**Business, Computer Science and Applied Technologies**

Our Division includes viable programs that fulfill the needs of many types of students. The needs range from transferring to a 4-year institution to the retraining of job skills. Five out of the top six jobs pursued are being awarded by the Division1. In the Academic year 2012-2013, the Division of Business, Computer Science, and Applied Technologies awarded 194 Associate Degrees (13% of the degrees awarded by the College) and 319 Certificates (54% of the certificates awarded by the College.)

For the Business, Computer Science, Accounting, CDI, CAOS, and Real Estate programs, there was a drop of 5.8% drop in enrollment. There was also a 4% drop in productivity.

The overall success rate was up by 1% (to 71%). Success rates for both targeted and non-targeted populations were up by 1% (60% for targeted and 71% for non-targeted.) However, it should be noted that the targeted population increased by 2% while the non-targeted population decreased by 4%. With the exception of Filipino population, the success rates of all other reported ethnic groups showed noticeable improvement with Native American improving by 7% (from 66% to 73%). Although the African American population success rates improved by 3%, it is still below 60%. However please note that the success rate for this population continues to improve, from 39% for 2010-2011and 51% for 2011-2012, to54% for 2012-2013.

For the Applied Technologies, there was a 2.7% drop in enrollment. The overall success rate was at 83%, which is a drop of 3% from 2011-2012. The targeted population success rates also dropped from 83% to 80%. However, it should be noted that there was an enrollment increase of 8%. For the non-targeted groups, the success rate dropped from 87% to 85% and the enrollment dropped by 5%. With the exception of Pacific Islanders, success rates for all other ethnic groups were 67% and 88%. There was a decline for all declared categories. The Pacific Islander success rates does not provide significant data due to the fact that the population was very small (3 enrolled, 1 passed and 2 withdrew). However, a 16% drop in the success rate of the African American and 14% of the Native American populations are of concern.

In closing the equity gap, the Division recognized the need to continue the assessment of Program Learning Outcomes (PLOACs) and the assessment of Student Learning Outcomes (SLOACs). **100% of both SLOACs and SLOACs have been completed.** Although the individual departments presented plans to address the success rate issues in their CPR reports, the issues will be discussed and addressed in the Division meetings.

**Accounting:**

Accounting Department: A decline of approximately half a percent (9.5%) in enrollment is noted. There was a reduction of 5% of the sections being offered. The enforcement of prerequisites continues to have a major impact on enrollment especially in ACCT 1C. Another factor is the unmet higher demand for online courses. The Department is currently looking at offering more advanced accounting courses online to meet this demand.

The productivity rate also dropped to 563 mostly due to scheduling issues which have been corrected (spring 2014 is 6% higher than that of spring 2013.) The Accounting Department targeted population represented approximately 20% (1181/5968) of our overall students in 2012-13, up from about 17.8% in 2011-12 and 16% in 2010-11. It should be noted that during that period we have had a 9.5% decline in overall students, so our targeted population has risen in real terms, as well as, in the percent of the whole. The overall success rate is up by 1% to 74%. Although the success rate of the non-targeted group is up by 2% (at 78%), the success rate for targeted groups has gone down by 1%. It is currently at 57%. As noted in the Department CPR, various measures are being taken to improve the success rates.

The Bureau of Labor Statistics projects a 13.1 percent job growth for Accountants between 2012 and 2022, in line with the average for all professions. This means an additional 166,700 accounting and auditing jobs will need to be filled during that period of time. Demand for thorough financial documentation is expected to increase in response to the recent financial crisis and subsequent financial regulations. As a result, forensic services have become one of the fastest-growing practice niches among CPA firms. Due to the current state of the economy and an increase in incidents of fraud, Accountants with expertise in forensic services are in high demand. The Department is also working on revising its forensic course offerings. The hiring of new faculty with expertise in cloud computing and enterprise systems should allow the department to incorporate new technologies into existing courses, which could, in return, increase enrollment and enhance productivity.

**Business:**

In 2012, the Business Department enrollment increased by 2.2%. Although productivity dropped by 8%, it is still at a high level of 680. There was an increase of 205 students (14% growth on a base of 1,433 students) in the targeted population enrolled in the program from 2011/12 to 2012/13. The percentage of the student population represented by the target groups increased from 28% to 30%.

The success rate of the targeted populations dropped by 3% to 57%.The faculty believes that was due to the increase in course offerings and large class size, which makes it difficult to give individual attention and create student engagement. Measures to improve success rates are discussed in the Department CPR report. The addition of two new faculty and the update of the curriculum is showing significant improvement to the enrollment. The Spring 2014 enrollment shows an increase of approximately 12% compared to Spring 2013.

According to the Department of Labor, employment in the Business field is expected to increase by 4-19% from 2012 to 2022.

**Computer Science:**

As reported in the CIS Comprehensive Program Review, for the entire academic year of 2012-13 the CIS Department was in “swing space” (temporary facilities) while the ATC Building was being remodeled. Half of the classes were held where a minimum of a ten (10) minute walk from the CIS lab was required. Half of the classes used slow laptops making “flipping the classroom” type of learning nearly impossible. In addition, in order to squeeze all CIS class sections into half the usual number of rooms, classes swapped between classrooms equipped with computers for each student to regular classrooms without any computers for students. These facility constraints coupled with the layoff of an Instructional Associate, a 4% increase in overall enrollment and a 16% increase in targeted group enrollment, were expected to result in a significant drop in student success (approximately 10%). Thankfully, due to the hard work and dedication on the part of the faculty and staff, the drop in success rates came way below expectations. The success rate for non-targeted groups dropped by 2%, and there was a 4% drop for the targeted groups.

With the return to ATC and the restructuring of the tutoring program, the success rate could possibly improve, however, I must point out that the increase in enrollment (44.4% spring 2014 compared to spring 2013) and the loss of a second Lab Coordinator due to retirement could hamper the effort to improve the success rate and may cause it to further drop. Therefore, I request an authorization to hire an Instructional Associate who possesses an in-depth knowledge of programming languages. The Department effectively and strategically plans the quarterly schedule as is evidenced by a productivity rate of 640 and an overall success rate of 70%.

The Computer Science Department reengineered several of its certificates and introduced new courses to the curriculum, several based on current IT needs including cyber security, cloud computing, and mobile app development. During the academic year of 2013-14 the CIS Department completed the implementation of delivering its core courses in the object oriented language of C++, a significant change from the procedural language of C. This change to an object oriented language together with offerings of advanced courses such as Advanced C++ and Advanced Programming: Series 86 and IA32/Pentium Assembly Language, offers our students transferring to a four-year institution the opportunity to be more than adequately prepared for the academic challenges they will meet.

The job market continues to gain momentum. According to the 2014 job survey by Forbes magazine, four (4) out of the top ten (10) surveyed jobs were computer science related. The top 2014 job was Software Developers (Applications and Systems Software) with a total employment in 2013 of 1,042,402 jobs and median hourly earnings of $45.06. This is more than twice the growth of the second ranking job and almost $16 higher in hourly earnings.

**Real Estate:**

2012-2013 shows a 5.4% increase in enrollment. The productivity was at 659 which is up by 5% compared to 2011-2012. While the overall success rate stayed at 71%, the non-success rate dropped by 3%. Although, the success rate of the targeted population was at 53%, which is the same as 2011-2012, it should be noted that there was a 25% increase in the targeted population in 2012-2013. This translates to an overall improvement in the targeted population success rate. As indicated in the Program CPR, the Department plans on utilizing the Tutorial Center to a greater degree and working toward a real estate specific tutoring group for the Department. Although the overall number of California real estate sales licenses dropped by 5% in Jan 2014, the strong Silicon Valley economic recovery has created a quick market recovery and, as a result, demand for brokers. This is evident by an increase of enrollment. Spring 2014 shows an increase of 23% over the spring 2013. For a small program with an annual FTEF of 1.1, it should be noted that this program is very productive.

**Auto Tech:**

The Auto Tech enrollment continues to have a small but steady increase in enrollment. The overall success rate continues to be strong, currently at 82%. The targeted population enrollment had an increase of 19% over the prior year. The success rate for targeted populations has been at 79% for the past 3 years. The non-targeted population was at 82% for 2012-2013. As noted in the Program CPR, The Automotive Technology Department will continue to focus on direct student intervention and counseling to reduce the equity gap, as well as, encouraging students to enhance their college readiness by using the resources of the College. The Auto Tech program is well recognized by both the industry and other academic institutions and continues to enjoy very strong ties with both. Since the Faculty are aware of the increasing demand for alternative transportation fuel technologies and the training requirements associated with it over the next five years, they are working on updating their curriculum to provide students with the needed skills. The Department was awarded a grant of approximately $160K for developing an alternative fuel curriculum. In addition, they are working closely with San Jose State University to develop those skills.

According to the U.S. Bureau of Labor Statistics, the average automotive technology related jobs growth rate for 2012 to 2022 is forecasted to be approximately 9 percent.

**MCNC & CDI:**

The MCNC enrollment shows a decline of approximately 17% and a productivity decline of5%. Explanations for the decline in enrollment are noted in the Program CPR. There was also a decline of 5.5% in the number of sections offered. The 2012-2013 productivity was 549. The overall success rate is at 84%, with the target population at 80% and non-targeted population at 86%.

The current economic recovery has witnessed a welcome return in manufacturing job growth.  From January 2010 to April 2012, manufacturing employment has expanded by 489,000 jobs, or 4%.

According to the Bureau of Labor Statistics, the overall employment of machinists and tool and die makers is projected to grow 7 percent from 2012 to 2022, slower than the average for all occupations. Employment growth will vary by specialty.

Employment of machinists is projected to grow 9 percent from 2012 to 2022, about as fast as the average for all occupations. Despite improvements in technologies, such as computer-numerically controlled (CNC) machine tools, autoloaders, high-speed machining, and lights-out manufacturing, machinists will still be required to set up, monitor, and maintain these automated systems.

In addition, employers will continue to need machinists, who have a wide range of skills and are capable of performing modern production techniques, in a machine shop. Manufacturers will continue to rely heavily on skilled machinists, as they invest in new equipment, modify production techniques, and implement product design changes more rapidly.

The MCNC Program is one of few programs in US that provide students with the skills needed to meet the above demands. The main strengths of the MCNC Program are our close ties to industry, as well as ties to high school and four-year college programs. Major companies such as TESLA, NASA, Grumman Marine Division, Loral Space Systems, Lockheed Space Systems, and Apple Inc., as well as local manufacturing job shop facilities, are closely involved with our Advisory Committee. These companies depend on the MCNC Program to enhance the skills of their existing and future employees in high tech manufacturing.

The CDI program is in the process of being phased into the MCNC program.

(<http://education.yahoo.net/articles/hot_degrees_in_2014.htm>)

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| **Measure C Requests** | | | | | | |
| **Item** | **DEPT** | **Quantity** | **ITEM/S BEING REQUESTED** | **PURPOSE** | **UNIT COST** | **$ TOTALS** |
| 1 | Faculty | 15 | Instructor Desktop Refresh | Instruction | $ 1,500.00 | $ 22,500.00 |
| 2 | Faculty | 40 | IPads Faculty Classroom Instruction | Instruction | $ 500.00 | $ 20,000.00 |
| 3 | Division | 1 | Conference Room Projector in L13 | Instruction | $ 3,500.00 | $ 3,500.00 |
| 4 | Division | 1 | Whiteboard in Conference room 203D | Instruction | $ 400.00 | $ 400.00 |
| 5 | Division | 1 | Conference Room Projector in ATC 203D | Instruction | $ 3,500.00 | $ 3,500.00 |
| **Total** | | | | | | **$49,900.00** |
| 1 | CS | 4 | Second overhead projector and screen for AT 204, 205, 311, 312 so Instructor can develop code and simultaneously show slides. | Instruction | $ 3,500.00 | $ 14,000.00 |
| 2 | CS | 50 | Smartphones fr Mobile App Courses | Instruction | $ 250.00 | $ 12,500.00 |
| 3 | CS | 1 | Projector ins ATC xxx Special projects Room | Instruction | $ 3,500.00 | $ 3,500.00 |
| 4 | CS | 30 | IPad for Classroom Instruction | Instruction | $ 400.00 | $ 12,000.00 |
| 5 | CS | 4 | Logitech Professional Presenter R800 with Green Laser Pointer | Instruction | $ 80.00 | $ 320.00 |
| 6 | CS | 4 | Wireless USB PC Remote Control Mouse for PC | Instruction | $ 35.00 | $ 140.00 |
| **Total** | | | | | | **$ 42,460.00** |

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| **Measure C Requests** | | | | | | |
| **Item** | **DEPT** | **Quantity** | **ITEM/S BEING REQUESTED** | **PURPOSE** | **UNIT COST** | **$ TOTALS** |
| 1 | MCNC | 3 | Vertical Milling Machine | Instruction | $ 15,500.00 | $ 46,500.00 |
| 2 | MCNC | 3 | Engine Lathe | Instruction | $ 28,000.00 | $ 84,000.00 |
| 3 | MCNC | 1 | HAAS 5 Axis CNC Mill | Instruction | $ 125,000.00 | $ 125,000.00 |
| 4 | MCNC | 1 | Horizontal Band Saw | Instruction | $ 18,000.00 | $ 18,000.00 |
| 5 | MCNC | 1 | Surface Grinder | Instruction | $ 18,000.00 | $ 18,000.00 |
| 6 | MCNC | 1 | CNC Electrical Discharge Machine | Instruction | $ 120,000.00 | $ 120,000.00 |
| **Total** | | | | | | **$ 411,500.00** |
| 1 | Auto Tech | 1 | Transmission Dynamometer | Instruction | $ 110,000.00 | $ 110,000.00 |
| 2 | Auto Tech | 1 | surface roughness tester | Instruction | $ 7,500.00 | $ 7,500.00 |
| 3 | Auto Tech | 12 | SOLUS Ultra® Full-function Scan Tool | Instruction | $ 3,895.00 | $ 46,740.00 |
| 4 | Auto Tech | 1 | new computer controlled cylinder honing machine. | Instruction | $ 60,000.00 | $ 60,000.00 |
| 5 | Auto Tech | 2 | Air Conditioning Equipment | Instruction | $ 10,000.00 | $ 20,000.00 |
| 6 | Auto Tech | 12 | Digital Multi-Meter Fluke 88V | Instruction | $ 419.00 | $ 5,028.00 |
| 7 | Auto Tech | 1 | Workbenches and Storage Cabinets | Instruction | $ 51,300.00 | $ 51,300.00 |
| 8 | Auto Tech | 12 | VERUS® PRO Diagnostic and Information System | Instruction | $ 9,749.00 | $ 116,988.00 |
| 9 | Auto Tech | 1 | updated valve grinder | Instruction | $ 15,300.00 | $ 15,300.00 |
| 10 | Auto Tech | 1 | new computer controlled cylinder boring machine. | Instruction | $ 60,000.00 | $ 60,000.00 |
| 11 | Auto Tech | 1 | Updated Wheel Balancer | Instruction | $ 8,000.00 | $ 8,000.00 |
| **Total** | | | | | | **$ 500,856.00** |
| 1 | Business | 1 | Overhead Projector to replace the overhead in ADMN 102 | Instruction | $ 3,500.00 | $ 3,500.00 |
| 2 | Business | 1 | Scantron Machine | Instructions | $ 8,500.00 | $ 8,500.00 |
| **Total** | | | | | | **$ 12,000.00** |
| 1 | Accounting | 1 | Overhead Projector to replace the overhead in L76 | Instruction | $ 3,500.00 | $ 3,500.00 |
| 2 | Accounting | 1 | Overhead Projector to replace the overhead in L74 | Instruction | $ 3,500.00 | $ 3,500.00 |
| 3 | Accounting | 1 | White Boards to replace the chalkboards in L81 | Instruction | $ 2,500.00 | $ 2,500.00 |
| 4 | Accounting | 1 | White Boards to replace the chalkboards in L84 | Instruction | $ 2,500.00 | $ 2,500.00 |
| 5 | Accounting | 1 | Replace Computer in L76 | Instruction | $ 1,500.00 | $ 1,500.00 |
| **Total** | | | | | | **$ 13,500.00** |