for entry-level positions to sterilize surgical instruments and medical equipment. Upon completing the program of three courses, graduates take the International Certification Exam (IAHCSMM). The Surgical Technology program prepares students to function in operating rooms under the direct supervision of physicians and nurses. Graduates of this three-semester program assist in scrubbing and with the surgical procedures in hospital operating rooms, emergency rooms and out-patient surgical clinics. The College offers a Licensed Vocational Nursing program for students who want to provide direct patient care, under supervision, to patients in clinics, long-term care homes, home health programs and, in some cases, acute care. Graduates of the program are eligible to take the NCLEX-PN exam for licensing. An advanced program for Operating Room Nursing (ORN) is also offered for practicing nurses who have a clinical sponsor. Graduates are eligible to take the Association of Perioperative Registered Nurses (AORN) Periop 101 competency examination for Registered Nursing.

Nursing and Related Programs Planning

The program lacks sufficient real-world clinical placements (training opportunities) and that is its greatest challenge. The accrediting agencies allow the program to offer up to 25% of the required clinical time in a simulator laboratory environment. A full-time simulation laboratory instructor would alleviate this problem and preclude the possibility of losing accreditation by the California Board of Registered Nursing (BRN) and the National League for Accrediting Commission (NLNAC). The Vocational Nursing program faces a similar possible loss of accreditation by the Board of Vocational Nursing and Psychiatric Technicians (BVNPT) due to inadequate numbers of faculty and staff. Additional program faculty has been unsuccessfully requested for over five years. Another challenge is student access to necessary computer laboratory space in order to complete the computer-based testing for nursing. The testing is accomplished online via external exams and the current rooms at the Center are not large enough. The nursing program enrollments are larger than can be accommodated in the current skills laboratory facility and an additional skills lab space is needed. The Surgical Technology, Central Services Technology, and Operating Room Nursing programs were transitioned to the HEC OM in 2010, but they have not been provided with supply or budget monies needed to support the instruction. Both the Surgical Technology and Operating Room Nurse programs have established new courses to assist practitioners in meeting new professional standards. Finally, the trend in the nursing field is to hire Bachelor of Science Nursing (BSN) graduates over Associate Degree registered nursing (RN) graduates. The program has established a transition course for final semester students to facilitate their transition to the BSN program with San Diego State University (SDSU). RN students can now take two upper division courses from faculty at SDSU offered at the Center. The Otay Mesa nursing program is one of three community colleges working in a collaborative way with the nursing faculty at SDSU to advantage the RN students in transfer and job searching.



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Emergency Medical Technology (EMT) and Paramedic Overview
The purpose of the EMT program is to train rescue workers and personnel to render emergency medical aid using proper techniques of care and transportation. Upon completion of the curriculum students are eligible for the state certification exam. This program has been offered to the community for over 25 years. The EMT curriculum has been revised to meet recent changes in national standards for the industry. The paramedic program is designed for EMT professionals who have had at least one full year of work experience in that field. Both programs have enjoyed an exceptionally high pass rate on national registry exams as they prepare students for work in these fields.

Emergency Medical Technology and Paramedic Program Planning
The programs will explore the need to transition from a certificate program to a degree program, as that appears to be a national trend. In addition, the accrediting body for EMS training programs is emphasizing that program directors and faculty have formal education currently required a bachelor's degree for the director and a master's degree to be required in the next few years. The paramedic program has offered fee-based instruction to the U.S. Border Patrol and has been approached by the City of Chula Vista to offer their training to the City Fire Department EMTs so that a higher level of service can be provided to citizens. The training will be on a contract education basis. The programs have identified a need for several specialized equipment items, some of which might be shared with the nursing program, and a permanent director for this and related programs. There are new state regulations pending that may create opportunities to expand the offerings to the EMS community, but the paramedic program needs additional full-time faculty.

Applied Business Programs Overview
An array of business related programs are offered through the HEC OM as online offerings. These include: (1) leadership and supervision; (2) international business; (3) logistics and transportation; (4) insurance; (5) community, economic and urban development; (6) travel and tourism; and (7) virtual office professional. Additional programs are offered on campus or through hybrid instructional strategies. These include: (1) administrative office assistant-bilingual intensive training; (2) payroll clerk; and (3) legal office assistant- bilingual intensive training. These programs focus on workforce development in business and industry in the Otay Mesa and South County area.

Applied Business Programs Planning
The programs intend to continue offering courses largely via the online instructional methodology.

Center for International Trade and Development (CITD) Overview
The Center assists small and medium-sized businesses expand internationally by providing low or no-cost counseling, market research, training, and education programs. The Center is a program of the California Community College Chancellor's Office Economic and Workforce Development unit and serves both San Diego and Imperial Counties. The Center is concluding its first year as part of the California State Trade and Export Promotion (STEP) initiative intended to promote border export trade. The Center staff is located both at the HEC OM and the Chula Vista campus. The Center also sponsors a Youth Entrepreneurship Program (YEP) that



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reaches 125 students at the College and within the Sweetwater Union High School District to provide training in how to start a business.

Center for International Trade and Development Planning
The Center needs office space of approximately 3,000 square feet and access to a training room for 30 people, a computer laboratory for 20 people, plus a conference room to accommodate 60-90 people. The services provided by the Center are a logical bridge to the Logistics and Transportation program offered through the HEC OM as CITD used a Title VI-B grant to further develop the curriculum for that program.

*Higher Education Center San Ysidro (HEC SY)*
The HEC SY has been in existence for over 23 years as part of a decentralization effort for the College. The HEC SY closed in 2007 for reconstruction and reopened in 2009. The building moved from being a 7,500 square foot property to now using 18,000 square feet. The Center now operates six days a week Monday through Saturday. The College has applied to the Chancellor's Office to have the HEC NC designated as a Center for funding purposes. The HEC SY hosts the Child Development program, and a Legal Interpretation/Translation program plus a range of general education and basic skills course offerings. Although located at the Chula Vista campus, the Child Development Laboratory School is managed through the Child Development Department at HEC SY.

While the 2007-2009 remodel allowed the HEC SY to offer more courses and now more enrolled students, the staffing is lower than it was in 2007 when the HEC SY closed for reconstruction. This places an intense strain on the existing personnel. The HEC SY does not have a laboratory classroom and therefore cannot offer a lab-based science course to meet general education requirements. There is a need for some additional private offices where confidential student services discussions may be held with students. The Library room at the Center also serves as a tutoring center and a career center. As a result, the noise level rises to a point that it creates an environment that is not compatible with quiet study and reading. The open computer laboratory needs to be larger and should be equipped with more comfortable chairs, as should the formal computer instruction classroom laboratory. There is a shortage of storage space and there are few places for students to just gather and visit with one another. While there is a parking lot that is across the street from the Center, student parking is sometimes a problem.

Child Development Overview
The program offers two Associate Degrees and several certificate programs matched to the state requirements for teaching pre-school children or childcare certification. The Child Development Laboratory School facility, located on the Chula Vista campus, can serve 126 children ages 6-weeks to five-years old and is used for student observations and student teaching. The facility can offer fee-based childcare for College students, staff and community members. A U.S. Department of Education Child Care Access Means Parents in School (CCAMPIS) grant supports participation of low-income parents. A California Department of Education grant, Preschool for All (PFA) provides free childcare for children four years of age. The building was constructed in 2005. It is one of the few such facilities accredited by the National Association for the Education of Young Children (NAEYC).



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Child Development Planning
The program launched a bi-lingual Family Childcare Certificate to reach the mostly Latino population and introduce the College to those who might not otherwise attend. The program also partnered with National University to offer a Bachelor's Degree in Early Childhood Education through a cohort model of instruction. The first cohort of students has completed the Bachelor's Degree and approached the program leaders to bring a Master's Degree program to the campus through a partnership with Pacific Oaks College, a renowned Early Childhood graduate education institution. That potential partnership is being discussed. The program, the enrollment of which consists 40% of middle-aged female students, is concerned about decreasing retention rates and the challenges those older students are facing as more technology is introduced into the instructional activities. For some students in the department the option to travel to the Chula Vista campus for required practicum and observation experiences is a very difficult challenge. In addition, the Chula Vista campus Child development Laboratory School cannot presently operate at full capacity due to budget restrictions that limit staffing. The faculty leadership is working on a plan to address the funding shortcoming. The program also sees a need for a quality Child Development Laboratory School Center in the San Ysidro area, as most facilities in the community are home-based operations that do not operate to the standards of instruction the program seeks to promote and teach. There are a limited number of state-licensed, childcare centers in the San Ysidro area. The faculty has identified a need to add an infant program, as that is where the greatest community need is found.

Legal Interpretation/Translation Overview
This program has been offered at the HEC SY since fall 2010. It prepares students for state certification as interpreters and translators for legal proceedings. The California certification for interpreters follows the guidelines of the Consortium for Language Access in the Courts. Additional details about this certification can by found at this URL http://www.ncsconline.org/d_research/courtinterp/cicourtconsort.html.

Legal Interpretation/Translation Planning
The program would like to be able to hire a full-time instructor.

*Higher Education Center National City and Crown Cove Aquatic Center (HEC NC)*
The HEC NC has been in place for over 13 years and was constructed as part of a decentralization effort by the College to better serve residents of National City and surrounding communities. The site hosts the Dental Hygiene, Medical Laboratory Technician, and Medical Office Procedures instructional programs plus a range of general education and basic skills course offerings. A grant-funded Family Resource Center program is located at the site as is both the San Diego Small Business Development Center and the staff of the San Diego-Imperial County Lead Regional Center. The overall growth of programs and student enrollments at the HEC NC has placed a strain on the limited numbers of faculty and staff assigned to the location.

The Center Director oversees the Navy Apprenticeship Program, Navy college program of instruction, and the San Diego Contracts Opportunities Center (located in Mission Valley).

The Crown Cove Aquatic Center (CCAC) on Highway 73 (Silver Strand) provides Recreational and Leisure Studies instruction and reports to the Center Director.



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Taken all together the HEC NC serves the communities of National City and Coronado. The College has applied to the Chancellor's Office to have the HEC NC designated as a Center for funding purposes.

Dental Hygiene Overview
The program provides entry-level education and experience to prepare graduates for licensure as dental hygienists. Classes for the two-year degree program are taken at the Center and laboratory training is provided on-site at the 22-chair Dental Hygiene Clinic under the supervision of licensed dentists and registered dental hygienists. Students provide oral health care education and dental hygiene services to the general public as well as the College community. The Hygiene program is accredited by the Commission on Dental Accreditation and has been acknowledged as a program "approved without reporting requirements." The program recently started a pre-dental hygiene course to assist students in determining if the program of instruction and career are a good fit for the student.

Dental Hygiene Planning
The program has identified a need for additional staff- a full-time clinic coordinator, a receptionist, a part-time computer support technician, and faculty for the skill-building course that will generate additional FTES. There are needs for equipment replacement, refurbishment, and maintenance plus two new digital radiography sensors. While the program began as a no-cost-to-the-patient community service, the burden of budget cuts has prompted a reconsideration of the minimal fee issue. Nearly all dental hygiene education programs in California charge fees for dental services. If fees were charged, the expected income likely would generate enough revenue to pay for a needed bilingual clinical receptionist to manage the load of 2,000 patients per year. Concorde, a for-profit college, opened a dental hygiene program in San Diego during September 2011 and will graduate its first class in spring 2013. The private, for profit, San Joaquin Valley College is opening a third campus in Chula Vista and expects to accept its first class of dental hygiene students in January 2013. Once all three programs are in full operation approximately 90 students will graduate each year and employment opportunities likely will plummet since the market will be "flooded."

The program leadership is reviewing ways to address attrition through curriculum modifications and program sequencing strategies. The leaders are also considering the feasibility of creating a post-graduate program to offer a fee-based curriculum to the local dental and dental hygiene communities. This program would potentially lead to certification as an Advanced Dental Hygiene Practitioner. Another growth possibility may be a fast-track dental hygiene curriculum (hybrid) targeted to foreign dentists and dental hygienists who already have a degree. Long-term the creation of a simulation laboratory would greatly benefit the pre-clinical courses, skill-building courses, and provide the opportunity to offer post-graduate courses for additional revenue.

Medical Laboratory Technician (MLT) Overview
The MLT program prepares students for careers in medical laboratory technology through the study of laboratory principles and procedures, clinical test significance and application, principles and the practice of quality assurance, and problem solving. The program is in partnership for clinical affiliation agreements with several health care systems and providers



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(Sharp HealthCare, Scripps Health, Rady Children's Hospital, Naval Medical Center San Diego, Kaiser Permanente, Palomar Pomerado Health, Family Health Centers of San Diego, and Paradise Valley Hospital). The 18-month program is accredited by the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Graduates have had a high pass rate on the national licensing board exam, American Society for Clinical Pathology (ASCP), and great success in securing employment.

Medical Laboratory Technician (MLT) Planning

The program leadership would like to be able to start a second cohort of students into the program during the spring semesters. Attention needs to be given to offering more sections of the prerequisite courses for entry into the program since many of those courses fill early and are also required for several other health programs. The development of a clinical laboratory scientist bridge curriculum with four-year institutions would help those students who already have a bachelor's degree before entering the MLT program. There are some on-going curriculum challenges in the program for those ESL students who require additional language assistance. Some reconfiguration of the curriculum is being considered based upon learning outcomes assessment and timing schedules in some courses, such as MLT 130 taught only in the summers. There is currently a need for a full-time clerical support person to the program. The program currently shares laboratory space with the Dental Hygiene program but requires its own laboratory facility, equipment, and supplies.

Medical Office Professional Overview

A medical office professional performs secretarial duties using specialized knowledge of medical terminology and hospital, clinic or laboratory procedures. Common duties include scheduling appointments, billing patients, compiling and recording medical charts, reports and correspondence. Therefore, the Medical Office Professional instruction offers several different majors within the program. Majors offered include medical coding, medical insurance, medical interpretation/translation, medical transcription, and medical word processing.

Medical Office Professional Planning

The faculty believes the program could be improved by more clearly defining career paths as the curriculum is presently too overwhelming and confusing to the students with some duplication. Consideration is being given to removing the medical coding, billing and insurance instruction from the program and crafting those offerings into a new Health Information Technology program. Were the current program divided it could better compete with the for-profit institutions as well as with programs at other community colleges. To improve the current program the faculty has identified needs for additional state-of-the-art computer equipment, scheduling program, MS Office, electronic health record system, computerized health coding system, and anatomically correct models for student learning. To address student learning needs, based on assessment results, the faculty are considering prerequisites that would require completion of appropriate English instruction; typing speed of 40 words per minute with no more than five errors, and basic computer instruction is MS Office and related operating systems. The program has begun a comprehensive curriculum modification to align its offerings with national accreditation standards for allied health programs, but faculty in the program are all part-time appointments. The movement of the program from Chula Vista to the HEC NC prompted the conversion of a lecture classroom into a clinical/laboratory space.



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Southwest Regional Apprenticeship Overview
The College is in partnership with the Puget Sound Naval Shipyard and Intermediate Maintenance Facility, the Southwest Regional Maintenance Center, Naval Air Fleet Readiness Center Southwest, and Portsmouth Naval Shipyard Point Loma to offer the Navy Apprenticeship program. It is a four-year, accredited co-operative education program. Apprentices attend classes in the Apprentice School at the Naval Air Station (NAS) North Island and earn a Certificate of Proficiency in Leadership and Supervision as well as a Journeyman Certificate in their chosen trade. Courses offered at the HEC NC help students achieve their academic goals.

Southwest Regional Apprenticeship Planning
Classes in this program are offered at the Naval Air Station, North Island (Coronado, CA). The program was able to earn federal approval as a journey level apprentice program within the first year of operation.

Family Resource Center Overview
Since 2004 the HEC NC has been the host for a Family Resource Center/Microenterprise Family Childcare (MEFC) program that was grant funded from the Department of Housing and Urban Development. The program linked the College to the local community by providing access to health and social services through the sponsorship of workshops. The MEFC provided courses and training to Spanish-speaking participants who wanted to establish a licensed childcare business in their own homes.

Family Resource Center Planning
Although the original grants are coming to a conclusion the HEC NC has pursued other grant resources for a different target audience but with a similar purpose.

Small Business Development Center (SBDC) and San Diego Contract Opportunities Center (SDCOC) Overview
The SBDC provides counseling and technical assistance to small businesses located south of the interstate 8 highway. The College also hosts the regional management team for small business development activities in both Imperial and San Diego counties. Both of these staff groups are located at the HEC NC site. The SDCOC assists businesses in preparing applications for government contract awards. It has offices in the Mission Valley property of the Point Loma Nazarene University.

Small Business Development Center (SBDC) and San Diego Contract Opportunities Center (SDCOC) Planning
Both the SBDC and the SDCOC value the opportunity to have office space and representation strategically placed in the service area. Both desire access to a classroom for workshops and seminar training as well as access to a larger conference room space for occasional use.

Crown Cove Aquatic Center Overview
The College has had a presence at the Silver Strand State Beach and Park since the early 1980's when physical education faculty offered water-based instruction supported by only a container box for storage of equipment. The Center established a memorandum of understanding with the State Parks and Recreation Department in 2000 and a new facility was constructed in 2005 on



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the site. The CCAC provides a wide range of educational activities to the communities of Coronado and Imperial Beach. The primary focus is to promote boating and water safety through instruction in the Safety Afloat Program, the Marine Safety Service Program, the Youth and Group Training Program, and an American Heart Association Community Training operation.

The curriculum offerings are a blend of credit courses from the Exercise Science/Athletics area and non-credit courses offered by the Continuing Education program of the College. Other instruction is offered on a fee-basis. A pilot program was started to offer a limited amount of equipment for rent to families that are camping at the Silver Strand State Beach where the Center is located. The Center has partnerships with the California Department of Boating and Waterways that provides a substantial grant to the Center for paddle-related sports instruction and the California State Parks and Recreation Departments.

Crown Cove Aquatic Center Planning
The CCAC intends to expand services in three ways. They plan torent equipment to the public, develop additional fee-based offerings, and expandi instruction to school-age children. They would do this through a sports camp offered during the school break periods in the academic year, and/or provide water-sports instruction to meet physical education curriculum requirements in the high schools. The Center staff envisions the development of an outdoor recreation leadership program, the curriculum of which would transfer to a Bachelor's Degree program at SDSU, and future interdisciplinary opportunities with environmental science, conservation, as well as park and recreation management. As instruction is offered seven days a week much of the calendar year, the greatest instructional challenge is to find qualified instructors for the credit classes and to groom replacement lifeguard and other instructors for the noncredit and fee-based offerings. A specific need is for additional storage space for equipment. The Center leadership sees a potential linkage of instruction at the Center with the marine hospitality sector of the San Diego economy.

Student Affairs
Student Affairs units at the College are divided into two groups: (1) Counseling and Matriculation; and (2) Student Services. The Vice President would like to evaluate the first year of program review within the area and to develop an annual report card for the area.

*Student Services*
The principal units within Student Services are: (1) Admissions and Records; (2) Financial Aid, Evaluations and Veterans Services; (3) Student Development; and (4) International Programs.

Admissions and Records and Outreach Overview
The Offices of Admissions, Records, and Outreach provide assistance to persons seeking information about the college. Assistance begins with the student's initial contact with the College, and continues throughout actual attendance, completion of education programs, and finally transfer and/or graduation.

Admissions and Records and Outreach Planning
The unit plans, through CCC Apply, to implement E-transcripts, online transcript requests, and international student applications. The Outreach office intends to create additional forms of



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communication with students such as Facebook accounts and to enhance video instructions on the web pages to provide a clear set of procedures.

Student Development: Activities, Health Services, Cooperative Work Experience Education (CWEE), Service Learning, and International Programs Overview
The Student Activities unit provides supervision to the student government and club system at the College.

The mission of the Health Services unit is to protect, support and promote student health in the belief that healthy students learn better and stay in school.

The CWEE program provides internships for students to apply classroom learning to real life work assignments and is part of the larger College effort in economic and workforce development. Approximately 30 degree or certificate programs at the College incorporate CWEE. Service Learning is a teaching strategy that ties course curriculum and concepts with service in the community. Courses in Sociology, Communications, English, Spanish and Math offer this learning opportunity. Students who participate in a course that offers service learning serve a minimum of 15 hours over the semester at a non-profit organization, public agency or school. At the end of the semester, once hours are completed, students receive certificates of achievement and notation of their hours on their co-curricular transcripts.

The International Programs unit promotes study abroad.

Student Development: Activities, Health Services, Cooperative Work Experience Education (CWEE), Service Learning, and International Programs Planning
In the coming years the Student Activities intends to increase the visibility and participation of student government in community events. There are plans to develop a tracking system to document student involvement in ASO and clubs. The unit recognizes the need to create an equipment replacement plan for the ASO. Student Activities has indicated a need for additional space and meeting places for student government and clubs.

The Health Services unit will explore electronic medical records as a way to increase efficiency. It also wants to implement comprehensive laboratory services for students and will see a partnership with a laboratory service. The unit has set a goal to update the written procedures such as standing orders, clerical procedures, nursing policy and procedures. Health Services has indicated that there are insufficient numbers of nursing personnel to provide services full-time at the Chula Vista campus and the HEC locations and therefore additional staff are required. The current Health Services space, with only two exam/treatment rooms, has been outgrown and the space is not ADA compliant. Also, the staff is currently located in two different buildings and need to be unified into one space.

The CWEE unit intends to increase the numbers of students enrolled in the offerings and to implement a formal student evaluation form to determine overall student satisfaction and success. To accomplish those goals the CWEE unit has requested a clerical support person, an intern and a full-time counselor. There are some limitations to the internship opportunities that are related to the current board-approved contract. The Service Learning program recommends



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funding to provide faculty stipends that would increase faculty involvement, thus increasing student access and participation in the program. Currently service learning opportunities are limited to the offerings at the Chula Vista campus, but the staff is interested in expanding those opportunities to courses offered at the Centers. If either or both programs were to grow, additional staff and office space would be required.

The International Programs unit intends to continue working to keep study abroad experiences reasonably priced and attractive to the widest possible student population. The spring 2013 experience is study in South Africa.

Financial Aid, Evaluations, and Veterans Services Overview
The Financial Aid program fills the gap that may exist between the cost of education and the funds available to students from family, employment and savings. The program delivered over $31 million dollars in aid for 2011-12.

The Evaluations Department receives and evaluates more than 2,500 student petitions each year from those seeking a degree, certificate and general education breadth certification for transfer. The Department also receives requests to determine credit and course equivalencies for transfer course work completed at other institutions, advanced placement, college level examination program, and international baccalaureate learning experiences. Grade point averages are also calculated for students seeking Cal Grants and students who might be eligible for graduation with honors.

The Veteran Services Office processes educational benefit requests for eligible students and provides information and guidance on veteran programs and liaison with local, state, and national veteran groups and organizations. Each term in 2011-12 the Office served almost 1,100 veteran students seeking benefits.

Financial Aid, Evaluations, and Veterans Services Planning
The Financial Aid program has implemented direct deposit of aid funds and a Bookstore link and continues to seek ways to exploit technology to improve services to the students. Financial Aid would like to implement a SARS system for their students so that student contacts and requests could be tracked. There are plans to conduct customer service training workshops and to develop an outreach program to improve communications and services to students.

The Evaluations Department is seeking increased staff time to accommodate transfer credit and course equivalency evaluations. In spring 2013 the Evaluations Unit will share their degree audit software package with counselors, which should allow counselors to help students plan their course selections. The Department intends to pursue additional technical education to enable the staff to utilize the College technology that would give better service to students. Consideration is being given to a marketing plan for the Evaluations Department to better communicate services and petition deadlines to students. The department would like to increase the number of student petitions for graduation and certification, expand online forms and access to reporting from Degree Audit and other modules. There is an urgent need to realign the process for the evaluation of external transcripts as that process takes too long.
The Veteran Services Office is seeking another unit of personnel to handle the increasing



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numbers of veterans attending the College. The unit also intends to explore ways to better track veteran students through the College technology systems and then to increase outreach to those students. The Office recognizes the critical need for a dedicated facility space for a Veterans' Student Center. The office also wants to develop a process for managing veteran debt letters.

*Counseling and Matriculation*
The principal units within Student Services are: (1) Counseling and Assessment; (2) Disability Support Services; (3) EOPS/CARE and CalWORKS; and (4) Student Employment Services (Transfer Center, Career Center, CTECS/WRC).

Counseling and Personal Development, Assessment Overview
The Counseling and Personal Development Department offers personal development courses that assist students with academic planning, career development, and personal enrichment. These courses are designed to help with the personal challenges and tasks facing college students. Some of the relevant student-centered topics are college study skills, self and career discovery, life planning, and decision making that focus particularly on selecting a college major and a career in order to make the transition from college to their chosen career fields. Courses help students identify their values, assess their personality, and make progress with their personal goals for life. The Department also offers academic planning services through counseling appointments with students. Matriculation and assessment services have been adversely impacted due to a severe reduction in categorical program funding from the State.

Counseling and Personal Development, Assessment Planning
The department has collaborated with other instructional divisions/departments for basic skills and transfer-based learning communities. The department has developed an online orientation program. Particularly in light of the requirements flowing from the Student Success Task Force, the Department has identified a need for additional full-time faculty and classified support staff. The Department has been moving forward to exploit technology to better communicate with and serve students in a variety of ways, including a student educational plan, online orientation, e-counseling, and technology to gather evidence of the impact of counseling on student success; however, the lack of processes to fully evaluate outside transcripts has hampered progress.

The Assessment Unit has requested replacement computers and additional funding for supplies and software license/maintenance agreements. The Unit has also identified the need for additional staff positions and more time for counseling personnel to accomplish assessment work. The unit plans to re-examine the student's ability to take higher-level assessment exams based on high school transcripts. There is a goal to complete the revisions of assessment webpages so that information is provided in a more concise manner. The unit will collaborate with the evaluations department to create an equivalency database to facilitate prerequisite review. In collaboration with the ESL Department, the unit will work to investigate and adopt additional ESL assessment instruments.

DSS Overview
As mandated by State and federal legislation, the Disability Support Services (DSS) unit serves students with disabilities. DSS verifies disabilities and assists students in identifying reasonable accommodations. The unit supports the College mission by eliminating any barriers that exist for



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students with disabilities that might limit their opportunities for success.

DSS Planning
The unit has identified a need for additional counseling personnel to provide assessment services plus additional staff and counselors to help students with disabilities. DSS also needs funding for assistive technology in the High Technology Center. The unit will also teach students to recognize the current resource limits and to find creative ways to use those assets. DSS would like to explore the use of cost-savings technologies to provide remote sign language interpreting and captioning. The faculty plan to review and modify DSS classes following the program review effort and monitor student progress in DSS classes based on SLO evidence. Presently the activities of the office are located in several different places on the Chula Vista campus. It would be helpful to consolidate those office spaces.

EOPS, CARE, and CalWorks Overview
Historically in California certain socio-economic groups have not had equal opportunities to pursue a college degree or certificate, or to fulfill transfer requirements for a four-year university. These units engage in intensive community outreach to attract special population students to the College. Personnel in these units provide a variety of services to these students such as individual career, academic, and personal counseling; advocacy program planning and special topic workshops; child care; job development and placement; clothing allowances and school supplies; and transportation assistance. Unfortunately, these categorically funded units have suffered a severe reduction in resources associated with a sharp curtailment of State resources for these kinds of programs at the community colleges.

EOPS, CARE, and CalWorks Planning
These units will engage in an effort to measure the extent and quality of the learning it is offering and to develop measurement tools to ensure students can recognize their options for achieving academic success. In view of the current fiscal situation EOPS & CARE intend to adjust services they provide and collaborate with other units on campus to maximize efficiency. The units will streamline their processes, ensure that all procedures are in written and organized in a common location, and continue to improve student retention in the programs offered.

Student Employment Services: Transfer Center, Career Center and CTECS/WRC Overview
The Transfer Center is the hub of transfer activity on and off campus. It is located near other student services such as Counseling, EOPS, Career Center, Employment Center and Admissions & Records.
The Career Center offers resources and counseling to students regarding career selection.

The Center for Technical Education and Career Success (CTECS) is a specialized support program for students enrolled in career and technical education programs. CTECS, in collaboration with the Regional Occupational Program and the Women's Resource Center, provides a comprehensive career technical education program.

Student Employment Services: Transfer Center, Career Center and CTECS/WRC Planning
The Transfer Center intends to increase transfer rates by developing a greater scope of services and visibility on campus through improved marketing strategies to increase participation of



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faculty and staff in the transfer process, research teleconferencing opportunities, and increase information dissemination. The Center staff is interested in establishing the means to offer virtual advising with those institutions that no longer conduct campus visits. There is also an interest in reviewing and updating the Center website to improve navigation for students.

The Career Center needs a separate budget rather than relying upon the overall counseling and assessment budget resources. Career Center staff would like to increase counselor hours assigned to the program so that it can better serve the students attending the HECs. The Center staff intends to provide online access for all enrolled students who are interested in career planning information.

The CTECS/WRC has recommended district funding for the unit and increases in staffing to provide additional services to the target population of students.

Business and Financial Affairs

This area of the College provides a range of administrative services to the College. The units in this area include: (1) Financial Services and Payroll; (2) Procurement, Central Services and Risk Management; (3) Bookstore; (4) Food Services/Contracts Food Program Projects; (5) Facilities, Operations and Planning; (6) Maintenance; (7) Grounds; (8) Custodial; and (9) Campus Police.

Financial Services and Payroll Overview

The role and responsibility of the Financial Services office is to ensure that the fiscal operations of the campus are planned, controlled, and accurately accounted for in the financial records. This applies to all funds, including appropriated, generated, awarded, donated, or otherwise received or spent by the campus from any source or for any purpose. The Fiscal Services operation is responsible for the fiscal accountability of grants, the campus district budget, and auxiliary funds. The Cashier's Office provides information and services in a quick, accurate, and student-centered manner to implement standardized cash receipting and produce timely and accurate invoices, payments refunds and deposits.

Financial Services and Payroll Planning

The Department is working to migrate the purchase chart of accounts module into Datatel R-18. Training will be provided to representatives from all campus departments to enable them to monitor their budget expenditures and to stay within the amounts allocated. The Cashier's Office, in collaboration with Institutional Technology, will design and implement a sustainable program to automate the student fee refunds processes. The staff will also work to clear out the backlog of student refunds.

Procurement, Warehouse, Office Support Services and Risk Management Overview

The Procurement, Office Support Services, and Risk Management units provide a variety of campus supports to all units of the College. These include mailroom, purchasing services, office support and printing services, warehousing, contracting, and risk management. Professionals in these units provide a unified purchasing system that ensures integrity and fairness with centralized responsibility for oversight of solicitation, vendor selection, negotiation, award, contract management, reporting, disposal of surplus property, and event support.



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Procurement, Warehouse, Office Support Services and Risk Management Planning
These units support the institution's educational programs and goals while pursuing opportunities to incorporate efficient procedures, processes, standards and technology to improve the overall efficiency in all areas of operations that will in turn enhance and benefit the student's educational outcomes.

Bookstore and Food Services/Contracts Food Program Projects Overview
The Bookstore provides the campus textbooks, supplies and supplemental learning materials to support the educational goals of students and faculty. The store is owned and operated by the College and has representation at each of the Higher Education Centers plus the Chula Vista campus. Campus Food Services provides students, staff and guests with high quality foods and exceptional customer service in a clean and safe environment. The unit supports the Culinary Arts instructional program.
Bookstore and Food Services/Contracts Food Program Projects Planning
The Food Services unit has identified the need to replace aging equipment and looks forward to the possibility of new facilities supported by Proposition R funds. Both the Bookstore and Food Services intend to build a marketing strategy to gain more awareness by both external and internal customers and to explore a multi-functional campus card that ties to other services on the campus.

Facilities, Operations and Plans Overview

The Department provides facilities planning, grounds, custodial, and maintenance services to the College. Maintenance provides the campus with onsite personnel to maintain furniture fixtures and equipment, buildings and building systems such as plumbing, HVAC, and electrical. Maintenance also performs all set ups for events and functions held on the campus as well as handling all shipping/receiving. The Grounds Department provides landscape and grounds maintenance services for the Chula Vista campus and HEC sites. In doing so the Department provides a safe and attractive landscape for student learning, a safe array of athletic sport fields for collegiate play and community sports, and other professional educational activities.

Facilities, Operations and Plans Planning
The Department intends to develop a plan to manage the additional assignable square footage that will be created as buildings are renovated and new construction adds to the campus locations. The Department seeks to hire a manager for the unit and ensure that future hires are employed as generalists to give more flexibility in assignments. The Maintenance and Custodial staff has requested the purchase of six computers so leads have the ability to utilize the Mercury Commerce faster and can provide more efficient and effective service. To conserve water the Department has worked with the City of Chula Vista to provide reclaimed water connections for future campus use. The Grounds Department will ensure that current resources are used to make the maintenance of areas that have the greatest impact on students a priority.

Campus Police Overview
The College Police Department provides the campus communities with public safety services performed by onsite personnel 24-hours a day seven-days a week. The College employs public safety officers with training specific to public safety, emergency preparedness, and parking



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enforcement. The Department serves students, faculty, and staff by providing escorts, patrolling the campus, responding to medical incidents, investigating crimes, and documenting all incidents. The department is also tasked with preparing the campus for man-made and natural disasters through careful planning, ongoing training and exercises. Police services at the HEC San Ysidro are provided by the San Diego Police Department, those at the HEC NC are provided by the National City Police Department. Police services at the HEC OM are provided by the College Police Department working closely with the San Diego Police Department as public safety assistants are assigned to the HEC.

Campus Police Planning
The College Police Department will promote an atmosphere of "community involvement" to improve awareness and safety on campus by enhancing customer service, accessibility of information, and communication with the campus. Over the next two years the Department intends to prepare the campus community for manmade and natural disasters.

Human Resources Office
This area is organized into five subunits: (1) Staff Development; (2) Tenure Review; (3) Human Resources Compliance; (4) Employee Benefits; and (5) Human Resources. The area goal is to support the district in the programs and services it provides to students and the campus communities by performing with integrity, responsiveness, and sensitivity. Among the services the Human Resources Office offers are the coordination and facilitation of recruitment for classified and academic staff, performance evaluations, and consideration of classified and compensation matters. In addition, the Office offers assistance and resolution of employee relation matters; interprets and implements union contracts; provide orientations for new employees; maintains personnel records; and administers employee leave benefits and other applicable fringe benefits (except health and welfare benefits). The Office adheres to relevant state and federal regulations.

Superintendent/President Area

Office of the Superintendent/President Overview
The Superintendent/President provides overall leadership to the College and works with the Governing Board to shape College policies and ensure the economic, effective, and efficient operation of the institution.

Office of the Superintendent/President Planning
The Superintendent/President has set four broad goals for the near term: (1) improve campus culture and climate by creating mutual trust and respect as professionals, reflective of an institution of higher learning; (2) ensure student access to success by strengthening inter-segmental alliances to ensure college, transfer and career preparation for all students; (3) improve institutional effectiveness by establishing organizational structures and systems that support teaching & learning; and (4) improve institutional advancement by maximizing Southwestern College as a community capacity builder.

Communications, Community and Governmental Relations Overview
The Communications, Community and Government Relations Department is a one-stop shop for



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the latest news on the College, its programs, activities, faculty, staff, and students. It produces and delivers promotional materials and electronic media in an effort to recruit students and communicate college information to the community. The Office staff provides marketing, advertising, web design and development, publications, and event planning services to the campus.

Communications, Community and Governmental Relations Planning
The goal of the Office is to enhance awareness, increase name recognition, and improve the image of the College, thereby generating enrollment and community goodwill.

Office of Institutional Effectiveness (OIE) Overview
The mission of the Office of Institutional Effectiveness is to guide an on-going college-wide process of planning and annual outcomes assessment for the purpose of documenting that the college is achieving its mission and strategic priorities and that it is continuously improving its programs and services. The Office provides research and grant writing services to all units of the College. The Office also provides leadership to the College Foundation which promotes and assists the College by generating support for scholarships, capital needs, and special projects to ensure quality education for the community via life-long learning and earning opportunities for the people and businesses in our service area.

Office of Institutional Effectiveness Planning
Beginning with the college's mission, vision, and strategic priorities, the OIE works collaboratively to develop unit/division purpose statements and annual objectives and/or learning outcomes to support SWC's mission and strategic priorities. Further, OIE assists in developing procedures, assessment methods and criteria for measuring the success of the unit/division learning outcomes. OIE documents the results and use of results to show that the unit is continuously improving its programs and/or services by utilizing the continuous Planning-Implementing-Evaluating (PIE) integrated planning process.

Institutional Technology Overview
The Institutional Technology Department provides leadership, service, and support in the use of institutional technology to advance the mission of the College. The unit provides the computing and media infrastructure, which is necessary to deliver a variety of educational programs. The department prides itself in providing first-class customer service and is driven by its commitment to students, faculty and staff. Over the past few years and into the foreseeable future, technology will continue to permeate every area of the campus.

Institutional Technology Planning
The Department has five primary functions: (1) technology support; (2) programming services and support; (3) network systems services; (4) computer lab and classroom podium support; and (5) leadership and support for the College Technology Plan. Many goals and objectives have been captured by the Technology Plan; however, the general themes for the future are to upgrade the Enterprise Resource Planning system from the Unidata to the Microsoft SQL database; expand the College data warehouse; implement the Human Resources module; complete the implementation of the Financials module; and, expand plus modernize the enterprise wireless and networking services.



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## C. SWOT Analysis Highlights

Strengths, Weaknesses, Opportunities, and Threats (SWOT)
At a public forum in November 2012, a cross section of College employees engaged in a brief SWOT analysis. Of the 45 participants, 18 were participants serving on the Enrollment Management/Educational Planning Committee. Listed below are the highlights of their thinking. A complete set of notes from the event is located in the Appendix.

*Strengths*

- Wonderful staff and faculty
- Strong academic programs
- Curriculum that is updated to reflect trends and needs
- Application of data for implementation and decision making
- Transparency and communication fostering collaboration
- Campus locations, grounds, student center

*Weaknesses*

- IT infrastructure
- Student services short of staff and faculty
- Not positioned to go after workforce development funds
- Need to facilitate degree/certificate completion
- Can't promise future institutionalization of grant ideas
- Need to use social media more
- Veteran's services are week
- Basic skills boot camp, length of time in basic skills still too long
- More online support services needed
- Need information on employment outlook for any degree or certificate
- More internship opportunities are needed

*Opportunities*

- Parcel tax initiative
- Capture the students, a record size group is now in the 7th grade
- Offer fee-based courses to sustain all courses and services
- Capture revenues outside of apportionment
- Reorganize everything

*Threats*

- Budget shortfall from state revenue
- Competition from private institutions such as Ashford
- Remaining competitive in a changing external environment
- Economy in general
- Unrealistic benchmarks (changing ACCJC standards and Student Success Task Force)
- Community support- how to rebuild it
- Lack of public transportation, particularly for students



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# VII. Key Planning Assumptions and Strategic Priorities

The College devoted a considerable amount of time and energy during the spring and fall of 2011 developing a consensus around the strategic priorities to be pursued over the next five years. The 2012-15 Strategic Plan builds on previous College plans and initiatives that began in 2004.

The purpose of the strategic planning effort is to engage the college community in discussions about the future challenges facing the College while recalling the lessons of the past and promoting dialogue to build consensus in support of agreed upon strategic priorities. To advance this most recent effort, a comprehensive external environmental scan was conducted and presented to several groups on the campus, at a community forum and to the Board of Trustees.[34] A comprehensive internal environmental scan was also conducted and presented to several groups on campus and at a community forum.[35] Materials provided at the community forum and other gatherings included forms to collect and discuss goal concepts to accompany the eight strategic priorities.[36] A workbook was created and used with groups on campus to develop action strategies to use in pursuit of the strategic priorities and goals.[37]

Four strategic priorities were developed to help the College *fulfill its mission*. The four priorities follow, with the related goals and institutional objectives (bulleted items) that were created through the processes described above.

**1. Student Access**
SWC will promote a student-centered climate that provides equal access to educational achievement through collaboration that values diversity.

- Explore alternative scheduling options to increase access to growing populations.
- Promote the Higher Educational Centers as critical access points in the communities served by the College District.
- Increase student access through the use of technology (e.g., interactive website, online support service etc.).

**2. Student Success**
SWC will promote a culture of academic success by creating a safe and supportive environment that enables students to achieve their educational goals.

- Promote student success by increasing retention, persistence and completion.
- Enhance instruction, student support services and operational effectiveness by fostering cultural competency.
- Promote student success by providing parallel student and instructional support services for online students as are available for students who attend classes on campus.

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[34] Weidlich, Stephen. *SWC Environmental Scan- External Data and slide presentation*. AECOM, Inc. October 19, 2011.
[35] SWC Institutional Effectiveness Office. *SWC Internal Environmental Scan slide presentation.* October 1, 2011
[36] SWC Institutional Effectiveness Office. *Community Forum and Campus Discussion Groups Handout Materials.* October 2011
[37] SWC Institutional Effectiveness Office. *SWC Strategic Planning Workbook: Annual Plan Development for the 2012-15 Strategic Plan* October 11, 2011.



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**3. Teaching & Learning**
SWC will provide excellent instruction and develop a culture of independent thinkers and learners.

- Develop and implement a professional development program for instructors teaching via distance education to enhance consistent quality of instruction.
- Develop and implement a plan for infusing critical thinking into all aspects of the student experience.

**4. Economic, Workforce and Community Development**
SWC will contribute to the region's economic revitalization through resources that support the expansion of local business and industry and by expanding programs that generate new and vital workforce and business development opportunities for students and community.

- Implement and maintain a College-wide Workforce and Business Development (WBD) Plan that promotes current SWC programs supporting economic, workforce and community development efforts and to identify new and emerging opportunities.
- Support the creation, retention and expansion of business and industry to contribute to the revitalization of the local economy.
- Increase the Cooperative Work Experience (CWEE) program and service learning practicum, internships and other related learning opportunities between SWC and regional industry and business.

Four additional strategic priorities were also developed to help the College *strengthen itself as a public institution.* Those additional strategic priorities are as follows, with the related goals and institutional objectives (bulleted items) that were created through the processes described above.

**1. Physical & Financial Resources**
SWC will act in a responsible, accountable and transparent manner in budget and financial matters, and will actively and ethically seek outside sources of funding in order to preserve financial solvency. SWC will provide that the College's design and infrastructure meets the evolving needs of all students, faculty, and staff and community in support of an innovative learning environment.

- Establish and provide financial information systems that are transparent and easily accessible in support of the budget development process.
- Maximize utilization of existing facilities and develop new facilities based on ever-changing student learning needs, emerging technologies, Governing Board goals and the SWC Strategic Priorities.

**2. Organizational Effectiveness**
SWC will provide effective implementation of organizational goals/strategies by cultivating and sustaining processes, systems and culture that support optimal organizational structure, capacity and capability. SWC will meet the evolving needs of students, faculty, staff and community in support of an innovative learning environment.

- Promote and sustain a culture of evidence based on data-driven decisions that support continuous improvement efforts and student success.



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- Support, promote and sustain shared planning and decision making through the Shared Consultation Council (SCC) as the central point of constituency review and approval of institutional infrastructure processes.
- Review and update College District policies and approve procedures for such policies with constituency input.

**3. Human Resources**
SWC will recruit, hire and train qualified and diverse staff, faculty, and administrators, demonstrating its commitment to providing an equitable and inclusive environment that supports professional growth and academic success of all employees and students.

- Develop and implement a system that allows full participation for faculty and staff in order to support internal processes and integrated planning.
- Create and sustain a culture of inclusion at SWC that supports the charge of the Diversity and Equity Committee as well as promotes trust, respect and collaboration.

**4. Institutional Technology & Research**
SWC will meet current and anticipated technology needs required to support and enhance the educational and workplace experience.

- Increase the integration of information technology systems needed for instruction, student support, online learning, operations, research, auxiliary services and security.
- Upgrade the network infras ructure district-wide, including wireless and wide-area networks, to better serve the needs of academic, student and administrative services.
- Support the development of the Office of Institutional Effectiveness for increased availability of data, research, and grants as well as improved institutional planning.

College traditions and history naturally influenced the perspectives of the administration, faculty and staff. In addition to the College's past experiences, the above strategic priorities, goals and institutional objectives were influenced by a set of observations and assumptions about the environment in which the College operates, and a view of the future shared with the campus community. In fall 2011, these observations were as follows:

1. Due to state budget cuts, starting in 2010-11 the College began to expend more than it received in revenue. Reserves were available to cover the shortfall, but on-going expenditures (positions) had to be reduced and revenue had to be increased.
2. Additional austere years are likely to lie ahead, until the California economy recovers and the State can correct structural imbalances in its revenue and expenditure processes. Proposition 30 did pass in the November 2012 election, and that will provide relief from continued budget reductions. Economic resources from the State will continue to be scarce to a greater degree than was the case in the past.
3. Funding values identified by the College community include: (1) preserve jobs; (2) preserve classes; (3) preserve support to students; and (4) preserve safety.



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4. The population of the service area will continue to grow, perhaps by 23% more residents by 2020. Approximately 7 to 8 percent of that population will be traditional, college-age young adults.
5. There is a wide range of income levels in the service area. Most residents with incomes at or below the poverty level are located next to the international border or along the I-5 corridor.
6. The unemployment in the service area was 7.3%, higher than San Diego County, but slightly lower than the State unemployment rate. The unemployment rate is expected to continue dropping slowly, but will remain higher than normal until the overall economy recovers.
7. Industry sectors with the largest share of employment in the service area include healthcare and social assistance, retail trade, educational services, finance, and professional/scientific services.
8. The fastest growing sectors in San Diego County are projected to be healthcare support occupations, healthcare practitioners and technical occupations.
9. The largest numbers of new employment opportunities by occupation are expected to be for registered nurses, medical secretaries, licensed practical and licensed vocational nurses.

To prepare for the consideration of new strategic priorities, goals and objectives, in spring 2011 the Governing Board articulated a set of goals, which were as follows:

GOAL 1: Ensure restoration of full accreditation status and continue to use accreditation standards to guide strategic planning and operations.

GOAL 2: Continue development of integrated data systems that provide information for measurable student success that support college operations, and institutional decision-making. Build a culture of evidence.

GOAL 3: Ensure that the College District budget effectively addresses the current fiscal crisis and provides fiscal stability to maintain instructional, student support, and operational integrity.

GOAL 4: Ensure a state-of-the-art teaching, learning, and work environment, including but not limited to technological advancements.

GOAL 5: Taking into consideration anticipated severe budget reductions, develop a plan to prioritize the SCCD focused Mission for the determination of resource allocation.

GOAL 6: Optimize resources and generate revenue for and through programs, partnerships, and grants.[38]

To ensure that the College's strategic priorities were advanced, in spring 2011 the Superintendent/President committed to the following goals and objectives:

- Improve Culture and Climate

[38] SWC Governing Board *Institutional Goals*. April 7, 2011 Study Session



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  - Create mutual trust and respect as professionals, reflective of an institution of higher learning.

- Ensure Student Access to Success
  - Strengthen inter-segmental alliances to ensure college, transfer and career preparation for all students.

- Improve Institutional Effectiveness
  - Establish organizational structures and systems that support teaching & learning.

- Improve Institutional Advancement
  - Maximize Southwestern College as a community capacity builder.[39]

To monitor the implementation of the goals and institutional objectives the College will continue to rely upon annual reports of progress by work groups organized around the priorities. The annual reports identify action items, discuss the status of each item, provide evidence and a timeline for completion and list a contact person. If applicable, the report also indicates the rubric or measurement.

Annually, each unit or discipline at the College prepares a Snapshot form that identifies accomplishments Some of these are directly tied to the strategic priority goals and objectives and needs of the discipline or unit. Identified needs flow to a school or area dean who prioritizes them and forwards them to a standing committee of the SCC. Those committees have members who become experts in a functional area of the College so that they can prioritize all of the requests and create a listing of the top 20 requests. That listing is forwarded to the Vice Presidents and then to the College cabinet.

# VIII. Opportunities for the Future-College Planning Agenda

## A. Future Labor Markets

The U.S. Chamber of Commerce has estimated that 90% of future jobs will require some form of postsecondary education. In a recent report the Chamber noted that outside the top three states, in which about 70% of first-time freshmen finish a degree in six years, statewide completion rates at four-year public colleges typically hover around 50%. In 17 states, less than half of all first-time, bachelor's degree–seeking students complete a degree within six years. Completion rates for two-year colleges are even worse; just one state has a statewide graduation rate greater than 50%. Thirty-three states have two-year completion rates at or below 25%; in 13 states, less than 15% of students who start at two-year colleges graduated within 150% of normal time to degree.[40] The U.S. Department of Labor has estimated that one-third of future jobs will demand skills in the science, technology, engineering and mathematics (STEM) disciplines. The U.S.

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[39] SWC Superintendent/President *Goals and Objectives* June 9, 2012

[40] U.S. Chamber of Commerce. *Leaders and Laggards: A State by State Report Card on Public Postsecondary Education*. June 2012



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government estimates that there are 3.7 million open jobs in the U.S. economy.[41] Amid this total there is a well-documented national shortage of individuals with engineering and computer science skills. Unemployment in computer-related occupations has fallen to just 3.4 percent, or less than the traditional rate for "full employment."[42] And most available analyses indicate that this shortage is going to get worse. As one recent study predicted, between 2010 and 2020, the American economy will annually produce more than 120,000 additional computing jobs that will require at least a bachelor's degree,[43] but the country's higher education system is currently producing only 40,000 bachelor's degrees in computer science annually.[44]

The Public Policy Institute of California (PPIC) has pointed to a mismatch between the level of education the future population is likely to possess and the level of education that will be demanded by the future state economy. In their analysis the supply of college-educated workers will not meet the projected demand. These estimates portend an opportunity for the College to contribute to the economic vitality of the society and to secure future employment for its graduates. In this longer-term view to 2025, the two industries with the greatest growth (state and local government and health care and social assistance) both require a significant portion of the prospective employees to be college educated. Collectively, those occupational areas where 60% or more of the individuals employed must have a college degree are anticipated to represent 29% of the workforce in California. Some of the details from the PPIC analysis are illustrated in the two ensuing tables.

### California Growth Industries & Education

| | Industry Share of State Employment (%) | | | College-Educated Workers Within Industry (%) | | |
|---|---|---|---|---|---|---|
| **High-growth Industries*** | **1990** | **2006** | **2025** | **1990** | **2006** | **2025** |
| Administration & support | 3.7 | 6.5 | 8.3 | 14 | 17 | 21 |
| Accommodation & food services | 4.4 | 8.1 | 8.2 | 15 | 15 | 16 |
| Health care & social assistance | 7.1 | 8.8 | 9.8 | 37 | 41 | 46 |
| Professional & scientific services | 4.7 | 6.2 | 7.2 | 52 | 67 | 87 |
| Construction | 4.6 | 5.7 | 5.9 | 13 | 11 | 10 |
| Arts, entertainment & recreation | 0.4 | 1.6 | 1.7 | 23 | 38 | 57 |
| Education services | 1.5 | 1.8 | 2.1 | 56 | 64 | 74 |
| Other services | 2.7 | 3.4 | 3.3 | 16 | 20 | 26 |
| Local & state government | 13.8 | 14.4 | 14.3 | 46 | 52 | 59 |
| Finance, insurance | 3.6 | 4.2 | 3.8 | 32 | 46 | 64 |
| | | | | | | |
| * Those growing as a share of overall employment | | | | | | |

Source: Public Policy Institute of California. *California's Future Workforce*. 2008

[41] U.S. Bureau of Labor Statistics. *Job Openings and Labor Turnover,* July 2012. Retrieved November 21, 2012 from http://www.bls.gov/news.release/pdf/jolts.pdf.
[42] U.S. Bureau of Labor Statistics. *Labor Force Statistics from the Current Population Survey*. Retrieved November 20, 2012 from http://www.bls.gov/web/empsit/cpseea30.htm.
[43] U.S. Bureau of Labor Statistics. *Occupational Employment and Job Openings Data, Projected for 2010–2020*. Retrieved November 20, 2012 from http://www.bls.gov/emp/.
[44] Integrated Postsecondary Education Data System from the U.S. Department of Education's National Center for Education Statistics (NCES). Retrieved November 21, 2012 from https://webcaspar.nsf.gov.



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## California Growth Occupations & Education

| | Occupations Share of State Employment (%) | | | College-Educated Workers Within Occupation (%) | | |
|---|---|---|---|---|---|---|
| **High-growth Occupations*** | **1990** | **2006** | **2025** | **1990** | **2006** | **2025** |
| Construction & maintenance | 3.8 | 5.8 | 6.0 | 7 | 7 | 6 |
| Computer & mathematical science | 1.2 | 2.5 | 3.3 | 65 | 69 | 75 |
| Building & grounds cleaning & maintenance | 1.9 | 3.8 | 3.9 | 4 | 5 | 6 |
| Business operations | 1.1 | 2.6 | 3.0 | 31 | 53 | 80 |
| Transportation & material moving | 4.9 | 6.6 | 6.7 | 8 | 8 | 7 |
| Education, training & library | 5.4 | 6.0 | 6.9 | 78 | 77 | 76 |
| Health care practitioner & technical | 3.3 | 3.8 | 4.3 | 59 | 64 | 70 |
| Community & social services | 0.5 | 1.3 | 1.4 | 64 | 63 | 61 |
| Personal care & service | 2.1 | 3.0 | 3.0 | 10 | 15 | 22 |
| Management | 5.6 | 6.4 | 6.4 | 42 | 54 | 70 |
| Health care support | 1.9 | 2.1 | 2.6 | 12 | 16 | 21 |
| Food preparation & service | 6.8 | 7.2 | 7.4 | 7 | 10 | 13 |
| Protective service | 1.9 | 2.2 | 2.3 | 20 | 26 | 33 |
| Legal | 0.6 | 0.8 | 0.8 | 82 | 79 | 75 |
| Arts, design, entertainment, sports & media | 2.5 | 2.5 | 2.6 | 48 | 60 | 74 |
| | | | | | | |
| *Those growing as a share of overall employment. | | | | | | |

Source: Public Policy Institute of California. *California's Future Workforce*. 2008

Several leading occupations can be identified that will require educated workers in the future if the entire state economy is considered with a focus on the high demand/high wage STEM occupations. The occupational family with the greatest projected demand that commonly requires an Associate Degree for entry is healthcare. The family of jobs that support healthcare is the second largest group, followed by computer and math science, and engineers and technicians. Students educated in these fields will have the most opportunities for relocating to areas throughout the State where there will be more available jobs.

## Where the California Jobs Will Be in 2018 (in thousands of jobs)

| Occupation Group | Occupation | Some College | % | Associate Degree | % | Bachelor's Degree | % | Total |
|---|---|---|---|---|---|---|---|---|
| STEM | Computer & Math Science | 89 | 16% | 45 | 8% | 242 | 44% | 545 |
| STEM | Architects & technicians | 13 | 20% | 9 | 14% | 25 | 38% | 65 |
| STEM | Engineers & technicians | 34 | 11% | 28 | 9% | 141 | 44% | 317 |
| STEM | Life and Physical Scientists | 9 | 6% | 6 | 4% | 45 | 32% | 140 |
| STEM | Social Scientists | 5 | 6% | 3 | 4% | 27 | 33% | 82 |
| | | | | | | | | |
| Healthcare | Healthcare Practitioners | 109 | 13% | 160 | 19% | 239 | 29% | 836 |
| Healthcare | Healthcare Support | 148 | 33% | 51 | 11% | 49 | 11% | 448 |

Source: Carnival, Anthony; Smith, Nicole; and Strohl, Jeff (2010). *Help Wanted: Projections of Jobs and Educational Requirements Through 2018*. Center on Education and the Workforce, Georgetown University.



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These state and regional highlights of occupations for the future provide opportunities for those students willing and able to relocate. There are opportunities for students with different levels of education from industry certification to an associate degree or a bachelor's degree. As noted below, there are some future employment opportunities in the local county economy as well. The California Employment Development Department (EDD) developed the labor market information below through surveys they conducted with business and industry. That work was completed in 2007 for the ten-year projection (2008-2018). At the time neither the survey nor respondents nor the officials at EDD could have anticipated the depth of the recession that started in 2008 or the protracted nature of the recovery with particularly severe consequences to state and local government employment. While the economy is recovering, it has been a relatively "job-less" recovery with more employment growth in the private sector than in public sector jobs. The projections that follow should be interpreted with this caveat in mind.

Through the year 2020, the California Employment Development Department (EDD) expects the fastest growing industry sectors in the State to be professional and business services, education services (private), health care and social assistance, leisure and hospitality, and retail trade. The professional and business services sector is expected to have an annual growth rate of about 2.3%. About 60% of the job growth in this sector is projected to occur in: (1) employment services; (2) management, scientific, and technical consulting; and (3) computer systems design and related services. Within health care the fastest annual growth is expected in nursing and residential care facilities (3.1%). Social assistance is expected to grow annually at 3% while private education is anticipated to grow at 2.9% annually. The U.S. Census indicated that the California population aged 65 years and over increased 18.1% between 2000 and 2010, compared to the State's total population growth of 10%. The population of people 85 years of age and over increased 41.2% during that time. As the population grows and demographics change, the demand for workers in private educational services, healthcare, and social assistance sectors will remain high.

Leisure and hospitality is the third largest growing industrial sector in the State. The two largest industry subsectors are food services (annual growth of 2.9%), drinking places, and accommodations (annual growth of 2.2%). Recent expansion of California's theme parks is expected to preserve the State's standing as a top tourist destination. The retail trade sector is projected to add 333,600 jobs by 2020. General merchandise stores and food and beverage stores dominate this industry sector.[45]

By 2020 the California economy is expected to add almost 2.6 million jobs in widespread growth as the economic recovery continues. The top 50 fastest growing occupations are expected to grow at a rate of 25% or more, compared to the overall 16.3% growth rate projected for total employment in the State. The fastest growing occupations are illustrated in the table below.

[45] California Employment Development Department, Labor Market Information Division. *California Industry Employment Projections 2010-2020.* Retrieved November 23, 2012 from http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=145



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## Top Ten Fastest Growing Occupations and Industries in California 2010-2020

| Occupation | 10-Yr Growth | Annual Growth Rate | Top Industry | Industry 10-Yr Growth Rate | Annual Growth Rate |
|---|---|---|---|---|---|
| Home Health Aides | 52.4% | 5.2% | Community Care Facilities for the Elderly | 61.1% | 6.1% |
| Market Research Analysts & Marketing Specialists | 45.8% | 4.6% | Management, Scientific, and Technical Consulting Services | 57.4% | 5.7% |
| Personal Care Aides | 42.6% | 4.3% | Private Households | 40.0% | 4.0% |
| Emergency Medical Technicians & Paramedics | 42.1% | 4.2% | Ambulatory Health Care Services | 27.1% | 2.7% |
| Medical Scientists, Except Epidemiologists | 41.4% | 4.1% | Scientific Research and Development Services | 18.4% | 1.8% |
| Marriage and Family Therapists | 39.3% | 3.9% | Outpatient Care Centers | 39.8% | 4.0% |
| Diagnostic Medical Sonographers | 37.7% | 3.8% | General Medical and Surgical Hospitals | 12.8% | 1.3% |
| Biochemists and Biophysicists | 37.5% | 3.8% | Scientific Research and Development Services | 18.4% | 1.8% |
| Logisticians | 33.8% | 3.4% | Management, Scientific, and Technical Consulting Services | 57.4% | 5.7% |
| Wallboard/pasterboard Taper | 33.3% | 3.3% | Building Finishing Contractors | 30.2% | 3.0% |

Source: California Employment Development Department, Labor Market Information Division. California Occupational Projections 2010-2020.

The 50 top occupations with the *most* job openings throughout California are projected to generate almost 3.3 million total job openings over the next ten years, thus accounting for more than 51% of all job openings. Food preparation and food service-related fields and office and administrative support group occupations account for 19 of the top 50 occupations. Among the top 50 occupations with the most openings, 33 have more replacement needs than new jobs because baby boomers will be retiring and some workers will shift to new occupations as the economy expands. Of these top 50 occupations, only 12 require a pre-employment entry-level education beyond a high school diploma. Eight of the occupations require work experience in a related occupation in addition to an entry-level education. After employment, 36 of the occupations require some type of on-the-job training. The following graph illustrates the projected total job openings in California between 2010 and 2020 by entry-level education.[46]

## Total Job Openings by Entry-Level Education, State of California 2010-2020

| Entry-Level Education | Job Openings 2010-2020 | Annual Openings | % of Annual | Subtotals |
|---|---|---|---|---|
| Less Than High School | 2,205,500 | 220,550 | 46.9% | |
| High School Diploma | 2,300,800 | 230,080 | 48.9% | |
| | | | | |
| Community College Experience | | | | |
| Some College, No Award | 34,600 | 3,460 | | 0.7% |
| Postsecondary Certificate | 220,300 | 22,030 | | 4.7% |
| Associate Degree | 291,900 | 29,190 | | 6.2% |
| *Community College Totals* | *546,800* | *54,680* | *13.2%* | |
| | | | | |
| Bachelor's Degree | 1,058,500 | 105,850 | 22.5% | |
| Master's Degree | 97,400 | 9,740 | 2.1% | |
| Doctoral or Professional Degree | 152,100 | 15,210 | 3.2% | |
| ***Total*** | ***4,702,400*** | ***470,240*** | | |

Source: California Employment Development Department, Labor Market Information Division. California Occupational Projections 2010-2020.

[46] California Employment Development Department, Labor Market Information Division. *California Occupational Employment Projections 2010-2020.* Retrieved November 23, 2012 from http://www.labormarketinfo.edd.ca.gov/Content.asp?pageid=145



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Within San Diego County the EDD projections for 2008-2018 suggest that the *industries* that will account for 69 percent of the job growth are: (1) Education Services, Health Care and Social Assistance (28,400 new jobs); (2) Professional and Business Services (24,000 new jobs); (3) Government (21,100 new jobs); and (4) Trade, Transportation, and Utilities (16,400 new jobs). The *fastest growing* nonfarm industry sector (based on growth rates) is Education Services, Health Care and Social Assistance (20.7%). Both Construction (18.9%) and Professional and Business Services (11.2%) sectors will outstrip the County's 10 percent growth rate. Population increases and the aging of the population drive both the growth in Health Care and Education employment. The growth projected in construction is related to government stimulus investments. However, as the economy recovers, delayed projects are expected to resume. EDD anticipates just over 476,900 job openings will materialize between 2008 and 2018.

The 50 *occupations* with the *most openings* are forecasted to generate almost 237,200 jobs. That is about 50% of all job openings in San Diego County through 2018. The top three occupations are Retail Salespersons, Waiters and Waitresses, and Cashiers. The median wage for these occupations ranges from $9.10 to $10.06 per hour and entry does not require postsecondary education. Approximately 14% of the occupations on the list of occupations with the most openings will require an Associate Degree for entry. These include registered nurses, general and operational managers, and accountants and auditors.

The 50 *fastest growing* occupations in San Diego County are expected to grow at 1.9 percent or more. Approximately 20 percent of the fastest growing occupations in the County are construction jobs. An Associate Degree is required for 26 of the fastest growing occupations and half of those are in health care.[47]

The EDD has projected that approximately 47000 job openings will be available in San Diego County each year between 2008 and 2018. Only 10% of these jobs are normally available to candidates who have completed an Associate Degree or some form of postsecondary vocational education. Preparation at the Bachelor's Degree level, which could begin at the community college, is the most common entry path for another 18% of these occupations.[48]

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[47] State of California, Employment Development Department "San Diego County Projection Highlights, 2008-2018" *Labor Market Information* Retrieved August 29, 2012 from http://www.labormarketinfo.edu.ca.gov
[48] State of California Employment Development Department, "Occupational Projections for San Diego County 2008-2018" *Labor Market Information* Retrieved August 17, 2012 from http://www.labormarketinfo.edu.ca.gov
[10] SDIC. *Region at Work*. Retrieved November 6, 2012 at http://www.gcccd.edu/sdic-regional-consortium/Doing%20What%20Matters.html



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**San Diego County Occupational Projections 2008-2018**

| Entry-Level Education | 2008-2018 Annual Openings | % of Annual Openings |
|---|---|---|
| Bachelor's Degree + work experience | 2,107 | 4% |
| Bachelor's Degree | 6,641 | 14% |
| Community College Experience | | |
| Associate Degree | 2,227 | 5% |
| Postsecondary Vocational Education | 2,175 | 5% |
| | | |
| Graduate education | 2,477 | 5% |
| On-the-Job Training only | 31,439 | 67% |
| ***Total*** | ***47,066*** | |

Source: California Employment Development Department, Labor Market Information; analysis by Cambridge West Partnership, LLC

The San Diego Area Council of Governments, SANDAG, has been following industry activity in the County since the late 1990s. In December 2012, SANDAG published a report on the thirteen key traded industry clusters that represent 27% of the region's total employment and offer higher wages than the regional average.[49] Traded industry clusters are groups of interrelated, export-oriented industries that bring new money into the region. Industries within the cluster commonly have business transactions with one another, participate in associations fostering collaboration and exchange of knowledge, but also complete for market share and stimulate productivity and innovation. All of the clusters are economic drivers as they are export-oriented.

Several industrial clusters have some businesses located within the College service area. The Aerospace, Navigation, and Maritime cluster has some concentration in National City and Chula Vista. The Biomedical Devices and Products cluster has a modest presence in National City. Highlights of recent employment and average annual wages are illustrated below. The Information and Communications Technologies cluster has some presence in Chula Vista. The Specialty Foods and Microbreweries cluster includes a few businesses that are located in Otay Mesa. However, on the whole the south suburban area, or the College service area, has only 5.4% of the jobs represented by all of these clusters in 2010. The SANDAG report placed three industries on a "watch list" for future growth: (1) e-security/cyber security; (2) musical instrument manufacturing; and (3) maritime industries. The report also noted that venture capital funding was flowing into the San Diego biotechnology and software industries.
Recent employment and annual average wage trends for the thirteen traded industry clusters discussed in the report are noted in this table.

[49] SANDAG. *Traded Industry Clusters in the San Diego Region.* December 2012.



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## Traded Industry Clusters in the San Diego Region

| | | | 2010 | | 2008-2010 | |
|---|---|---|---|---|---|---|
| **Traded Industry Cluster** | **No. of employees 2008** | **No. of employees 2009** | **No. of employees** | **Annual Average Wage** | **Gain/ Loss** | **% Workforce Change** |
| Action sports manufacturing | 4,561 | 4,378 | 4,177 | $65,300 | -384 | -8.00% |
| Advanced precision manufacturing | 4,692 | 4,544 | 4,416 | $51,800 | -276 | -6% |
| Aerospace, navigation and maritime tech | 30,998 | 31,794 | 32,099 | $79,300 | 1,101 | 4% |
| Apparel manufacturing | 3,297 | 2,909 | 2,870 | $30,400 | -427 | -13% |
| Biomedical devices and products | 9,901 | 9,886 | 12,012 | $99,500 | 2,111 | 21% |
| Biotechnology and pharmaceuticals | 18,868 | 13,598 | 22,636 | $107,000 | 3,768 | 20% |
| Cleantech | 7,314 | 7,570 | 7,986 | $87,400 | 672 | 9% |
| Entertain and hospitality | 149,654 | 148,839 | 149,352 | $21,800 | -302 | 0% |
| Fruits and vegetables | 4,649 | 4,031 | 4,241 | $26,900 | -408 | -9% |
| Horticulture | 6,765 | 5,961 | 6,013 | $29,100 | -752 | -11% |
| Information and communications tech | 73,976 | 72,750 | 72,043 | $94,400 | -1,933 | -3% |
| Publishing and marketing | 13,328 | 12,216 | 11,848 | $56,600 | -1,480 | -11% |
| Specialty foods and microbreweries | 1,844 | 1,695 | 1,717 | $43,500 | -127 | -7% |
| ***Traded Industry Cluster Total*** | ***329,847*** | ***325,171*** | ***331,410*** | ***$56,000*** | ***1,563*** | ***0.5%*** |
| ***Regional Total*** | ***1,309,300*** | ***1,240,900*** | ***1233300*** | ***$50,700*** | ***-76,000*** | ***-6%*** |

Source: SANDAG. Traded Industry Clusters in the San Diego Region

In response to the Doing What Matters initiative, Career and Technical Education (CTE) deans and directors from Region X discussed and selected three industry sectors to emphasize in their future planning then cross-walked those to the Chancellor's Office 2013-14 industry categories. Two additional emergent sectors/clusters were identified and cross-walked.

The group also identified Hospitality/Tourism/Travel, convergence in Health, IT, and Medical Devices (e.g., wireless health), Professional Services, IT, and Manufacturing by defense contractors (especially drone manufacturing/ICT), and wireless devices and mobile media as an additional industrial sector. The group added that these five areas cut across all priority sectors: small business, trade, environmental technologies, ICT, and workplace skills and education. The prioritization was completed as part of a new incentive funding program from the Chancellor's Office to promote greater regional collaboration in developing career and technical education programs.[50]

[50] San Diego Imperial Counties Regional Consortium (SDIC). *Sector Designation.* Retrieved December 19, 2012 from http://www.gcccd.edu/sdic-regional-consortium/sector-designation.html



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**Region X 2013-14 CTE Planning Priorities**

| Priority Sectors/Clusters | Chancellor's Office 2013-14 Categories of Industries |
|---|---|
| Healthcare/Life Sciences/Biotech | 1. Healthcare 2. Life Sciences/Biotech |
| Infrastructure: Energy/Transportation/Utilities | 1. Advance Trans & Renew 2. Energy (Eff) & Utility 3. Ag, Water & ENVT |
| Manufacturing/Engineering | 1. Advanced Manufacturing 2. Global Trade & Logistics |
| | |
| **Emergent Sectors/Clusters** | |
| Clean Tech (Green) | 1. Energy (Eff) & Utility 2. Advance Trans & Renewables |
| Cyber Security | 1. Info & Comm Tech (ICT)/Digital Media |

Source: SDIC Web Site

California Community College Centers of Excellence
The Centers of Excellence is a workforce research initiative of the California Community Colleges' Economic and Workforce Development unit. The Centers of Excellence, in partnership with business and industry, deliver regional workforce research customized for community college on high growth, emerging, and economically critical industries and occupations and their related workforce needs. The Centers are strategically located to study the regional economies of California and produce industry-validated environmental scan reports designed to enable community colleges to remain relevant and responsive in their offerings. Several of the studies produced in the last two years by the Centers are highlighted below as a way to provide the College with some insights regarding potential opportunities for new instructional programs or workforce development initiatives.

The Region at Work
The San Diego-Imperial Regional Community College Consortium (SDIC), in cooperation with the Center of Excellence for the region, developed a short fact sheet in spring 2012 to highlight the regional labor market.[51] Looking forward to 2014 the fact sheet described the largest employment gains to come from the professional, scientific and technical services sector (13,700 jobs) and the healthcare services sector (12,000 jobs). Manufacturing industries were characterized as a vital component of the region's biotechnology economy.

Professional, scientific and technical services industries represent more than 198,000 jobs in the San Diego economy. Through 2014 the largest job gains are projected for management, scientific, and technical consulting services. Major San Diego employers in this sector include: (1) Premier Inc. (1,500 jobs); (2) General Atomics (1,300 jobs); (3) Burnham Institute (1,000 jobs); and EDAW Inc. (1,000 jobs).



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**San Diego Industry Spotlight: Professional, Scientific and Technical Services**

| Industry Sector | 2011 Jobs | 2014 Jobs | Change | % Change | # of Establishments |
|---|---|---|---|---|---|
| Management, Scientific & Technical Consulting Services | 34,342 | 39,433 | 5,091 | 15% | 3,479 |
| Scientific Research & Development Services | 33,604 | 36,418 | 2,814 | 8% | 915 |
| Computer Systems Design & Related Services | 26,758 | 28,740 | 1,982 | 7% | 2,119 |
| Architectural, Engineering & Related Services | 28,913 | 30,139 | 1,226 | 4% | 1,700 |
| Total | 123,617 | 134,730 | 11,113 | 9% | 8,213 |

Source: SDIC. *Region at Work*. Spring 2012

The occupations found in this sector and listed below commonly require an Associate Degree or above. The largest growth is anticipated to be in these occupations: (1) management analyst; (2) medical scientists; (3) computer software engineers (applications); (4) accountants and auditors; (5) managers; and (6) computer software engineers (systems software). The fastest growth occupations are projected to include: (1) medical scientists; (2) management analysts; (3) computer software engineers (applications and systems software); (4) business operation specialists; (5) market research analysts; and (6) biological technicians.

Healthcare services industries represent more than 67,000 jobs in the San Diego economy. Through 2014 the largest growth is projected for physicians' offices, hospitals, home health care services and elder care facilities. Some of the major San Diego employers are: (1) Kaiser Permanente (5,000 jobs); (2) Sharp Grossman Hospital (3,000 jobs); (3) Tri-City Medical Center (2,400 jobs); and (4) Sharp Rees Stealy Medical Center (2,000 jobs).

**San Diego Industry Spotlight: Healthcare Services**

| Industry Sector | 2011 Jobs | 2014 Jobs | Change | % Change | # of Establishments |
|---|---|---|---|---|---|
| Offices of Physicians | 30,132 | 33,463 | 3,331 | 11% | 2,625 |
| General Medical & Surgical Hospitals | 21,570 | 23,223 | 1,653 | 8% | 131 |
| Home Health Care Services | 8,828 | 10,067 | 1,239 | 14% | 219 |
| Community Care Facilities for the Elderly | 8,706 | 9,900 | 1,194 | 14% | 323 |
| Total | 69,236 | 76,653 | 7,417 | 11% | |

Source: SDIC. *Region at Work*. Spring 2012

Within the healthcare services sector, the opportunities listed below have potential for growth and generally require some college education or an Associate Degree or above. The largest growth is anticipated to be in these occupations: (1) registered nurses; (2) medical secretaries; (3) medical assistants; (4) nursing aides and attendants; (5) home health aides; (6) physicians and surgeons; and (7) licensed practical or vocational nurses. The fastest growing occupations in health care include: (1) home health aides; (2) physician assistants; (3) physical therapists; (4) medical assistants; (5) medical and clinical laboratory technicians; (6) personal and home care aides; and (7) registered nurses.



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The manufacturing industry sector accounts for about 107,000 jobs in the San Diego-Imperial County region. Through 2014 employment is expected to increase by the greatest amount in navigational, measuring, electromedical and control instruments manufacturing. Some of the larger employers include: (1) Life Technologies Corp (1,400 jobs); (2) Amylin Pharmaceuticals Inc. (800 jobs); (3) Medimpact Healthcare Systems (450 jobs); and BD Biosciences (400 jobs).

**San Diego Industry Spotlight: Manufacturing**

| Industry Sector | 2011 Jobs | 2014 Jobs | Change | % Change | # of Establishments |
|---|---|---|---|---|---|
| Navigational, Measuring, Electromedical, and Control Instruments Manufacturing | 9,605 | 10,748 | 1,143 | 12% | 189 |
| Pharmaceutical and Medicine Manufacturing | 5,373 | 6,008 | 635 | 12% | 108 |
| Medical Equipment and Supplies Manufacturing | 6,480 | 6,922 | 442 | 7% | 206 |
| Metalworking Machinery Manufacturing | 1,343 | 1,574 | 231 | 17% | 49 |

Source: SDIC. *Region at Work*. Spring 2012

Within manufacturing, the occupations listed below have potential for growth. They usually require some college or an Associate Degree or more. The largest growth is anticipated to be in these occupations: (1) managers; (2) industrial engineers; (3) packing and filling machine operators and tenders; (4) welders; (5) customer service representatives; and (6) computer software engineers (applications). The fastest growth is projected to be in these occupations: (1) managers; (2) industrial engineers; (3) mechanical engineers; (4) purchasing agents; (5) engineering managers; and (6) customer service representatives.

Mobile Media Occupations in California

Mobile media occupations are described as the technologies used to develop, integrate, and support mobile websites and applications. The study conducted by the staff at three Centers used a workforce survey of employers (400 responses), a survey of community college program leaders, and real-time labor market information. Mobile media technology impacts a variety of industries but the greatest impact is found in industries related to technology, advertising and media. Most firms participating in the survey were small as they employed fewer than 25 employees. There were six occupations that represent most of the jobs in this field as noted in the table.

**Key Mobile Media Occupations in San Diego**

| Occupation | 2011 Employment | 2012 Employment | % Growth | Net Growth |
|---|---|---|---|---|
| Software engineers | 168 | 181 | 8.0% | 13 |
| Computer support specialists | 143 | 161 | 12.6% | 18 |
| Project managers | 161 | 213 | 32.3% | 52 |
| Web developers | 14 | 20 | 42.9% | 6 |
| Graphic designers and/or multi-media artists | 33 | 37 | 12.1% | 4 |
| Programmers and/or application developers | 103 | 127 | 23.3% | 24 |
| ***Total*** | ***622*** | ***739*** | ***18.8%*** | ***117*** |

Source: Centers of Excellence. Mobile Media Occupations in California.



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From March to August 2011 a scan of real-time job opening announcements revealed that San Diego had 725 openings out of 8,375 posted vacancies. The top employers in San Diego included Qualcomm, CyberCoders, Activision, and Bsquare Corporation. The 57 San Diego employers who participated in the survey indicated that they planned to add 536 additional jobs between 2011 and 2012 for an 18.2% growth rate. The two occupations that were expected to create the most jobs are project managers and programmers and/or applications developers while the fastest growth occupations were anticipated to be web developers and project managers. Employers indicated they were having difficulty hiring web developers, computer support specialists and software engineers.[52]

Social Media in California

Throughout California there are over 30,000 job openings projected in four social media occupations over the next five years. The emergence of social media has impacted the workforce in terms of how communications are conducted with clientele and how new business is generated. The jobs in this area cross several industries and occupations, but four occupations in particular have been profoundly impacted: (1) public relations; (2) marketing and media communications; (3) business development, sales and advertising; and (4) social media management. A study by two Centers of Excellence examined labor market data, job postings, secondary research materials, and conducted an employer survey. While employers are interested in ways to upgrade current employees, the offerings at community colleges are sparse.

Public relations specialists are expected to experience the highest growth rate with an estimated 11% gain, which is about 8,000 new and replacement jobs throughout the state. The number of projected openings in San Diego represents roughly 9% of the statewide expectations.

**San Diego/Imperial Social Media Job Openings Projections**

| Occupation | San Diego/Imperial Job Openings 2011-2016 | 5-Year Projected Growth Rate |
|---|---|---|
| Sales representatives, services | 1,716 | 7% |
| Public relations specialists | 702 | 10% |
| Advertising sales agents | 187 | 3% |
| Media and communication workers | 175 | 7% |
| Advertising and promotions managers | 108 | 3% |
| ***Total*** | ***2,888*** | |

Source: Centers of Excellence. Social Media in California.

[52] Centers of Excellence. Mobile Media Occupations in California. March 2012



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**San Diego/Imperial Region- Employment, 5-year Growth & Replacement Jobs**

| Occupation | 2011 Jobs | 2016 Jobs | New Job Openings | Total Job Openings | % Change | Average Hourly Wages |
|---|---|---|---|---|---|---|
| Sales representatives, services | 8,766 | 9,395 | 629 | 1,716 | 7% | $27.28 |
| Public relations specialists | 3,226 | 3,546 | 320 | 702 | 10% | $25.10 |
| Advertising sales agents | 1,439 | 1,480 | 41 | 187 | 3% | $26.84 |
| Media and communication workers | 914 | 981 | 67 | 175 | 7% | $20.36 |
| Advertising and promotions managers | 755 | 774 | 19 | 108 | 3% | $35.72 |
| ***Total*** | ***15,100*** | ***16,176*** | ***1,076*** | ***,888*** | ***7%*** | ***$26.77*** |

Source: Centers of Excellence. Social Media in California.

The Centers of Excellence staff was unable to locate any certificate or degree programs in social media among the community colleges. However, a model curriculum was identified at San Francisco State University http://www.cel.sfsu.edu/socialmedia/certificate.cfm, Bucks County Community College in Pennsylvania http://www.bucks.edu/academics/coned/allcourseofferings/workplc-pro-skills/cert-soc-media-biz/, and University of San Francisco http://www.usanfranonline.com/online-courses/social-media-training.aspx.

The majority of employers surveyed would prefer a one-day workshop for their employees; however, 51% indicated support for a certificate program, 40% would support a semester-long course and 29% would want to see a degree program developed in this discipline. The study authors suggested that colleges considering a response to social media should consider embedding social media into existing programs; determine if there is a need for professional certification; and create courses that might be offered as skills to upgrade training, perhaps through contract education to employers.[53]

Solar Industry and Occupations: Distributed and Utility-scale Generation
Two Centers of Excellence collaborated in 2012 to complete an environmental scan on the Solar Industry and Occupations: Distributed and Utility-Scale Generation. Distributed solar is small-scale, decentralized energy generation located at or near the point of end use, while utility-scale solar includes large-scale generation projects that provide greater than one megawatt of electricity feeding into the transmission grid and supplying energy to utility companies. The study involved a survey of employers and community colleges, labor market data analysis and interviews.

The authors of the study found that 2,000 solar firms in the State employed close to 50,000 workers and that as the industry continues to expand. The industry will add between 18,000 and 24,000 jobs over the next three years. Most employment opportunities in the distributed solar field are installation workers. That workforce is expected to grow between 8,000 and 10,000 jobs by 2015. Employment in utility-scale solar is primarily short-term construction jobs. Just fewer than 60% of the firms in the industry provide installation services; 26% of the firms engage in

[53] Centers of Excellence. *Social Media in California*. February 2012



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wholesale trade or distribution of energy, while a scant 18% of the firms are manufacturing solar items.

The majority of employers reported particular difficulty in hiring water or pool heating installers, sales and marketing occupations, and cost estimators. Presently there are 54 community colleges offering some type of solar training. Within the San Diego/Imperial County region four colleges offer solar programs (Imperial Valley, Mira Costa, Miramar, and San Diego City). Collectively, these programs appear to have adequately addressed the demand for solar photovoltaic installers. However, there are some skill mismatches and colleges were advised to consider the following.

- Expand the knowledge area of programs to include other solar occupations such as solar thermal installers and sales representatives/estimators.
- Strengthen partnerships with employers to develop internships, or apprenticeships so that students can gain work experience.
- Develop courses on the basics of energy production, power plant management, and solar technologies to address the needs of utility-scale solar projects.

Within the United States, California is the photovoltaic market leader with a great deal of research and development as well as large-scale construction activities concentrated in the San Francisco Bay Area and Southern California. The federal government has incentivized the adoption of solar power through tax credits. California's solar capacity has doubled over the past five years, in part through state incentive programs and consumer demand. Almost 90% of the employers reported hiring electricians with solar skills to perform installation work. Dedicated solar installers were hired by 71% of the firms completing the survey. Some 48% of the participating firms hired roofers with solar skills to perform installation work.

In contrast to the distributed solar firms, utility-scale solar is composed of large-scale generation projects that provide more than one megawatt of electricity to a transmission grid that supplies energy for utility companies. Two technologies are primarily used in these circumstances: (1) photovoltaic generation and (2) solar thermal. Presently, there are 70 utility scale solar projects in development. Skilled construction workers, who travel with the general contractor from one major project to the next, fill most of the construction positions, but a limited number of temporary construction workers are hired for short-term work. The solar utility-scale plants are not highly labor-intensive to operate.

Southern California employs almost 31,000 workers in solar industry firms and is expected to add 2,400 jobs in 2012 (8% growth) and 5,900 jobs over the next three years (19% growth). Most employers responding to the survey indicated that they prefer on-the-job training across all installation occupations. As an alternative, many of the employers would accept customized on-site training or courses provided by community colleges.

Logistics and Transportation Occupations

The Centers of Excellence in the San Francisco Bay and Central Valley regions completed an environmental scan for logistics and transportation occupations. Some of the concepts discussed in that study apply to the Southern California region as 32% of the goods, valued at $83 billion, originate in the southwestern U.S. At present 11 million people (8.6% of the U.S. labor force)



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work in supply chain technology, and projections indicate that the industry will add an additional 969,000 jobs by 2030. It may be useful for the College to ask the regional Center of Excellence to repeat this scan with a focus on Southern California. The College may want to contact the leadership of the National Center for Supply Chain Technology Education (NCSCTE), located at Norco Community College, for technical assistance in considering ways to enhance the current Transportation and Logistics instructional program.

Logistics and transportation is not a single industry, rather it is composed of five main segments: railroads, trucking, ports, air and warehousing. Trucking is the most dominant industry. In the environmental scan the research team found that 93% of employers said that expertise in the use of computer information systems for logistics and supply chain management was an important skill. Some 70% of employers indicated that knowledge and understanding of security issues related to the movement of goods was another important area of knowledge.

Water/Wastewater Occupations in Southern California
In fall 2011 two Centers of Excellence completed an environmental scan of occupations in the water and wastewater industry in seven Southern California Counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura). Largely due to upcoming retirements, employers anticipate having to replace 3,400 employees in seven occupations or roughly 18% of the current workforce.

Water and wastewater industries primarily involve the collection, distribution, treatment, and conservation of water. Whereas water systems are responsible for providing and distributing clean water to businesses and homes, wastewater systems are responsible for collecting and treating sewage and runoff water that can be cleaned and possibly reused. The growth in the seven key occupations for which community college education would be most appropriate is illustrated in the following table.

**Southern California Water and Wastewater Key Occupations Growth**

| Occupations | 2011 Jobs | 2014 New and Replacement Jobs | Growth Rate |
|---|---|---|---|
| Water Treatment Operator | 2,653 | 506 | 19.1% |
| Water Distribution Operator | 4,059 | 958 | 23.6% |
| Wastewater Treatment Operator | 3,399 | 663 | 19.5% |
| Wastewater Collections Operator | 2,551 | 457 | 17.9% |
| Mechanic/Machinist | 3,116 | 891 | 28.6% |
| Electrician/Electrician Technician | 1,344 | 504 | 37.5% |
| Electronic Maintenance Technician/Instrument Technician | 1,256 | 391 | 31.1% |
| Total | 18,378 | 4,370 | 23.8% |

Source: Centers of Excellence. *Water and Wastewater Occupations in Southern California.* November 2011

In response to a survey, employers indicated that they had the most difficulty in hiring electronic maintenance technicians and industrial engineers. Water quality analyst and water conservation specialist were two emerging occupations that were identified through the environmental scan. Thirty-seven percent of the firms reported that they employ water quality analysts and 55% of the firms stated they employ water conservations specialists.



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The College may want to explore the possibility of an instructional program in these occupational fields; however, water/wastewater programs do exist at Palomar College, Cuyamaca College and Imperial Valley College.[54]

Cyber Security Occupations

In 2012 the Center of Excellence for Los Angeles and Orange Counties completed an environmental scan focused on the occupations related to cyber security. The field represents both an employment opportunity in the private sector but also employment related to homeland security. The Center for Strategic and International Studies estimates that there are about 1,000 security specialists in the United States who have the specialized skills to operate effectively in cyberspace; however, the United States needs about 10,000 to 30,000 such individuals. The College might want to ask the Center of Excellence staff for San Diego and Imperial Counties to replicate the 2012 study as the economy of San Diego is supported by extensive military and defense contracting firms that would have a natural interest in cyber security.

The completed environmental scan encouraged community colleges to:

1. Consider adding courses in cyber security to their computer science programs.
2. Create new Certificates or Degrees in cyber security.
3. Make sure that their programs and curriculum include the skills listed for cyber security occupations in this report.
4. Include representation from cyber security employers on advisory committees to be aware of new trends to keep programs up to date.
5. Contact Cyber Watch West3, a valuable resource for curriculum development, partnership with businesses, and services to students.
6. Coordinate with other colleges in the region to avoid duplication of efforts and possible competition.
7. Organize internships and opportunities for their students to gain hands-on experience.

Cyber security professionals do not have specific occupational titles but are included in the broader information technology titles listed below.

- Computer and information systems managers
- Computer programmer
- Computer software engineers, applications
- Computer software engineers, systems software
- Computer support specialists
- Computer systems analysts
- Database administrators
- Network and computer systems administrators
- Network systems and data communications analysts
- Computer specialists, all other

[54] Center of Excellence. *Water and Wastewater Occupations in Southern California*. November 2011.



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The environmental scan concluded that job growth for these occupations is being driven by three important factors:

1. Security concerns and the need to protect information and data due to the complexity of devices, systems, networks, applications, and users.
2. The need to operationalize security as both government and business move towards proactive, as opposed to reactive security.
3. The government's requirements of due diligence and a longer-term strategy as government regulations are forcing organizations to evaluate and modify their business processes and operations with security in mind.[55]

Agriculture Value Chain Occupations

The Center of Excellence for the Central Valley completed an environmental scan on the California agriculture value chain in 2011. The agriculture value chain is actually comprised of four industry clusters: (1) support; (2) production; (3) processing and packaging; and (4) distribution. Throughout the state there are 2.5 million individuals employed in over 800 job titles within the agriculture value chain. Highlights about the food manufacturing and distribution industry in the San Diego region, discussed in a 2010 study conducted by the South County Economic Development Council and SANDAG, are outlined below.

On-the-job training is the means by which the most common occupations in the support cluster of the agriculture value chain are accessed. However, the support cluster employs the largest number of workers. Occupations in the production cluster are largely in decline as machinery has replaced human labor in many aspects of this cluster over the last decade. The occupations with the greatest numbers of employees in the processing and packaging industries and the distribution portions of the agriculture value chain are exclusively available through on-the-job training. The opportunities for employment and the annual average wages vary both among the clusters as well as by region throughout the state.

**Projection of Agriculture Jobs in the San Diego-Imperial County Region**

| Agriculture Cluster | 5-Year New Jobs Projection |
|---|---|
| Support | 18,433 |
| Distribution | 1,047 |
| Processing/Packaging | 286 |
| Production | -1,486 |

Source: Center of Excellence. *Agriculture Value Chain in California.* June 2011

[55] Center of Excellence. *Cyber Security Occupations in Los Angeles and Orange Counties.* June 2012.



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**Annual Average Wages in Agriculture Jobs in the San Diego-Imperial County Region**

| Agriculture Cluster | 2011 Av Annual Wages |
|---|---|
| Support | $63,654 |
| Distribution | $38,966 |
| Processing/Packaging | $52,796 |
| Production | $51,290 |

Source: Center of Excellence. *Agriculture Value Chain in California.* June 2011

The scan documented many community college programs throughout the state that contributed to preparing students for employment in the agriculture value chain. Across the state programs were identified in 64 different Taxonomy of Programs (TOP) codes. In the San Diego-Imperial Counties region 100 community college programs were identified in the study. The environmental scan pointed to an employer preference for certificate programs for specific occupations in the agriculture value chain. However, if there is a need for trained workers in the region, employer partnerships are essential and colleges are advised to consider offering the training directly to employers through a contract education mode.[56]

The San Diego Workforce Partnership (SDWP) funds job training programs to meet the region's demand for qualified workers and provides workforce data about the present and projected labor market. SDWP has sponsored a number of workforce studies over the last two years, sometimes in collaboration with the San Diego Regional Economic Development Corporation (SDREDC), the South County Economic Development Council (SCEDC), or other entities. Those studies might be of use to the College as instructional programs are being reviewed and new programs are being considered.

San Diego Maritime Industry Report
In 2012 the SDWP collaborated with the SDREDC and the Maritime Alliance to prepare a study on the maritime industry in San Diego. The study effort involved a survey to over 230 employers in the San Diego area, interviews, proprietary business data as well as data from the Census Bureau and the Bureau of Labor Statistics. As noted earlier in this Plan, the maritime industry group is a major driver in the San Diego economy as more than 1,400 companies that produce over $14 billion of direct sales employ a workforce of almost 46,000 in the industry group. Of those 46,000 employees, approximately 8,000 work in traditional, exclusively maritime industries, approximately 19,000 work in technology-oriented businesses, and about 18,700 work in industries that include maritime activities but are not exclusively maritime industries. The industry group is a mix of the tradition and the fast-growing technology-oriented sectors. All economic activity having to do with oceans, seas, harbors, ports and coastal zones is included in the study. Based on the research, the study projected total employment growth between 2011 and 2020 to be nearly 6,000 new jobs or 12 percent of the current workforce.

Employers indicated that they favored their own internal training programs over external programs and cited industry-specific skills more than crosscutting work skills as the greatest deficiency among job candidates. These observations suggest that there may be opportunities for

[56] Center of Excellence. *Agriculture Value Chain in California.* June 2011.



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the College to partner with employers in workforce development education initiatives offered as contract education. Approximately 85 percent of the employers were not familiar with existing workforce development programs.

Clear patterns emerged from the study with respect to the most critical occupations for the industry. The pattern represents a bifurcation between high-paying jobs, some of which require extensive education, and other high-paying jobs that do not require a bachelor's degree. These occupations were among the most critical and difficult to fill.

**Critical Occupations in the San Diego Maritime Industries**

| SOC | Critical Occupations | 2011 Emp. | 2020 Emp | Growth & Openings | Av Annual Wage |
|---|---|---|---|---|---|
| 11-1021 | General & Operations Managers | 839 | 884 | 174 | $128,880 |
| 13-1111 | Management Analysts | 408 | 545 | 492 | $80,750 |
| 13-1161 | Market Research Analysts | 163 | 235 | 108 | $65,650 |
| 13-1199 | Business Operations Specialists | 386 | 470 | 146 | $70,500 |
| 13-2011 | Accountants & Auditors | 358 | 419 | 125 | $74,370 |
| 17-2141 | Mechanical Engineers | 503 | 550 | 180 | $88,790 |
| 19-4021 | Biological Technicians | 216 | 240 | 150 | $46,870 |
| 47-1011 | First-line Supervisors of Construction Laborers | 354 | 421 | 134 | $72,870 |
| 47-2061 | Construction laborers | 517 | 625 | 142 | $38,730 |
| 47-2073 | Operating Engineers & Other Construction Equipment Operators | 247 | 322 | 122 | $69,190 |
| 49-9021 | Heating, Air Conditioning & Refrigeration, Mechanics & Installers | 389 | 515 | 183 | $52,770 |
| 51-4121 | Welders, Cutters, Solderers & Brazers | 747 | 820 | 237 | $40,840 |
| 47-2111 | Electricians | 635 | 714 | 220 | $54,630 |
| 47-2152 | Plumbers, Pipefitters, & Steamfitters | 922 | 1051 | 348 | $59,010 |

Source: Maritime Alliance, San Diego Workforce Partnership, and San Diego Regional Economic Development Corporation. *San Diego Maritime Industry Report.* 2012

The study suggested these strategies to address the issue of finding qualified talent with maritime knowledge and experience:

1. Insert maritime-specific modules into existing courses
2. Create specialized elective courses that focus on maritime-related topics within a variety of programs of study
3. Sponsor after-school activities
4. Fund maritime internships
5. Promote work-study programs

The Maritime Alliance is in the process of organizing sector workgroups that will identify workforce needs. Once identified the working groups will seek to engage secondary vocational programs, community colleges and four-year institutions for help in adopting or designing curricula and programs. Already both the fishing industry and the shipyards have identified needs that should be in the general responsibility of SDWP and fit the mandate of high school



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career centers and community colleges. The report contains a series of career pathway graphics that might be useful to the College.[57]

Community Clinics in San Diego: A Review of Workforce Issues
In fall 2011 the SDWP commissioned a study of community healthcare clinics in San Diego as their needs are rarely addressed in the mainstream healthcare literature. The study included secondary data and interviews with executives and staffing managers from the clinics throughout the County. The findings revealed significant foundational skills gaps in reading, writing and math among the frontline workforce of medical assistants, even among native English speakers. The allied health occupations provide a wide range of diagnostic, therapeutic, and technical services in support of healthcare delivery teams, and they are often the first line of contact with patients.

Job openings in allied health occupations are expected to grow by approximately 8% over the next three years due to growth and turnover in community clinics. Previous surveys of large healthcare employers reported that technical skills were most important, followed by customer service skills. However, the smaller community clinics rated technical skills third, after communication skills and critical thinking. Moreover, work readiness skills surpassed appropriate education and training in reported importance. Most employers participating in the survey noted the following as the greatest deficiencies of recent hires:

1. Communications skills (82% of the participants)
2. Demonstrated professionalism (73% of the participants)
3. Problem solving (64% of the participants)
4. Technical skill deficiencies (18%)

Despite an abundance of medical assistants, well beyond the numbers needed to meet demand, skill shortages remain among applicants for open positions (roughly 350-400 openings annually). Many of the 1,300 medical assistant graduates each year do not have any college-level education. The community clinics do not pay a wage that is competitive with other health care providers and therefore tend to hire high school graduates with some training, often from Regional Occupational Programs (ROP).
Clinic employers named the following skills (in order of importance) as the most difficult to find in medical assistant job applicants: communication and critical thinking; technical skills; work readiness skills, and appropriate education and training. There are differences in the desired skills for medical assistant applicants between community clinic employers and other healthcare provider employers.

[57] Maritime Alliance, San Diego Workforce Partnership, and San Diego Regional Economic Development Corporation. *San Diego Maritime Industry Report.* 2012



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**Ranked Skill Preferences for Medical Assistant Candidates**

| Skill Area | Other Healthcare Provider's Rank | Community Clinic Rank |
|---|---|---|
| English Language | 1 | |
| Medicine or Dentistry | 2 | |
| Customer Service | 3 | 1 |
| Clerical | 4 | |
| | | |
| Demonstrated Professionalism | | 2 |
| Basic Computer Skills | | 3 |
| CPR Certification | | 4 |
| Writing Ability | | 5 |
| Bilingual Ability | | 6 |

Source: San Diego Workforce Partnership. *San Diego Community Clinics: Workforce Issues*

The clear skill deficiencies for medical assistant clinic employees are in the area of the "soft skills." Therefore, the College may want to review how communication skills (particularly basic grammar and vocabulary), customer service and critical thinking are developed through the curriculum. Regarding mathematics, employers noted that basic arithmetic skills are insufficient among current staff and that creates a danger in providing accurate dosing.

Medical assistants are often promoted to supervisory or case manager positions. In those roles they require organizational leadership, ethics, communications and critical thinking skills along with some further technical training.

While California does not require licensing of medical assistants, hospitals and other medical providers prefer candidates who hold certifications from national or regional professional associations. Many malpractice insurance providers require certification. Preferred certifications are from the American Association of Medical Assistants (AAMA) or the Association of Medical Technologists (AMT). Community clinics reported that the large majority of their medical assistants do not have certifications.[58]

Healthcare IT Research Report

In 2011 the University of San Diego Extension conducted a research effort on behalf of the SDWP for the purpose of exploring ways in which the Healthcare Information Technology (HIT) cluster could be strengthened. HIT is the intersection of information science, computer science and healthcare. It deals with the resources, devices and methods used to optimize the acquisition, storage, retrieval and use of information in biomedicine and health.

The research concluded that San Diego is well ahead of much of the nation in electronic medical record (EMR) adoption, the backbone of HIT. The only area lagging in adoption is the smaller physician practices, where lack of incentives and financial/business risk, as well as reluctance to change traditional workflows, represent barriers. The opportunities presented by the use of medical devices and mobile or tele-health applications suggest the possibility of ways to shortcut the laborious conversion of existing processes associated with central databases or physical

[58] San Diego Workforce Partnership. *Community Clinics in San Diego: A Review of Workforce Issues Facing San Diego's Community Healthcare Clinics.* November 2011.



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intermediaries. Federal legislation in 2009, the HITEC Act, contains timelines and incentives for hospitals and physicians to adopt EMRs. While the EMRs are one component of HITs, the regulatory requirements will put that component on the leading edge of a revolution with the healthcare industry.

The study found that HIT occupations could be categorized as follows:

- Digitization- jobs related to the capture, storage and security of information related to healthcare operations.
- Integration- jobs associated with the application of policy, standards, protocols, systems, exchange, protection and best use of patient and process information.
- Analytics- jobs involved with the organization, retrieval, application, adaptation and examination of medical and institutional information for the purpose of improving healthcare outcomes.
- Business Support- jobs and skill sets that are more general in nature, commonly organized as sales, administration, technical and business development.

Throughout the County there is a strong cadre of employees working within the digitization function. Most HIT workers in this category are found at large-scale healthcare systems or at consulting firms that provide these services. The types of jobs that fall into the digitization category are: data entry, technical software and user support, health information management specialists, implementation support specialists, data formatting, control and security positions, billing and coding technicians, and software and process trainers. Jobs in the other three categories are stable, but growing at a slower pace than those in digitization. All of the occupations identified require some post high-school courses and/or community college training or more. There is an abundance of HIT-related education in the San Diego region and the authors of the Healthcare IT Research Report believe that the workforce is in an emergent stage since most of the job openings are in the digitization category.

One area of that is not well addressed yet is the education of software engineers and project managers who understand the clinical environment. The report recommended the creation of educational and development programs that supplement foundational training in either IT or clinical fields.[59] The College may want to consider ways to best prepare students for positions of jobs in the aforementioned digitization and integration categories.

Healthcare Workforce Development in San Diego County

In 2010 the SDWP investigated the issues associated with healthcare workforce development with a particular emphasis on allied healthcare professions, in San Diego County. The allied health professionals are healthcare practitioners with formal education and clinical training that is credentialed through licensure, registration or certification processes. They collaborate with physicians and others in a healthcare team to provide services in the identification, prevention and treatment of diseases, disabilities and disorders. Employers advised the SDWP researchers that there is an experience gap for candidates seeking their first jobs. The development of

[59] UC San Diego Extension. *Healthcare IT Research Report.* 2011



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volunteer experiences and adequate, appropriate clinical experience during the instructional program are recommended to close the experience gap.

**San Diego Job Growth in Healthcare**

| Occupation | 2010 Jobs | 2015 Jobs | % Growth |
|---|---|---|---|
| Physical therapists | 1,632 | 1,914 | 17.3% |
| Medical assistants | 7,049 | 8,212 | 16.5% |
| Occupational therapists | 971 | 1,115 | 14.8% |
| Registered nurses | 21,960 | 24,623 | 12.1% |
| Medical records and health information technicians | 1,508 | 1,691 | 12.1% |
| Radiologic technologists and technicians | 1,449 | 1,603 | 10.6% |
| Pharmacists | 2,219 | 2,451 | 10.5% |
| Medical and clinical laboratory technologists | 806 | 885 | 9.8% |
| ***Total*** | ***37,594*** | ***42,494*** | ***13.0%*** |

Source: Healthcare Workforce Development in San Diego County

One in four employers use or need certified healthcare interpreters or medical translators at their worksites, particularly employees who can speak Spanish. Other desired key skills include good verbal and writing skills, knowledge of health information technology, basic mathematics, and customer service skills. The most common shortcoming among candidates is basic skills in English and math.[60] The College may want to review the effectiveness of instruction in these skill areas among the healthcare programs that are presently offered.

Entertainment & Hospitality

In 2011 the SDWP retained the services of the ERISS Corporation to conduct a survey of employers in the entertainment and hospitality industry. Over 370 employers in 34 classifications of the North American Industry Classification system were involved in the research. Most employers indicated that they provide internal training to new employees, but 37% of the participating employers additionally used external training providers. At the time of the survey, only a modest 3% growth in job expansion was anticipated out to the end of 2012. The current recession makes employers very cautious about adding new workers. However, turnover accounted for another 13% increase in openings.

A series of career ladder graphics is included as an appendix to the study. Among the 37 occupations studied these occupations had the greatest number of projected job openings:[61]

[60] Brad Wisons and Agnes Zsigovics. *Healthcare Workforce Development in San Diego County: Recommendations for Changing Times.* SDWP, 2010.

[61] SDWP *Entertainment and Hospitality Industry Cluster Survey.* June 2011.



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**San Diego Entertainment and Hospitality Occupations, Projections 2011 to 2012**

| Occupational Title | New Jobs | Turnover Openings | Total Growth | Median Hrly Wage* |
|---|---|---|---|---|
| Cashiers | 2% | 26% | 28% | $9.31 |
| Chefs | 0% | 36% | 36% | $21.47 |
| Choreographers | 11% | 11% | 22% | $18.02 |
| Counter & Rental Clerks | 2% | 34% | 36% | $11.57 |
| Dishwashers | 2% | 27% | 29% | $9.03 |
| Hotel Desk Clerks | 3% | 20% | 23% | $10.97 |
| Recreational Protective Service Workers | 11% | 12% | 23% | $13.18 |
| Secretaries | 9% | 13% | 22% | $17.25 |
| Security Guards | 2% | 16% | 21% | $11.42 |
| Taxi Drivers and Chauffeurs | 12% | 21% | 33% | $10.47 |
| | | | | |
| *for experienced employees | | | | |

Source: SDWP. *Entertainment and Hospitality Industry Survey*

Almost all of these occupations are characterized as having more openings generated through employee turnover than new jobs being added.

San Diego Military Contractors Outlook Report
In 2011 the SDWP retained the BW Partnership to conduct a survey of 125 defense industry employers in the San Diego area because defense, defense related, and homeland security economic activity is one of the core drivers to the regional economy. The SDWP wanted to better understand the size and breadth of this economic cluster and its workforce preparation needs. Participating employers ranged from fewer than 25 employees (one-fourth of all firms) to 10% of the firms having 100 or more employees.

Collectively, the employers anticipated hiring enough new employees to represent a 7.3% growth between 2011 and 2012. Across the board, higher-skilled occupations make up the greatest percentage of the overall defense workforce. Scientific and technical support personnel are the largest occupational group, accounting for 1,800 jobs, among the military contractors in San Diego. Employers reported some or great difficulty in finding qualified applicants. The greatest deficiencies among applicants were reported to be technical competence, technical writing ability, and communications skills.



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**San Diego Military Contractors Occupational Outlook**

| Occupations by Nature of Firm | % of Workforce |
|---|---|
| *Manufacture Exclusively* | |
| Project Managers | 60.0% |
| Quality Control & Testing Technicians | 48.6% |
| Sales Representatives or Estimators | 42.9% |
| Electrical Equipment Assemblers | 22.9% |
| *Do Not Manufacture* | |
| Supervisors & Managers of Front-line Workers | 34.4% |
| Marketing & Sales Positions | 25.6% |
| Finance & Accounting Positions | 24.4% |
| *Both Manufacture and Provide Other Services* | |
| Scientific & Technical Support Positions | 29.8% |
| Computer & Information Technology Support Positions | 26.4% |
| Customer Service Positions | 15.2% |

Source: SDWP. *San Diego Military Contractors Outlook Report*

The employment opportunities for support-and-production related occupations with defense contractors are not significantly different from non-defense related jobs. A clean criminal history is an absolute must for employment with a defense contractor and at least one year of work experience is highly desired. The majority of employers, for most occupations in the study, expect a four-year college degree as preparation. However, candidates with an Associate Degree may be competitive for the technician support positions, but career advancement will require more education.[62]

The South County Economic Development Corporation has completed a limited number of industry and occupational studies that might be of interest to the College for the purpose of planning new instructional programs or workforce development initiatives.

Manufacturing
Between October 2011 and June 2012 the South County Economic Development Council (SCEDC) staff conducted a survey of over 280 manufacturing business (establishments engaged in the mechanical, physical or chemical transformation of materials, substances, or components into new products). Manufacturers expressed difficulty in finding qualified employees noting that many of the training programs have been downsized or no longer exist due to budget cuts. They identified a need to retrain current employees and offer additional training classes related to computerize manufacturing equipment. Computer numeric control (CNC) machinists, for example, have jobs waiting, but there is a lack of skilled and available workers to fill the positions. Several manufactures said that CNC machinists are recruited from all over and are in demand throughout the state. Numerous manufactures commented on the need to have trade courses offered at both high schools and community colleges.

Many of the participants were unaware of the variety of business-assistance programs currently offered in San Diego County, such as tax credits for hiring qualified employees, and training dollars for customized training programs. Only 16 percent of those surveyed said they had forged

[62] SDWP. *San Diego Military Contractors Outlook Report* June 2011.



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a business relationship with a local educational institution. Twenty-six percent of the respondents indicated a desire to learn more about the variety of training programs available to them. In the future, forty percent of the companies (177) plan to expand their employment in San Diego.[63]

There may be opportunities for the College to provide some fee-based instruction or workforce preparation training to the manufacturing firms in the service area. An instructional program in CNC for machinists would be a costly investment and should not be undertaken lightly.

Food Manufacturing
In 2010 the SCEDC and the SANDAG Service Bureau staff conducted a study of the food manufacturing and distribution industry enterprises located in the Otay Mesa community (zip code 92154). A total of seventeen employer interviews were conducted to explore their business operations and workforce needs. In the larger San Diego region there are more than 550 firms engaged in the food manufacturing and distribution industry sector employing approximately 12,600 workers. Within Otay Mesa it is estimated that 38 firms specialize in this sector and employ more than 1,500 workers. Most firms in the South County area and in Otay Mesa specialize in wholesale food distribution.

Some of those interviewed expressed concerns about finding qualified workers with experience in the industry in occupations such as quality control/quality assurance, cost accountants, and plant/equipment maintenance workers. Specific training needs that were mentioned include: FDA regulations, hazardous materials safety and general safety, first aid and CPR, and forklift operation certification. Some interest was also expressed in assistance with government contracting processes to help employers understand the requirements and expand their customer base.[64]

There may be opportunities for the College to provide some fee-based instruction for the food-manufacturing firms in the service area.

## B. Planning for Potential New Programs

There are nine public community colleges located within San Diego County. Collectively, the nine community colleges, including Southwestern College, offer 1,520 instructional programs leading to degrees and/or certificates in fields of study described by the California Community College Chancellor's Office Taxonomy of Programs (TOP) manual.[65] Before new instructional programs are implemented, care should be taken to analyze the existing programs offered by those institutions. For example there are 49 programs in the field of Office Technology/Office Computer Applications (TOP 051400) and 33 programs offered in the field of Child Development/Early Care and Education (TOP 130500) by the nine colleges.

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[63] Cindy Gompers-Graves and Bradley Weinstein. *San Diego Regional Manufacturing Sector Report.* South County Economic Development Council. June 25, 2012
[64] SANDAG Service Bureau. *Food Manufacturing and Distribution Industry Sector in Otay Mesa.* South County Economic Development Council. April 30, 2010
[65] California Community College Chancellor's Office, *Program Inventory* Retrieved October 31, 2012 from http://www.cccco.edu/ChancellorsOffice/Divisions/Academic Affairs/inventory of programs



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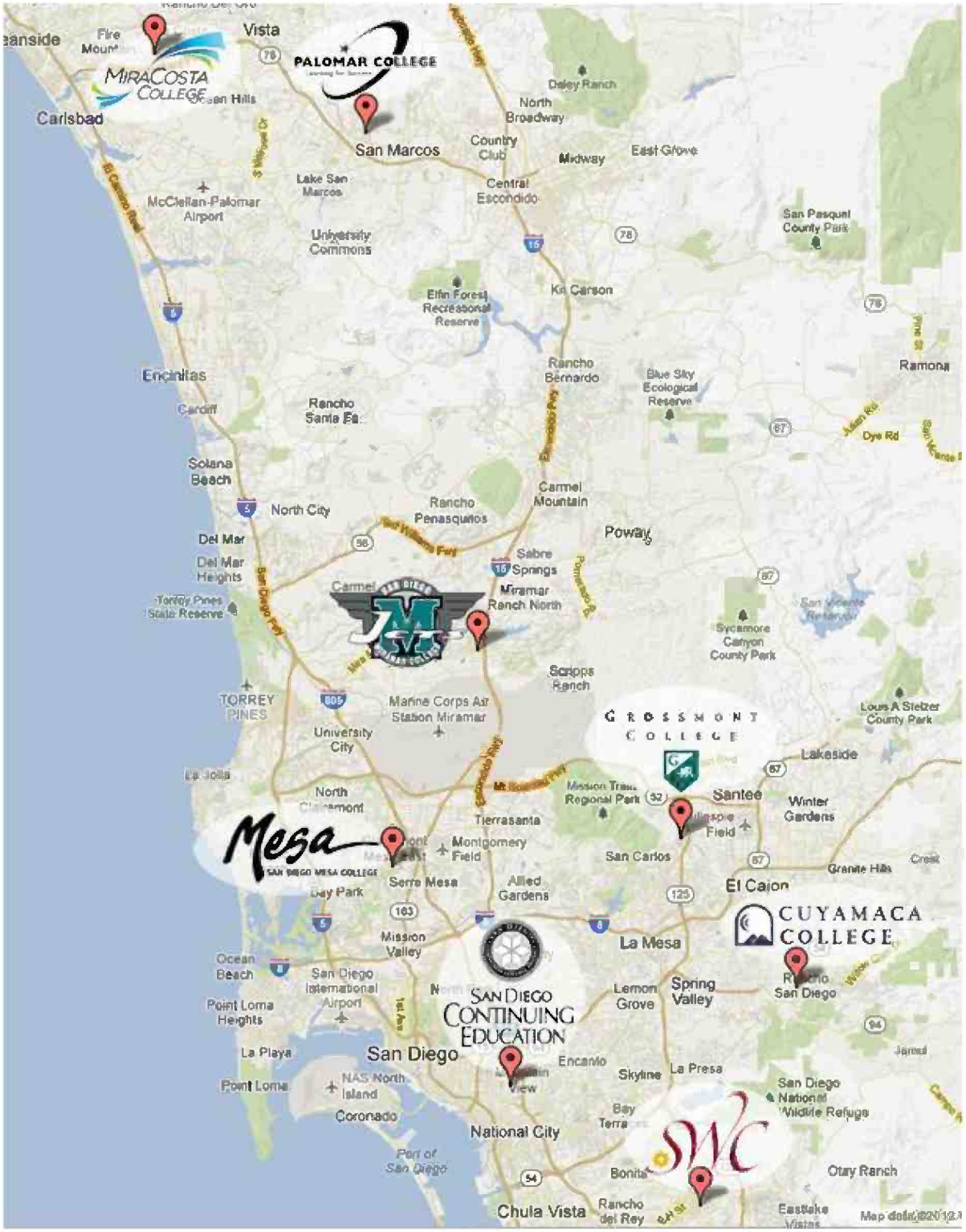
**Public Community Colleges in San Diego County**




Source: ERSI; analysis by Cambridge West Partnership, LLC



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The enactment of the Student Transfer Achievement Reform (STAR) Act, aka SB 1440, provided the College with an opportunity to "retool" some of its current transfer-oriented programs and to introduce new ones. The legislation requires a community college district to grant an associate degree for transfer to a student in his/her field of study once the student has met degree and transfer requirements for a particular major. Upon completion of the transfer associate degree, the student is eligible to transfer with junior standing into a local California State University (CSU) campus. Students will be given priority when applying to a particular program that is similar to his/her community college field of study. The bill prohibits a community college district or campus from adding local course requirements in addition to requirements of the STAR Act, and prohibits the CSU from requiring a transferring student to repeat courses similar to those taken at the community college that counted toward their associate degree for transfer.

The statewide strategy to implement the STAR Act is to develop transfer-model curriculums (TMC) through inter-segmental faculty dialogue using the structure of the course identification numbering system (C-ID) as much as possible so that common course descriptions will be used as building blocks. The initial focus of the project is on the top transfer majors within the CSU. The goal is to reach agreements on a model curriculum that all community colleges could adopt for each particular major. As of fall 2012, twenty-two model curriculums have been approved.

Two TMCs were completed at the College and approved by the Chancellor's Office: (1) Math; and (2) Communications Studies. In fall 2012 the College Curriculum Committee recommended five additional TMC model degrees, (1) Administration of Justice; (2) Political Science; (3) English; (4) Sociology; and (5) Physics. Four other TMCs have been pre-launched at the College or proposed to the Curriculum Committee: (1) Psychology; (2) Kinesiology; (3) Theater Arts; and (4) Music.

Another group of eight model curriculums are available for consideration: Anthropology, Art History, Business Administration, Computer Science, Early Childhood Education, Elementary Education (Liberal Studies), Geography, Geology, History, Journalism, and Studio Arts.[66] The SWC faculty is in discussion about these other models. In some cases there is a preference to wait for a TMC from SDSU because most students transfer to that institution. In the case of Early Childhood Education a decision has been made not to offer a transfer AA degree model. A complete analysis of the extent to which current College programs of instruction align with the 22 approved TMCs can be found in the appendices.

In an effort to identify new program areas that would meet labor market needs in San Diego County, an analysis was completed of the occupations expected to have 50 or more job openings annually through the year 2018. The list was filtered using the Bureau of Labor Statistics training-level definitions with a focus on those occupations requiring a Bachelor's or Associate Degree, some post-secondary vocational education, or long-term on-the-job-training of more than twelve months. Both the some post-secondary education and the long-term on-the-job training of more than twelve months might be experiences that culminate in a CTE certificate issued by a community college.

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[66] Course Identification Numbering System for the California Community Colleges, *SB1440 Update* Retrieved December 6, 2012 from http://www.c-id.net/degreereview.html



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Those occupations that meet the criteria above were mapped, through the Standard Occupational Classification (SOC) codes and Taxonomy of Programs (TOP) codes, to Associate Degree and Certificate of Achievement instructional programs offered by the nine public community colleges in San Diego County. Because the occupations mapped to one or more TOP code used by the community college system, there can be multiple programs offered for each occupation. For that reason, some of the values in the "Reg X Total Pgms" column show a count in excess of the nine colleges in the study area. Some occupations, such as Accountants and Auditors in the first table, have multiple rows because the occupational SOC code is mapped to different TOP codes. In some occupations listed in the tables the inventory of authorized programs among the San Diego County community colleges did not contain a matching TOP code, such as the first occupation, Business Operations Specialists, All Other, located in the first table.

Each of the tables that follow should be studied to identify potential occupations for which a new instructional program might be designed. The most promising occupations are those with the highest number of projected annual average total jobs (fourth column in the tables), but the fewest number of established competitor programs and the smallest number of average annual awards 2007-08 to 2011-12 (final column on the right).

The first table below identifies occupations in San Diego County commonly requiring a Bachelor's degree for which EDD has projected 50 or more annual job openings through the year 2018. Forty-one occupations meet these criteria. An initial course of study for these occupations might begin in a community college, and therefore, the transfer degree initiative may be a starting place for instructional programs that lead to these occupations.



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# San Diego County Occupations Commonly Requiring a Bachelor's Degree and the Extent of Neighboring Community College Programs Related to Those Occupations

| SOC Code | Occupational Title | TOP | SOC to TOP6_ decimal | An Av Total Jobs | 2010 Median Hourly | 2010 Median Annual | Expected Preparation | Inv'try TOP Code | Reg X Total Pgms | Av An Awards 08 to 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| 131199 | Business Operations Specialists, All Other | 059900 | 0599.00 | 523 | $29.93 | $62,266 | Bachelor's Degree | | | |
| 252021 | Elementary School Teachers, Except Special Education | 490120 | 4901.20 | 435 | [6] | $68,411 | Bachelor's Degree | 490120 | 6 | 23.5 |
| 132011 | Accountants and Auditors | 050200 | 0502.00 | 388 | $30.94 | $64,348 | Bachelor's Degree | 050200 | 18 | 178.8 |
| 132011 | Accountants and Auditors | 050210 | 0502.10 | 388 | $30.94 | $64,348 | Bachelor's Degree | 050210 | 1 | 67.0 |
| 252031 | Secondary School Teachers, Except Special and Vocational Education | 083700 | 0837.00 | 364 | [6] | $66,610 | Bachelor's Degree | | | 2.0 |
| 252031 | Secondary School Teachers, Except Special and Vocational Education | 083900 | 0839.00 | 364 | [6] | $66,610 | Bachelor's Degree | | | |
| 253099 | Teachers and Instructors, All Other | 089900 | 0899.00 | 205 | N/A | $49,158 | Bachelor's Degree | | | |
| 252022 | Middle School Teachers, Except Special and Vocational Education | 083700 | 0837.00 | 203 | [6] | $66,835 | Bachelor's Degree | | | 2.0 |
| 252022 | Middle School Teachers, Except Special and Vocational Education | 083900 | 0839.00 | 203 | [6] | $66,835 | Bachelor's Degree | | | |
| 151031 | Computer Software Engineers, Applications | 070200 | 0702.00 | 198 | $43.11 | $89,680 | Bachelor's Degree | 070200 | 8 | 41.0 |
| 151031 | Computer Software Engineers, Applications | 070600 | 0706.00 | 198 | $43.11 | $89,680 | Bachelor's Degree | 070600 | 4 | 6.5 |
| 151081 | Network Systems and Data Communications Analysts | 070100 | 0701.00 | 168 | $37.18 | $77,339 | Bachelor's Degree | 070100 | 2 | 3.3 |
| 151081 | Network Systems and Data Communications Analysts | 070200 | 0702.00 | 168 | $37.18 | $77,339 | Bachelor's Degree | 070200 | 8 | 41.0 |
| 151081 | Network Systems and Data Communications Analysts | 070730 | 0707.30 | 168 | $37.18 | $77,339 | Bachelor's Degree | | | 1.0 |
| 151081 | Network Systems and Data Communications Analysts | 070810 | 0708.10 | 168 | $37.18 | $77,339 | Bachelor's Degree | 070810 | 18 | 42.2 |
| 131023 | Purchasing Agents, Except Wholesale, Retail, and Farm Products | 050900 | 0509.00 | 161 | $29.24 | $60,822 | Bachelor's Degree | 050900 | 7 | 25.8 |
| 151051 | Computer Systems Analysts | 070100 | 0701.00 | 133 | $38.22 | $79,503 | Bachelor's Degree | 070100 | 2 | 3.3 |
| 151051 | Computer Systems Analysts | 070200 | 0702.00 | 133 | $38.22 | $79,503 | Bachelor's Degree | 070200 | 8 | 41.0 |
| 151051 | Computer Systems Analysts | 070730 | 0707.30 | 133 | $38.22 | $79,503 | Bachelor's Degree | | | 1.0 |
| 151051 | Computer Systems Analysts | 070900 | 0709.00 | 133 | $38.22 | $79,503 | Bachelor's Degree | 070900 | 5 | 22.7 |
| 119141 | Property, Real Estate, and Community Association Managers | 051100 | 0511.00 | 127 | $24.48 | $50,920 | Bachelor's Degree | 051100 | 18 | 75.2 |
| 119141 | Property, Real Estate, and Community Association Managers | 051110 | 0511.10 | 127 | $24.48 | $50,920 | Bachelor's Degree | 051110 | 3 | 5.0 |
| 172051 | Civil Engineers | | | 125 | $40.60 | $84,455 | Bachelor's Degree | | | |
| 119021 | Construction Managers | 050100 | 0501.00 | 123 | $51.86 | $107,871 | Bachelor's Degree | 050100 | 12 | 96.7 |
| 119021 | Construction Managers | 050500 | 0505.00 | 123 | $51.86 | $107,871 | Bachelor's Degree | 050500 | 12 | 341.0 |
| 119021 | Construction Managers | 050600 | 0506.00 | 123 | $51.86 | $107,871 | Bachelor's Degree | 050600 | 15 | 51.1 |
| 151032 | Computer Software Engineers, Systems Software | 070200 | 0702.00 | 121 | $44.64 | $92,838 | Bachelor's Degree | 070200 | 8 | 41.0 |
| 151032 | Computer Software Engineers, Systems Software | 070600 | 0706.00 | 121 | $44.64 | $92,838 | Bachelor's Degree | 070600 | 4 | 6.5 |
| 271024 | Graphic Designers | 061430 | 0614.30 | 120 | $21.91 | $45,586 | Bachelor's Degree | 061430 | 14 | 23.2 |
| 271024 | Graphic Designers | 061460 | 0614.60 | 120 | $21.91 | $45,586 | Bachelor's Degree | 061460 | 4 | 51.0 |
| 271024 | Graphic Designers | 100900 | 1009.00 | 120 | $21.91 | $45,586 | Bachelor's Degree | 100900 | 2 | 2.0 |
| 271024 | Graphic Designers | 101300 | 1013.00 | 120 | $21.91 | $45,586 | Bachelor's Degree | 101300 | 1 | 7.0 |
| 271024 | Graphic Designers | 103000 | 1030.00 | 120 | $21.91 | $45,586 | Bachelor's Degree | 103000 | 13 | 38.3 |
| 172072 | Electronics Engineers, Except Computer | | | 115 | $47.33 | $98,438 | Bachelor's Degree | | | |
| 399032 | Recreation Workers | 011510 | 0115.10 | 112 | $10.69 | $22,244 | Bachelor's Degree | | | 4 |
| 399032 | Recreation Workers | 083520 | 0835.20 | 112 | $10.69 | $22,244 | Bachelor's Degree | 083520 | 7 | 48.6 |
| 399032 | Recreation Workers | 083560 | 0835.60 | 112 | $10.69 | $22,244 | Bachelor's Degree | | | |
| 399032 | Recreation Workers | 083570 | 0835.70 | 112 | $10.69 | $22,244 | Bachelor's Degree | | | |
| 399032 | Recreation Workers | 083600 | 0836.00 | 112 | $10.69 | $22,244 | Bachelor's Degree | 083600 | 5 | 5 |
| 399032 | Recreation Workers | 083610 | 0836.10 | 112 | $10.69 | $22,244 | Bachelor's Degree | 083610 | 5 | |
| 273031 | Public Relations Specialists | 060600 | 0606.00 | 111 | $24.91 | $51,824 | Bachelor's Degree | | | 3.0 |
| 131051 | Cost Estimators | 050100 | 0501.00 | 110 | $31.65 | $65,825 | Bachelor's Degree | 050100 | 12 | 96.7 |
| 131051 | Cost Estimators | 050500 | 0505.00 | 110 | $31.65 | $65,825 | Bachelor's Degree | 050500 | 12 | 341.0 |
| 131051 | Cost Estimators | 050600 | 0506.00 | 110 | $31.65 | $65,825 | Bachelor's Degree | 050600 | 15 | 51.1 |
| 131079 | Human Resources, Training, and Labor Relations Specialists, All Other | 051600 | 0516.00 | 106 | $32.66 | $67,934 | Bachelor's Degree | 051600 | 2 | 5.0 |
| 172199 | Engineers, All Other | 090100 | 0901.00 | 94 | $46.49 | $96,710 | Bachelor's Degree | 090100 | 12 | 14.8 |
| 151071 | Network and Computer Systems Administrators | 070100 | 0701.00 | 92 | $34.45 | $71,656 | Bachelor's Degree | 070100 | 2 | 3.3 |
| 151071 | Network and Computer Systems Administrators | 070730 | 0707.30 | 92 | $34.45 | $71,656 | Bachelor's Degree | | | 1.0 |
| 151071 | Network and Computer Systems Administrators | 070800 | 0708.00 | 92 | $34.45 | $71,656 | Bachelor's Degree | 070800 | 7 | 31.0 |
| 151071 | Network and Computer Systems Administrators | 070810 | 0708.10 | 92 | $34.45 | $71,656 | Bachelor's Degree | 070810 | 18 | 42.2 |
| 151071 | Network and Computer Systems Administrators | 070820 | 0708.20 | 92 | $34.45 | $71,656 | Bachelor's Degree | 070820 | 2 | 30.0 |
| 151071 | Network and Computer Systems Administrators | 079900 | 0799.00 | 92 | $34.45 | $71,656 | Bachelor's Degree | 079900 | 6 | 144.5 |
| 172141 | Mechanical Engineers | | | 91 | $39.75 | $82,681 | Bachelor's Degree | | | |
| 172112 | Industrial Engineers | | | 80 | $39.00 | $81,104 | Bachelor's Degree | | | |
| 211021 | Child, Family, and School Social Workers | | | 77 | $24.78 | $51,546 | Bachelor's Degree | | | |
| 131073 | Training and Development Specialists | | | 76 | $28.83 | $59,961 | Bachelor's Degree | | | |
| 132051 | Financial Analysts | | | 74 | $41.28 | $85,853 | Bachelor's Degree | | | |
| 132052 | Personal Financial Advisors | | | 74 | $30.89 | $64,238 | Bachelor's Degree | | | |
| 413031 | Securities, Commodities, and Financial Services Sales Agents | | | 74 | $28.88 | $60,059 | Bachelor's Degree | | | |
| 131071 | Employment, Recruitment, and Placement Specialists | 051600 | 0516.00 | 70 | $24.46 | $50,879 | Bachelor's Degree | 051600 | 2 | 5.0 |
| 419031 | Sales Engineers | 050940 | 0509.40 | 67 | $40.23 | $83,682 | Bachelor's Degree | | | 4.0 |
| 192031 | Chemists | 190500 | 1905.00 | 62 | $42.96 | $89,355 | Bachelor's Degree | 190500 | 11 | 14.1 |
| 151021 | Computer Programmers | 050970 | 0509.70 | 61 | $39.27 | $81,683 | Bachelor's Degree | 050970 | 2 | 2.0 |
| 151021 | Computer Programmers | 061430 | 0614.30 | 61 | $39.27 | $81,683 | Bachelor's Degree | 061430 | 14 | 23.2 |
| 151021 | Computer Programmers | 061460 | 0614.60 | 61 | $39.27 | $81,683 | Bachelor's Degree | 061460 | 4 | 51.0 |
| 151021 | Computer Programmers | 070700 | 0707.00 | 61 | $39.27 | $81,683 | Bachelor's Degree | 070700 | 2 | 55.0 |
| 151021 | Computer Programmers | 070710 | 0707.10 | 61 | $39.27 | $81,683 | Bachelor's Degree | 070710 | 8 | 11.5 |
| 151021 | Computer Programmers | 070900 | 0709.00 | 61 | $39.27 | $81,683 | Bachelor's Degree | 070900 | 5 | 22.7 |
| 151021 | Computer Programmers | 070910 | 0709.10 | 61 | $39.27 | $81,683 | Bachelor's Degree | 070910 | 7 | 5.5 |
| 192041 | Environmental Scientists and Specialists, Including Health | 030100 | 0301.00 | 60 | $31.71 | $65,958 | Bachelor's Degree | 030100 | 1 | 12.0 |
| 192041 | Environmental Scientists and Specialists, Including Health | 030200 | 0302.00 | 60 | $31.71 | $65,958 | Bachelor's Degree | | | |
| 131081 | Logisticians | 051000 | 0510.00 | 58 | $37.65 | $78,308 | Bachelor's Degree | 051000 | 3 | 1.0 |
| 132099 | Financial Specialists, All Other | | | 58 | $27.97 | $58,187 | Bachelor's Degree | | | |



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## San Diego County Occupations Commonly Requiring a Bachelor's Degree and the Extent of Neighboring Community College Programs Related to Those Occupations (continued)

| SOC Code | Occupational Title | TOP | SOC to TOP6_ decimal | An Av Total Jobs | 2010 Median Hourly | 2010 Median Annual | Expected Preparation | Inv'try TOP Code | Reg X Total Pgms | Av An Awards 08 to 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| 113051 | Industrial Production Managers | 050100 | 0501.00 | 55 | $40.20 | $83,623 | Bachelor's Degree | 050100 | 12 | 96.7 |
| 113051 | Industrial Production Managers | 050500 | 0505.00 | 55 | $40.20 | $83,623 | Bachelor's Degree | 050500 | 12 | 341.0 |
| 113051 | Industrial Production Managers | 050600 | 0506.00 | 55 | $40.20 | $83,623 | Bachelor's Degree | 050600 | 15 | 51.1 |
| 131072 | Compensation, Benefits, and Job Analysis Specialists | 051600 | 0516.00 | 55 | $29.26 | $60,862 | Bachelor's Degree | 051600 | 2 | 5.0 |
| 172061 | Computer Hardware Engineers | | | 53 | $42.23 | $87,855 | Bachelor's Degree | | | |
| 291071 | Physician Assistants | 120600 | 1206.00 | 53 | $39.56 | $82,277 | Bachelor's Degree | | | |
| 252012 | Kindergarten Teachers, Except Special Education | 490120 | 4901.20 | 50 | [6] | $50,608 | Bachelor's Degree | 490120 | 6 | 23.5 |
| 291071 | Physician Assistants | 120600 | 1206.00 | 53 | $39.56 | $82,277 | Bachelor's Degree | | | |
| | | | | | | | | *Total* | *404* | |

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The table below identifies ten occupations in San Diego County with 50 or more annual openings through 2018 that commonly require an Associate Degree. The occupation of Computer Support Specialists might be a useful field to consider for new instructional programs.

## San Diego County Occupations Commonly Requiring an Associate Degree and the Extent of Neighboring Community College Programs Related to Those Occupations

| SOC Code | Occupational Title | SOC to TOP6_ decimal | An Av Total Jobs | 2010 Median Hourly | 2010 Median Annual | Expected Preparation | Inv'try TOP Code | Reg X Total Pgms | Av An Awards 08 to 12 |
|---|---|---|---|---|---|---|---|---|---|
| 291111 | Registered Nurses | 1230.00 | 826 | $38.81 | $80,734 | Associate Degree | | | |
| 291111 | Registered Nurses | 1230.10 | 826 | $38.81 | $80,734 | Associate Degree | 123010 | 13 | 345.8 |
| 151041 | Computer Support Specialists | | 226 | $22.72 | $47,254 | Associate Degree | | | |
| 413021 | Insurance Sales Agents | 0512.00 | 134 | $27.23 | $56,649 | Associate Degree | 051200 | 4 | 5.0 |
| 151099 | Computer Specialists, All Other | 0701.00 | 124 | $38.91 | $80,952 | Associate Degree | 070100 | 2 | 3.3 |
| 151099 | Computer Specialists, All Other | 0706.00 | 124 | $38.91 | $80,952 | Associate Degree | 070600 | 4 | 6.5 |
| 151099 | Computer Specialists, All Other | 0799.00 | 124 | $38.91 | $80,952 | Associate Degree | 079900 | 6 | 144.5 |
| 194021 | Biological Technicians | 0430.00 | 118 | $22.50 | $46,809 | Associate Degree | 043000 | 8 | 30.8 |
| 194099 | Life, Physical, and Social Science Technicians, All Other | 0934.70 | 85 | $23.27 | $48,401 | Associate Degree | | | |
| 194099 | Life, Physical, and Social Science Technicians, All Other | 1920.00 | 85 | $23.27 | $48,401 | Associate Degree | | | |
| 232011 | Paralegals and Legal Assistants | 1402.00 | 78 | $29.95 | $62,279 | Associate Degree | 140200 | 9 | 102.6 |
| 173023 | Electrical and Electronic Engineering Technicians | | 72 | $28.06 | $58,370 | Associate Degree | | | |
| 292021 | Dental Hygienists | 1240.20 | 67 | $45.06 | $93,723 | Associate Degree | 124020 | 1 | 131.0 |
| 292071 | Medical Records and Health Information Technicians | 1223.00 | 53 | $16.28 | $33,869 | Associate Degree | 122300 | 1 | 90.0 |
| 292071 | Medical Records and Health Information Technicians | 1223.10 | 53 | $16.28 | $33,869 | Associate Degree | 122310 | 2 | 59.0 |
| | | | | | | | *Total* | *50* | |

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC



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The table below identifies thirteen occupations in San Diego County with 50 or more annual openings through 2018 that commonly require some post-secondary vocational education. These occupations are ones in which private, for-profit trade schools commonly provide programs of study. Their offerings are not included in the total programs column.

**San Diego County Occupations Commonly Requiring Some Post-secondary Vocational Education and the Extent of Neighboring Community College Programs Related to Those Occupations**

| SOC Code | Occupational Title | SOC to TOP6_ decimal | An Av Total Jobs | 2010 Median Hourly | 2010 Median Annual | Expected Preparation | Inv'try TOP Code | Reg X Total Pgms | Av An Awards 08 to 12 |
|---|---|---|---|---|---|---|---|---|---|
| 436013 | Medical Secretaries | 0514.20 | 300 | $15.70 | $32,667 | Post-Secondary CTE | 051420 | 11 | 8.3 |
| 292061 | Licensed Practical and Licensed Vocational Nurses | 1230.20 | 253 | $22.98 | $47.797 | Post-Secondary CTE | 123020 | 5 | 93.3 |
| 493023 | Automotive Service Technicians and Mechanics | 0948.00 | 156 | $19.54 | $40,637 | Post-Secondary CTE | 094800 | 28 | 198.5 |
| 493023 | Automotive Service Technicians and Mechanics | 0948.40 | 156 | $19.54 | $40,637 | Post-Secondary CTE | | | |
| 399031 | Fitness Trainers and Aerobics Instructors | 0835.00 | 135 | $17.44 | $36,259 | Post-Secondary CTE | 083500 | 8 | 16.8 |
| 399031 | Fitness Trainers and Aerobics Instructors | 0835.10 | 135 | $17.44 | $36.259 | Post-Secondary CTE | | | 1.0 |
| 399031 | Fitness Trainers and Aerobics Instructors | 0835.20 | 135 | $17.44 | $36,259 | Post-Secondary CTE | 083520 | 7 | 48.6 |
| 399031 | Fitness Trainers and Aerobics Instructors | 0835.50 | 135 | $17.44 | $36.259 | Post-Secondary CTE | | | |
| 399031 | Fitness Trainers and Aerobics Instructors | 0835.60 | 135 | $17.44 | $36,259 | Post-Secondary CTE | | | |
| 393011 | Gaming Dealers | | 127 | $9.19 | $19,120 | Post-Secondary CTE | | | |
| 395012 | Hairdressers, Hairstylists, and Cosmetologists | 3007.00 | 117 | $11.31 | $23,529 | Post-Secondary CTE | 300700 | 3 | 196.0 |
| 419022 | Real Estate Sales Agents | 0511.00 | 96 | $20.15 | $41,911 | Post-Secondary CTE | 051100 | 18 | 75.2 |
| 419022 | Real Estate Sales Agents | 0511.10 | 96 | $20.15 | $41,911 | Post-Secondary CTE | 051110 | 3 | 5.0 |
| 252011 | Preschool Teachers, Except Special Education | 1305.10 | 95 | $13.59 | $28.269 | Post-Secondary CTE | 130500 | 33 | 237.8 |
| 514121 | Welders, Cutters, Solderers, and Brazers | 0956.50 | 92 | $20.28 | $42,184 | Post-Secondary CTE | 095650 | 7 | 184.5 |
| 436012 | Legal Secretaries | 0514.10 | 82 | $19.87 | $41,345 | Post-Secondary CTE | 051410 | 28 | 19.3 |
| 395092 | Manicurists and Pedicurists | 3007.00 | 58 | $9.08 | $18,894 | Post-Secondary CTE | 300700 | 3 | 196.0 |
| 319011 | Massage Therapists | 1262.00 | 53 | $20.79 | $43,237 | Post-Secondary CTE | 126200 | 3 | 57.0 |
| 493031 | Bus and Truck Mechanics and Diesel Engine Specialists | 0947.00 | 53 | $22.55 | $46,916 | Post-Secondary CTE | 094700 | 14 | 39.5 |
| | | | | | | | *Total* | *171* | |

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC



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The table below identifies eighteen occupations in San Diego County expected to have 50 or more annual openings through 2018 that commonly require some long-term on-the-job training (OJT) and perhaps some post-secondary vocational education. The U.S. Bureau of Labor Statistics views long-term OJT as being twelve or more months or alternative experience combined with formal classroom instruction that is occupational specific rather than job specific. The skills learned are thought to be transferable to another job in the same occupation.

Several of these occupations are also entered through formal apprenticeship programs offered by various trade unions. Employment preference may go to the graduates of those programs. While information from the federal Bureau of Labor Statistics may show that police and sheriff's patrol officers enter the occupation through extensive on-the-job training, the tradition in California is to hire graduates from a formal Peace Officer Standards and Training (POST)-certified academy program. A similar preference is found for California fire fighters. These occupations are also ones in which private, for-profit trade schools commonly provide programs of study. Their offerings are not included in the total programs column.

**San Diego County Occupations Commonly Requiring Long-Term On-the-Job Training and Perhaps Some Formal Education and Existing Programs**

| SOC Code | Occupational Title | SOC to TOP6_ decimal | An Av Total Jobs | 2010 Median Hourly | 2010 Median Annual | Expected Preparation | Inv'try TOP Code | Reg X Total Pgms | Av An Awards 08 to 12 |
|---|---|---|---|---|---|---|---|---|---|
| 472031 | Carpenters | 0952.10 | 345 | $22.64 | $47,100 | Long-Term OJT | 095210 | 2 | 270.0 |
| 499042 | Maintenance and Repair Workers, General | 0957.00 | 316 | $16.98 | $35,317 | Long-Term OJT | 095700 | 4 | 28.0 |
| 352014 | Cooks, Restaurant | 1306.30 | 311 | $12.08 | $25,123 | Long-Term OJT | 130630 | 17 | 405.6 |
| 472111 | Electricians | 0952.20 | 252 | $23.88 | $49,673 | Long-Term OJT | 095220 | 19 | 405.5 |
| 333051 | Police and Sheriff's Patrol Officers | 2105.50 | 174 | $34.37 | $71,487 | Long-Term OJT | 210550 | 8 | 89.5 |
| 131041 | Compliance Officers, Except Agriculture, Construction, Health and Safety, and Transportation | | 170 | $28.92 | $60,142 | Long-Term OJT | | | |
| 472152 | Plumbers, Pipefitters, and Steamfitters | 0952.30 | 167 | $24.23 | $50,402 | Long-Term OJT | 095230 | 11 | 149.5 |
| 332011 | Fire Fighters | 2133.00 | 130 | $29.60 | $61,558 | Long-Term OJT | 213300 | 12 | 397.7 |
| 332011 | Fire Fighters | 2133.10 | 130 | $29.60 | $61,558 | Long-Term OJT | | | |
| 332011 | Fire Fighters | 2133.50 | 130 | $29.60 | $61,558 | Long-Term OJT | | | |
| 131031 | Claims Adjusters, Examiners, and Investigators | 0512.00 | 106 | $26.17 | $54,437 | Long-Term OJT | 051200 | 4 | 5.0 |
| 499021 | Heating, Air Conditioning, and Refrigeration Mechanics and Installers | 0946.00 | 80 | $24.35 | $50,655 | Long-Term OJT | 094600 | 12 | 198.0 |
| 492022 | Telecommunications Equipment Installers and Repairers, Except Line Installers | 0934.30 | 71 | $29.80 | $61,976 | Long-Term OJT | 093430 | 6 | 8.5 |
| 119012 | Farmers and Ranchers | 0102.00 | 67 | N/A | N/A | Long-Term OJT | | | |
| 119012 | Farmers and Ranchers | 0102.20 | 67 | N/A | N/A | Long-Term OJT | | | |
| 119012 | Farmers and Ranchers | 0102.30 | 67 | N/A | N/A | Long-Term OJT | | | |
| 119012 | Farmers and Ranchers | 0103.00 | 67 | N/A | N/A | Long-Term OJT | 010300 | 4 | 2.0 |
| 119012 | Farmers and Ranchers | 0103.10 | 67 | N/A | N/A | Long-Term OJT | | | |
| 119012 | Farmers and Ranchers | 0104.00 | 67 | N/A | N/A | Long-Term OJT | | | |
| 119012 | Farmers and Ranchers | 0109.30 | 67 | N/A | N/A | Long-Term OJT | 010930 | 6 | 21.0 |
| 119012 | Farmers and Ranchers | 0112.00 | 67 | N/A | N/A | Long-Term OJT | | | 3.0 |
| 472051 | Cement Masons and Concrete Finishers | | 65 | $27.96 | $58,147 | Long-Term OJT | | | |
| 272022 | Coaches and Scouts | 0835.00 | 58 | [6] | $41,067 | Long-Term OJT | 083500 | 8 | 16.8 |
| 272022 | Coaches and Scouts | 0835.10 | 58 | [6] | $41,067 | Long-Term OJT | | | 1.0 |
| 272022 | Coaches and Scouts | 0835.20 | 58 | [6] | $41,067 | Long-Term OJT | 083520 | 7 | 48.6 |
| 272022 | Coaches and Scouts | 0835.50 | 58 | [6] | $41,067 | Long-Term OJT | | | |
| 272022 | Coaches and Scouts | 0835.60 | 58 | [6] | $41,067 | Long-Term OJT | | | |
| 514041 | Machinists | 0956.30 | 58 | $19.41 | $40,385 | Long-Term OJT | 095630 | 6 | 99.5 |
| 472044 | Tile and Marble Setters | 0952.60 | 57 | $24.22 | $50,377 | Long-Term OJT | 095260 | 4 | 143.0 |
| 499052 | Telecommunications Line Installers and Repairers | 0934.30 | 54 | $25.11 | $52,217 | Long-Term OJT | 093430 | 6 | 8.5 |
| 513011 | Bakers | | 54 | $12.24 | $25,460 | Long-Term OJT | | | |
| | | | | | | | *Total* | *136* | |

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC



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The table below identifies twenty-nine occupations in San Diego County, which expect to have 50 or more annual openings through 2018 that commonly require some moderate-term on-the-job training and perhaps some post-secondary vocational education. The U.S. Bureau of Labor Statistics views moderate-term OJT as being one to twelve months combined with informal training that is occupational specific rather than job specific. The skills learned are thought to be transferable to another job in the same occupation.

These occupations are ones for which private, for-profit trade schools commonly provide programs of study. Their offerings are not included in the total programs column. The College might consider a workforce development effort as a means to prepare students to enter these occupations.

**San Diego County Occupations Commonly Requiring Moderate-Term On-the-Job Training and Perhaps Some Formal Education and Existing Programs**

| SOC Code | Occupational Title | SOC to TOP6_ decimal | An Av Total Jobs | 2010 Median Hourly | 2010 Median Annual | Expected Preparation | Inv'try TOP Code | Reg X Total Pgms | Av An Awards 08 to 12 |
|---|---|---|---|---|---|---|---|---|---|
| 434051 | Customer Service Representatives | 0518.00 | 895 | $17.14 | $35,648 | Moderate-Term OJT | | | |
| 436011 | Executive Secretaries and Administrative Assistants | 0514.00 | 439 | $20.89 | $43,470 | Moderate-Term OJT | 051400 | 49 | 144.0 |
| 436011 | Executive Secretaries and Administrative Assistants | 0514.20 | 439 | $20.89 | $43,470 | Moderate-Term OJT | 051420 | 11 | 8.3 |
| 472061 | Construction Laborers | 2102.10 | 376 | $16.99 | $35,347 | Moderate-Term OJT | 210210 | 3 | 9.0 |
| 433031 | Bookkeeping, Accounting, and Auditing Clerks | | 347 | $18.05 | $37,541 | Moderate-Term OJT | | | |
| 414012 | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 0509.00 | 314 | $26.78 | $55,709 | Moderate-Term OJT | 050900 | 7 | 25.8 |
| 414012 | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 0509.60 | 314 | $26.78 | $55,709 | Moderate-Term OJT | | | |
| 414012 | Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 0599.00 | 314 | $26.78 | $55,709 | Moderate-Term OJT | | | |
| 512092 | Team Assemblers | | 293 | $11.70 | $24,328 | Moderate-Term OJT | | | |
| 413099 | Sales Representatives, Services, All Other | 0506.50 | 292 | $27.18 | $56,544 | Moderate-Term OJT | 050650 | 7 | 4.5 |
| 413099 | Sales Representatives, Services, All Other | 0509.40 | 292 | $27.18 | $56,544 | Moderate-Term OJT | | | 4.0 |
| 413099 | Sales Representatives, Services, All Other | 0599.00 | 292 | $27.18 | $56,544 | Moderate-Term OJT | | | |
| 533032 | Truck Drivers, Heavy and TractorTrailer | 0947.50 | 284 | $20.43 | $42,495 | Moderate-Term OJT | | | |
| 319092 | Medical Assistants | 0514.20 | 245 | $14.57 | $30,303 | Moderate-Term OJT | 051420 | 11 | 8.3 |
| 319092 | Medical Assistants | 1208.00 | 245 | $14.57 | $30,303 | Moderate-Term OJT | 120800 | 2 | 58.5 |
| 319092 | Medical Assistants | 1208.10 | 245 | $14.57 | $30,303 | Moderate-Term OJT | 120810 | 6 | 39.5 |
| 319092 | Medical Assistants | 1208.20 | 245 | $14.57 | $30,303 | Moderate-Term OJT | 120820 | 10 | 33.3 |
| 319092 | Medical Assistants | 1219.00 | 245 | $14.57 | $30,303 | Moderate-Term OJT | | | |
| 319092 | Medical Assistants | 1223.10 | 245 | $14.57 | $30,303 | Moderate-Term OJT | 122310 | 2 | 59.0 |
| 472141 | Painters, Construction and Maintenance | 0952.70 | 196 | $19.67 | $40,914 | Moderate-Term OJT | | | |
| 319091 | Dental Assistants | 1240.10 | 165 | $17.38 | $36,143 | Moderate-Term OJT | 124010 | 4 | 140.0 |
| 414011 | Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products | 0509.40 | 147 | $33.80 | $70,301 | Moderate-Term OJT | | | 4.0 |
| 414011 | Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products | 0599.00 | 147 | $33.80 | $70,301 | Moderate-Term OJT | | | |
| 433021 | Billing and Posting Clerks and Machine Operators | | 143 | $17.19 | $35,748 | Moderate-Term OJT | | | |
| 292052 | Pharmacy Technicians | 1221.00 | 135 | $17.92 | $37,262 | Moderate-Term OJT | | | |
| 436014 | Secretaries, Except Legal, Medical, and Executive | 0514.00 | 119 | $16.34 | $33,981 | Moderate-Term OJT | 051400 | 49 | 144.0 |
| 439199 | Office and Administrative Support Workers, All Other | | 112 | $12.26 | $25,495 | Moderate-Term OJT | | | |
| 512099 | Assemblers and Fabricators, All Other | | 111 | $13.91 | $28,938 | Moderate-Term OJT | | | |
| 519061 | Inspectors, Testers, Sorters, Samplers, and Weighers | 0956.80 | 92 | $15.16 | $31,531 | Moderate-Term OJT | | | 1.0 |
| 472073 | Operating Engineers and Other Construction Equipment Operators | 0947.30 | 87 | $29.47 | $61,297 | Moderate-Term OJT | | | |
| 333012 | Correctional Officers and Jailers | 2105.10 | 86 | N/A | N/A | Moderate-Term OJT | 210510 | 6 | 66.8 |
| 333012 | Correctional Officers and Jailers | 2105.20 | 86 | N/A | N/A | Moderate-Term OJT | | | |
| 472081 | Drywall and Ceiling Tile Installers | 0952.80 | 85 | $23.53 | $48,949 | Moderate-Term OJT | 095280 | 2 | 7.0 |
| 412022 | Parts Salespersons | 0509.40 | 79 | $14.36 | $29,883 | Moderate-Term OJT | | | 4.0 |
| 472211 | Sheet Metal Workers | 0956.40 | 75 | $25.07 | $52,137 | Moderate-Term OJT | 095640 | 7 | 70.0 |
| 211093 | Social and Human Service Assistants | | 74 | $14.45 | $30,042 | Moderate-Term OJT | | | |
| 419099 | Sales and Related Workers, All Other | 0506.50 | 70 | $17.97 | $37,388 | Moderate-Term OJT | 050650 | 7 | 4.5 |
| 419099 | Sales and Related Workers, All Other | 0509.40 | 70 | $17.97 | $37,388 | Moderate-Term OJT | | | 4.0 |
| 419099 | Sales and Related Workers, All Other | 0509.60 | 70 | $17.97 | $37,388 | Moderate-Term OJT | | | |
| 419099 | Sales and Related Workers, All Other | 0599.00 | 70 | $17.97 | $37,388 | Moderate-Term OJT | | | |
| 352012 | Cooks, Institution and Cafeteria | 1306.20 | 61 | $13.35 | $27,766 | Moderate-Term OJT | 130620 | 3 | |
| 352012 | Cooks, Institution and Cafeteria | 1306.30 | 61 | $13.35 | $27,766 | Moderate-Term OJT | 130630 | 17 | 405.6 |
| 439041 | Insurance Claims and Policy Processing Clerks | | 61 | $16.95 | $35,252 | Moderate-Term OJT | | | |
| 533021 | Bus Drivers, Transit and Intercity | 0947.50 | 55 | $16.27 | $33,835 | Moderate-Term OJT | | | |
| 519023 | Mixing and Blending Machine Setters, Operators, and Tenders | | 52 | $13.08 | $27,202 | Moderate-Term OJT | | | |
| | | | | | | | *Total* | *203* | |

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC



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The table below identifies fifty-five occupations in San Diego County, which expect to have 50 or more annual openings through 2018 that commonly require some short-term on-the-job training and perhaps some post-secondary vocational education. The U.S. Bureau of Labor Statistics views short-term OJT as being one month or less and informal training that is occupational specific rather than job specific. The skills learned are thought to be transferable to another job in the same occupation.

However, this is an instructional area in which private, for-profit trade schools commonly provide programs of study. Their offerings are not included in the total programs column. The College might consider a workforce development effort as a means to prepare students to enter these occupations.

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## San Diego County Occupations Commonly Requiring Short-Term On-the-Job Training and Perhaps Some Formal Education and Existing Programs

| SOC Code | Occupational Title | SOC to TOP6_ decimal | An Av Total Jobs | 2010 Median Hourly | 2010 Median Annual | Expected Preparation | Inv'try TOP Code | Reg X Total Pgms | Av An Awards 08 to 12 |
|---|---|---|---|---|---|---|---|---|---|
| 412031 | Retail Salespersons | 0109.20 | 1,968 | $10.06 | $20,930 | Short-Term OJT | 010920 | 5 | 7.3 |
| 412031 | Retail Salespersons | 0506.50 | 1,968 | $10.06 | $20,930 | Short-Term OJT | 050650 | 7 | 4.5 |
| 412031 | Retail Salespersons | 0509.00 | 1,968 | $10.06 | $20,930 | Short-Term OJT | 050900 | 7 | 25.8 |
| 412031 | Retail Salespersons | 0509.40 | 1,968 | $10.06 | $20,930 | Short-Term OJT | | | 4.0 |
| 353031 | Waiters and Waitresses | | 1,714 | $9.10 | $18,927 | Short-Term OJT | | | |
| 412011 | Cashiers | 0506.50 | 1,566 | $9.23 | $19,202 | Short-Term OJT | 050650 | 7 | 4.5 |
| 353021 | Combined Food Preparation and Serving Workers, Including Fast Food | | 872 | $9.21 | $19,168 | Short-Term OJT | | | |
| 439061 | Office Clerks, General | | 724 | $14.19 | $29,516 | Short-Term OJT | | | |
| 353022 | Counter Attendants, Cafeteria, Food Concession, and Coffee Shop | | 595 | $9.41 | $19,570 | Short-Term OJT | | | |
| 399021 | Personal and Home Care Aides | | 578 | $10.19 | $21,195 | Short-Term OJT | | | |
| 435081 | Stock Clerks and Order Fillers | 0506.50 | 527 | $10.48 | $21,812 | Short-Term OJT | 050650 | 7 | 4.5 |
| 537062 | Laborers and Freight, Stock, and Material Movers, Hand | | 479 | $11.50 | $23,926 | Short-Term OJT | | | |
| 373011 | Landscaping and Groundskeeping Workers | 0109.10 | 393 | $11.97 | $24,901 | Short-Term OJT | 010910 | 16 | 41.0 |
| 373011 | Landscaping and Groundskeeping Workers | 0109.40 | 393 | $11.97 | $24,901 | Short-Term OJT | 010940 | 4 | 9.0 |
| 352021 | Food Preparation Workers | 1306.30 | 392 | $9.67 | $20,104 | Short-Term OJT | 130630 | 17 | 405.6 |
| 359031 | Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop | | 385 | $9.13 | $18,999 | Short-Term OJT | | | |
| 372011 | Janitors and Cleaners, Except Maids and Housekeeping Cleaners | | 371 | $11.04 | $22,947 | Short-Term OJT | | | |
| 259041 | Teacher Assistants | 0802.00 | 360 | N/A | $27,836 | Short-Term OJT | 080200 | 1 | 5.0 |
| 259041 | Teacher Assistants | 0802.10 | 360 | N/A | $27,836 | Short-Term OJT | 080210 | 1 | 4.0 |
| 359011 | Dining Room and Cafeteria Attendants and Bartender Helpers | | 355 | $9.08 | $18,896 | Short-Term OJT | | | |
| 352011 | Cooks, Fast Food | | 339 | $9.11 | $18,964 | Short-Term OJT | | | |
| 359021 | Dishwashers | | 335 | $9.14 | $19,013 | Short-Term OJT | | | |
| 434171 | Receptionists and Information Clerks | 1208.30 | 316 | $13.37 | $27,807 | Short-Term OJT | | | |
| 339032 | Security Guards | 2105.30 | 307 | $11.55 | $24,022 | Short-Term OJT | 210530 | 3 | 18.5 |
| 399011 | Child Care Workers | | 307 | $11.40 | $23,722 | Short-Term OJT | | | |
| 353011 | Bartenders | | 284 | $9.16 | $19,064 | Short-Term OJT | | | |
| 393091 | Amusement and Recreation Attendants | | 267 | $9.28 | $19,293 | Short-Term OJT | | | |
| 433071 | Tellers | 0504.00 | 266 | $12.60 | $26,213 | Short-Term OJT | 050400 | 3 | 38.0 |
| 372012 | Maids and Housekeeping Cleaners | | 252 | $9.70 | $20,180 | Short-Term OJT | | | |
| 311012 | Nursing Aides, Orderlies, and Attendants | 1230.30 | 245 | $11.65 | $24,250 | Short-Term OJT | 123030 | 1 | 295.7 |
| 533033 | Truck Drivers, Light or Delivery Services | 0947.50 | 233 | $14.52 | $30,197 | Short-Term OJT | | | |
| 311011 | Home Health Aides | 1230.80 | 192 | $10.39 | $21,607 | Short-Term OJT | 123080 | 1 | 83.0 |
| 435071 | Shipping, Receiving, and Traffic Clerks | | 186 | $13.42 | $27,918 | Short-Term OJT | | | |
| 412021 | Counter and Rental Clerks | 0509.40 | 182 | $11.23 | $23,350 | Short-Term OJT | | | 4.0 |
| 433011 | Bill and Account Collectors | 0504.00 | 161 | $16.97 | $35,290 | Short-Term OJT | 050400 | 3 | 38.0 |
| 452092 | Farmworkers and Laborers, Crop, Nursery, and Greenhouse | 0103.00 | 157 | $10.46 | $21,755 | Short-Term OJT | 010300 | 4 | 2.0 |
| 537061 | Cleaners of Vehicles and Equipment | | 153 | $9.27 | $19,284 | Short-Term OJT | | | |
| 537051 | Industrial Truck and Tractor Operators | 0947.40 | 151 | $15.56 | $32,374 | Short-Term OJT | 094740 | 2 | 14.0 |
| 434081 | Hotel, Motel, and Resort Desk Clerks | 0509.40 | 148 | $10.92 | $22,703 | Short-Term OJT | | | 4.0 |
| 393031 | Ushers, Lobby Attendants, and Ticket Takers | | 142 | $9.50 | $19,760 | Short-Term OJT | | | |
| 435052 | Postal Service Mail Carriers | | 138 | $26.06 | $54,195 | Short-Term OJT | | | |
| 339099 | Protective Service Workers, All Other | | 134 | $15.73 | $32,709 | Short-Term OJT | | | |
| 435061 | Production, Planning, and Expediting Clerks | | 118 | $23.56 | $49,003 | Short-Term OJT | | | |
| 536021 | Parking Lot Attendants | | 113 | $10.06 | $20,918 | Short-Term OJT | | | |
| 537064 | Packers and Packagers, Hand | | 108 | $9.34 | $19,433 | Short-Term OJT | | | |
| 392021 | Nonfarm Animal Caretakers | | 98 | $11.83 | $24,611 | Short-Term OJT | | | |
| 339092 | Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers | | 95 | $13.58 | $28,250 | Short-Term OJT | | | |
| 254031 | Library Technicians | 1602.00 | 79 | $17.37 | $36,137 | Short-Term OJT | 160200 | 2 | 111.0 |
| 434199 | Information and Record Clerks, All Other | | 78 | $18.33 | $38,136 | Short-Term OJT | | | |
| 519198 | HelpersProduction Workers | | 77 | $10.30 | $21,430 | Short-Term OJT | | | |
| 434151 | Order Clerks | | 75 | $14.87 | $30,911 | Short-Term OJT | | | |
| 533031 | Driver/Sales Workers | 0506.50 | 71 | $9.71 | $20,185 | Short-Term OJT | 050650 | 7 | 4.5 |
| 419041 | Telemarketers | 0509.00 | 67 | $10.77 | $22,416 | Short-Term OJT | 050900 | 7 | 25.8 |
| 419041 | Telemarketers | 0509.40 | 67 | $10.77 | $22,416 | Short-Term OJT | | | 4.0 |
| 434111 | Interviewers, Except Eligibility and Loan | | 63 | $16.49 | $34,310 | Short-Term OJT | | | |
| 533041 | Taxi Drivers and Chauffeurs | 0947.50 | 59 | $11.01 | $22,909 | Short-Term OJT | | | |
| 352015 | Cooks, Short Order | | 56 | $11.27 | $23,450 | Short-Term OJT | | | |
| 434161 | Human Resources Assistants, Except Payroll and Timekeeping | | 56 | $18.79 | $39,097 | Short-Term OJT | | | |
| 519111 | Packaging and Filling Machine Operators and Tenders | | 56 | $11.60 | $24,121 | Short-Term OJT | | | |
| 434121 | Library Assistants, Clerical | 1602.00 | 53 | $12.19 | $25,352 | Short-Term OJT | 160200 | 2 | 111.0 |
| 353041 | Food Servers, Nonrestaurant | | 51 | $9.67 | $20,106 | Short-Term OJT | | | |
| | | | | | | | *Total* | *107* | |

Source: California Employment Development Department, Labor Market Information; California Community College Chancellor's Office; analysis by Cambridge West Partnership, LLC

The Council for Higher Education Accreditation (CHEA) lists a limited number of postsecondary institutions within the official College service area that have been accredited by



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some body which the CHEA organization and the U.S. Department of Education recognize.[67] That accreditation may be either regionally based for the entire institution or industry-based from a specialized national accrediting body.

**Other Accredited Institutions**

| Institution_City | Institution_Name |
|---|---|
| Chula Vista | Kaplan College - Chula Vista |
| Chula Vista | United States University |
| National City | Bellus Academy - National City |

Source: U.S. Department of Education, Office of Postsecondary Education

The California Department of Consumer Affairs, Bureau of Private Postsecondary Education lists nine licensed institutions within the College official service area. Most of these are narrowly focused on a limited number of occupations where some training is desired before entry into the workforce.[68]

**California Licensed Private Postsecondary Educational Institutions**

| School | City |
|---|---|
| California Hair Design Academy, Inc. | Chula Vista |
| Kaplan College | Chula Vista |
| Pima Medical institute | Chula Vista |
| United Education Institute DBA UEI College | Chula Vista |
| Westmed College | Chula Vista |
| Comprehensive Training Systems Inc | Imperial Beach |
| Bellus Academy | National City |
| California College, San Diego | National City |
| Momax Truck Driving School | National City |

Source: California Department of Consumer Affairs, Bureau of Private Postsecondary Education

The discussion of competing institutions above is limited to those with a physical presence near the College. One source, Associate Degrees Online, identifies 78 different associate degrees that are available to California residents from 30 institutions they represent throughout the country.[69] The College has grown through its use of distance education to the point where 222 sections were offered in the fall 2011 term. As noted in the 2010 Substantive Change Proposal approved by ACCJC, the College offers a number associate degree programs online. Within California, the California Virtual Campus (CVC) list contains 167 participating institutions, which includes

[67] Council for Higher Education Accreditation *List of Accredited Institutions.* Retrieved December 7, 2012 from http://www.chea.org and U.S. Department of Education, Office of Postsecondary Education. Retrieved December 7, 2012 from http://www.ope.ed.gov/accreditation

[68] State of California, Department of Consumer Affairs, Bureau of Private Post-secondary Education *Directory of BPPE Approved Schools in San Diego County.* Retrieved December 8, 2012from http://www.bppe.ca.gov

[69] Associate Degrees Online *List of Participating Schools.* Retrieved December 10, 2012 from http://www.associatedegreeonline.com



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mostly California community colleges. Those schools collectively offer an associate degree in over two-dozen different fields of study that can be completed online.[70]

## C. Opportunities for Improvement and Expansion of the Curriculum Offerings

With these labor market considerations as a backdrop, the College has been discussing and considering the possibility of some new instructional programs. In that regard, it might be useful if the College were to adopt the general philosophy of focusing on a *limited number* of instructional programs and services that school can do well. In the long run, there will be a commitment to continue growing the College in ways that can be *sustained.* On the transfer side of instruction, as noted above, the emphasis is on continued work on SB 1440 majors so that students can successfully transfer with a minimal loss of units. With respect to the basic skills courses, there is interest in consolidating the curriculum where possible, and facilitating the students' rapid completion of those foundational courses.

On the CTE side of instruction, several initiatives are under way, including:

- **SB 1440 Majors.** The faculty has approved several the TMCs. They are actively discussing almost all of the remaining model curriculums that have been released from the C-ID project efforts.
- **Fire Science.** This program is offering wild land firefighting training through contract education. The faculty has also offered several of the state Fire Marshall Command series of courses for in-service education as fee-based offerings.
- **EMT/Paramedic.** The paramedic faculty will be offering instruction to the Chula Vista Fire Department, through contract education, to improve emergency medical services to citizens.
- **Registered Nursing.** The program has collaborated with the School of Nursing at San Diego State University (SDSU) to offer several BA level courses at the HEC OM to help Southwestern nursing students to transition into the BSN program.
- **Child Development.** The program has facilitated a cohort of students through a BA program taught at Southwestern by faculty from National University.

Student Affairs has been expanding the range of online services available to students to increase student access and will be piloting an e-advising module available through Ellucian and expanding the use of Degree Audit in spring 2013.

The new program ideas being discussed and considered include those listed below. The list is an unranked set of conversation notes gathered from multiple sources. In sales talks, these would be listed as leads or potential prospects for development. The College will need a great deal more exploration and dialog before pursuing any of these ideas. However, as part of  futures plan, it represents stated dream ideas or stepping off points in an adventure. It is a value added discussion that takes for granted that much of what the College already does is worthwhile and

[70] California Virtual Campus *Programs Offered by College* Retrieved December 7, 2012 from http://www.cvc.org



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important, while asking what's next or what could be added, what flavor should be tried next, what's just over the next horizon?

- **Dental Hygiene.** The program leadership is considering a fee-based Advanced Dental Hygiene Practitioner program. There are no providers in San Diego.
- **Fire Science.** The program is planning to introduce a wild land firefighting emphasis for the degree or a certificate because there is already a national curriculum, but no providers in San Diego. The program is discussing a curriculum initiative in emergency or disaster preparedness.
- **Administration of Justice.** The program leadership is discussing starting to offer P.O.S.T.-approved, advanced in-service law enforcement training courses.
- **Theater Arts.** If a new performance venue were available, the department is interested in developing a technical theater emphasis.
- **Mathematics.** The department is interested in two initiatives. A Quantway program for students who are not pursuing a math-based major and a Math Emporium approach to some of the basic skills curriculum.
- **Chemistry.** If a new science facility were available, the faculty are interested in introducing curriculum in nanotechnology, materials science, and green technology.
- **Exercise Science, Health and Athletics.** The department has an interest in reviving health assessment/testing associated with the Wellness Center.
- **Computer-Aided Design.** The faculty are interested in expanding the continuing education offerings.
- **Computer Information Systems.** The faculty are interested in expanding instruction to web development for portable devices as well as more complex problem-solving and configuration instruction with Cisco NETLAB software.
- **Computer Science.** The faculty are interested in cloud-based curriculum delivery and curriculum to teach programming for mobile devices.
- **Continuing Education.** The program leadership continues to be interested in an Adult Basic Education "boot camp" and would like to move forward with several new fee-based course ideas.
- **Medical Office Professional.** The faculty are interested in reconfiguring the program and perhaps launching a separate health information technology program. However, all faculty associated with the program are adjunct.
- **Crown Cove Aquatic Center.** The Center leadership is interested in an outdoor recreation leadership program that would transfer to SDSU.

Although there are many good ideas emerging from these discussions, the College as a whole is not always able to move forward with new ideas or the development of current initiatives. Currently there is a critical shortfall of funds, full-time faculty and support personnel. The College, however, can ill afford to ignore future growth opportunities. It must continue to value a "can do" attitude that will position the College for a brighter future which grows programs to prepare future workers for a vibrant California economy and San Diego County with a technically competent workforce. It is within this framework that the College should continue to engage in these conversations.



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Programs That Need Strengthening

The College may wish to review the range of instructional programs offered as part of an effort to consider the proper mix of instructional offerings to meet the needs of the service area. With respect to career and technical education programs that would lead to immediate entry-level employment it may be useful to ask the question- does the certificate or degree awarded upon conclusion of this program have a market value? In a pair of recent reports, the Center on Education and the Workforce has made the case that millions of "middle jobs" in the nation pay well and do not require a bachelor's degree. "Middle jobs" represent one in five jobs in the United States and those jobs are 47% of the middle-class jobs in the workforce. There are five career and technical education pathways that prepare citizens for those jobs: associate degrees, postsecondary certificates, employer-based training, industry-based certifications, and apprenticeships. Furthermore, "if only certificates with demonstrated value were included among the postsecondary credentials, the United States would move from 15th to 10th in postsecondary completions among the Organization for Economic Cooperation and Development (OECD) countries for those 25 to 34-years of age.[71]

The College might wish to expend some efforts to place programs into related knowledge groups and market them as a cluster that leads to a related range of occupations. That effort would assist the new student in their decision-making process of selecting a career and a major program of study.

Financially, it is essential that the College is ensuring programs are sustainable, i.e. economically viable and responsive to employer's needs. The College might want to advance instructional programs, particularly those career and technical education programs designed to provide entry-level competencies for immediate employment that are anchored by industry-endorsed standards and third-party certification of learning outcome accomplishments. The College might wish to embrace the principle that all instructional programs intended to facilitate transfer to a four-year institution should be well articulated with public and/or private four-year institutions where.

In reaching conclusions about program viability, College policy 4021 provides for the consideration of five broad performance measures:

(1) Goals and objectives of the program are no longer appropriate to the mission of the College or congruent with the Institutional Strategic Plan of the District.
(2) The program no longer meets industry needs and lacks demand in the current job market and is not considered an emerging industry or career or the program curriculum no longer aligns with university transfer majors or general education requirements.
(3) The program does not meet the curriculum standards as defined by Title 5 section 55100.
(4) There are insufficient resources to realistically support the program at a sufficient level of quality and the program have experienced continued low or declining enrollment (55% of class max or more), which is demonstrated by continued low persistence and completion rates in the program supported by reliable, valid, and longitudinal data.

[71] Anthony Carnevale, et. al. *Career and Technical Education: Five Ways that Pay Along the Way to the B.A.* Center on Education and the Workforce, Georgetown University. September 2012 and Anthony Carnevale, et. al. *Certificates: Gateway to Gainful Employment and College Degrees.* Center on Education and the Workforce, Georgetown University. June 2012



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(5) The program has been determined to be out of compliance with existing state or federal laws or licensing laws in particular occupations.[72]

Other institutions have used more explicit criteria when considering the redesign or retirement of an instructional program. These other criteria sometimes include a mix of the following considerations:

- The number of degrees and certificates awarded over a three-year period;
- The number of enrollments over a three-year period;
- FTES/FTEF efficiency;
- State, national and industry certification;
- Current job market strength;
- Future employment projections;
- Adequacy of facilities and equipment;
- Industry connections;
- Course alignment with current and future needs of industry;
- The level of competition from existing programs at neighboring schools;
- Current and planned redundancy within the County; and
- The frequency of need for resources and equipment refurbishment.

As part of the review of programs it might be useful to ascertain the extent to which students have completed any of the instructional programs in question but those students did not apply for a certificate or degree. That might be a source of under reporting on awards granted. The College might want to revisit its practices associated with the awarding of certificates and degrees to determine if a more proactive posture could increase the numbers of awards granted.

The College has a strikingly large number of instructional programs approved by the Chancellor's Office. Additional programs listed in the catalog that require fewer than 18 units to complete have not yet been reviewed and approved by the Chancellor's Office. As a matter of policy, the Chancellor's Office will not agree to review any instructional program requiring less than 12 semester units to complete; however, colleges are free to create those programs and ask the local Board of Trustees to approve them as a certificate. Colleges may not place a notation on a student's transcript indicating completion of a program of study unless that program has been approved by the Chancellor's Office. Listed below are the fall 2012 counts of authorized instructional programs and fall 2011 headcounts for the colleges in San Diego County. As illustrated in the table, the colleges collectively offer 1,520 authorized instructional programs. That count does not include low-unit certificates that have been approved by the local boards of trustees.

[72] Southwestern Community College District Policy. *Program Discontinuance, Policy 4021.* Adopted February 9, 2011.



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**Instructional Program Portfolios Among San Diego County Community Colleges**

| District | College | Number of Authorized Programs | % | Fall 2011 Headcount | Headcount Rank |
|---|---|---|---|---|---|
| Southwestern | Southwestern | 281 | 18% | 21,559 | 4 |
| Palomar | Palomar | 276 | 18% | 27,452 | 1 |
| San Diego | San Diego City | 186 | 12% | 16,726 | 6 |
| San Diego | San Diego Mesa | 173 | 11% | 24,338 | 2 |
| MiraCosta | Mira Costa | 163 | 11% | 16,138 | 7 |
| Grossmont-Cuyamaca | Grossmont | 146 | 10% | 19,266 | 5 |
| Grossmont-Cuyamaca | Cuyamaca | 127 | 8% | 8,137 | 9 |
| San Diego | San Diego Miramar | 113 | 7% | 11,778 | 8 |
| San Diego | San Diego Adult | 55 | 4% | 23,889 | 3 |
| | ***Total*** | ***1,520*** | | | |

Source: California Community College Chancellor's Office. Program Inventory and Data Mart 2.0

SWC leads the region in the numbers of programs authorized by the California Community College Chancellor's Office, but ranks fourth in size of institution. The College may want to consider if so many instructional programs are necessary and helpful to the student body and community served. While there is no simple answer or optimal number of instructional programs in an institution's portfolio of offerings, there is recent research that suggests the chore of navigating college is frustrated by too many choices.[73]

An analysis of program awards between 2006-07 and 2011-12[74] revealed two very strong transfer support programs are evident. General Studies accounted for 1,387 awards or an average of 231.2 awards per year while Transfer Studies represented 1,262 awards or an average of 210.3 awards per year. The numbers of awards in both programs declined over this period of time because the College was required to shift to more discipline-specific instructional program awards.

A mix of liberal arts and career and technical programs offered by the College appears to be strong as the programs averaged from 2006-07 to 2011-12 between 63.2 to 10.0 awards per year. Over this period of time it is possible that the program name was changed and therefore, the tabulation of awards is reflected on different rows in the data set. There are 32 instructional programs that fall into this strong category as noted in the table below. Programs with the "CT" initials denote a certificate of achievement.

[73] Judith Scott-Clayton. *The Structure of Student Decision-Making at Community Colleges.* Community College Research Center Brief #49, January 2011 and Judith Scott-Clayton. *The Shapeless River: Does a Lack of Structure Inhibit Students' Progress at Community Colleges?* Community College Research Center Working Paper No. 25, January 2011.

[74] Award counts by program provided by the SWC Office of Institutional Research, October 9, 2012



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## Instructional Programs with a Strong Awards History

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Average |
|---|---|---|---|---|---|---|---|---|
| Nursing,Assoc Degree | 53 | 72 | 63 | 70 | 65 | 56 | 379 | 63.2 |
| Psychology | 37 | 37 | 52 | 47 | 37 | 70 | 280 | 46.7 |
| Spanish to English Associate Teacher | 66 | 65 | 24 | 61 | 2 | 1 | 219 | 36.5 |
| Bus Administration | 35 | 26 | 43 | 36 | 38 | 36 | 214 | 35.7 |
| Child Development Teacher-AA | 44 | 39 | 36 | 24 | 33 | 33 | 209 | 34.8 |
| Criminal Justice | 38 | 21 | 29 | 35 | 23 | 35 | 181 | 30.2 |
| Child Development Teacher - CT | 53 | 27 | 28 | 20 | 26 | 22 | 176 | 29.3 |
| Dental Hygiene | 32 | 28 | 15 | 30 | 30 | 29 | 164 | 27.3 |
| AJ: Law Enforcement-CT | 21 | 20 | 20 | 28 | 24 | 39 | 152 | 25.3 |
| Accounting - Associate in Arts | 21 | 24 | 24 | 20 | 26 | 32 | 147 | 24.5 |
| Sociology | 23 | 14 | 22 | 23 | 16 | 39 | 137 | 22.8 |
| AJ: Corrections Emph-CT | 22 | 22 | 14 | 20 | 20 | 30 | 128 | 21.3 |
| Law Enforcement Trng Acad | 1 | | 37 | 26 | | | 64 | 21.3 |
| Emerg Med Tech/Paramedic-CT | 34 | 5 | 21 | 17 | 26 | 24 | 127 | 21.2 |
| LA: Emphasis in Math and Science (Option 1) | | | | 1 | 18 | 43 | 62 | 20.7 |
| LA: Emphasis in Social/Behavioral Science (Option 1) | | | | 3 | 17 | 39 | 59 | 19.7 |
| AJ: Law Enforcement Emph-A.S. | 12 | 18 | 14 | 20 | 22 | 31 | 117 | 19.5 |
| LA: Emphasis in Social/Behavioral Science (Opt 2 or 3) | | | | | 11 | 27 | 38 | 19.0 |
| Nursing, Vocational - CT" | 1 | 19 | 19 | | 25 | 22 | 86 | 17.2 |
| Construction Inspection-CT | 18 | 12 | 14 | 20 | 17 | 19 | 100 | 16.7 |
| LA: Emphasis in Arts/Humanities (Option 1) | | | | | 3 | 24 | 27 | 13.5 |
| Fire Science Technology - CT | 8 | 12 | 9 | 12 | 15 | 21 | 77 | 12.8 |
| LA: Emphasis in Math and Science (Option 2 or 3) | | | | 1 | 15 | 19 | 35 | 11.7 |
| Child Development - A.A. | 23 | 5 | 13 | 11 | 10 | 7 | 69 | 11.5 |
| Graphic Design | 10 | 11 | 10 | 21 | 10 | 7 | 69 | 11.5 |
| Bus Admin: Int'l Bus | 19 | 12 | 12 | 14 | 3 | 6 | 66 | 11.0 |
| Paralegal Studies - CT | 11 | 12 | 8 | 15 | 9 | 10 | 65 | 10.8 |
| Accounting - A.S. | 13 | 10 | 9 | 7 | 13 | 11 | 63 | 10.5 |
| Social Work | 11 | 7 | 7 | 12 | 15 | 9 | 61 | 10.2 |
| AJ: Corrections Emph: A.S. | 7 | 9 | 6 | 7 | 13 | 18 | 60 | 10.0 |
| Fire Science Technology - A.S. | 6 | 10 | 11 | 10 | 9 | 14 | 60 | 10.0 |
| Legal Interpretation-Basic | | | | 7 | 9 | 14 | 30 | 10.0 |

Source: SWC Office of Institutional Research; analysis by Cambridge West Partnership, LLC

Another 44 instructional programs perhaps could be stronger as they averaged from 2006-07 to 2011-12 between 9.7 and 5.0 awards per year. Over this period of time it is possible that the program name was changed and therefore, the tabulation of awards is reflected on different rows in the data set. The programs that could be stronger are noted in the table below.



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## Instructional Programs Which Could Have a Stronger Awards History

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Average |
|---|---|---|---|---|---|---|---|---|
| Accounting - CT | 13 | 12 | 7 | 5 | 13 | 8 | 58 | 9.7 |
| CIS--Web Shopping Cart Developer | | | | | | 9 | 9 | 9.0 |
| Paralegal Studied - A.S. | 10 | 12 | 6 | 12 | 5 | 9 | 54 | 9.0 |
| Lib Stds: Elem Ed | 11 | 9 | 10 | 7 | 3 | 13 | 53 | 8.8 |
| Micro Technician Bookkeeper | 15 | 10 | 2 | 11 | 1 | | 39 | 7.8 |
| Medical Assistant: Administrative---Basic | | | 6 | 5 | 11 | 9 | 31 | 7.8 |
| AJ: Forensics-CT | 9 | 8 | 7 | 11 | 5 | 6 | 46 | 7.7 |
| Legal Office Assistant---Bilingual | 15 | 3 | 5 | | | | 23 | 7.7 |
| Medical Lab Technician - A.S. | | | | | 7 | 8 | 15 | 7.5 |
| LA: Emphasis in Arts/Humanities (Option 2 or 3) | | | | 1 | 5 | 16 | 22 | 7.3 |
| Medical Assistant: Coding and Insurance---Basic | | | 7 | 5 | 10 | 7 | 29 | 7.3 |
| Nursing, Vocational - A.S. | | 6 | 5 | | 11 | 7 | 29 | 7.3 |
| CAD & Drafting-Basic | 13 | 12 | 9 | 7 | 1 | 1 | 43 | 7.2 |
| Architecture | 7 | 7 | 11 | 3 | 7 | 7 | 42 | 7.0 |
| Mathematics | 7 | 6 | 7 | 7 | 9 | 6 | 42 | 7.0 |
| Fitness Advanced Cert. | 7 | 9 | 3 | 5 | 9 | 7 | 40 | 6.7 |
| Legal Interp Trans | 13 | 7 | 7 | 9 | 3 | 1 | 40 | 6.7 |
| Legal Interpretation/Translation-Intermediate Eng/Span | | | | 4 | 7 | 9 | 20 | 6.7 |
| Political Science | 7 | 4 | 6 | 8 | 7 | 8 | 40 | 6.7 |
| Auto Brake & Suspension System | 3 | 1 | 22 | 6 | 6 | 1 | 39 | 6.5 |
| English | 4 | 6 | 2 | 11 | 7 | 9 | 39 | 6.5 |
| Bus Mgmt: Marketing | 7 | 5 | 7 | | | | 19 | 6.3 |
| Construction Inspection-AS | 7 | 7 | 3 | 7 | 7 | 7 | 38 | 6.3 |
| Art | 2 | 9 | 7 | 7 | 4 | 8 | 37 | 6.2 |
| Administrative Office Assistant-Bilingual | 1 | 19 | 3 | | 1 | | 24 | 6.0 |
| Economics | 3 | 5 | 6 | 8 | 5 | 9 | 36 | 6.0 |
| Public Admin | 4 | 4 | 8 | 7 | 5 | 7 | 35 | 5.8 |
| Finance | 7 | 3 | 5 | 7 | 5 | 7 | 34 | 5.7 |
| Journalism | 5 | 5 | 9 | 3 | 5 | 7 | 34 | 5.7 |
| Biology | 3 | 3 | 9 | 8 | 4 | 6 | 33 | 5.5 |
| Literature | 6 | 1 | 8 | 3 | 10 | 5 | 33 | 5.5 |
| Spanish Proficiency | | 3 | 9 | 6 | 4 | | 22 | 5.5 |
| Emerg Med Tech/Paramedic-AS | 4 | 5 | 5 | 5 | 5 | 7 | 31 | 5.2 |
| Management - A.A. | 3 | 6 | 4 | 8 | 3 | 7 | 31 | 5.2 |
| Photography | 7 | 3 | 7 | 2 | 7 | 5 | 31 | 5.2 |
| AJ: Forensics Emph - A.S. | 9 | | 3 | 8 | 2 | 3 | 25 | 5.0 |
| CIS--Web Search Engine Marketer | | | | | | 5 | 5 | 5.0 |
| CIS:Opp/PC Support Spec-AS | 4 | | 7 | 6 | | 3 | 20 | 5.0 |
| Communication | 7 | 5 | 4 | 3 | 6 | | 25 | 5.0 |
| LA: Communication in the English Language (Opt 2 or 3) | | | | | | 5 | 5 | 5.0 |
| Paralegal Studies-Bil - A.S. | 6 | 7 | 6 | 5 | 3 | 3 | 30 | 5.0 |
| Professional Photography | | | | | | 5 | 5 | 5.0 |
| Tele Prod Spec-Adv | 8 | 6 | 1 | 7 | 7 | 1 | 30 | 5.0 |
| Tele Prod Spec-Bsc | 7 | 6 | 1 | 6 | 5 | | 25 | 5.0 |

Source: SWC Office of Institutional Research; analysis by Cambridge West Partnership, LLC



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Based on the numbers of awards granted, this group of programs appears to be under performing. They may be solid instructional programs, particularly if the size of the student enrollment were considered, but in terms of awards granted, they are not yet excelling. It is unreasonable to expect every instructional program to be "stellar" but there may be steps for improvement that could be taken by the programs. The College must continue to practice its efforts to set program performance expectations, systematically collect evidence, reflect upon that evidence to reach conclusions regarding program improvement initiatives, and to make those changes supported by resource allocations where appropriate.

Programs That Might Be Reconsidered

Over a period of several program review cycles, the College has developed a process to evaluate the vitality of instructional and student services programs. The purpose of the program vitality review process is to determine the vitality and continued viability of a program in response to concerns identified during program review regarding significant changes in enrollment, labor market demand, faculty availability, or facility and equipment costs and availability. The vitality review provides an opportunity to gather more data and information in response to these concerns. The evaluation may lead to program improvement, possible suspension, or elimination of the program.

There are 233 instructional programs that perhaps should be reconsidered as they averaged from 2006-07 to 2011-12 between 4.8 and 1.0 award per year. Over this period of time it is possible that the program name was changed and therefore, the tabulation of awards is reflected on different rows in the data set. These programs are noted in the Appendix. Instructional programs for which no awards were granted were not part of the data set considered in this analysis.

It is sometimes the case in career and technical programs that students become early leavers with marketable skills (ELMS). In short, they do not remain to complete the program as the faculty had designed the curriculum. With the current emphasis on increasing the numbers of students who complete a college degree or a certificate that will launch them into employment, there may be opportunities that the College should pursue to strengthen or redesign these programs.

The College must continue to practice its efforts to set program performance expectations, systematically collect evidence, and reflect upon this evidence to reach conclusions regarding program improvement or program discontinuation initiatives.

Program Changes and Adjustments

Certificates of Completion, Proficiency or Achievement

The College appears to have pursued a curricular strategy in career and technical education areas of introducing three levels of certification (basic, intermediate and advanced), in addition to the associate degree, for many disciplines. While this strategy may have been inspired by the concept of "stackable certificates," it is far from clear that each level of certification aligns to an industry-recognized set of knowledge and skills that have a market value. Recent research has revealed that two out of every three workers who have both a certificate and a degree earned the certificate first, thus the certificate does serve as a stepping stone on the way to a college degree. That same study found that generally, short-term certificates of less than one year have little economic payoff to the worker. However, in some cases, short-term certificates requiring less



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than one year are wage boosters, such as for males earning certification in police and protective services disciplines or females earning business and office management certifications. On average, certificate holders earn 20 percent more than high school-educated workers and in some fields earn more than workers with an associate's degree. The research concludes with the observation that certificate programs could be considered successful if they promote either: (1) gainful employment and long-term job and income security or (2) encourage the acquisition of a college degree. [75]

A review of the instructional programs listed in the 2012-2013 College catalog documents a number of certificates of achievement programs that may not have been presented to the Chancellor's Office for review and approval. In some cases the total number of units required is below the 12-unit threshold and would not be reviewed by the Chancellor's Office staff, but in other cases the units required for completion range from 12 to 17.5 units. Any certificate requiring fewer than 18 units is described as a certificate of proficiency. One accounting of the certificates of proficiency identified 43 programs.[76] Any non-credit Chancellor's Office approved program is described as awarding a certificate of completion. The College appears to have had eight of the non-credit certificate of completion programs approved.

The College catalog lists a number of certificates requiring between 12 and 17.5 units of credit each. The College has the prerogative to approve locally such programs, but cannot memorialize a student's accomplishment of the curriculum requirements on a transcript. However, the College may report those program awards to the state and receive a certain amount of "credit" for those awards. Although the programs requiring between 12 and 17.5 units could be presented to the Chancellor's Office for approval as a certificate of achievement only four of them appeared on the official list of approved programs at the Chancellor's Office web site.

In 2007-08 and 2008-09 the College reported 465 and 436 of these certificate awards to the Chancellor's office respectively in each of those two reporting periods. The reporting of those awards declined to only 35 in 2011-12. Because certificate awards to students in these programs have not been reported to the State in great numbers, the College may not be getting "full credit" in the CTE accountability model required by the Carl Perkins Act. Unless the required units are brought up to at least 18 semester credits, the awarded certificates, even if reported to the State, would not be credited to the College in the ARCC framework.

It may be advantageous for the College to discuss preparing instructional program proposals to the Chancellor's Office for all of the certificates they intend to retain that require between 12 and 17.5 units to complete. Upon approval of a program, the College would be allowed to annotate a student's transcript that they earned a certificate of achievement. Additionally, the College would earn appropriate credit under the provisions of the Carl Perkins Act, if the award were also reported to the Chancellor's Office. Even if program approval is not pursued for these certificates the College may want to consider an effort to consistently report all awards to the Chancellor's Office.

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[75] Anthony Carnevale, et. al. *Certificates: Gateway to Gainful Employment and College Degrees.* Center on Education and the Workforce (Georgetown University), June 2012.

[76] email correspondence with Susan Soy in the Office of Instructional Support Services, September 29, 2012



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## D. Planning Opportunities Related to College Priorities

Recommendations for New Initiatives
The discussion that follows explores the four College strategic priorities associated with the core mission of the institution, some of the activities in which the College has engaged to support those priorities, and suggestions for additional initiatives the College might consider.

**Student Access Priority**
Locations
Southwestern College's original campus is well positioned on the eastern edge of the primary city in its service area, Chula Vista, to capture the ongoing development of the city, as it grows eastward. The College has additionally positioned three Higher Education Centers geographically to address community needs in National City, San Ysidro and Otay Mesa. The first two are located in developed urban areas, while Otay Mesa is awaiting residential development that will bring more students to that location. Of the three, San Ysidro appears to be highly impacted and an intensely utilized facility. National City provides easy access and ample parking, but perhaps would benefit from additional instructional offerings that serve the unique needs of National City. Otay Mesa would perhaps benefit if the campus were completed with promised outdoor physical facilities required of the public safety programs and if there were daytime offerings that would attract additional students.

Distance Education Strategies
The College has acknowledged the growth of online education and the fact that students are able to earn certain certificates and/or degrees by completing more than half of their required courses online. Therefore, a substantive change proposal was developed in 2010 and approved by ACCJC. In light of the importance of distance education, changed federal expectations, and recent Commission action, the College is developing an overarching strategic plan for distance learning. This plan will guide the College in the choice of which courses to authorize for the distance education modality. The College leadership should also take note of the changed expectations regarding the management of an online instructional program as represented in the Commission's adoption of the Western Consortium on Educational Technology (WCET) policy and the creation of a separate manual entitled *Guide to Evaluating Distance Education and Correspondence Education* (October 2010).[77]

Three studies were recently completed by the Community College Research Center on the topic of online and hybrid courses. These studies highlight the challenges associated with distance learning for both students and institutions. Two of the studies were completed using system-wide data from Virginia and Washington State community colleges while the third was a literature review of the impact of online learning on low-income and underprepared students. The two state-specific studies followed a cohort of students from 2004 over a period of nearly five years with similar academic outcomes. Although students enrolled in hybrid courses were similar to those enrolled exclusively in face-to-face courses, the students receiving online instruction were employed more hours and had demographic characteristics associated with stronger academic

[77] See the Recent Commission Actions section for January 2011 adopted new polices at http://www.accjc.org/actions-on-policy



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preparation. After controlling for student characteristics, the results indicated that students were more likely to fail or withdraw from online than from face-to-face courses.

The College has documented that online course success rates (60.7%) are a little lower than success rates for hybrid course offerings (62.4%). The overall success rate for campus face-to-face courses at the College is a little higher (65.8%) than either the online or hybrid offerings[78]. In an effort to improve student success in online and hybrid courses the College might want to consider the findings and recommendations from several national research projects. Two state-specific studies found that those students who enrolled in online instruction early in their college careers were slightly less likely to re-enroll for subsequent terms. Those who took a larger portion of their credits online were less likely to finish a certificate or degree program or to transfer to a four-year institution. These outcomes did not apply to those students enrolled in hybrid courses where results were similar to the face-to-face modality course offerings.[79]

Online instruction is an important strategy for increasing access to classes and providing flexible class times for students, particularly students who work. The literature review study detailed some of the challenges faced by low-income and underprepared students who commonly attend the community colleges online, and some of the issues the sponsoring institutions need to address. These include: (1) technical difficulties; (2) a sense of social distance and isolation; (3) a lack of the learner control that may be needed in the unstructured online world; and (4) limited support services. The College has addressed technical difficulties by providing support services to students through an online learning support department that thrives on customer service.

The study authors argue that supports should be integrated into the everyday lives of online students. For example, students should be required to complete an assessment prior to enrolling. This assessment would preferably provide more tailored direction and advice to the individual student based on his/her need to learn technology skills and study habits. The assessment would also provide score information to the instructor so that the data could be used in a proactive approach to help the student succeed. Prospective online students should also be required to complete a tutorial with practice exercises on how to use the course management system deployed to support the instruction. Online support such as access to a reference librarian is an essential service, but to familiarize the students with the service, some activity requiring consultation with the librarian should be introduced early in the course of study. The hours during which technical support and tutoring are offered need to be expanded and instructors need to encourage students to use those services.

Career/Major Choice Strategies

The Institute for Higher Education Leadership and Policy (IHELP) at California State University, Sacramento has produced a series of reports about policy issues and practices associated with California community colleges. One report, *The Road Less Traveled*, argues for the development of policy that would require students to declare a field of study when they enter

[78] SWC Office of Grants, Research and Planning. *Comparison of Hybrid, Online and Lecture Courses at Southwestern College*. December 2012.

[79] Di Xu and Shanna Smith Jaggars *Online and Hybrid Course Enrollment and Performance in Washington State Community and Technical Colleges* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #31, 2011).



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the institution. That idea found its way into the Student Success Task Force recommendations. To enable students to make that declaration, the College may want to aggressively promote the use of California Career Café, Bridges.com or develop a set of generic educational plans for career and technical occupation programs similar to the software created at the Coast Community College District.[80] These generic plans provide a link between the high schools, the College and the local CSUs. Coastpathways.com offers the students an interactive web resource to select a CTE program. This allows students to determine which courses are required for each program, which related general education courses are recommended, and which high school courses are articulated with each college program, as well as which University courses would be required to complete a bachelor degree in the program. The Coast District software identifies salary information for the occupational pathway by a link to OCCareers.com where the traditional 16 pathways developed by the federal government have occupations that are translated into local data. Programs offered by other colleges in the Coast District are also displayed at the OCCareers site, which is an Orange County resource. For registered students, the Coastpathways.com site also provides a schedule planner to assist students to make class choices consistent with program specifications. These software products and web sites may help students declare a course of study earlier in their college careers than they might have otherwise. Most features of the product are open to the public (prospective students). These products may work well with the degree audit application from Datatel (Ellucian) that is being provided to the counseling faculty in spring 2013.

The College may want to review the critical transition points that students experience in college to focus on college policies and practices that promote rapid entry into and completion of instructional programs of study. Recent research calls attention to the importance of coherent programs that prepare students for success in further education and/or employment. Research also notes the importance of placing new students into a program where their progress is continually monitored to ensure completion.[81]

Basic Skills Strategies

Given the large numbers of new students who are recommended for remedial instruction that were noted in the internal scan portion of this Plan, the College may want to develop some proactive strategies designed to maximizing the numbers of new students who avoid basic skills. One strategy that some community colleges have found to be useful is an aggressive campaign to get prospective students to prepare for the placement examinations.

Preparation for placement exams is facilitated by a practice examination and by guides that are available online at http://www.swccd.edu/3rdLevel/index.asp?L2=114. Additional practice resources are available at the College bookstore. The Riverside Community College District reported good success with their efforts to incentivize prospective students to study/prepare for

[80] *CoastPathways.com* Retrieved December 8, 2012 from www.coastpathways.com

[81] Davis Jenkins *Get With the Program: Accelerating Community College Student's Entry Into and Completion of Programs of Study* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #32, 2011) and Davis Jenkins *Redesigning Community Colleges for Completion: Lessons from Research on High-Performance Organizations* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #24, 2011)



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the placement examinations.[82] Improvements were most notable for math exam scores. Santa Monica College provides an online orientation to the placement tests called Prep2Test at this URL http://www.smc.edu/EnrollmentDevelopment/AssessmentCenter/Pages/Prepare-Before-Testing.aspx. Assessment personnel at Santa Monica have found that students who prepare were 19 percent more likely to place into college-level English and 36 percent more likely to place into college-level math than students who did not prepare. In other states a fee-based refresher course is provided for students who took the placement test and scored below college level on the first try.[83] Researchers at the Community College Research Center studied assessment and placement practices at open-access, two-year colleges in seven states. They generally found that most systems focused on students who were re-taking the exam after an initial failure. For those addressing first-time test-takers, the majority of colleges provided links to sample tests on their websites. However, only a handful had any systematic practice in place to direct students to those resources. A few schools did require entering students to sign contracts prior to testing stating that they were informed about the test, its purpose, and what they could do to prepare. In North Carolina the refresher course is required of students who placed into two or more developmental courses. The success of that practice convinced college leaders that the opportunity should be offered to all students who placed into developmental education. The researchers' conclusion is that "implementing placement test review seems to improve placement accuracy."[84]

A second strategy to maximize the numbers of students who move directly into college-level instruction is based on high school transcript analysis. The Long Beach Community College District research staff discovered that many of the students who placed deep into English remediation courses were high-performing English students in high school. The staff completed a statistical analysis using nine years of data to compare the relative utility of high school grades in predicting college-course performance. The results documented the discipline grades in English and Math plus the overall high school GPA were less related to how students scored on the college placement exam but much more related as the strongest predictors of actual performance in college courses of the same discipline. That finding has led to an experiment in fall 2012 to place approximately 800 recent high school graduates, whose high school performance was acceptable, directly into college-level curriculum.[85] The Research and Planning Group for the California Community Colleges has launched a statewide project, Student Transcript-Enhanced Placement Study (STEPS) involving 22 colleges to replicate the work done at Long Beach. The College may want to consider participating in this statewide project. This California research builds on national research efforts to explore alternatives to the high-stakes placement exams commonly used in higher education. A recent report from the Community

[82] Myung Hwa Koh. *Data Analysis of the 2011 Jump Start Program: Jump Start, Remembering What You Already Know.* Riverside City College, June 4, 2012.
[83] Pamela Burdman. *Where To Begin? The Evolving Role of Placement Exams for Studetns Starting College.* Jobs for the Future, August 2012.
[84] Michelle Hodara, et. al. *Improving Developmental Education Assessment and Placement: Lessons from Community Colleges Across the Country.* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #51, November 2012).
[85] John Hetts, et. al. *Assessing Assessment: Evaluating Models of Assessment and Placement.* Long Beach City College. April 2012.



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College Research Center points to the improved predictive accuracy gained by using high school GPA rather than placement exam results.[86]

A related effort to maximize the numbers of students enrolling directly into college-level English composition has been brought to fruition at the Grossmont-Cuyamaca Community College District. A longitudinal data set from Cal-PASS/IEBC was used to facilitate discussions among English faculty at the community college, Grossmont Union High School District, and San Diego State University. Curriculum alignment issues were explored over a period of eight years as high school curriculum focused on fiction literature while the community college stressed non-fiction and the five-paragraph essay while university faculty focused on rhetoric in English composition courses. Collectively the faculty developed an intervention that targeted improvement in expository reading and writing skills in the 9th through 12th grades through the standards-based curriculum implemented in the high school district. As a result, enrollments in college-level English grew from 36% to 57% and success in the college courses was reported for 86% of the participating students. Well-prepared high school students now move directly into freshman composition courses at the community college district.[87]

The College has engaged in a strategy aimed at helping prospective students eliminate the need for college placement exams by the use of the Early Assessment Program (EAP) that provides placement testing in 11th grade year. The goal is to assist students with the process of choosing courses while they are still in high school to avoid college remediation. The CSU Early Assessment Program (EAP) allows high school students to acquire information about their readiness for college work. This program was made accessible to the community colleges through legislation in 2008. For the College the program allows for the waiver of the normally administered placement exams, and for the students it allows access directly to the College curriculum if they are evaluated to be college-ready from the EAP exams.

In the 2011 examination cycle, 78% of the junior class in the primary feeder public school district to the College, Sweetwater Union High School District (SUHSD) participated in the EAP. The results reveal that 24% of the junior class students in the Sweetwater District were assessed to be ready for college English. Substantially fewer junior students from the Sweetwater District were considered ready for college math (12%) without any conditions and another 46% were assessed conditionally ready for college-level math at the time they took the EAP, but needed to enroll in a senior year math class in order to develop their math proficiency.[88] If they do so, they are excused from the CSU math placement exam process. The College has not used the conditional qualification for math placement. It remains to be seen how many students who were assessed to be not ready for college English and/or math through the EAP process subsequently will enroll in the prescribed senior-level courses. However, the College may want to consider an aggressive and proactive strategy to induce the conditionally-ready students to

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[86] Clive Belfield, et. al. *Predicting Success in College: The Importance of Placement Tests and High School Transcripts.* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #42, February 2012). and Judith Scott-Clayton. *Do High Stakes Placement Exams Predict College Success?"* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #41, February 2012).

[87] Shelly Valdez. *English Curriculum Alignment Project.* Retrieved October 24, 2012 from http://www.iebcnow.org/OurWork/K16Collaboration/English-Alignment.aspx.

[88] *EAP 2011 Test Results* Retrieved December 14, 2012 from http://eap2010.ets.org/ViewReport.asp



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enroll in math curriculum during their senior year in high school as a way to prepare for college-level instruction. The College may want to collaborate with the high school faculty to design that senior year math course of study.

An evaluation of the CSU program indicates that the EAP reduces the probability of the average student being directed to remedial curriculum by 6.1% in English and 4.1% in math. The evaluation further concluded that the EAP did not discourage underprepared students from applying to the CSU.[89] Perhaps the College could similarly benefit from aggressive participation in the EAP effort. To make the most of this opportunity, the College might want to seek local funding to gain access to the individual student high school EAP data to support outreach efforts. The goal of this initiative is to persuade the high school students who are assessed to be "not ready" for college English and/or math to seek out additional curriculum while still in high school during their senior year, *before* they complete the College placement exams.

To promote access to the College the student affairs staff has engaged in a wide range of outreach activities to the SUHSD. The instructional leaders of the College have long collaborated with faculty in the SUHSD to share teaching ideas and strategies in key discipline areas such as math, sciences, and English. These have produced very impressive results, particularly among underrepresented groups.

**Student Success Priority**

The College goal is to demonstrate a strong commitment to student learning by ensuring that program excellence will be promoted. Assessing student learning, achievement and service outcomes is one way the College might want to approach achieving this goal. The College intends to continue implementation of learning outcomes assessment and to attain sustainable and continuous quality improvement status as described in the ACCJC rubric. With respect to student achievement the College intends to increase the numbers of students who are awarded degrees to 3,000 within two years (up from the present 988).

Transfer Mission Strategies

Most students intending to transfer from the College to a four-year institution plan to attend a CSU. The transfer major initiative (SB1440) discussed earlier in this Plan holds the potential to smooth the transfer process to a CSU campus for many students at the College who are able to select a field of study and meet the academic requirements. The faculty will continue actively to engage in the inter-segmental discipline peer review process being used to develop the TMCs. The Curriculum Committee will also continue to be vigilant in fast tracking those approved TMCs that fit with the established campus instructional programs, but the faculty will need to accelerate their deliberations and may need to embrace a system-wide TMC rather than waiting for SDSU faculty to create a distinct University model.

The STAR Act also has the potential to reduce the workload for the articulation officer at the College. As noted earlier in this Plan, an increasing number of students from the College transfer to in-state private universities. Given the economic circumstances for all segments of public

[89] Jessica Howell et. al. "Postsecondary Preparation and Remedial Education; An Evaluation of the Early Assessment Program at California State University," *Journal of Policy Analysis and Management* vol. 29 No. 4 p. 726-748, 2010.



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higher education in the State, the College may want to focus some efforts on creating additional program-level articulation agreements with the in-state private institutions to which students from the College most commonly transfer. Currently the College has agreements with five of the fourteen private in-state institutions to which SWC students transfer. Comparatively speaking, a smaller number of students from the College transfer to the UC campus locations. Although the UC campuses cannot be directed by the Legislature to participate in the process created under the STAR Act, they have been encouraged to facilitate transfer. Therefore, the College will explore ways to use the adopted TMCs that were adopted by the College to engage the faculty at nearby UC locations (UCSD) in discussions about program-level articulation agreements.

Career and Technical Education Mission Strategies
The theme from the Chancellor's Office Workforce and Economic Development Division is to Do What Matters for Jobs and the Economy. The campaign is organized around four phases or prongs:

- Phase one is to give priority for jobs and the economy by paying more attention to labor market data and deciding on instructional program capacity as a region.
- Phase two is to make room for jobs and the economy by promoting programs that are more closely aligned to regional labor market needs with an emphasis on industry-valued certifications and retool or discontinue programs that are not viable.
- Phase three is to promote student success by adopting common metrics and implementing national best practices to strengthen success experiences.
- Phase four is to innovate instructional programs for jobs in the economy by closing skills gaps with creative solutions that meet real labor market needs.

A recently released report from the Institute for Higher Education Leadership and Policy, *The Road Less Traveled: Realizing the Potential of Career and Technical Education* in the California Community Colleges, provides a number of observations about the place of this type of education in the State.[90] Three other reports have followed to further explore the role of CTE instruction in the state and within local districts. While much of the discussion in these reports is targeted to state policy, the College might wish to consider addressing several of the recommendations in these reports that are topics with the control of the College[91].

*The Road Less Traveled* report criticizes the state's basic skills program for not including any explicit focus on the CTE programs and also criticizes the CTE certificate programs for failing to require English or math (critical thinking/problem solving) instruction as part of the certificate

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[90] Nancy Shulock et. al. *The Road Less Traveled: Realizing the Potential of Career Technical Education in the California Community Colleges* (Sacramento, CA: Institute for Higher Education Leadership and Policy, 2011)
[91] Nancy Shulock et. al. *Career Opportunities: Career Technical Education and the Complete College Agenda, Part 1: Structure and Funding of Career Technical Education in the California Community Colleges* (Sacramento, CA: Institute for Higher Education Leadership and Policy, January 2012). Colleen Moore et. al. *Career Opportunities: Career Technical Education and the Complete College Agenda, Part 2: Inventory and Analysis of CTE Programs in the California Community Colleges* (Sacramento, CA: Institute for Higher Education Leadership and Policy, February 2012). Nancy Shulock et. al. *Career Opportunities: Career Technical Education and the Complete College Agenda, Part 3: Promising CTE Policies from Across the States* (Sacramento, CA: Institute for Higher Education Leadership and Policy, September 2012).



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curriculum requirements. The absence of those requirements triggers questions about of whether graduates possess the skills necessary for success in the workplace. A review of the current certificates offered by the College confirms that some make these requirements, but not most of them, fit the pattern described in *The Road Less Traveled* report.

The Lumina Foundation released the *Degree Qualification Profile* approximately two years ago.[92] The College might want to review the learning outcomes of degrees and certificates in light of the DQP. Based solely on the titles and descriptions of required courses, it is not entirely clear the extent to which those foundational talents described in the DQP are developed in the CTE curriculum itself, nor it is evident how the employer-desired "soft skills" are fostered.[93] Therefore, the College may want to take some cross-discipline institutional learning outcomes as a pilot, and consider a curriculum-mapping project for the CTE certificate programs. This pilot project would help determine the extent to which communications, critical thinking/problem solving, and "soft skills" desired by employers are being taught *and assessed*. A list of the skills desired by employers is found in the Appendix.

The College may want to explore additional ways to integrate basic skills with the CTE instruction. A growing body of research literature suggests that teaching basic skills in the context of the disciplinary topic areas is an effective way to teach students how to apply the foundational skills.[94] Distinct from teaching the basic skills curriculum in separate courses, contextualization or integration emphasizes teaching basic skills with direct reference to real world events and practices that commonly occur in the discipline or occupational area.[95] One author has characterized this approach as having these components: (1) interdisciplinary learning; (2) use of students' informal, out-of-school knowledge; (3) active learning and student collaboration; and (4) authentic assessment.[96] While CTE faculty may routinely assign reading, writing or math tasks, an integrated basic skills approach is different because the teacher also provides procedural knowledge by telling the students how to perform the tasks and models the techniques for them. Developing confidence in the use of these instructional skills will require some professional development effort by the faculty.

The Community College Research Center has completed a literature review of twenty-seven studies about the contextualization/integration concept.[97] Most of the studies compared contextualization with a "business-as-usual" group and found better outcomes for the students who had been offered contextualized instruction. In a series of studies about the Washington state Integrated Basic Education and Skills Training (I-BEST) program Jenkins and his

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[92] *Degree Qualification Profile* (Lumina Foundation) Retrieved January 25, 2011from http://www.luminafoundation.org

[93] Association for Career and Technical Education. *What Is Career Ready?* Retrieved March 24, 2011 from http://www.acteonline.org; *Workforce Readiness Initiative* (New York, NY: The Conference Board, June 2007)

[94] Carol Lee and Anika Spratley *Reading in the Disciplines: The Challenges of Adolescent Literacy* (New York, NY: Carnegie Corporation of New York's Council on Advancing Adolescent Literacy, 2010)

[95] *Contextualized Teaching and Learning: A Faculty Primer: A Review of Literature and Faculty Practies With Implications for California Community College Practitioners.* (Sacramento, CA: The Research and Planning Group, Spring 2009)

[96] Doroles Perin *Facilitating Student Learning Through Contextualization* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #29, February 2011)

[97] Ibid.



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colleagues found that participants were substantially more likely to complete an occupational certificate program than their counterparts who had not participated.[98] In addition, these researchers noted that the Gates and Casey Foundations have both expressed interest in replicating the model. A California study by Wisely found that minority students with contextualized basic skills courses moved more rapidly into college-level courses and were able to perform and complete those courses.[99]

The faculty at Los Medanos College, and many other California community colleges, has embraced a contextualized approach to teaching reading skills call the reading apprenticeship. The strategy involves classroom instructors weaving reading interaction aspects into subject-area teaching through metacognitive conversations about the thinking process. The program is being promoted by the 3csn faculty professional development efforts within the state basic skills initiative.[100]

Another concern about CTE programs is the fate of the graduates. New federal regulations called gainful employment reporting require colleges to disclose a variety of data about their occupational programs such as: the occupations that the program prepares students to enter, normal time to complete the program of study, on-time graduate completion rates, the costs of participating in occupational programs, placement rates for completers, and the median educational loan debt incurred by completers. To assist institutions in meeting some aspects of these requirements the Research and Planning Group (RP Group) of the California Community Colleges has launched a survey effort, CTE Employment Outcomes Project, to elicit information from students who both completed and those who left occupational programs in order to help improve the programs and provide data for the gainful employment reporting obligation.[101] The College may want to consider participating in this project. The RP Group has also completed a series of studies about the transfer outcomes for CTE students in several disciplines. The reports stemming from the Student Transfer in Professional Pathways Project (STP3) may be useful to the College in its ongoing efforts to improve CTE instruction.[102]

Basic Skills Mission Strategies

As two-thirds of the students completing the college placement exams are recommended to basic skills instruction their association with the College is a prominent agenda item. The College has

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[98] Davis Jenkins et. al. *Washington State's Integrated Basic Education and Skills Training Program (I-BEST): New Evidence of Effectiveness* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #20, 2010). John Wachen et. al. *How I-BEST Works: Findings From A Field Study of Washington State's Integrated Basic Education and Skills Training Program* (New York, NY: Columbia University, Teachers College, Community College Research Center, September 2010). John Wachen, et. al. *Contextualized College Transition Strategies for Adult Basic Skills Students: Learning from Washington State's I-BEST Program Model* (New York, NY: Columbia University, Teachers College, Community College Research Center, December 2012).

[99] Charles Wisely *Effectiveness of Contextual Approaches to Developmental Math in California Community Colleges* (doctoral dissertation. University of the Pacific, Stockton, CA, 2009).

[100] Additional information about Reading Apprenticeship in California community colleges is located at http://ra.3csn.org/

[101] Examples of the survey results and additional information about the project can be found at http://www.rpgroup.org/projects/CTE-Employment-Outcomes-Survey

[102] Additional information and the series of six discipline-specific briefs can be found at http://www.rpgroup.org/stp3.html



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responded by creating a process by which faculty could prepare a basic skills proposal for funding and have it reviewed. All proposals must relate to the College basic skills planning matrix and have an evaluation plan. Using these state funds, five faculty members were hired to specifically teach basic skills curriculum. With fewer resources today than was the case several years ago, a limited number of current projects have been funded. Significant funding has been provided for staff development experiences and conference attendance.

With support from the basic skills initiative, the College hired a coordinator for the initiatives and has implemented several strategies in recent years that appear to have had a positive effect. Efforts have been made to expand basic skills course related assistance (tutoring, writing center, supplemental instruction or power study, student tutoring center). The writing center staff offers a workshop series to students, whether enrolled in the writing center or not, and developed an online writing lab (OWL) project. These writing center workshops provide supplemental education to the entire student body.

The Math Department has implemented several strategies to provide students greater opportunities to master the developmental math course content. A classroom clicker project was initiated in the math department. Since 1998 a summer bridge math program was offered to provide students counseling and learning skills as well as math instruction for students who placed into Math 35, Math 45 or Math 65, but it has since been discontinued due to lack of funding. These strategies are consistent with contemporary literature on pedagogy used in math instruction.[103] Very preliminary findings of a Texas community college summer bridge program using experimental research design offers some positive results regarding increased college credits and fewer developmental credits attempted.[104] The Math Department is now considering Quantway as an approach to math instruction for the liberal arts majors. Promoted by the Carnegie Foundation, Quantway is an accelerated strategy to engage the students more fully in the study of mathematics with a quantitative reasoning focus as they work toward college-level instruction.[105] A second strategy that is being considered comes from the National Center for Academic Transformation. The Math Emporium approach to basic skills instruction has a proven track record to boost student success and persistence.[106]

A SARS Early Alert Referral System has been put into place. The SARS system allows the College to set up an automated notification process that is triggered by instructor input when students in their classes are having difficulties. Such systems are believed to be useful as a tactic to provide assistance to underperforming students.[107] However, recent research has suggested

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[103] Michelle Hodara *Reforming Mathematics Classroom Pedagogy: Evidence-Based Findings and Recommendations for the Developmental Math Classroom* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #27, 2011).

[104] Joshua Pretlow and Claire Mitchell Developmental *Summer Bridge Programs: Implementation and Early Evidence From A Random Assignment Study* National Center for Postsecondary Research presentation at the Association for the Study of Higher Education Conference 2010.

[105] Additional information about Quantway is available at http://www.carnegiefoundation.org/quantway.

[106] Additional information about the Math Emporium strategy is available at http://www.thencat.org/R2R/AcadPrac/CM/MathEmpFAQ.htm

[107] Carrie Bourdon and Rozana Carducci *What Works in the Community Colleges: A Synthesis of the Literature on Best Practice* (Los Angeles, CA: Graduate School of Education, University of California at Los Angeles, December 2002).



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there may be an early alert possibility in the grade mark awarded to students in the developmental curriculum sequences. If the relationship between the grade earned in the prerequisite course and the likely grade to be earned in the follow-on course were explained to students, it may be a useful "early alert" intervention.[108]

Learning community strategies have been implemented and there is ongoing emphasis on target ethnic subpopulations of students. A variant of the learning community strategy, Preparation Achievement Interdependence, and Responsibility (PAIR) courses, has continued to show promise. It is the pairing of a basic skills discipline course with a personal development/learning skills course. Initially, an instructional team of one disciplinary faculty member and a counseling faculty member taught these paired courses. Currently, the disciplinary faculty member largely teaches the PAIR courses. The pairing promotes more interactive teaching, group activities and brings the students in contact with the same instructor for six hours per week. Each learning community pair had a tutor in the classroom one or two times a week and a counselor assigned to the students. Students were required to complete an educational plan with the counselor. The counselor also presented essential academic and career information at the start of each term. The content of the learning skills course emphasized expected college success information and also provided a framework in which the instructor and student both attended transfer and career center activities together. Each PAIR learning community had a peer mentor who was responsible to follow-up with students, set up study groups, update the facebook and tweet accounts and help the instructor in the class. Unfortunately, some of these services had to be curtailed when funding from the state shrank.[109]

The College has also used a version of supplemental instruction (SI) as an intervention locally known as the Power Study Program. That program provides an academic support service in the form of tutoring to address the needs of students in basic skills courses, or in those courses where developmental deficiencies have historically existed to the detriment of student success. Prospective and current tutors for the Power Study Program meet the minimum qualifications mandated by Southwestern College's Academic Success Center tutorial program. All tutors must also have completed ED 100. Completion of this course ensures that individual tutors are prepared to engage students in learner-centered instruction and are familiar with the wide variety of educational approaches intended to foster student independence. Tutors are made aware of the diversity in learning styles among student learners and are versed in a wide range of techniques suited to a structured tutorial setting. This generalized tutoring training is a basis for the Power Study Program's SI framework. The Power Study Program has yielded good results in its various forms over the years and now is associated with the PAIR course strategy.[110]

The ESL Department restructured its curriculum to focus on Learning English for Academic Purposes (LEAP). The new configuration uses a sustained theme of content-based instruction to language teaching. The four-level program was introduced in fall 2010 after several years of

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[108] Robert Johnstone *Relationship of Grades and Performance in Subsequent Sequenced Courses* Presentation at the Research and Planning Group Conference, April 2011.
[109] Personal correspondence with Maya Bloch, PAIR Learning Community Co-cordinator, December 18, 2012.
[110] SWC Office of Researh, Planning and Grants. *2011-12 ESL/Basic Skills End-of-Year Report*; David Wales. *BSI Project Report.* Fall 2010; SWC Office of Researh, Planning and Grants. *Fall 2009 and Spring 2010 Power Study Program Findings*; Susan Axford. *The Power Study Program at the Academic Success Center: Annual Report for Fall 2008 and Spring 2009.*



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curriculum development and pilot testing. At the same time a new assessment was developed and tested which resulted in more accurate placement of students within the four levels of the program.

The college has also implemented some strategies for compressed learning in connection with English basic skills offerings. This learning strategy responds to two observations about basic skills students in community colleges: (1) large number of students referred to basic skills curriculum never enroll in them, and (2) for those referred to the lowest levels, many fail to enroll in the next course in the sequence while others drop out of the sequence before completing the series.[111] The compressed learning strategy involves rethinking course scheduling, or redesigning instruction to expedite the completion of academic requirements. A literature review of twelve empirical studies of the compressed strategy, that included student outcome data, has been published by the Community College Research Center.[112] One approach to compression is to offer the basic skills course over a shorter period of time. There are a limited number of English composition courses offered by the college over an eight-week session within the 16-week term. Colleges using this compression approach are Cerritos College in Norwalk, California, the Community College of Denver, Colorado (FastStart program)[113], and Ivy Tech (a 23-college statewide system) in Indiana.

Some colleges have successfully redesigned multi-course sequences to create a shorter pathway to college coursework such as a one-term integrated developmental reading and writing course that would otherwise take two semesters or a one-term intensive basic skills math course for students who place into Elementary Algebra.[114] This shorter approach in composition is used at Chabot College in Hayward, California. The goal of the math strategy is to prepare students for Elementary Statistics by teaching selective concepts in Algebra that are needed to learn statistics but have the students skip the full Intermediate Algebra course that is commonly listed as a prerequisite. An initiative called Statway is being led by the Carnegie Foundation and involves 19 community colleges, five of which are in California.[115] Colleges using the Statway approach are Mt. San Antonio, Pierce, San Diego City, American River, Foothill and Los Medanos College in California.

A third approach to compressing is to "mainstream" the basic skills students into freshman composition while providing basic skills instruction in the same term. The Community College of Baltimore County in Maryland has taken students whose placement scores were just below the

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[111] Tom Bailey, et. al. *Referral, Enrollment and Completion in Developmental Education Sequences in Community Colleges* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #15, 2009) and Bridget Long *Remediation: The Challenges of Helping Underprepared Students* (Harvard, MA: Harvard Graduate School of Education, Paper presented at the American Enterprise Institute for Public Policy Research Conference, Degrees of Difficulty, February 2011).

[112] Nikki Edgecombe. *Accelerating the Achievement of Developmental Education Students*. (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #30, 2011).

[113] Debra Bragg, et. al. *2010 Follow-up of Community College of Denver FastStart Program.* (Champaign, IL: University of Illinois, Office of Community College Research and Leadership, December 2010).

[114] Katie Hern with Myra Snell *Exponential Attrition and the Promise of Acceleration in Developmental English and Math*. (unpublished document Hayward, CA: Chabot College, 2010).

[115] Jenna Cullinane and Philip Uri Treisman *Improving Developmental Mathematics Education in Community Colleges: A Prospectus and Early Progress Report on the Statway Initiative* (National Center for Postsecondary Research, 2010).



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freshman composition cut-off point and placed a limited number of them into a freshman composition class that is scheduled to meet immediately before a companion developmental course taught by the same instructor. A rigorous evaluation of this project shows extraordinary results which can be attributed to the curriculum and scheduling design.[116] Beyond the structural changes deployed in these approaches, there may be increases in student success associated with changes in pedagogy as preliminary investigation of the accelerated classrooms suggests faculty frequently use diversified instructional approaches that include student-centered activities.[117]

The College might consider continuing its review of success initiatives in light of some recent research on the dynamics of non-academic support that are meant to improve student outcomes across all subgroups of students. By means of reviewing one hundred twenty-eight books, journal articles and reports, four mechanisms that appear to encourage student success were identified: (1) creating social relationships; (2) clarifying aspirations and enhancing commitment; (3) developing college know-how; and (4) making college life feasible.[118] Many of the efforts that the College has launched under the basic skills initiative may already incorporate these mechanisms. The conclusions of this research emphasize that efforts at any college to improve student persistence should *focus on process not programs*. Recommended process practices that shift the delivery of information and the location of relationship-building within the College include: (1) redesigning advising and counseling so that it is streamlined and personalized; (2) making non-academic supports intrusive so that students are forced to encounter them; and (3) creating more structure within the college.[119][120]

All community colleges struggle with finding ways to make remedial education effective. The topic has been the subject of many reports and studies in recent years. One of the more recent advocacy documents on the topic of remedial instruction may be of interest to the College as its principles are stated very succinctly, draw upon recent creditable research, and carries the support of three major groups and an established University research center.[121]

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[116] Davis Jenkins et. al. *A Model for Accelerating Academic Success of Community College Remedial English Students: Is the Accelerated Learning Program (ALP) Effective and Affordable?* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #21, September 2010). Sung-Woo Cho, et. al. *New Evidence of Success for Community College Remedial English Students: Tracking the Outcomes of Students in the Accelerated Learning Program (ALP)* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #53, December 2012).

[117] Nikki Edgecombe *Accelerating the Academic Achievement of Students Referred to Developmental Education*. (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #30, February 2011).

[118] Melinda Karp *Toward a New Understanding of Non-Academic Student Support: Four Mechanisms Encouraging Positive Student Outcomes in the Community College* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #28, 2011).

[119] Judith Scott-Clayton *The Shapeless River: Does Lack of Structure Inhibit Students' Progress at Community Colleges?* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #25, 2011).

[120] Sung-Woo Cho and Melinda Karp. *Student Success Courses and Educational Outocmes at Virginia Community Colleges.* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #40, February 2012). and Melinda Karp and Rachel Bork. *They Never Told Me What to Expect, So I Didn't Know What to Do: Defining and Clarifying the Role of a Community College Student.* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #47, July 2012).

[121] Charles A. Dana Center (University of Texas), Complete College America, Education Commission of the States and Jobs for the Future. *Core Principles for Transforming Remedial Education: A Joint Statement.* December 2012.



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Student Equity Strategies
The College has a goal to strengthen student support pathways by delivering effective services that minimize barriers, promote student enrollment, and increase course completion. The College is concerned about the equity of access to math and English courses. The College may want to set a three-and six-year goal to ensure that no group has a completion rate in transfer math or English below the 80% level of the reference group. By state guidelines the College should mitigate the effects of any disproportionately low transfer-ready rate. The institution might wish to set a goal of ensuring that no group completion rates in transfer math and English are below 80% of the reference group.

The College has monitored the experiences of students by disaggregating the student achievement data by self-identified race/ethnicity, age, gender and disability. This approach has recently been endorsed by a landmark study of the California community college student experience.[122] In a 2008-09 review of this data, the Student Equity Report noted a disproportionately low success rate in basic skills courses for males of all ethnicities. A similar gender disparity was found in degree applicable courses. The greatest discipline disparities were located in math basic skills where most ethnic groups were lower than 80% the success rate of the majority group. American Indian/Alaskan Native, Black and Pacific Island students were not performing as well as other groups in basic skills English. Transfer rates evidenced some disparity among Latino, ESL and low-income students. The findings of a student equity report using 2002-03 to 2007-08 data were reported earlier in this Plan. The College may want to consider repeating the student equity study to include more recent data that focuses upon results or outcomes of the student experience in the college curriculum.

**Teaching and Learning Priority**
Distance education enhancements
The literature review study found that instructors teaching online courses were usually given a short "crash" course on how to use the institution's course management system. The College provides course management pedagogy instruction through staff development offerings and the distance education office arranges one-on-one meetings with faculty to help them master the course management system. The research concluded that instructors also need instruction on issues of online quality and pedagogy. Time and attention needs to be given to course design to implement "scaffolding" activities, discussion moderation, and encouragement for struggling students. Merely adding embedded video or online quizzes to the instructional strategy used in a face-to-face environment will not likely result in a successful online learning outcome.[123] The Online Learning Support group provides faculty with instruction regarding online teaching procedures, best practices, and techniques for meaningful and regular contact with students. The College may want to consider using the findings and suggestions from these studies and materials from ACCJC to guide its ongoing review of local distance education policy and practice.

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[122] Colleen Moore and Nancy Shulock *Divided We Fail: Improving Completion and Closing Racial Gaps in California's Community Colleges* (Sacramento, CA: Institute for Higher Education Leadership and Policy, CSU Sacramento, October 2010).
[123] Shanna Smith Jaggars *Online Learning: Does It Help Low-Income and Underprepared Students?* (New York, NY: Columbia University, Teachers College, Community College Research Center Working Paper #26, 2011).



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Assessment of Learning Outcomes Strategies
As noted previously, the College has made major strides in the articulation of intended learning outcomes at the course, program, general education, and now institutional levels. The outcomes of courses have been mapped to program and institutional level learning outcomes using the CurricUNET and eLumen software packages. As reported earlier in this Plan, extensive efforts have been made to conduct learning outcomes assessments and report those results and plan for improvements at the course level. To engage in a reflective dialogue about the findings, and to chart specific ways to improve the learning experience for students, faculty have been instructed to discuss the assessment findings as part of their program review activities. The campus is well aware of external expectations for progress in this professional responsibility. The College may want to consider ways to promote systematic cross-disciplinary discussions about the assessment results as they pertain to the institutional learning outcomes as those outcomes are often supported by instruction in multiple disciplines.

Revisiting Technology Support Strategies
The College goal is to leverage technology resources to facilitate student learning, campus communication, and institutional effectiveness. In the past, the College made investments in supporting classroom instruction and student affairs services through the use of technology. As reported in several interviews, many faculty believe it is time to revisit some of those investments. Requests for the upgrade of classroom support technology have been made. Proposals for the enhancement of the College network and wireless infrastructure are included in the Technology Plan. Plans are also being made to implement mobile computing services that will allow students to use smart phones to access the College administrative computing resources. As noted earlier in this Plan, there is an ongoing effort in the student affairs area and elsewhere in the College to expand self-services to students. Various software packages have been implemented in several instructional areas to assist students with their learning processes.

Southwestern College has been a client of Ellucian (formerly named Datatel) for over 20 years. Ellucian's ERP software, Colleague, is currently used for most areas of District operations across Academic Affairs, Student Affairs, Financial Affairs and Research; however, the ERP system in its current state has been judged adequate as it does not fully support the District's needs. The Governing Board has authorized the College to embark on an optimization plan that will address the inadequacies and position the institution to better use the system throughout the District. Some highlights of the project include new self-service options for students, new portal for staff *and* students, real-time Colleague interaction with the online learning platform, new reporting tools and reports, repair and/or replacement of outdated program code, return to the basic functionality of the system as designed, review and/or development of new business processes, and the application of best practices to different service areas, such as Student Education Planning, Retention Alert, Student Services workflows, Human Resources (HR) position budgeting, WebAdvisor-Benefit enrollment, HR workflows, SQL migration and more. The project is also to include the purchase and installation of new software and services for consulting, training and project management.[124] As this project unfolds it promises to bring great benefits to the College workforce and students that will positively impact the learning experience and student outcomes.

[124] Further details of the proposal can be found at the Governing Board web pages http://www.boarddocs.com/ca/swccd/Board.nsf/Public



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An Instructional Technology Strategy
The College may want to explore the possibilities of a desktop virtualization project like the one in place at the Coast Community College District. This technology strategy will allow the institution to use a computer-equipped laboratory for a variety of instructional purposes. The instructional software is housed in a suite of centralized servers that have also been optimized through virtualization. However, graphics-intensive applications are an exception to the interchangeable use of the computer laboratory space afforded by the desktop virtualization. In addition to giving the College greater flexibility in the use of computer laboratories, a desktop virtualization project would allow students to log onto the college network from any place through the Internet using either a Macintosh or a PC computer. Students also would be able to access the instructional software they need for their courses. It is understandable that some departments may feel that they "own" a computer laboratory facility. However, not only would the College be able to provide better service to the students but also it would use existing facilities more efficiently if a virtualization project were to be implemented. That would enable the College to become more competitive for state construction resources and potentially save on costs.

**Economic, Workforce and Community Development Priority**
Collaboration with Regional Colleges
With respect to CTE programs the themes from the Chancellor's Office are unmistakable. Greater regional collaboration is expected and will be rewarded through a new funding strategy that will promote that collaboration. Greater attention to addressing the documented workforce needs of business and industry in the region are also expected

Instructional Program Mix
The College aspires to offer relevant instructional programs. Therefore, the College may want to review its portfolio of program offerings to achieve the best mix or balance of transfer liberal arts, CTE, and basic skills instructional programs to address the educational needs of the immediate communities it serves and San Diego County as a whole. The current mix of instructional programs has been previously discussed in this Plan. However, it is important to note that with the reduction of state support, fiscal difficulties will continue over the next several years. The College may have to consider program consolidations and even greater collaboration with other community colleges in San Diego County to achieve cost savings.

The College offers a very modest cooperative work experience education (CWEE) along with internships and service learning opportunities as a pedagogy within other courses. The College is interested in expanding the internship and work experience education opportunities but has only assigned one staff member to support those programs. It might be possible to expand these opportunities with the assistance of additional staff. Another expansion possibility might be through a more concerted effort on the part of faculty leaders of CTE instructional programs that would lend themselves to a CWEE learning opportunity.

Business Promotion Focus
The College has a unique combination of administrative units positioned to advance business activity in the immediate College service area as well as in the San Diego-Imperial Counties region.



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The Center for International Trade and Development (CITD) addresses the economic and business development priority of the College's strategic plan by promoting export business from the United States as well as bi-national cooperation in the San Diego-Imperial Valley and Baja California region. It is a grant-funded entity supported by the Chancellor's Office of Economic and Workforce Development unit and the U.S. Small Business Administration through the State Trade and Export Promotion (STEP) program. In July 2012, the Center celebrated a partnership signing ceremony with the Camara de Negocios Mexico-Americana (CANEMEXA) to formalize support for business owners seeking to begin or expand their businesses into the international marketplace. The agreement marked the beginning of a working relationship between the two entities to strengthen and expand international trade business development in the $13 billion-sized border market. Ninety-eight percent of foreign direct investment, $750 million USD in 2010, in the State of Baja California is in the manufacturing industries called maquiladoras. Tijuana has the highest number of maquiladora plants of any Mexican city. In 1988 the U.S. federal government established foreign-trade zone No. 153 for the City of San Diego in the Otay Mesa community area. More than 1,500 acres of industrial zoned land was designated adjacent to the booming maquiladora industry and near both Brown Field Airport and the Tijuana International Airport.

The CITD also manages a grant-funded youth entrepreneurship program (YEP) to increase awareness of and aspirations to self-employment among young people ages 14-27. The activities of these two functions require spaces for counseling sessions, meetings and conferences of business people from both sides of the border. There may be opportunities to expand the impact of these two functions through the use of Internet technology. The third function of CITD is expressed in the interface between CITD and the Logistics and Transportation instructional program offered by the College. The program has an international commerce emphasis. There may be opportunities for greater collaboration if the instructional program were to be enhanced by an additional focus on supply chain considerations. CITD has offices at both the Otay Mesa HEC and the Chula Vista campus.

The San Diego Contract Opportunities Center (SDCOC) is one of a limited number of Procurement Technical Assistance Centers (PTAC) in the nation and only one of two operated by a community college. Financial support for the SDCOC comes from grants and local sponsor support. Its mission is to connect small businesses with government contracting opportunities, in this case throughout San Diego and Imperial Counties. The SDCOC addresses the economic and business development priority of the College's strategic plan by offering one-on-one counseling, specialized workshops and training classes, construction plan room services, and automated bid matching services for selected clients from searches of almost 2,000 local web sites. Since 1995 the SDCOC has been responsible for creating over 4,400 jobs in the local economy. SDCOC staff is seeking an even greater impact by creating self-paced, online training workshops that are augmented by webinar presentations. The SDCOC could advance its work if it had more dependable access to a smart classroom to hold 40-50 people for workshops one day per week and a set of laptops for client use during training sessions. An instructional certificate program in construction business management or contract management might be a means for the College to enhance the work of the SDCOC and help many of its clients.



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The third grant-funded, business development-oriented activity hosted by the College is the regional lead organizational unit of the Small Business Development Center Network. The lead organizational unit is responsible for three centers in San Diego and Imperial Counties. One of the three centers, the South San Diego County Small Business Development Center (SBDC), is located within the College service area. The U.S. Small Business Administration funds both the lead organization for the network and the South County SBDC activities. Both the lead organization and the South San Diego County SBDC are currently located at the HEC National City. The Center Network leadership is piloting online training materials through the production of streaming video presentations that they believe will increase the impact of all three geographic-specific Centers. The College intends to develop a Workforce and Business Development Plan, which will be overseen by the regional lead for the SBDC Network.

The South County SBDC addresses the economic and business development priority of the College's strategic plan through its consulting and training programs with small businesses. Experienced business people act as part-time consultants to provide the counseling and training services of the Center. The South County SBDC believes that some office space and consulting meeting rooms at the Chula Vista and perhaps even the Otay Mesa campus locations would assist them to provide services to businesses. Otherwise, the National City location is an ideal central location for both the South County SBDC and the regional Network staff. As is the case with the CITD and SDCOC, the South County SBDC needs ready access to a smart classroom that could hold 40-50 people for business training workshops and some form of a meeting room that could accommodate 40 people on the advisory board.

Enterprise Zones and Targeted Employment Areas

The College service area contains several enterprise zones and targeted employment areas. There may be ways in which the College could leverage those designations in its strategic priority efforts to favorably impact the economic, workforce and community development of the area.

Enterprise Zones were created in California in the 1980's to stimulate business investment in areas traditionally slow in obtaining their fair share of private investment dollars and to increase jobs opportunities in areas of high unemployment. The legislative purpose of the Enterprise Zone Program is to "stimulate business and industrial growth in the depressed areas of the State." Additionally the program was established to help attract business and industry to the state, to help retain and expand existing state business and industry, and to increase job opportunities for all Californians. There are several tax savings benefits to businesses in these enterprise zones such as:

- Tax credits against the purchase of new manufacturing, assembly, data processing or communications equipment equivalent to the amount of sales or use tax.
- Tax credits on the wages to qualified new employees over a five-year period (up to 50 percent in the first year, 40 percent in the second year, etc.). This credit could exceed $34,000 per eligible employee.
- The option to accelerate depreciation on business property
- Lenders can take a deduction on the net interest earned from loans made to enterprise zone businesses. Qualified loans include business loans, mortgages and loans from noncommercial sources.



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- Businesses get priority for various state programs, such as state contracts and grants, applications for industrial development bonds, expedited permit processing for commercial projects, assistance with recruiting and hiring targeted employees, access to capital through financial assistance programs and access to specialized technical assistance programs.

In 2006-2007 the Cities of San Diego, National City, and Chula Vista combined efforts to create the San Diego Regional Enterprise Zone (SDREZ) that covers portions of all three cities. Portions of the new zone overlap with the Foreign Trade Zone, the Recycling Market Development Zone, the Federal Renewal Communities, and the HUB Zone Program (sponsored by the U.S. SBA). In 2012 the SDREZ and the Targeted Employment Area (TEA) were expanded again to consume greater parts of all three cities.[125]

The state of California designates areas of the state as a TEA based on high local unemployment data. In San Diego both Imperial Beach City and National City were so designated as of April, 30, 2012. Under federal law, 10,000 immigrant visas per year are available to qualified individuals seeking permanent resident status on the basis of their engagement in a new commercial enterprise. The visa program is popularly called the EB-5 visa program. If the investment in a new commercial enterprise is made in a Targeted Employment Area (TEA), the required investment is decreased to the $500,000 investment level. The investment must create or preserve at least 10 jobs for U.S. workers, excluding the investor and their immediate family. A TEA is either a "high unemployment area" in an urban setting (being part of a metropolitan statistical area) that has experienced an unemployment rate of at least 150 percent of the national average rate or a "rural area." Applicants to the EB-5 visa program must demonstrate that they meet all requirements of the program prior to filing with the U.S. Citizenship and Immigration Service (USCIS). If it is determined that the investment criteria is met and properly documented, an investor may be granted conditional permanent residence status for a period of two years. At the end of the conditional period a permanent green card may be issued. An investor may apply for U.S. citizenship five years after the initial grant of conditional permanent residence.

Through the many activities of the College units and programs mentioned above the institution has and will continue to form both public and private partnerships in the service area that will assist the College to advance its economic, workforce and community development strategic priority.

[125] Regional maps and further discussion of the San Diego Regional Enterprize Zone and Targeted Employment Area are found at http://www.sandiego.gov/sdrez/



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# IX. Projections for Future Growth

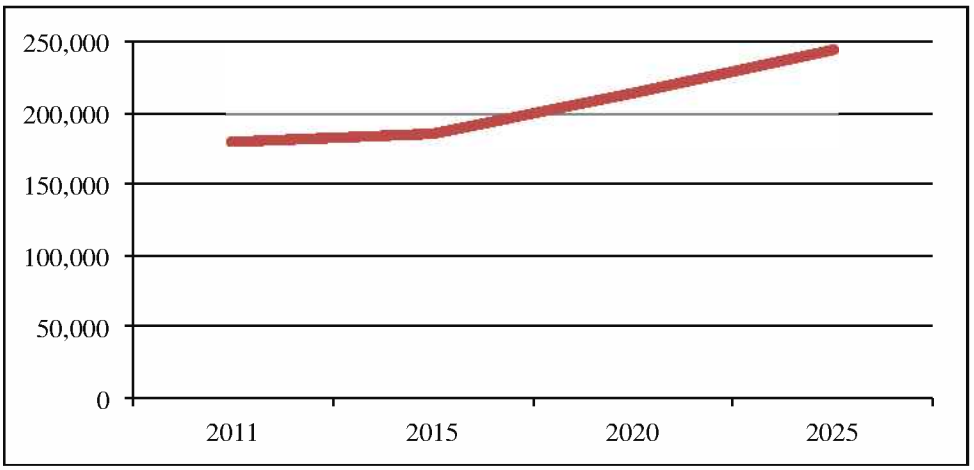
## A. Future Growth Projections

Linking the Educational Master Plan's internal and external analysis to space quantification completes the process. It balances the current and future curriculum, instructional delivery modes, learning environment, and necessary support structures with providing a comprehensive program of campus development.

As a dynamic process, Educational Master Planning involves a mixture of methods and a variety of assessments. Looking to the future, a master plan must provide for sufficient facilities to accommodate higher enrollment numbers, to improve the teaching/learning environment, to address new program development, to integrate the latest technological innovations, and to provide adequate space configuration permitting flexible teaching methods.

Considering the economic and fiscal factors, the growth projection of Weekly Student Contact Hours (WSCH) for the entire District was established at an average annual 2.5% for benchmark years 2015, 2020 and 2025. This growth represents a reasonable forecast for on-campus instruction at this College at this time. In any planning cycle, the proposed facilities are time specific and address future needs for increased capacity that may or may not materialize. The strategic goal is to plan for sufficient facilities that are flexible enough to accommodate additional enrollments.

**Projected Fall Term WSCH, Southwestern College District**




Source: Cambridge West Partnership, LLC

Consideration was given to tangible trends such as changes in student origins, population growth rate and changes in demographics for establishing the growth projection for future headcounts. The rate of growth in headcount for the entire District was established at an average annual 2.1% for benchmark years 2015, 2020 and 2025. This growth also represents a reasonable forecast for the on-campus headcount at this College at this time. In any planning cycle, the proposed facilities are time specific and address future needs or capacities that may or may not materialize.



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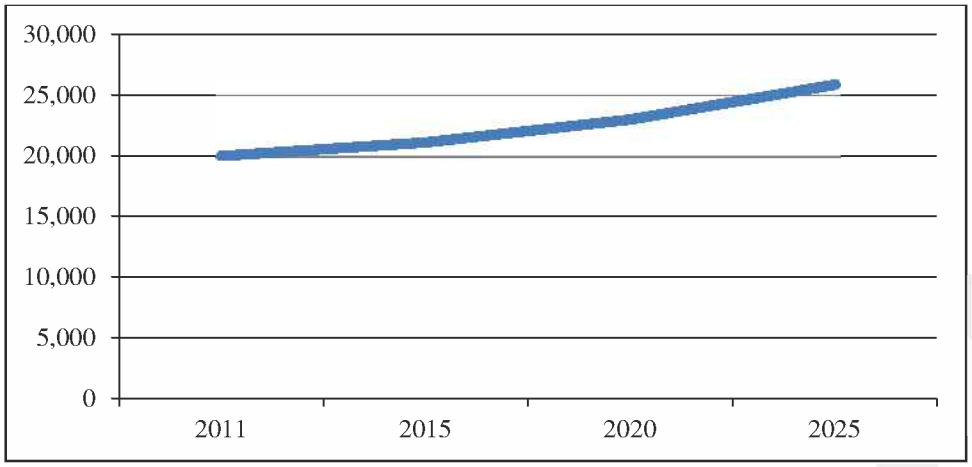
The strategic goal is to plan for sufficient facilities that are flexible enough to accommodate additional headcounts.

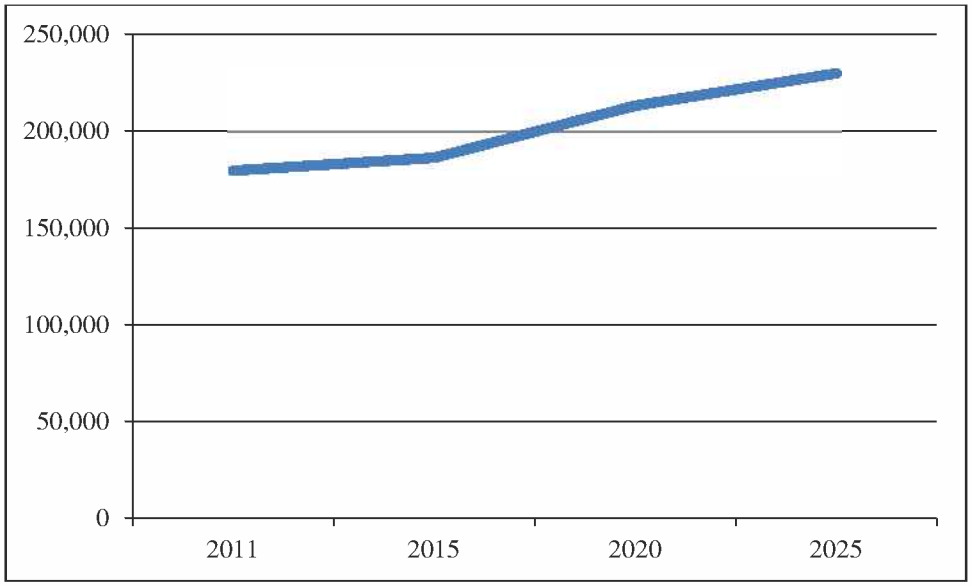
**Projected Fall Term Headcount, Southwestern College District**




Source: Cambridge West Partnership, LLC

The original Chula Vista campus and each of the Higher Education Centers are moving at a different pace with respect to the fall term generation of WSCH. The Centers also attract students who, in some cases, are attending more than one site within the District. Therefore, it is difficult to estimate a meaningful headcount or to project future headcounts for the individual instructional locations within the District. The future fall term WSCH for the large Chula Vista campus is projected to grow at an average annual rate of 2.0% over the benchmark years 2015, 2020 and 2025.

**Chula Vista Campus Projected Fall Term WSCH**




Source: Cambridge West Partnership, LLC



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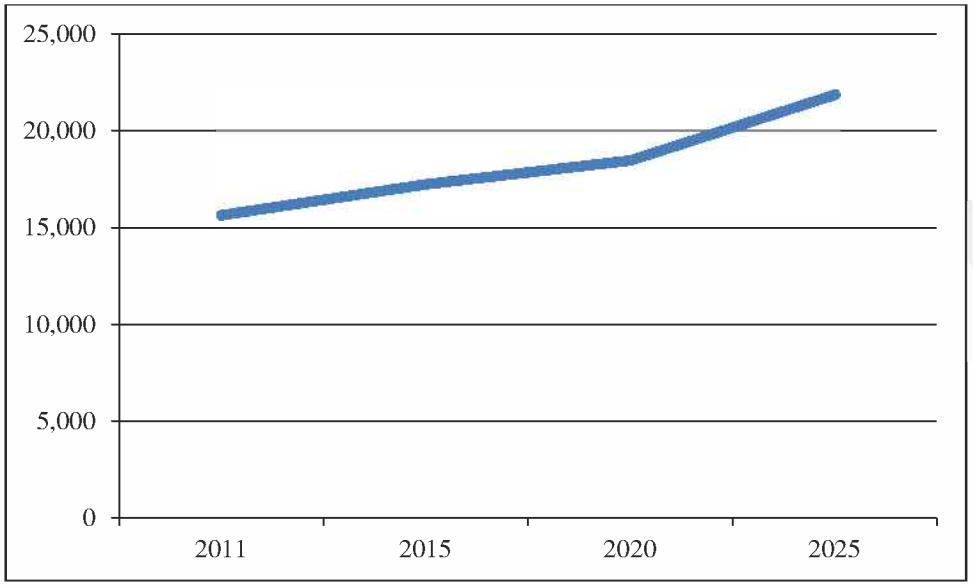
The Otay Mesa Higher Education Center is projected to experience future WSCH growth at an annual average rate of 2.8%. However, this rate of growth depends upon future land development activities to bring addition residential housing to the areas west of the Center location.

**Otay Mesa Higher Education Center Projected Fall Term WSCH**




Source: Cambridge West Partnership, LLC



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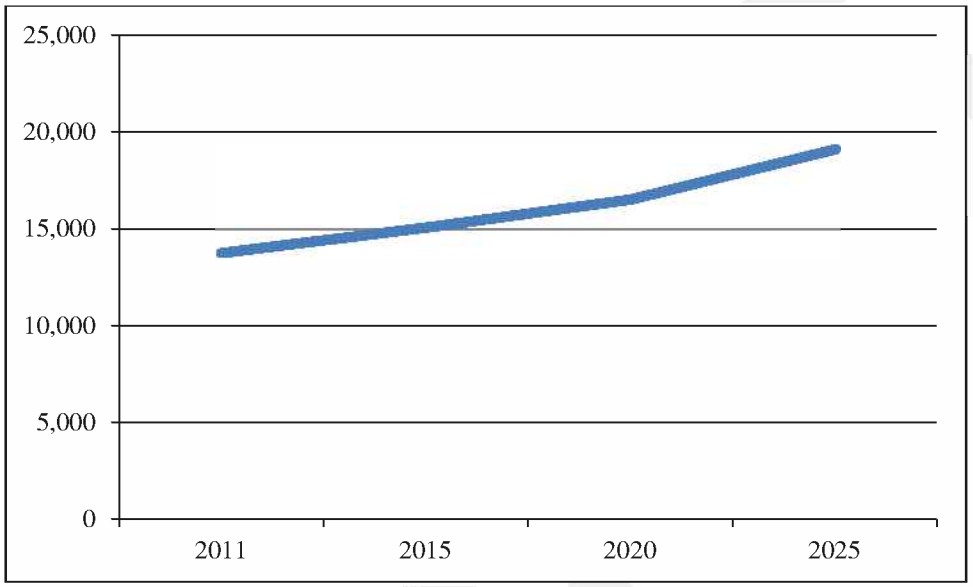
The San Ysidro Higher Education Center is also projected to experience future WSCH growth at an annual average rate of 2.8%. This Center is limited in facilities and now operates six days a week. Additional major growth will depend upon the provision of additional instructional facilities. The area around the Center is almost completely developed with little vacant land remaining. Growth in the recent past was accomplished by expanding the instructional activities from four days a week (Monday to Thursday) to six days a week. Although public transportation service to the Center is available, student and staff parking for automobiles driven to the site is limited.

**San Ysidro Higher Education Center Projected Fall Term WSCH**




Source: Cambridge West Partnership, LLC



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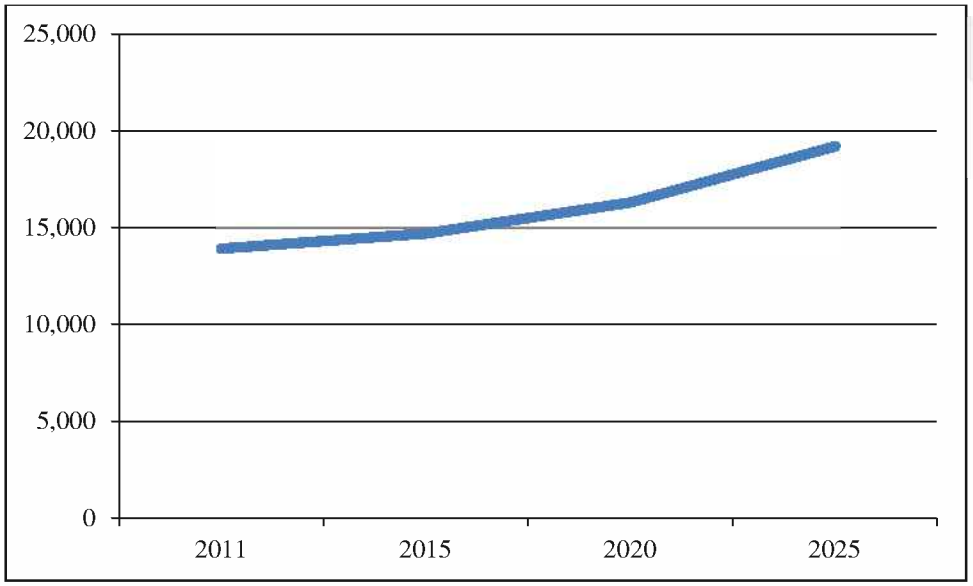
The National City Higher Education Center is projected to experience future WSCH growth at an annual average rate of 2.7%. The projection includes all instructional activity provided in National City at the physical location of the Center plus offerings at the Crown Cove Aquatic Center and the programs offered to Navy personnel and taught elsewhere in the District. This Center is somewhat limited in facilities. Additional major growth will depend upon expanding instructional services to the weekend and/or the provision of additional instructional facilities. The area around the Center is almost completely developed with little vacant land remaining. Public transportation service to the Center is available; the site is very accessible from interstate freeway five and both student and staff parking for automobiles driven to the site are ample.

**National Higher Education Center Projected Fall Term WSCH**




Source: Cambridge West Partnership, LLC



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## B. WSCH Growth and the Future Program of Instruction

WSCH Projections
State standards for construction and renovation of facilities basically focus on *capacity*. Capacity, as outlined in the Facilities Planning Manual is correlated with the production of WSCH. WSCH represents the average number of hours of student instruction in a week per class (i.e. 30 students enrolled in a class that meets 3 hours per week is 90 WSCH). Estimating growth in headcounts produces a factor of increased WSCH. This WSCH is then transformed into instructional space or assignable square feet (ASF). Each space type, in this case lecture and/or laboratory, WSCH generates an "appropriate" instructional facility addressed as ASF. While these calculations are established through state standards, other factors must be considered in planning facilities. An additional factor in all planning is *adequacy*. Adequacy in this context assumes sufficient and/or suitable capacity to provide for an effective learning environment.

WSCH Projections and the Future Program of Instruction
The following table projects future WSCH and FTES in benchmark years of 2015, 2020, and 2025. The forecast is in summary form by educational centers and Chula Vista campus of the College. The actual forecasting process, however, was conducted at the discipline/program level. A comprehensive analysis by discipline/program can be found in the appendix of the Facilities Master Plan.



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## Southwestern College- Chula Vista Campus Fall Term WSCH and FTES Projections 2011-2025

| Profile | Actual | | | Projected | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall Sem 2011 | | | 2015 | | | 2020 | | | 2025 | | |
| School | # of Sec | WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES |
| Arts & Communication | 206 | 23,013.0 | 767.1 | 220 | 24,072.1 | 802.4 | 245 | 27,002.4 | 900.1 | 279 | 30,920.3 | 1,009.9 |
| Health, Exercise Sci, Athle, Tech | 284 | 32,011.7 | 1,067.1 | 291 | 31,816.9 | 1,060.6 | 320 | 36,503.4 | 1,216.8 | 363 | 42,661.0 | 1,422.0 |
| Language & Literature (and Academic Dev) | 354 | 37,859.40 | 1262.0 | 354 | 39,601.0 | 1,320.0 | 388 | 45,710.7 | 1,523.7 | 423 | 51,448.9 | 1,714.9 |
| Mathematics, Science & Engineer | 317 | 42,570.8 | 1,419.0 | 332 | 44,528.6 | 1,484.3 | 367 | 49,563.0 | 1,652.1 | 412 | 55,976.2 | 1,418.0 |
| Social Science, Humainities & Bus | 334 | 36,817.00 | 1227.2 | 348 | 38,511.7 | 1,283.7 | 384 | 44,481.6 | 1,482.7 | 443 | 51,944.2 | 1,731.5 |
| Other (Child Dev, Lib, Study Skills) | 108 | 7,765.6 | 258.9 | 109 | 8,124.1 | 270.8 | 115 | 10,093.9 | 336.5 | 126 | 10,998.9 | 366.6 |
| ***Campus Total*** | **1,603** | **180,038** | **6,001.3** | **1,654** | **186,654** | **6,221.8** | **1,819** | **213,355** | **7,111.9** | **2,046** | **243,950** | **7,662.9** |

Source: Cambridge West Partnership, LLC

## Southwestern College- Higher Education Center- Otay Mesa Fall Term WSCH and FTES Projections 2011-2025

| Profile | Actual | | | Projected | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall Sem 2011 | | | 2015 | | | 2020 | | | 2025 | | |
| School | # of Sec | WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES |
| Arts & Communication | 2 | 183.90 | 6.1 | 2 | 210.4 | 7.0 | 4 | 240.2 | 8.0 | 4 | 276.2 | 9.2 |
| Health, Exercise Sci, & Tech | 11 | 1,453.8 | 48.5 | 10 | 1,681.1 | 56.0 | 11 | 1,735.7 | 57.9 | 13 | 1,994.7 | 66.5 |
| Language & Literature | 8 | 916.50 | 30.6 | 9 | 1,088.7 | 36.3 | 10 | 1,221.5 | 40.7 | 12 | 1,257.4 | 41.9 |
| Mathematics, Science & Engineer | 17 | 2169.6 | 72.3 | 17 | 2,597.3 | 86.6 | 19 | 2,725.5 | 90.9 | 23 | 3,224.6 | 107.5 |
| Social Sci, Humanities & Bus | 40 | 3,933.6 | 131.1 | 39 | 4,185.9 | 139.5 | 42 | 4,647.8 | 154.9 | 46 | 5,429.3 | 181.0 |
| Health Occupations | 76 | 6,355.50 | 211.9 | 77 | 6,779.6 | 226.0 | 84 | 7,107.5 | 236.9 | 94 | 8,719.7 | 290.7 |
| Other (Insurance/Leadership) | 13 | 636.0 | 21.2 | 11 | 712.2 | 23.7 | 11 | 813.0 | 27.1 | 12 | 923.2 | 30.8 |
| ***Center Total*** | **167** | **15,649** | **521.6** | **165** | **17,255** | **575.2** | **181** | **18,491** | **616.4** | **204** | **21,825** | **727.5** |

Source: Cambridge West Partnership, LLC



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## Southwestern College- Higher Education Center- San Ysidro Fall Term WSCH and FTES Projections 2011-2025

| Profile | Actual | | | Projected | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall Sem 2011 | | | 2015 | | | 2020 | | | 2025 | | |
| School | # of Sec | WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES |
| Arts & Communication | 13 | 1,111.0 | 37.0 | 13 | 1,161.4 | 38.7 | 15 | 1,332.7 | 44.4 | 17 | 1,545.7 | 51.5 |
| Health, Exercise Sci, & Tech | 18 | 1,225.8 | 40.9 | 19 | 1,371.6 | 45.7 | 20 | 1,515.5 | 50.5 | 21 | 1,687.7 | 56.3 |
| Language & Literature | 50 | 4,870.2 | 162.3 | 52 | 5,348.8 | 178.3 | 57 | 5,796.4 | 193.2 | 59 | 6,722.8 | 224.1 |
| Mathematics, Science & Engineer | 18 | 2392.8 | 79.8 | 21 | 2,792.9 | 93.1 | 23 | 2,857.0 | 95.2 | 26 | 3,282.9 | 109.4 |
| Social Sci, Humanities & Bus | 39 | 2,656.5 | 88.6 | 40 | 2,776.9 | 92.6 | 42 | 3,191.1 | 106.4 | 45 | 3,708.3 | 123.6 |
| Other (Child Development) | 30 | 1,527.0 | 50.9 | 28 | 1,596.8 | 53.2 | 30 | 1,820.0 | 60.7 | 32 | 2,133.6 | 71.1 |
| ***Center Total*** | **168** | **13,783.3** | **459.4** | **173** | **15,048** | **501.6** | **187** | **16,513** | **550.4** | **200** | **19,081** | **636.0** |

Source: Cambridge West Partnership, LLC

## Southwestern College- Higher Education Center- National City Fall Term WSCH and FTES Projections 2011-2025

| Profile | Actual | | | Projected | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall Sem 2011 | | | 2015 | | | 2020 | | | 2025 | | |
| School | # of Sec | WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES | # of Sec | Total WSCH | FTES |
| Arts & Communication | 9 | 1,029.0 | 34.3 | 10 | 1,076.3 | 35.9 | 12 | 1,228.7 | 41.0 | 15 | 1,411.8 | 47.1 |
| Health, Exercise Sci, & Tech | 24 | 1,130.1 | 37.7 | 20 | 1,179.1 | 39.3 | 21 | 1,294.5 | 43.2 | 23 | 1,614.5 | 53.8 |
| Language & Literature | 18 | 2,155.5 | 71.9 | 19 | 2,377.3 | 79.2 | 21 | 2,575.0 | 85.8 | 24 | 2,959.3 | 98.6 |
| Mathematics, Science & Engineer | 28 | 3351.6 | 111.7 | 30 | 3,505.0 | 116.8 | 33 | 3,830.2 | 127.7 | 36 | 4,598.2 | 153.3 |
| Social Sci, Humanities & Bus | 26 | 2,280.7 | 76.0 | 26 | 2,404.3 | 80.1 | 27 | 2,618.2 | 87.3 | 27 | 3,127.3 | 104.2 |
| Health Occupations | 47 | 2,877.6 | 95.9 | 51 | 3,006.4 | 100.2 | 58 | 3,436.3 | 114.5 | 64 | 3,961.7 | 132.1 |
| Other (Crown Cove, Noncredit) | 32 | 1,092.0 | 36.4 | 25 | 1,148.0 | 38.3 | 28 | 1,311.3 | 43.7 | 31 | 1,494.3 | 49.8 |
| ***Center Total*** | **184** | **13,916.5** | **463.9** | **181** | **14,696** | **489.9** | **200** | **16,294** | **543.1** | **220** | **19,167** | **638.9** |

Source: Cambridge West Partnership, LLC



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# Appendix A: Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis

| SWOT ANALYSIS | |
|---|---|
| **STRENGTHS** | **OPPORTUNITIES** |
| Wonderful staff & faculty<br>Data= moving in right direction<br>Vision | Parcel Tax Initiative<br>15 (of 25) passed on Election Day.<br>Homeowners agree to pay a tax that goes to the college |
| Strong Academic Programs<br>Data= Persistence<br>Focus on IPI's | We need to capture the students - - a record group - - who are in the 7th grade now |
| Application of data for implementation<br>Research Office<br>It's working! | Offer fee-based courses to sustain all courses/services.<br>Readiness courses (fee-based) to prep students for classes (e.g.: biology) |
| Transparency & Communication=collaboration<br>Students are successful<br>**SWC** is serving the **community**<br>o Responsive to students<br>o diversity | Capture Revenues<br>(Farmers' Market. Etc.) |
| Location* | Reorganize **everything**! |
| Curriculum is updated to reflect current trends/needs | |
| Campus grounds* | |
| Student Center * | |

Source: Public Forum November 28, 2012



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# Appendix A: Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis (continued)

| | |
|---|---|
| **WEAKNESSES** | **THREATS** |
| IT infrastructure<br>IT personnel to help | Budget (state &college) |
| Student Services short staff/faculty no-classroom to serve students (transcripts in evaluations & counseling). | Private College (e.g. Ashford) |
| Not positioned to go after none traditional funding e.g. workforce development | Remaining competitive in changing external environment |
| Research staff & Institutionalized Grants (can't promise future funding) | Economy |
| Need to facilitate degree/certification completion<br>Use technology? | Unrealistic Benchmarks (e.g. changing ACCJC Standards & Student Success Task Force) |
| Website improvements | Inability to obtain accurate data |
| Need to use social media more<br>No college email for students<br>Crash system if we try mass email | Level of trust in community |
| Drop process, etc. add survey to get information on why students drop<br>Use colleague more to prompt students | Community support<br>How to rebuild |
| Information on employment outlook for any degree or certificate | Lack of public transportation |
| Veteran Services are weak | |
| Length of basic skills offerings lower start, less likely to make it to college level | |
| Basic skills boot camp for a fee?<br>Shorten the path<br>External sponsor for the experience<br>Cuyamaca example? | |
| More info re: internship role<br>So many students 1st generation who don't know what to do (college basics) | |
| Online (DE) support services | |

Source: Public Forum November 28, 2012



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# Appendix B: Instructional Programs That Might Be Reconsidered

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Annual Average |
|---|---|---|---|---|---|---|---|---|
| Automotive Technolgy - Cert | 6 | 4 | 3 | 5 | 7 | 4 | 29 | 4.8 |
| Paralegal Studies Bil - CT | 5 | 7 | 6 | 6 | 3 | 2 | 29 | 4.8 |
| Occ Health/Safety - CT | 4 | 4 | 5 | 4 | 5 | 6 | 28 | 4.7 |
| Philosophy | 3 | 2 | 7 | 2 | 6 | 8 | 28 | 4.7 |
| Biotechnology - A.S. | 4 | | 1 | 7 | 3 | 8 | 23 | 4.6 |
| Cis: Web Designer | 12 | 8 | 3 | 2 | 1 | 1 | 27 | 4.5 |
| History | 5 | 5 | 4 | 3 | 2 | 7 | 26 | 4.3 |
| Fam Day Care Provide | 10 | 4 | 2 | | 1 | | 17 | 4.3 |
| Family Support Special-Basic | 6 | 3 | 2 | 6 | 4 | | 21 | 4.2 |
| Anthropology | 2 | 3 | 4 | 2 | 3 | 11 | 25 | 4.2 |
| Automotive Performance Systems | 3 | | 5 | 2 | 4 | 6 | 20 | 4.0 |
| Biotechnology - Certificate | 2 | 1 | 1 | 7 | 4 | 9 | 24 | 4.0 |
| Electronics Technician Emp-A.S | 7 | 1 | 6 | 5 | 1 | | 20 | 4.0 |
| Legal Office Assistant-Bilingual - Intensive Training | | | | | 4 | | 4 | 4.0 |
| Medical Assistant: Coding and Insurance---Intermediate | | | | | | 4 | 4 | 4.0 |
| Microcomputer Office and Tech Support Skills---Basic | | | 5 | 3 | | | 8 | 4.0 |
| Surgical Techology - CT | 2 | 2 | 1 | 3 | 3 | 13 | 24 | 4.0 |
| Automotive Technology - A.S. | 3 | 1 | 3 | 5 | 5 | 6 | 23 | 3.8 |
| CIS: Opp/PC Support Spec-Adv | 3 | 1 | 7 | 7 | 1 | 4 | 23 | 3.8 |
| Tele Prod Specialist | 6 | 4 | 2 | 5 | 4 | 2 | 23 | 3.8 |
| French | | 2 | 2 | 6 | 5 | 4 | 19 | 3.8 |
| Graphic Applications | 3 | 4 | 5 | 6 | 1 | | 19 | 3.8 |
| Trans Ed/Prep Nurs'g | 1 | | 3 | 4 | 6 | 5 | 19 | 3.8 |
| Bus Mgt---Sup/Ldrship (basic) | 4 | 6 | 1 | 4 | | | 15 | 3.8 |
| Real Estate - A.S. | 4 | 6 | 3 | 2 | 3 | | 18 | 3.6 |
| Bus Mgmt: Supr/Mgmt | 3 | 4 | | | | | 7 | 3.5 |
| Bus Mgt---Super/Ldrshp Emph | 4 | 5 | 1 | 4 | | | 14 | 3.5 |
| Medical Office Prof (MOP) | 4 | 6 | 2 | | 2 | | 14 | 3.5 |
| Microsoft Office Specialist (MOS)-Basic | 4 | 6 | 3 | | 1 | | 14 | 3.5 |
| MOP: Medical Coding Special | | 5 | 3 | 3 | 3 | | 14 | 3.5 |
| Office Information Systems Professional-Basic | 1 | 6 | 6 | | 1 | | 14 | 3.5 |
| Pre-Sch Teacher Trng | 8 | 1 | 4 | | | 1 | 14 | 3.5 |
| Information Systems | 6 | 2 | 3 | 3 | | 3 | 17 | 3.4 |
| Office Information Systems Professional-Advanced | | 3 | 7 | 1 | 4 | 2 | 17 | 3.4 |
| Architect Tech-Bsc | 5 | 2 | 2 | 4 | 4 | 3 | 20 | 3.3 |
| CIS: Opp/PC Support Spec-CT | 3 | 1 | 6 | 5 | 1 | | 16 | 3.2 |
| Exercise Science | | 1 | 2 | 3 | 5 | 5 | 16 | 3.2 |
| Office Information Systems Professional | | 2 | 5 | 3 | 5 | 1 | 16 | 3.2 |
| Real Estate - CT | 3 | 6 | 3 | 1 | 3 | | 16 | 3.2 |
| CAD & Drafting-Adv | 2 | 3 | 2 | 7 | 1 | 4 | 19 | 3.2 |



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# Appendix B: Instructional Programs That Might Be Reconsidered (continued)

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Annual Average |
|---|---|---|---|---|---|---|---|---|
| Admin Office Asst: Admin Inten Trng---Bil(engl/Span | | | | | | 3 | 3 | 3.0 |
| Bus Mgmt: Ent Sm Bus | 3 | 4 | 5 | 3 | 1 | 2 | 18 | 3.0 |
| Bus Mgmt: Ent/Sm Bus | 2 | 5 | 5 | 3 | 1 | 2 | 18 | 3.0 |
| CIS: Web Flash Designer | 3 | 3 | 5 | 3 | 1 | | 15 | 3.0 |
| Culinary Arts---Cooking and Baking | | | | 1 | 5 | 3 | 9 | 3.0 |
| Electrical and Electronic Test Tech---Intermediate | | | | 3 | | | 3 | 3.0 |
| Electronics Technician Emph-CT | 6 | 2 | 5 | 1 | 1 | | 15 | 3.0 |
| Electronics---Computer Technician | | | | | | 3 | 3 | 3.0 |
| Environmental Mgmt - CT | | 2 | 3 | 2 | 3 | 5 | 15 | 3.0 |
| Fitness Basic Cert. | 3 | 4 | 5 | 1 | 2 | | 15 | 3.0 |
| Infant-Toddler Teach Spec-CT | 6 | 3 | 1 | 2 | | | 12 | 3.0 |
| Leadership and Supervision---Intermediate | | | | | 3 | | 3 | 3.0 |
| MOP: Medical Coding Spec | | 4 | 3 | 3 | 2 | | 12 | 3.0 |
| MOP: Medical Interp/Trans | | 3 | | | | | 3 | 3.0 |
| Criminal Investigator | 5 | 3 | 2 | 1 | 4 | 2 | 17 | 2.8 |
| Marketing - A.A. | 1 | 6 | 2 | 5 | 2 | 1 | 17 | 2.8 |
| Spanish for Bilingua | 2 | 2 | 1 | 5 | 3 | 4 | 17 | 2.8 |
| Crime Scene Investigator | | 1 | 3 | 4 | 4 | 2 | 14 | 2.8 |
| Crime Scene Investigator - CT | | 1 | 3 | 4 | 4 | 2 | 14 | 2.8 |
| Bus Mgt---Sup/Ldrshp (adv) | 3 | 4 | 1 | 3 | | | 11 | 2.8 |
| CAD & Drafting | 2 | 2 | 3 | 4 | 1 | 4 | 16 | 2.7 |
| CIS: Microcomp Emphsi | 6 | | | 1 | 1 | | 8 | 2.7 |
| Legal Office Professional---Bilingual | | 5 | 2 | | 1 | | 8 | 2.7 |
| Web Site Designer/Developer-AS | 1 | 2 | 2 | 3 | 3 | 5 | 16 | 2.7 |
| Bus Mgmt: Intl Bus | 1 | | 4 | | | | 5 | 2.5 |
| CIS: Internet Web-Adv | 4 | | | | 1 | | 5 | 2.5 |
| CIS: Internet Web-Bsc | 4 | | 1 | | | | 5 | 2.5 |
| Comp Sys Intensive Trng-Adv | | | | | 3 | 2 | 5 | 2.5 |
| Computer Science - A.S. | | 4 | 3 | 1 | 2 | | 10 | 2.5 |
| Elec: Compu Tech-Adv | | | | 2 | 3 | | 5 | 2.5 |
| Insurance---Basic | | | 3 | 2 | | | 5 | 2.5 |
| Legal Office Professional-Bilingual | 1 | 3 | 3 | | 3 | | 10 | 2.5 |
| Management---Basic | | 3 | 2 | 4 | 1 | | 10 | 2.5 |
| Management---Intermediate | | | | | 3 | 2 | 5 | 2.5 |
| Medical Interpreter---Basic (English/Spanish) | | | | 2 | 3 | | 5 | 2.5 |
| Surgical Technology - A.S. | 2 | 1 | 1 | 4 | 4 | 3 | 15 | 2.5 |
| Teacher Education Preparation | | | | 2 | 3 | | 5 | 2.5 |
| Landscape Architecture - A.S. | 5 | 1 | 2 | | 2 | 2 | 12 | 2.4 |
| Landscape Architecture - CT | 5 | 2 | 2 | | 2 | 1 | 12 | 2.4 |



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# Appendix B: Instructional Programs That Might Be Reconsidered (continued)

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Annual Average |
|---|---|---|---|---|---|---|---|---|
| AJ: Admin of Justice | 4 | 2 | 1 | | | | 7 | 2.3 |
| Architecture Techology | 3 | 3 | 2 | 3 | 1 | 2 | 14 | 2.3 |
| Bus Mgmt: Fin Service | 5 | 3 | 2 | 1 | 1 | 2 | 14 | 2.3 |
| CIS: Internet Web Dsg | 5 | 1 | | | 1 | | 7 | 2.3 |
| CIS: Microcomp-Adv | 5 | | | 1 | 1 | | 7 | 2.3 |
| Computer Systems Intensive | | | | 1 | 3 | 3 | 7 | 2.3 |
| Culinary Arts: Cooking and Baking---Advanced | | | | 1 | 2 | 4 | 7 | 2.3 |
| Management - A.S. | | | | 2 | 4 | 1 | 7 | 2.3 |
| Travel & Tourism | | 5 | | | 1 | 1 | 7 | 2.3 |
| Web Site Designer/Developer-CT | 2 | 2 | 1 | 2 | 3 | 4 | 14 | 2.3 |
| Music | | 1 | 3 | 2 | 3 | 2 | 11 | 2.2 |
| Bus Mgmt: Fin Serv | 3 | 3 | 2 | 1 | 2 | 2 | 13 | 2.2 |
| Telemedia | 2 | 2 | 1 | 3 | 3 | 2 | 13 | 2.2 |
| Adv Emission Spec | 2 | | 1 | | 2 | 3 | 8 | 2.0 |
| Bus Mgmt: Int'l Bus | 1 | | 3 | | | | 4 | 2.0 |
| Chemistry | | | 3 | | | 1 | 4 | 2.0 |
| CIS---Computer Prog Emphasis on Applications---Basic | | | | 2 | | | 2 | 2.0 |
| CIS: Internetwork Tec | 1 | | 3 | | 2 | 2 | 8 | 2.0 |
| CIS: Internetwork-Adv | 1 | | 3 | | 2 | 2 | 8 | 2.0 |
| CIS: Internetwork-Bsc | 2 | 3 | 3 | 1 | 1 | | 10 | 2.0 |
| Computer Sys Intensive Trg-Bas | | | | 2 | 2 | 2 | 6 | 2.0 |
| Elec Tech Intensive Trg Prog | | 2 | | | | | 2 | 2.0 |
| Electrical and Electronic Test Technician | | | | 2 | | | 2 | 2.0 |
| Financial and Investment Services---Basic | | 2 | 1 | 3 | 2 | | 8 | 2.0 |
| Hospitality: CA---Food Services Management | | | | | 2 | | 2 | 2.0 |
| Hospitality: CA---Food Services Management---Basic | | | | | 2 | | 2 | 2.0 |
| Hospitality: Event and Convention Management---Basic | | | | | | 2 | 2 | 2.0 |
| Intn'l Bus Emphasis---Basic | | | 2 | | | | 2 | 2.0 |
| Legal Office Professional | 4 | 1 | 1 | | | | 6 | 2.0 |
| Legal Office Professional---Bilingual (Engl/Span)-Basic | | | | | 2 | | 2 | 2.0 |
| Legal Office Professional: Criminal Law Specialty | | | 2 | | | | 2 | 2.0 |
| Medical Office Assistant-Biling-Intensive Trng | | | | 2 | | | 2 | 2.0 |
| Medical Office Assistant-Bilingual | 3 | 2 | | 2 | 1 | | 8 | 2.0 |
| Medical Office Professional | | 3 | 2 | | 1 | | 6 | 2.0 |
| Microsoft Office Specialist (MOS)-Advanced | | 3 | 2 | 1 | | | 6 | 2.0 |
| Nursery Occ/Floral Design-CT | | | | | 2 | | 2 | 2.0 |
| Occ Health/Safety - A.S. | 1 | | 1 | 3 | 3 | 2 | 10 | 2.0 |
| Web Flash Dev/Game Animator-CT | 1 | | 1 | | | 4 | 6 | 2.0 |



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# Appendix B: Instructional Programs That Might Be Reconsidered (continued)

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Annual Average |
|---|---|---|---|---|---|---|---|---|
| Broker License | 2 | 1 | 2 | 1 | | 3 | 9 | 1.8 |
| Physics | 1 | | 1 | 1 | 3 | 3 | 9 | 1.8 |
| CIS: Microcomp-Bsc | 3 | 1 | | 1 | 2 | | 7 | 1.8 |
| Culinary Arts---Baking/Pastry | 2 | | | 2 | 2 | 1 | 7 | 1.8 |
| Elec: Computer Tech | | | 1 | 2 | 3 | 1 | 7 | 1.8 |
| Pharmaceutical/Lab Science-CT | | 3 | | 2 | 1 | 1 | 7 | 1.8 |
| Musical-Commercial - A.S. | 1 | 2 | 1 | 1 | 3 | 2 | 10 | 1.7 |
| Musical-Commercial - CT | 1 | 2 | 1 | 1 | 3 | 2 | 10 | 1.7 |
| Office Information Systems Professional-Bilingual-Basic | 1 | 2 | | | | 2 | 5 | 1.7 |
| Dance | 2 | 1 | | 2 | 1 | 2 | 8 | 1.6 |
| Cert Nursing Assist | | 2 | | 1 | | | 3 | 1.5 |
| CIS: Web Database Prog/Adm-Lp | 2 | 2 | | 1 | 1 | | 6 | 1.5 |
| Construction Management-AS | 1 | | 1 | 2 | | 2 | 6 | 1.5 |
| Construction Management-CT | | 2 | | 1 | 1 | 2 | 6 | 1.5 |
| Elec: Compu Tech-Bsc | | 1 | 1 | 1 | 3 | | 6 | 1.5 |
| Elec: Network-Adv | 2 | | | | | 1 | 3 | 1.5 |
| Elec: Network-Bsc | 2 | 1 | | | | | 3 | 1.5 |
| Fam Support Spec---Geriatrics | 1 | 2 | | 2 | 1 | | 6 | 1.5 |
| Infant-Toddler Teacher Spec-AA | 2 | | | 1 | | | 3 | 1.5 |
| Medical Assistant: Administrative | | | | 1 | | 2 | 3 | 1.5 |
| Medical Assistant: Administrative---Intermediate | | | | 1 | | 2 | 3 | 1.5 |
| Medical Assistant: Clinical---Basic | | | 1 | 2 | 2 | 1 | 6 | 1.5 |
| Telemedia Technology - A.S. | | | | | 1 | 2 | 3 | 1.5 |
| Theater Arts---Performance A.A | | | | | 1 | 2 | 3 | 1.5 |
| Travel and Tourism---Basic | | 2 | 1 | | 1 | 2 | 6 | 1.5 |
| Web Flash Dev/Game Animator-AS | | 1 | 2 | 1 | | 2 | 6 | 1.5 |
| Computer Science - A.A. | 1 | 1 | 1 | | 3 | 1 | 7 | 1.4 |
| Humanities | | 1 | 2 | 1 | 1 | 2 | 7 | 1.4 |
| Elec: Network Admin | 2 | | | | 1 | 1 | 4 | 1.3 |
| GIS---Continuing Students and Working Professionals | | 2 | 1 | | 1 | | 4 | 1.3 |
| Mariachi Specialization - CT | 2 | | | 1 | | 1 | 4 | 1.3 |
| Office Information Systems Professional-Bilingual-Adv | 1 | 1 | | | | 2 | 4 | 1.3 |
| Theater Arts (Drama) | 2 | 1 | | 1 | | | 4 | 1.3 |
| Entrepreneurship/Sm Bus - A.S. | | | 2 | 1 | 1 | 1 | 5 | 1.3 |
| International Business---Basic | | 1 | 2 | 1 | | 1 | 5 | 1.3 |
| Spanish | 2 | | 1 | | 1 | 1 | 5 | 1.3 |



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# Appendix B: Instructional Programs That Might Be Reconsidered (continued)

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Annual Average |
|---|---|---|---|---|---|---|---|---|
| Admin Office Asst: Admin Inten Trng---Bil(engl/Span) | | | | | 1 | | 1 | 1.0 |
| African-American Studies | | | | | | 1 | 1 | 1.0 |
| Architect Tech-Adv | 1 | | | | 1 | | 2 | 1.0 |
| Asian-American Stds | | | | | | 1 | 1 | 1.0 |
| Astronomy | | | 1 | | | | 1 | 1.0 |
| CIS---Computer Prog Emphasis on Applications---Advanced | | | | | 1 | | 1 | 1.0 |
| CIS---Computer Programming w/an Emphasis on Applications | | | | | 1 | 1 | 2 | 1.0 |
| CIS: Appl Prgm'g-Cert | 1 | 1 | | | | | 2 | 1.0 |
| CIS: Appl Programming | | 1 | | 1 | | | 2 | 1.0 |
| CIS: Internet | | | 1 | | | | 1 | 1.0 |
| CIS: Internet-Adv | | | 1 | | | | 1 | 1.0 |
| CIS: Internet-Basic | 1 | | 1 | | | | 2 | 1.0 |
| CIS: Systems Prog Emp-A.S. | | 1 | | | | | 1 | 1.0 |
| CIS: Systems Prog Emp-CT | | 1 | | | | | 1 | 1.0 |
| Computer Science - CT | | 1 | | | 1 | | 2 | 1.0 |
| Computer Sys Intense Trng-Adv | | | | 1 | | | 1 | 1.0 |
| Culinary Arts: Cooking Essentials---Basic | | | | 1 | 1 | 1 | 3 | 1.0 |
| Design Technology - CT | 1 | | | 1 | 1 | | 3 | 1.0 |
| Early Interven Teach Spec-AA | | 1 | 1 | | | | 2 | 1.0 |
| Elec: Internetwor-Adv | | | | | 1 | | 1 | 1.0 |
| Elec: Internetwor-Bsc | | 1 | | | 1 | | 2 | 1.0 |
| Elec: Internetworking | | | | | 1 | | 1 | 1.0 |
| Electrical Test Technician - Intensive Training (CT) | | | | 1 | | | 1 | 1.0 |
| Electrical Test Technician---Basic | | | | 1 | | | 1 | 1.0 |
| Entrepreneurship and Small Business---Basic | | 1 | 1 | 1 | | | 3 | 1.0 |
| Entrepreneurship and Small Business---Intermediate | | | 1 | 1 | | 1 | 3 | 1.0 |
| Environmental Mgmt - A.S. | 1 | 1 | 1 | 1 | 1 | | 5 | 1.0 |
| Family Childcare | | | 1 | | | | 1 | 1.0 |
| Family Law Specialty (Bilingual) | | | 1 | | | | 1 | 1.0 |
| Geographic Information Science---GIS Technician | | | 1 | | | | 1 | 1.0 |
| Geography | 1 | | | | 1 | 1 | 3 | 1.0 |
| Golf/Sports Turf Mgmt - A.S. | 1 | | | | | | 1 | 1.0 |



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# Appendix B: Instructional Programs That Might Be Reconsidered (continued)

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Annual Average |
|---|---|---|---|---|---|---|---|---|
| Hospitality: CA---Food Services Management---Advanced | | | | | 1 | | 1 | 1.0 |
| Hospitality: Culinary Art---Baking & Pastry Mgmt---Basic | | | | | 1 | | 1 | 1.0 |
| Hospitality: Culinary Arts---Baking & Pastry Management | | | | | 1 | | 1 | 1.0 |
| Hospitality: Culinary Arts/Baking & Pastry Mgmt-Advanced | | | | | 1 | | 1 | 1.0 |
| Hospitality: Event and Convention Management | | | | | | 1 | 1 | 1.0 |
| Hospitality: Event and Convention Management---Advanced | | | | | | 1 | 1 | 1.0 |
| Hospitality: Hotel Operations Management | | | | | | 1 | 1 | 1.0 |
| Hospitality: Hotel Operations Management---Advanced | | | | | | 1 | 1 | 1.0 |
| Hospitality: Hotel Operations Management---Basic | | | | | 1 | 1 | 2 | 1.0 |
| Immigration Law Specialty (Bilingual) | | | 1 | | | | 1 | 1.0 |
| Inf-Tod Teacher Trng | | 1 | | | | | 1 | 1.0 |
| International Business - A.S. | | | | 1 | 1 | | 2 | 1.0 |
| International Logistics and Transportation---Basic | | | | | | 1 | 1 | 1.0 |
| LA: Emphasis in Comm in the Engl Lang (Option 1) | | | | | 1 | 1 | 2 | 1.0 |
| Landscape Design | 1 | | | | 1 | | 2 | 1.0 |
| Landscape Occupations - CT | 1 | 1 | | | | 1 | 3 | 1.0 |
| Landscape Occupations- A.S. | 1 | 1 | | | | | 2 | 1.0 |
| Leadership and Supervision | | 1 | | | | | 1 | 1.0 |
| Leadership and Supervision---Basic | | | | 1 | | | 1 | 1.0 |
| Legal Interpretation/Translation Specialty (Bilingual) | | 1 | 1 | 1 | 1 | | 4 | 1.0 |
| Legal Office Professional-Bil: Immigration Law Specialty | | | 1 | | 1 | | 2 | 1.0 |
| Legal Office Professional: Immigration Law Specialty | | | | 1 | | | 1 | 1.0 |
| LOP-BIL: LEGAL INTER/TRANS SP | | | 1 | 1 | 1 | | 3 | 1.0 |
| Mariachi Specialization - A.A. | | | | 1 | 1 | 1 | 3 | 1.0 |
| Med Office Assistant | 1 | | | | | | 1 | 1.0 |
| Medical Assistant: Clinical | | | | 1 | | | 1 | 1.0 |
| Medical Assistant: Clinical---Intensive Training | | | | | 1 | | 1 | 1.0 |
| Medical Assistant: Clinical---Intermediate | | | | 1 | | | 1 | 1.0 |
| Medical Interpreter---Intermediate (English/Spanish) | | | | | 1 | | 1 | 1.0 |
| Medical Office Management | | | | 1 | | | 1 | 1.0 |
| Medical Office Management---Advanced | | | | 1 | | | 1 | 1.0 |
| Medical Office Management---Basic | | | | 1 | | | 1 | 1.0 |
| Microcomputer Office and Technical Support Skills | | | | | | 1 | 1 | 1.0 |
| Microsoft Certified Systems Intensive Training---Basic | | | | | 1 | | 1 | 1.0 |
| MOP: Medical Insurance Spec | 1 | 1 | 1 | 1 | | | 4 | 1.0 |
| MOP: Medical Word Proc Spec | | | 1 | | | | 1 | 1.0 |



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# Appendix B: Instructional Programs That Might Be Reconsidered (continued)

| Program | 2006-2007 | 2007-2008 | 2008-2009 | 2009-2010 | 2010-2011 | 2011-2012 | Total | Annual Average |
|---|---|---|---|---|---|---|---|---|
| Office Information Systems Professional-Bilingual | 1 | 1 | | | | | 2 | 1.0 |
| Payroll Clerk | | | | 1 | | | 1 | 1.0 |
| Pharmaceutical/Lab Science-AS | | 1 | 1 | 1 | | 1 | 4 | 1.0 |
| Recreation/Leisure Studies-AA | | | | 1 | 1 | | 2 | 1.0 |
| Reggio Mast Teach Sp | | | | 1 | | | 1 | 1.0 |
| Salesperson License | 1 | | 1 | 1 | | | 3 | 1.0 |
| Telemedia Technology - CT | | | | | 1 | | 1 | 1.0 |
| Travel and Tourism---Advanced | | 1 | | | 1 | | 2 | 1.0 |
| Virtual Office Professional---Basic | | | | | | 1 | 1 | 1.0 |
| Web Strfrnt Bldg MIVA Basic | | | 1 | | | | 1 | 1.0 |
| Women Studies | 1 | | | | | | 1 | 1.0 |
| Word Processing Specialty | | 1 | | | | | 1 | 1.0 |

Source: SWC Office of Institutional Research; analysis by Cambridge West Partnership, LLC

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# Appendix C: Are They Really Ready to Work? Employer Evaluations of New Graduates on Very Important Knowledge and Applied Skills

| **High School Graduates** | | | | |
|---|---|---|---|---|
| Deficiency | % of Employers Rating | | Excellence | % of Employers Rating |
| Written Communications | 80.9% | | No skills are on the excellence | |
| Professionalism/Work Ethic | 70.3% | | list for new entrants with | |
| Critical Thinking/Problem Solving | 69.6% | | a high school diploma. | |
| Oral Communications | 52.7% | | | |
| Ethics/Social Responsibility | 44.1% | | | |
| Reading Comprehension | 38.4% | | | |
| Teamwork/Collaboration | 34.6% | | | |
| Diversity | 27.9% | | | |
| Information Technology Application | 21.5% | | | |
| English Language | 21.0% | | | |
| | | | | |
| | | | | |
| **Two-Year College/Technical School Graduates** | | | | |
| Deficiency | % of Employers Rating | | Excellence | % of Employers Rating |
| Written Communications | 47.3% | | Information Technology Application | 25.1% |
| Writing in English | 46.4% | | | |
| Lifelong Learning/Self Direction | 27.9% | | | |
| Creativity/Innovation | 27.6% | | | |
| Critical Thinking/Problem Solving | 22.8% | | | |
| Oral Communications | 21.3% | | | |
| Ethics/Social Responsibility | 21.0% | | | |
| | | | | |
| | | | | |
| **Four-Year College Graduates** | | | | |
| Deficiency | % of Employers Rating | | Excellence | % of Employers Rating |
| Written Communications | 27.8% | | Information Technology Application | 46.3% |
| Writing in English | 26.2% | | Diversity | 28.3% |
| Leadership | 23.8% | | Critical Thinking/Problem Solving | 27.6% |
| | | | English Language | 26.2% |
| | | | Lifelong Learning/Self Direction | 25.9% |
| | | | Reading Comprehension | 25.9% |
| | | | Oral Communications | 24.8% |
| | | | Teamwork/Collaboration | 24.6% |
| | | | Creativity/Innovation | 21.5% |

Source: Jill Casner-Lotto, Linda Barrington, Mary Wright. *Are They Really Ready to Work?* The Conference Board. New York, October 2006



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