Welding Technology Program Review

Welding

Cerro Coso Community College

David Villicana

9/28/2017

Executive Summary

The Welding Technology program is offered solely on ground. We have began dual enrollment and adult education opportunities with Tehachapi, Mojave, and Trona high schools. Since the last program review in 2012, the degree and certificate have only gone through minor changes. The first change was to have the welding department begin teaching INDE C060, which was previously MATH C056. This change came after the department's advisory committee made the recommendation. The second change was the addition of a pipe and tube welding course WELD C204. This course was requested by the department's advisory committee.

The Welding program has many strengths and is a necessary skill to learn for anyone seeking employment in the welding industry or simply looking to learn welding as a skill. Student success and retention rates are very high. Many students are taking the welding courses as a job requirement, so their employer is requiring them to succeed. Students are in constant contact with the department after leaving the program and receiving a good-paying job. While the data may show the number of students receiving employment is lower than the state or district, surveys given within the courses show that not all students are seeking employment, some simply want to make their own repairs within welding. Faculty works with students equally regardless of their reason for taking the courses. Full-time and adjunct instructors work together to assess and teach the courses offered. The department continues to have strong relationships with local members of industry which are part of the department's advisory committee. The advisory committee meets twice per year.

Although the Welding program does have many strengths, there is always room for improvement. The number of declared majors has been cyclic since the last program review. Enrollment was quite high in 2015 but took a large decline in 2016. It is unclear why this large of a decrease happened. Marketing and community outreach will be at the forefront of the department's upcoming strategies. The department would like to hold its own outreach days where the community can come spend a few hours working and talking with instructors. One of these days would directed more towards women interested in welding. By doing this, we may be able to capture more students.

Part 1 - Relevance

1. Catalog Description

WELDING TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE: This course of study trains students in multiple welding processes and is designed to prepare them for an entry level welding position in diverse fields. Safe and clean work habits are practiced and personal protective equipment is required. Career areas in which welders work include: mining, manufacturing, marine welding, ship building, metal art sculpting, machine shops, construction, railroads, automotive, as well as the aircraft, aerospace and renewable energy industries. Courses required for the Associate degree major at Cerro Coso Community College may not be the same as those required for a major at a four-year school. If you do plan to transfer, consult a counselor and visit www.assist.org to identify the courses needed for the major at your transfer school and to develop a plan that will best meet your goals. You must complete a minimum of 60 units, including the courses listed in the major and general education requirements, with an overall GPA of 2.0 or better, and a grade of "A," "B," "C," or "P" in all courses for the major. A minimum of 12 units must be completed at Cerro Coso Community College.

The catalog description is concise and describes the program's objectives. Students can expect to learn the skills needed to obtain gainful employment as an entry level welder or simply learn welding as an added skill. Although the catalog description states that a "P" can be used in the major, this is an error, and the program will undergo revision in the future.

2. Program Learning Outcomes

Welding Technology Associate Degree and Certificate of Achievement:

A. Demonstrate competency in major welding processes used in industry.
B. Apply the use of hand tools and shop equipment to fabricate projects.
C. Recognize and interpret technical drawings in the planning and fabrication of projects.
D. Demonstrate appropriate workplace safety policies and procedures during welding and fabrication operations.
E. Apply mathematical concepts to solve problems related to an industrial/technical environment.

Welding Processes Certificate of Achievement:

A. Demonstrate competency in major welding processes used in industry.
B. Apply welding processes and the use of hand tools and shop equipment to fabricate projects.
C. Accurately fabricate items from technical drawings using appropriate math skills.
D. Apply and practice workplace safety policies and procedures while learning welding and related skills

All program learning outcomes are reviewed by the department's advisory committee and meet the wide variety of skills needed to be successful as an entry level welder. The program learning outcomes are realistic and achievable. The artifacts for assessing the program learning outcomes are mostly projects designed to simulate skills needed on the job.

3. Courses/Program Matrix

Welding Technology AS/Certificate of Achievement (23 units)

Students must complete all of the following courses (23 units)

- WELD C101 – Oxyacetyle Welding   3 units
- WELD C102 – Shielded Metal Arc Welding   2 units
- WELD C200 – Gas Metal Arc Welding   2 units
- WELD C203 – Gas Tungsten Arc Welding   2 units
- WELD C204 – Pipe and Tube Welding   3 units
- WELD C210 – Welding Fabrication   3 units
- MCTL C107 – Tool and Equipment Operation   3 units
- DRFT C108 – Reading Technical Drawings   2 units
- INDE C060 – Mathematical Applications for Trades   3 units

Welding Processes Certificate of Achievement (12 units)

Students must complete all of the following courses (12 units)

- WELD C101 – Oxyacetylene Welding   3 units
- WELD C102 – Shielded Metal Arc Welding   2 units
- WELD C200 – Gas Metal Arc Welding   2 units
- WELD C203 – Gas Tungsten Arc Welding   2 units
- WELD C210 – Welding Fabrication   3 units

Program Matrix
Courses Program Learning Outcomes

	A	B	C	D	E
DRFT C108		X		X	
INDE C060				X	
MCTL C107		X		X	
WELD C101	X		X		
WELD C102	X		X		
WELD C200	X		X		
WELD C203	X		X		
WELD C204	X				
WELD C210	X	X			

The Welding Processes Certificate gives students the skills needed in the 4 major welding processes used throughout industry. Due to the extreme importance of safety throughout the entire program, there is a must pass safety exam given after the appropriate lecture period in the WELD C101 class. If a student

does not pass this exam, they may not proceed and will be dropped from the course with the option to come back the following semester and try again. In the capstone course (WELD C210), students will be able to use the skills they have learned in the previous courses to design and build projects.

The Welding Technology Certificate of Achievement expands on the first level certificate, offering technical drawings, tool and equipment, math for trades, and pipe welding classes. Throughout the department's advisory committee meetings, industry was asking for the addition of a pipe welding class. This addition of WELD C204 allows students to gain the knowledge of an entry level pipe welder. DRFT C108 gives students an opportunity to see and understand real world blueprints to construct simple and complex designs. MCTL C107 teaches students to use not only basic hand tools but also tools that you would not typically see on a daily basis. INDE C060 (previously MATH C056) used to be taught by the math department. After discussion with the advisory board, it was decided that the welding department would take over this course. The math department did a great job teaching the class, but when a trade expert can teach the theory along with real world experiences, the subject matter can be more easily understood.

4. Program Pathway

Recommended pathways

Welding Processes Certificate of Achievement – 12 units

Complete all of the following courses	Spring 1	Fall 1	Spring 2	Fall 2
WELD C101	X	X	X	X
WELD C102	X	X	X	X
WELD C200	X	X	X	X
WELD C203	X	X	X	X
WELD C210	X	X	X	X

All the above courses are offered solely on ground. The Welding department has been working with Tehachapi, Trona, and Mojave high schools to offer dual enrollment and adult education opportunities. As shown above, all the core courses are offered every semester to allow more options for students. The Welding Processes Certificate of Achievement can be completed in three semesters. This certificate used to take five semesters to complete. The department worked to offer more sessions each semester to allow students the opportunity to complete the certificate sooner. The department cannot reduce the amount of time to complete the program anymore. Each course is a building block to the next course. Semester one the student may take WELD C101. Semester two the student can take WELD C102 and WELD C200. The third semester the student may take WELD C203 and WELD C210.

Welding Technology Certificate of Achievement – 23 units

Complete all of the following courses	Spring 1	Fall 1	Spring 2	Fall 2
DRFT C108		X		X
INDE C060	X		X	
MCTL C107		X		X
WELD C101	X	X	X	X
WELD C102	X	X	X	X
WELD C200	X	X	X	X
WELD C203	X	X	X	X
WELD C204	X	X	X	X
WELD C210	X	X	X	X

Students can take the courses listed in the Welding Processes Certificate along with the DRFT C108, INDE C060, and MCTL C107 and earn the Welding Technology Certificate of Achievement. These courses are currently only offered once per calendar year. There is talk within the department to offer these courses every semester to give students more options. While it may be a heavier workload, students can achieve the Welding Technology Certificate in three semesters as well. All the courses offered in the department are offered in the evening to accommodate the working student. We have tried to offer an earlier afternoon cohort model and that did not work as there was low enrollment.

Welding Technology Associate in Science Degree (AS) – 60 units

Complete all of the following courses	Spring 1	Fall 1	Spring 2	Fall 2
DRFT C108		X		X
INDE C060	X		X	
MCTL C107		X		X
WELD C101	X	X	X	X
WELD C102	X	X	X	X
WELD C200	X	X	X	X
WELD C203	X	X	X	X
WELD C204	X	X	X	X
WELD C210	X	X	X	X

4. Conditions of Enrollment

There are no conditions of enrollment for program entrance. WELD C101 is the prerequisite for all the welding courses. WELD C102 and WELD C200 are prerequisites for WELD C203 and WELD C210. WELD C102 is a prerequisite for WELD C204. These prerequisites are put in place to allow students to be successful in the following semester.

Part 2 – Appropriateness

1. Connection to College Mission

The mission of Cerro Coso Community College is to provide tailored programs and equitable services to the students in the communities and rural areas we serve. We demonstrate a conscious effort to produce and support student success and achievement through traditional and distance delivery.

To accomplish this mission we will provide:

- degrees and certificates in transfer and career technical education
- remedial instruction
- comprehensive support services
- learning opportunities that develop ethical and effective citizenry, and
- continuing education that is compatible with the institution's primary mission

As a career technical education program, the Welding program aligns with the college mission by offering marketable career technical skills to students in a field that continues to grow locally and nationwide and that still has a scarcity of job applicants in all areas in industry. The Welding program also gives those students, not seeking employment, the opportunity to learn a new skill. The completion of the Welding Technology Associate Degree or Certificate of Achievement qualifies students for employment in many areas such as: mining, manufacturing, marine welding, ship building, metal art sculpting, machine shops, construction, railroads, automotive, as well as the aircraft, aerospace and renewable energy industries.

The program is offered solely on campus. The practical nature of the courses is needed to simulate working environments and situations students may face in industry. This is all done in a lab environment on campus where students can be closely monitored to ensure proper safety measures and techniques are being followed. Instructors, who maintain personal currency of knowledge and skill in the welding industry, apply best practices of providing prompt and meaningful feedback to students and maintain regular and effective contact with students throughout the week.

2. Determination of Student Needs

The primary resource for determining skill requirements is the program's advisory committee, which consists of mostly local industry experts, small business owners, and faculty. Faculty attends annual trade shows to stay current on new technology in the field.

Labor market information is gathered from Economic Modeling Specialists, Inc. (EMSI) and the California Economic Development Department (EDD). EMSI and the EDD publish information about projected job outlook and wages.

Student needs are also assessed on an on-going basis through assessment of student learning outcomes. Department faculty determine authentic and reliable methods for assessing outcomes, develop rubrics for assessing outcomes, score student artifacts, and discuss results.

Tutoring for students can be quite difficult as we only have one welding lab and when one class is no longer using the lab another class may be. Students are given the opportunity to come in and work with the instructors during their down time. A lot of time faculty office hours are taken up working individually with students who may be struggling. For the classes in the program that are not taught in a lab, the department has utilized the Learning Assistance Center (LAC).

Job development support is provided by Job Development Specialist at the Ridgecrest campus. He networks with local employers to learn about internship and employment opportunities for students and graduates, and he prepares students for employment application and interviews.

The department serves a mixed population of students. The majority of our students take the welding program to either receive gainful employment or to increase their skills at their current job. There is another population of students who are either retired or not seeking new employment. These students are strictly looking to learn welding as an added skill or to help them make home projects or needed repairs themselves. The department makes sure to reach both populations to help them with their goals regardless if they are seeking employment or not.

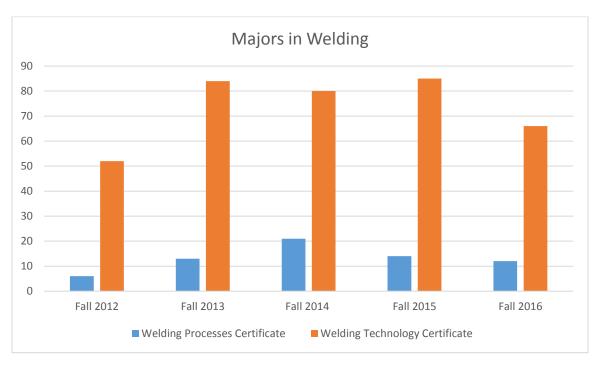### 3. Place of Program in Curriculum/Similar Programs

There are no other similar programs in Cerro Coso's service area. Bakersfield College is the closest college that offers a welding program. There is no similar welding program at Porterville College. Cerro Coso's Welding program does not compete with any other college for students. The department has begun dual enrollment with Mojave High School and Trona High School. We are in the process of working with other local high schools as well. The Welding program is also looking to expand to the Tehachapi service area. Tehachapi High School has a nice welding facility that we will be able to use.

4. Majors and Completers

Majors have increased 26% in the last five years, although the number of majors dropped from 85 majors in 2015 to 66 in 2016.

Majors in Welding

■ Welding Processes Certificate   ■ Welding Technology Certificate

Source: KCCD Program Review Data

A five year review of the welding program shows that for years 2013, 2014, and 2015 enrollment was quite high but drops off significantly in year 2016. We are showing a five year average of 73 majors in Welding Technology and 13 in Welding Processes. We would like to see 10 or more completers per year. The department is unclear of the exact reason for the decline. This has been discussed during department meetings. One of the things we will be doing to hopefully increase enrollments, is to have two days (outside of preview day and I'm going to college day) for the community to tour our facilities and speak with the instructors. One of these days will be geared more towards women interested in welding. We also believe that finally getting our new CNC plasma cutter up and running like it should will attract more students to stay and complete the program to be able to learn and use the machine. This will offer students to learn new and emerging technology. Students will use this machine mostly during INDE C060 and WELD C210. For the most part, advertisement has been mainly word of mouth. We will be working closely with the marketing department to create new brochures and are hoping to have a few live welding videos of students put on the college website. The program generally has plenty of students in the introductory class which is WELD C101. We typically run two sections of the WELD C101 course to accommodate the amount of students. Students seem to drop off after taking the much harder C102 course. Although some of this drop off can be attributed to the courses getting harder, after talking with several students, work is the primary cause of students not finishing the program. Another reason we tend to lose students after WELD C102 and WELD C200 is because these courses provide the average "hobbyist" with the skills they were searching for to make repairs or build projects at home. Several of our students have received employment after taking just the C101 course and are

now unable to take time off from work from their new job to finish the program. We often have students come back to finish at a much later time.
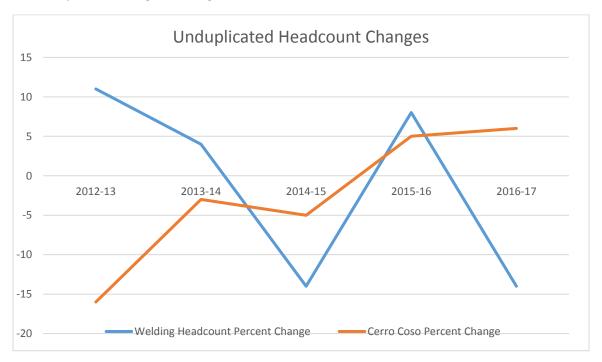
1. Summary of Student Demand Data
Students demand has declined by 12% since 2014.

Student Demand Summary	2012-13	2013-14	2014-15	2015-16	2016-17
Active Sections	13	20	15	14	16
First Day Enrollment	283	356	281	281	247
Census Day Enrollment	263	328	259	249	228
Unduplicated Headcount	163	169	145	156	134
First Day Waitlist	35	27	3	3	0
Full Time Equivalent Students (FTES)	41.9	50.9	40.5	39.9	36.8
Full Time Equivalent Faculty (FTEF)	3.9	5.9	4.5	4.3	4.3
Productivity (FTES/FTEF)	10.6	8.6	9.1	9.4	8.6

Source: KCCD Program Review Data

In 2012-13, the unduplicated headcount was 163. That number has gone up and down every year in the last four years. The highest being 169 in 2013-14 and the lowest of 134 in 2016-17.

Compared to college trends, we notice that when the college had a -16% reduction in students in year 2012-13, the Welding program had an 11% increase. Also in year 2013-14 the Welding program had an increase in headcount when the college had a reduction. However, the following years, we see a drastic reduction in Welding when the college only had a slight reduction. Since 2013-14, there has been quite a staggering number of students.

Class scheduling does seem to be having an effect on this. With the much needed addition of the WELD C204 class, per our advisory committee, the course schedule has needed to change slightly. Due to the fact that we have only one electric welding lab, only one welding class can be offered at a time. Since we run the majority of our classes in the evening, to accommodate our working students, we have had to begin offering one of our welding classes in the early afternoon. Enrollment is consistently low in this course because students are typically working during this time. We alternate the class that is offered in this early time frame to ensure that students are not held up too much when finishing their certificate. Surveys have been given to students about classes being offered in the morning versus evening. The data showed the majority of students requesting evening classes.

The program's brochures are outdated and we will be working with marketing to update them along with some other marketing possibilities.

6. Labor Market Information and Analysis *(CTE Programs Only)*

The Employment Development Department (EDD) 2017 occupational guide for Welders, Cutters, Solders, and Brazers in California reports that there will be 28,400 new jobs through 2024. The EDD cites median hourly wages for welders as $15.46/hour, with $19.43/hour in the 25th percentile and $25.81/hour in the 75th percentile. These wages are actually quite low as other occupations that require the individual to have welding experience, such as a boilermaker, are making upwards of $50/hour.

7. Explanation of Employer Relationship *(CTE Programs Only)*

The primary employer of welders in our service area are represented by Searles Valley Minerals, Rio Tinto, Coso Geothermal, Naval Air Weapons Station China Lake, and Briggs Mine. Searles Valley Minerals and Navy Air Weapons Station China Lake send their Millwright and Maintenance apprentices through our Welding Program. The employer relationship with our program is very strong. The above-mentioned companies attend advisory committee meetings when possible.

8. Advisory Committee *(CTE Programs Only)*

First Name	Last Name	Title	Organization
David	Villicana	Faculty	Cerro Coso Community College

James	O'Connor	Faculty	Cerro Coso Community College
Dave	Lind	Maintenance Director	Coso Geothermal
John	Adams	Program Manager	NAWS China Lake
Mark	Wood	Maintenance Superintendent	Searles Valley Minerals
Jesse	Bowden	Engineer	Searles Valley Minerals
Kim	Moulton	Director Human Resources	Rio Tinto
Steven	Payne	Jet Mechanic	NAWS China Lake
David	Silva	Water Technician	NAWS China Lake
Warren	Francis	Engineer	Searles Valley Minerals
Jeff	Cole	Flight Test Technician	NAWS China Lake
Alaina	Cole	Flight Test Technician	NAWS China Lake
Ray	Becker	Plant Manager	Searles Valley Minerals

The Advisory Committee meets twice per year, once in the Fall and once in the Spring. The committee has played a very active role in how our program is structured. The Pipe and Tube Welding course WELD C204 was introduced to the program after much interest from the advisory board. Student learning outcomes are discussed during advisory committee meetings to show where students are succeeding or where there may need to be more focus on certain areas.

9. Current Cost of the Program to Students

Cost for the 12 unit Welding Processes Certificate of Achievement estimated as follows:

 CA Residents

12.0 units

at $46 per unit

Equals $552 in tuition and fees

Plus approximately $720* for books and supplies

Total cost $1,272 for 1 semester

Non-residents

12.0 units

at $258 per unit

Equals $3,096 in tuition and fees

Plus approximately $720* for books and supplies

Total cost $3,816 for 1 semester

Cost for the 23 unit Welding Technology Certificate of Achievement estimated as follows:

CA Residents

23.0 units

at $46 per unit

Equals $1,058 in tuition and fees

Plus approximately $1,380* for books and supplies

Total cost $2,438 for 2 semesters

Non-residents

23.0 units

at $258 per unit

Equals $5,934 in tuition and fees

Plus approximately $1,380* for books and supplies

Total cost $7,314 for 2 semesters

Cost for the 60 unit Welding Technology A.S. degree estimated as follows:

CA Residents

60.0 units

at $46 per unit

Equals $2,760 in tuition and fees

Plus approximately $3,600* for books and supplies

Total cost $6,360 for 4 semesters

Non-residents

60.0 units

at $258 per unit

Equals $15,480 in tuition and fees

Plus approximately $3,600* for books and supplies

Total cost $19,080 for 4 semesters

There is a $40 materials fee for each welding course. The cost of materials and consumables needed to run the program are substantial. This small materials fee helps offset the cost to run the program. The materials fee is listed in the course outline of record. The materials and consumables students use throughout the course of the program become part of their projects and students are allowed to take assignments and projects home with them. This is how the department stays within regulations.

Part 3 – Currency

1. **Staffing**

The Welding program is currently taught by two full-time faculty members and one adjunct faculty member. Staffing has been adequate for the program, although we are working to hire one or two more adjunct faculty members. The adjunct who currently teaches for us, works during the day. Having one or more adjuncts in our adjunct pool allows for any flexibility that may be needed to due to work schedules.

	2012-13	2013-14	2014-15	2015-16	2016-17
FTES	41.8	50.9	40.5	39.9	36.8
FTEF	3.9	5.9	4.5	4.3	4.3

Productivity, as calculated by full-time equivalent students (FTES) divided by full-time equivalent faculty (FTEF), has also declined within the program and college-wide. Within the program, productivity has declined by 19%, owing to enrollment decline and smaller class sizes. The classes are limited on the number of students that can take the welding courses due to the number of welding booths available.

FTES/FTEF	2012-13	2013-14	2014-15	2015-16	2016-17
Program	10.6	8.6	9.1	9.4	8.6
College	14.5	13.6	13.1	13.1	12.8

2. Professional Development

The department members attend different conferences as the opportunity arises. In the Fall of 2017, both full-time faculty members attended a trade show called FabTech. FabTech is North America's largest welding specific trade show. Faculty members will also attend a conference yearly called Westec. This is also a trade show with more variety such as welding, machining, and tooling. Attending these conferences ensures that faculty can stay up to date with new technology and industry standards. The department would also like to send a faculty member to become an American Welding Society (AWS) certified weld inspector. With this certification, the department will be able to offer highly sought after AWS certifications to students, increasing their chances of receiving a higher paying job.

3. Facilities and Physical Resources

The Welding department recently modernized the electric lab to accommodate 30 students. Previously there were only 11 stations which could only accommodate 22 students. Students would have to share a welding booth, thus limiting their actual practice time. With the addition of the new welding lab, students are no longer required to share a welding booth, doubling the amount of time they are able to physically spend welding. This extra time has shown to drastically improve the work students are able to perform. The Welding department is planning to do the same modernization to the Oxygen/Acetylene lab. The plans have been conceptualized. With the modernization of the main college building, we have been sharing our existing welding lab with the science department. The science department needed access to a ventilation system for their projects. Once the main building construction is completed, the modernization of the oxygen/acetylene should be able to start. During this remodel we wish to remove the current office that is in the middle of the classroom, giving more room for class projects.

4. Technology

The current information technology in the welding department is out of date at best. The department is requesting new video projectors with wireless connections in rooms 192, 198, 145, and 147. There are welding specific video cameras that the department would like to purchase. It can be extremely difficult to give welding demonstrations to students with 20+ students trying to look over your shoulder. With the addition of these welding cameras, students can view live welding demonstrations on a television

screen in the classroom. We will also have the capability to record students as they weld, allowing them to see exactly what they are either doing correctly or incorrectly.

5. Marketing

The department has outdated banners and brochures. We are in the process of working with the marketing department to make new and up to date brochures and banners. The department participates in activities such as I'm going to college day and college preview day. During these events the department will give live welding and cutting demonstrations. With welding being a more male dominated trade, the department has used women on our brochures to help solve an equity gap. One of the department's goals is to produce welding videos for student viewing. The plan is to work with the webmaster to possibly have a few short welding videos from our program on the college website. This can showcase work to potential students and employers. The department has strong relationships with industry in the community. Searles Valley Minerals and China Lake Naval Base sends their trainees through our program to learn the skills needed for their jobs. The department is also looking to market towards more dual enrollment offerings.
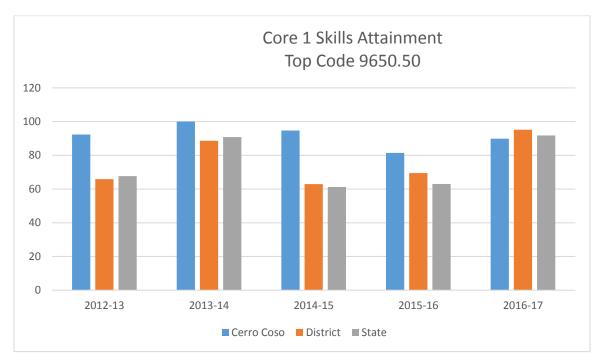
Part 4 – Student Achievement

1. **Course-Level Student Performance Data**

Perkins Core Indicator data shows that this program (TOP Code 0956.50 Welding Technology) exceeds the State and District averages for Core 1 Technical Skill Attainment (essentially course completion) in 2012-13, 2013-14, and 2014-15. 2015-16 and 2016-17 were slightly below State and District averages. The program has exceeded State and District averages for Core 2 Completion (program completion) in 2012-13, 2014-15, and 2015-16. And the program has exceeded State averages for Core 3 Persistence in all years except 2016-17.
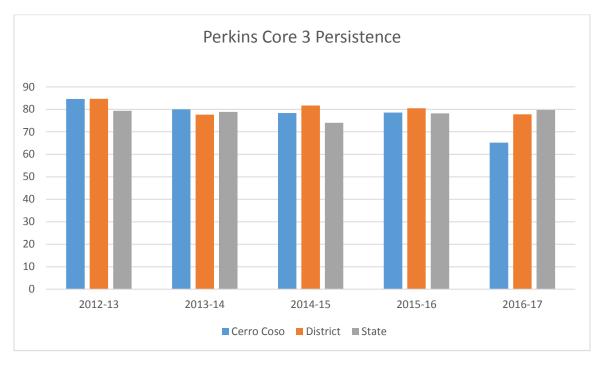
**Core 1 Skills Attainment
Top Code 9650.50**

Source: CCCCO Perkins Core Indicators Reports

Core 2 Completion

Source: CCCCO Perkins Core Indicators Reports

Perkins Core 3 Persistence

Source: CCCCO Perkins Core Indicators Reports

Retention and success in the program exceed that of the college. Faculty members provide a lot of one on one work with students, as the welding classes are mostly lab based courses.
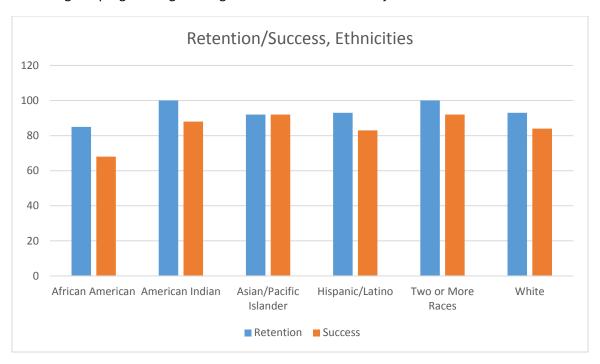

Welding Retention/Success

Source: KCCD Program Review Data

Disaggregated data shows that retention and success are slightly higher among males than female in this program and the college as a whole. In this program, retention is highest among students 20-29 years of age (94%) and 30-39 years of age (94%) and lowest among students 40 and older (91%). Success rates are close across the different age groups, but students 30-39 years of age are most successful (87%) and students 19 and younger are the least successful (79%). Across ethnicities, retention and success are greater than the college averages, in some cases, substantially greater. We attribute this largely to the fact that a large population of our students are being sent through our program by their employers or are taking our program to get a wage increase in their current job.
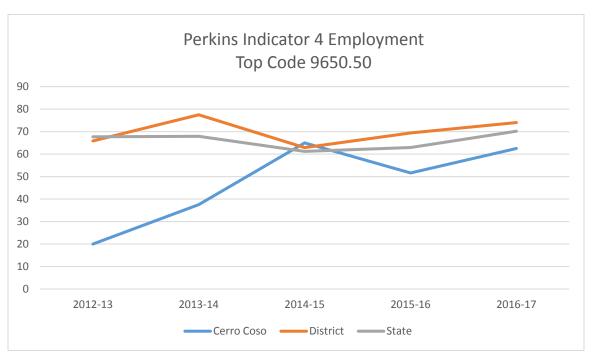

Source: KCCD Program Review Data

2. **Employment Data** *(CTE Programs Only)*

The Perkins Core Indicator 4 shows that employment is lower than that of the district or state, although we do show a larger increase from 2015-16 and 2016-17. The department has given out surveys for several semesters. Those surveys have shown us that not every student that is in the program is seeking emplyment. We believe that a large portion of our students are not being captured by Perkins. We keep in touch with a lot of our students after they have left our program and a very high percentage are working utilizing welding in their field of employment. One of the problems that could be causing the lack of employment data is the fact that several of our student's job titles are not "welders." There are too many jobs to list that are not welders but require the inidividual to know how to weld. Just to name a few: Maintenance/Mechanic, Sheet metal worker, Metal Fabricator, Boilermaker, etc. For example, the California Department of Industrial Relations (DIR) website shows a Boilermaker in Area 1, which includes Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, San Luis Obispo (only that portion that is within a 25- mile radius of the city of Santa Maria), and Ventura

Counties making $41.91 per hour. The DIR website also shows the prevailing wage for an iron worker in the same counties making $34.75 per hour. These are just examples showing that there are much higher wages in a diverse field that require the individual to be a skilled welder.

Source: CCCCO Perkins Core Indicators Reports

3. Achievement of Program Learning Outcomes

PLO 1:	Demonstrate competency in major welding processes used in industry
Target:	90%
Assessment Method:	Projects from WELD C101, WELD C102, WELD C200, WELD C203. All students who were actively participating in the course were used in the denominator.
Assessment Date:	Fall 2016
Recent Results:	95%
PLO 2:	Apply the use of hand tools and shop equipment to fabricate projects
Target:	90%
Assessment Method:	A project given in WELD C210. All students who were actively participating in the course were used in the denominator.
Assessment Date:	Fall 2016
Recent Results:	100%

PLO 3:	Recognize and interpret technical drawings in the planning and fabrication of drawings.
Target:	80%
Assessment Method:	Exam given in DRFT C108. All students who were actively participating in the course were used in the denominator.
Assessment Date:	Fall 2016
Recent Results:	87.5%
PLO 4:	Demonstrate appropriate workplace safety policies and procedurs during welding and fabrication of projects
Target:	95%
Assessment Method:	An exam given in WELD C101, WELD C102, WELD C200, and WELD C203. All students who were actively participating in the course were used in the denominator.
Assessment Date:	Fall 2016
Recent Results:	100%
PLO 5:	Apply mathematical concepts to solve problems related to an industrial/technical environment
Target:	90%
Assessment Method:	Exam given in INDE C060. All students who were actively participating in the course were used in the denominator.
Assessment Date:	Fall 2016
Recent Results:	95%

		Assessment History Summary					
PLO #	**Target**	**Semester**	**Met?**	**Semester**	**Met?**		
PLO 1	75%	FA09	Yes	FA16	Yes		
PLO 2	75%	FA09	Yes	FA16	Yes		
PLO 3	75%	FA09	Yes	FA16	Yes		
PLO 4	75%	FA09	Yes	FA16	Yes		
PLO 5				FA16	Yes		

a. Gaps and Improvements Made

There are currently no gaps in program learning outcomes.

b. Summary of Program Learning Outcome Achievement

Achievment of program learning outcomes were high when the outcomes were previously assessed. It was thought then by the department that the target was too low. The target has since been increased.

Program learning outcome 5 is new to the program and was first assessed in Fall 2016 with the other program learning outcomes.

Learning outcomes are discussed between department full-time and adjunct faculty during department meetings and flex days. Learning outcomes are also discussed at advisory meetings. We believe that the current learning outcomes are satisfactory and should not require major change in the near future.

4. Achievement of Course Student Learning Outcomes

| Course | SLO # | Target | 5-Year Assessment History | | | | | |
			Semester	Met?	Semester	Met?	Semester	Met?
WELD C101	SLO 1	95%	FA15	Yes				
	SLO 2	95%	FA15	Yes				
	SLO 3	95%	FA15	Yes				
	SLO 4	95%	FA15	Yes				
	SLO 5	95%	FA15	Yes				
	SLO 6	95%	FA15	Yes				
WELD C102	SLO 1	100%	FA11	Yes	FA17	Yes		
	SLO 2	100%	FA11	Yes	FA17	Yes		
	SLO 3	75%	FA11	Yes	FA17	Yes		
	SLO 4	75%	FA11	Yes	FA17	Yes		
WELD C200	SLO 1	95%	FA15	Yes	FA17	Yes		
	SLO 2	95%	FA15	Yes	FA17	Yes		
	SLO 3	95%	FA15	Yes	FA17	Yes		
	SLO 4	95%	FA15	Yes	FA17	Yes		
	SLO 5	95%	FA15	Yes				
	SLO 6	95%	FA15	Yes				
	SLO 7	95%	FA15	No				
	SLO 8	90%	FA15	Yes				
WELD C203	SLO 1	100%	FA17	Yes				
	SLO 2	75%	FA17	Yes				
	SLO 3	75%	FA17	Yes				
	SLO 4	75%	FA17	Yes				
WELD C204	SLO 1	95%	SP16	Yes				
	SLO 2	75%	SP16	Yes				
	SLO 3	75%	SP16	Yes				
	SLO 4	75%	SP16	Yes				
	SLO 5	75%	SP16	Yes				
WELD C210	SLO 1	100%	FA14	Yes	FA17	Yes		

	SLO 2	80%	FA14	Yes	FA17	Yes		
	SLO 3	80%	FA14	Yes	FA17	Yes		
	SLO 4	80%	FA14	Yes	FA17	Yes		
	SLO 5	80%	FA14	Yes	FA17	Yes		
DRFT C108	SLO 1	70%	FA14	Yes	FA17	Yes		
	SLO 2	80%	FA14	Yes	FA17	Yes		
	SLO 3	80%	FA14	No	FA17	Yes		
	SLO 4	80%	FA14	Yes	FA17	Yes		
INDE C060	SLO 1	65%	SP16	Yes				
	SLO 2	65%	SP16	Yes				
	SLO 3	65%	SP16	No				
MCTL C107	SLO 1	100%	SP12	Yes	FA17	Yes		
	SLO 2	80%	SP12	Yes	FA17	Yes		
	SLO 3	80%	SP12	Yes	FA17	Yes		
	SLO 4	90%	SP12	Yes	FA17	Yes		

a. **Gaps and Improvements Made**

WELD C200 – Control the quality of the weld by changing the electrode extension and gun angle.
Target: 95%
Reason for Gap: There were only 11 students registered in this course when the outcome was assessed. The result was 10 of 11 students succesfully completing this outcome equalling a 91% success rate. With only one student not meeting the outcome there was not immediate cause for concern. You will notice that in Fall 2017, the course outcomes were assessed again, however there were only four student learning outcomes. The course has been revised since Fall 2015 assessments and the number of outcomes were decreased.

DRFT C108 – Recognize and understand symbology used on working drawings.
Target: 80%
Reason for Gap: 13 of 17 students were successful in completing this outcome, resulting in a 76% success rate. There has been discussion within the department to allow more time during this course for this section of work.

INDE C060 – Solve trade related word problems using algebra, geometry, and trigonometry.
Target: 65%
Reason for gap: 11 of 20 students were successful in completing this outcome, resulting in a 55% success rate. More time has been allowed for this section during the course.

b. **Summary of Student Learning Outcome Achievement**

There are 39 student learning outcomes in the welding program. Of those 39 student learning outcomes, only three were not met in the last five years. Some of the targets are high compared to other programs; however, the faculty feel that it is necessary to ensure we are sending well-qualified people out into the workforce.

Full-time and adjunct faculty have extensive dialogue in department meetings about what is expected when completing student learning outcomes. Adjunct faculty are kept up to date on any changes that may be made to student learning outcomes or where to input assessments.

5. Assessment Schedule for Next Program Review Cycle

	Year 1	Year 2	Year 3	Year 4
PLOs				
PLO 1				X
PLO 2				X
PLO 3				X
PLO 4				X
	Year 1	**Year 2**	**Year 3**	**Year 4**
SLOs				
WELD C101				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
SLO 5			X	
SLO 6			X	
WELD C102				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
WELD C200				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
SLO 5			X	

SLO 6			X	
SLO 7			X	
SLO 8			X	
WELD C203				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
WELD C204				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
SLO 5			X	
WELD C210				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
SLO 5			X	
DRFT C108				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
INDE C060				
SLO 1			X	
SLO 2			X	
SLO 3			X	
MCTL C107				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	

Part 5 – Action Plans

1. Analysis of Current Program Strengths

The Welding program gives students the skills needed to work in many aspects throughout industry, not just being classified as a welder. People with welding training can work in a multitude of job classifications such as mining, manufacturing, marine welding, ship building, metal art sculpting, machine shops, construction, railroads, automotive, as well as the aircraft, aerospace and renewable energy industries all while receiving a high wage. Being trained in welding allows students to not only find a job in our local area, but anywhere in the U.S. The American Welding Society estimates that there will be a 290,000 job deficit in welders by 2020.

The curriculum aligns with the skills that are required throughout industry. Students can also receive a welder's performance certificate in Gas Metal Arc Welding that follows the same criteria of that of an American Welding Society qualification, which is highly sought after in employees. On numerous occasions, the department has had students show up to class and have to drop the class due to their new found employment after only receiving partial training. Although this does not help our success and retention rates, it does show the dire need for the welding program.

The program has experienced high student success and retention rates over the past five years averaging a 93.2% retention rate and an 83.8% success rate. The program compares or exceeds the State and District among Perkins core 1-3 indicators in the last five years. A large portion of our students are currently working in the welding industry. Students continue to reach out to the department after leaving the welding program to tell about their new job or how much they appreciated the skills they have learned.

3. Analysis of Improvements Needed

The department feels that we can do a much better job of promoting the Welding Program. This would include things such as having new brochures made, better marketing locally, traveling to the local high schools more often, and completing welding videos to put on the College website. In doing this, we believe that we can increase our unduplicated headcount and increase the number of degrees and certificates.

4. Response to Previous Strategies

2012 Program Review Strategies:

1: Additional space/lab area. As mentioned above, the welding program has outgrown the current lab. A plan to increase size requirements and convert the existing lab into a dedicated oxygen/acetylene lab is being developed. This will increase the capacity to accommodate 30+ students. The office will be removed to provide an open floor plan which is needed to better utilize the space for increased productivity and safety. Pending, with the modernization of the main building, the lab space was needed for chemistry to be able to utilize the welding labs ventilation systems. Renovating the existing oxy/acetylene lab would have hindered the chemistry department for using the space. Recent talks with Dean Kane state that the construction will hopefully begin in Summer 2018.

2: A dedicated electric welding lab in the former machine tool space is also being designed. The new lab will accommodate 30+ electric welding stations for C102, C200, C203, C210 class. Completed. The dedicated electric welding lab has been completed and is currently being utilized by the electric welding classes (WELD C102, WELD C200, WELD C203, WELD C204, and WELD C210). The new lab space now accommodates 30 students, when previously we could only accommodate 24 and students were required to share a welding booth.

3: The addition of more welding equipment and infrastructure to support the increased capacity for both the gas and electric labs will be appropriated. Completed. More welding equipment has been purchased to support the new welding lab and the increase in welding stations.

4: Establish an adjunct instructor pool and lobby for an additional full-time instructor and a

TA. Revised. The department does not currently meet the requirements to hire another full-time instructor. The department has hired a TA which has been invaluable to the department

5: Start advertising more aggressively including a Cerro Coso Welding Program website. In progress. While the department has not began advertising more aggressively, there has been discussions with the marketing department to begin this process. Live action welding videos have been made to work towards some type of Welding Program web site.

6: To keep current instructors will continue to engage in professional development and curriculum will be reviewed. Completed/Ongoing. Instructors have attended seminars and conferences within the field to stay current on new technology along with continuing to work in the field during breaks.

7: Develop a cohort model and revised schedule so students are able to receive the twelve unit certificate in three semesters. Completed. The Welding Processes Certificate and the Welding Technology Certificate can now be completed in three semesters.

Two-Year Program Strategies

1: Create updated brochures

- Description – Work with the marketing department to create new brochures.
- Measurement – New brochures are created.
- Timeline – Spring 2018
- Responsible Party – David Villicana

2: Complete modernization of oxy/acetylene lab

- Description – Update oxy/acetylene lab to include 24 new welding stations and required equipment.

- Measurement – Completion of welding lab.
- Timeline – Completion by Spring 2019.
- Responsible Party – CTE Dean, Maintenance and Operations, David Villicana

3: Create welding videos

- Description – Complete welding videos for each welding exercise in each welding class for student viewing.
- Measurement – All welding videos are completed and accessible to students.
- Timeline – Fall 2019
- Responsible Party – David Villicana, James O'Connor

4: Increase enrollment

- Description – increase enrollment by 15% by doing more community outreach and working closer with high school.
- Measurement – Record and unduplicated headcount of 154 or higher.
- Timeline – Fall 2019
- Responsible Party – David Villicana, James O'Connor

Five-Year Program Strategies

1. Transition to Open Education Resources OER to replace textbooks
   - Description – The department will work to find new resources to replace textbooks.
   - Measurement – Students needing to purchase less or zero textbooks to complete the program.
   - Timeline – Fall 2022
   - Responsible party – David Villicana, James O'Connor

2. Expand dual enrollment offerings with local high schools
   - Description – The department would like to offer more courses with local high schools to increase dual enrollment numbers.
   - Measurement – One or more high schools begins dual enrollment with the welding department.
   - Timeline – Fall 2022
   - Responsible party – David Villicana

3. Expand welding facilities to include new and emerging technologies
   - Description – The department would like to expand the existing facilities to be able to offer more technology driven courses.
   - Measurement – Expansion of facilities
   - Timeline – Fall 2022
   - Responsible party – David Villicana, Maintenance and Operations

4. Increase enrollments
   - Description – Continue 2 year strategy to increase enrollments
   - Measurement – Increased headcount
   - Timeline – Fall 2022
   - Responsible party – David Villicana

Part 6 – Supporting Documentation

[The following data is to be supplied by the Office of Institutional Research:]

1. Section Level data by *course* (5 year aggregate broken out online, onsite, combined)
    a. Number of sections
    b. Enrollment first day, census, end of term
    c. FTES, FTEF, Productivity (FTES/FTEF)
    d. Course Retention Rate
    e. Course Success Rate
    f. Method of delivery (F2F, hybrid, ITV, online)
2. Student Demography by *discipline* (5 years aggregate)
    a. Headcount
    b. Age
    c. Gender
    d. Ethnicity
3. Awards (5 years)
4. Others as appropriate, in consultation with the Institutional Researcher

[The following data is to be supplied by the department:]

1. Identify where SLO Reports for all courses within the program(s) can be accessed.
2. Identify where PLO Reports for all courses within the program(s) can be accessed.
3. Advisory Committee Meeting minutes *(CTE Only)*
4. Others, as appropriate, such as department minutes, employer surveys, marketing brochures

Welding

Student Demographic Information

Unduplicated Headcount [1]	2012-13		2013-14		2014-15		2015-16		2016-17	
	#	% Change	#	% Change	#	% Change	#	% Change	#	% Change
Cerro Coso College	163	11%	169	4%	145	-14%	156	8%	134	-14%

Gender	Welding										Collegewide	
	2012-13		2013-14		2014-15		2015-16		2016-17		2016-17	
	#	%	#	%	#	%	#	%	#	%	#	%
Female	9	6%	11	7%	20	14%	16	10%	10	7%	5,310	59%
Male	154	94%	158	93%	125	86%	140	90%	118	88%	3,574	40%
Not Reported									6	4%	105	1%

Age	Welding										Collegewide	
	2012-13		2013-14		2014-15		2015-16		2016-17		2016-17	
	#	%	#	%	#	%	#	%	#	%	#	%
19 & Younger	32	20%	33	20%	26	18%	23	15%	34	25%	1,848	21%
20-29	79	48%	84	50%	64	44%	74	47%	46	34%	3,672	41%
30-39	25	15%	31	18%	34	23%	31	20%	27	20%	1,837	20%
40 & Older	27	17%	21	12%	21	14%	28	18%	27	20%	1,632	18%

Ethnicity	Welding										Collegewide	
	2012-13		2013-14		2014-15		2015-16		2016-17		2016-17	
	#	%	#	%	#	%	#	%	#	%	#	%
African American	3	2%	4	2%	8	6%	6	4%	3	2%	478	5%
American Indian	8	5%	5	3%	2	1%	1	1%	1	1%	127	1%
Asian/Filipino/Pac. Islander	1	1%			2	1%	3	2%	1	1%	366	4%
Hispanic/ Latino	43	26%	59	35%	50	34%	50	32%	40	30%	3,574	40%
White	100	61%	97	57%	78	54%	94	60%	84	63%	3,940	44%
Two or More Races	7	4%	4	2%	5	3%	2	1%	5	4%	385	4%
Not Reported	1	1%									119	1%

Ed Plan Completion	Welding										Collegewide	
	2012-13		2013-14		2014-15		2015-16		2016-17		2016-17	
	#	%	#	%	#	%	#	%	#	%	#	%
Abbreviated	2	1%	2	1%	8	6%	19	12%	6	4%	1,407	16%
Comprehensive	120	74%	114	67%	75	52%	65	42%	48	36%	1,955	22%
Both (Abbrev. and Comp.)	4	2%	5	3%	13	9%	23	15%	19	14%	1,475	16%
Other Ed Plan					1	1%	2	1%			31	0%
Exempt	4	2%	6	4%	7	5%	5	3%	10	7%	479	5%
No Ed Plan Completed	33	20%	42	25%	41	28%	42	27%	51	38%	3,642	41%

Completed Matriculation [2]	Welding										Collegewide	
	2012-13		2013-14		2014-15		2015-16		2016-17		2016-17	
	#	%	#	%	#	%	#	%	#	%	#	%
Fully Matriculated	106	65%	106	63%	90	62%	108	69%	71	53%	4,687	52%

Student Majors Information

Subject Majors [3]	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016	5-Year Average
Industrial Technology	18	11	1		8	10
*Trades Practices	5	11	3			6
Welding Processes	6	13	21	14	12	13
Welding Technology	52	84	80	85	66	73

Course Enrollments

Active Sections	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	13	20	15	14	16
Total	13	20	15	14	16

First Day Enrollment [4]	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	283	356	281	281	247
Total	283	356	281	281	247

Census Day Enrollment [4]	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	263	328	259	249	228
Total	263	328	259	249	228

Subject Students/Section [5]	Subject				
	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	20	16	17	18	14
Total	20	16	17	18	14

Collegewide Students/Section [5]	Collegewide				
	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	18	19	17	17	17
Distance Ed	29	28	27	27	27
Total	24	24	22	22	21

First Day Waitlist [6]	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	35	27	3	3	0
Total	35	27	3	3	0

FTES, FTEF & Productivity

FTES [7]	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	41.8	50.9	40.5	39.9	36.8
Total	41.8	50.9	40.5	39.9	36.8

FTEF Workload [7]	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	3.9	5.9	4.5	4.3	4.3
Total	3.9	5.9	4.5	4.3	4.3

FTEF Workload By Contract Type	2012-13		2013-14		2014-15		2015-16		2016-17	
	#	%	#	%	#	%	#	%	#	%
1) Full-Time	1.9	49%	2.9	49%	2.5	56%	3.6	85%	3.9	91%
2) Overload	0.9	22%	0.9	16%	0.2	5%	0.6	15%	0.4	9%
3) Adjunct	1.1	29%	1.5	25%	1.7	39%			0.0	0%
4) Summer			0.6	10%						

Subject Productivity (FTES/FTEF) [8]	Subject				
	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	10.6	8.6	9.1	9.4	8.6
Productivity (FTES/FTEF)	10.6	8.6	9.1	9.4	8.6

Collegewide Productivity (FTES/FTEF) [8]	Collegewide				
	2012-13	2013-14	2014-15	2015-16	2016-17
Traditional	13.9	13.0	12.4	12.3	11.8
Distance Ed	15.1	14.1	13.9	13.9	13.7
Productivity (FTES/FTEF)	14.5	13.6	13.1	13.1	12.8

Success & Retention Rates

Subject [9]	2012-13		2013-14		2014-15		2015-16		2016-17	
	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success
Traditional	96%	85%	94%	85%	91%	84%	92%	83%	93%	82%
Total	96%	85%	94%	85%	91%	84%	92%	83%	93%	82%

Collegewide [9]	2012-13		2013-14		2014-15		2015-16		2016-17	
	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success
Traditional	90%	76%	89%	75%	90%	79%	91%	80%	94%	83%
Distance Ed	79%	61%	79%	61%	81%	65%	82%	64%	85%	66%
Total	83%	67%	82%	66%	85%	71%	86%	70%	89%	73%

Success & Retention Rates Disaggregated

Because of small numbers, the five years represented in this report were combined. Percentages shown in grey italics are from groups of less than 30 where overall results are more influenced by individual results.

Subject Overall Combined	Retention	Success
Welding	93%	84%

Collegewide Overall Combined	Retention	Success
Cerro Coso College	85%	70%

Subject Gender	Retention	Success
Female	90%	83%
Male	94%	84%

Collegewide Gender	Retention	Success
Female	84%	69%
Male	86%	71%

Subject Age	Retention	Success
19 & Younger	93%	79%
20-29	94%	85%
30-39	94%	87%
40 & Older	91%	81%

Collegewide Age	Retention	Success
19 & Younger	88%	71%
20-29	83%	66%
30-39	84%	71%
40 & Older	85%	75%

Subject Ethnicity	Retention	Success
African American	85%	68%
American Indian	100%	88%
Asian/Filipino/Pac. Islander	92%	92%
Hispanic/ Latino	93%	83%
Two or More Races	100%	92%
White	93%	84%

Collegewide Ethnicity	Retention	Success
African American	73%	49%
American Indian	80%	60%
Asian/Filipino/Pac. Islander	89%	77%
Hispanic/ Latino	84%	67%
Two or More Races	84%	68%
White	87%	74%

Subject Ed Plan Completion	Retention	Success
Completed Student Ed Plan	94%	85%

Collegewide Ed Plan Completion	Retention	Success
Completed Student Ed Plan	86%	72%

Subject Fully Matriculated	Retention	Success
Fully Matriculated	94%	85%

Collegewide Fully Matriculated	Retention	Success
Fully Matriculated	86%	72%

Student Awards

Awards by Type & Program [10]		2012-13	2013-14	2014-15	2015-16	2016-17	5-Year Total
AS	Industrial Technology	2					2
	Welding Technology	9	3	6	1	7	26
	Award Type Total	11	3	6	1	7	28
Cert	Welding Processes	21	14	19	19	17	90
	Welding Technology	19	5	7	11	6	48
	Award Type Total	40	19	26	30	23	138
Total Awards		51	22	32	31	30	166

Welding & Industrial Technology Advisory Meeting
April 23, 2013
Casey's Restaurant – Ridgecrest, Ca

Attendees: Herman Foster, James O'Connor, Valerie Karnes, Angela Sellers, Jennifer Musick, Arzel Hale, John Haefele, Laura Hickle

Meeting began at 11:15am with welcome and attendee introductions

Advisory Committee discussion:

James O'Connor explained the purpose and expectations for an advisory committee
- Input from industry is needed for the continued growth of the program
- Importance of offering real world training to students
- Explained the C6 grant received by Cerro Coso from Department of Labor and Education
  - 11 colleges within the grant following 8 guiding principles (accelerated, block scheduling, cohort model, embedded remediation, support services)
  - Benefits of the C6 Grant:
    - Ability to fast track students to the workplace
    - Offer contextualized learning
    - Students receive a MSSC and AWS Welding certificate
    - Ability to transform the way we are educating students
  - College requirements is to meet 70% job placement for the completer
  - Review of current program

Review of current Industrial Technology handout/course sequence:
- Math for Trades course is being evaluated to be removed and replaced with a course that is specifically directed to the needs of the industry
  - Input received from Renewable Energy industry reflected the need for Electronics versus the Electricity
- The format was re-evaluated and changed to meet the various needs. Referencing Previous Course Sequence (page 10) and Proposed Course Sequence (page 11)

Identifying student cohorts for C6:
- Laura Hickle, SSUSD would like the ability to contact the HS students who completed
- SVM employees are selected currently by temporary employment agencies
  - There have been exceptions to the process when a possible employee arrives with education and experience
  - Current pay is $12/hr-$16/hr for entry level or $18/hr-$20/hr once they have been permanently selected
  - Have hired employees with defined criteria to complete and advanced pay at the time of completion
  - Maintenance department is approximately 1/3 of the staff
  - Potential openings are expected
  - Cannot employee lower than 6G welding level certification and layout
  - Students have to pass welding test procedures
  - Entry employees must have the ability to be a mechanic or welder that can be a mechanic
  - Currently RBS provides selection of employees

Industry input:

- Searles Valley Mineral -
  - Agree the outline of proposed courses to be of value for their industry and interested in both circuits courses
  - Biggest challenge with the mechanical employees are the ability to pass the prerequisite to get to Technical Math Trades course
  - Safety course is important for employees

Additional updates:

- Laura Hickle would like for Herman and James to visit Jeff Prusa's High School class
  - Laura will contact with available days/times

Meeting concluded at 1:10pm

Industrial Technology and Welding Advisory Committee
Minutes November 5, 2014
Grape Leaf Restaurant, 11:30- 1:00 pm

Attending: Mark Ford (Searles Valley Minerals), Gina Martin (Searles Valley Minerals), Charles Roach (NAWS), David Lind (Coso Operating Co.), Kevin Westmoreland (Coso Operating Co.), Doug Smith (NAWS), Lloyd Plett (Retired NAWS), David Villicana, (CC Faculty), James O'Connor (CC Faculty and Chair Industrial Arts)

Introductions were made around the table.

The existing Welding Technology AS and certificates were reviewed regarding course content, program outcomes and pre-requisites.

With respect to the addition of the WELD C204 Pipe and Tube Welding course, there is agreement that the course should be added to the Welding Technology program.

Mark Ford confirmed that Searles Valley Minerals needs welders who are trained in pipe and tube welding.

Charles Roach confirmed that NAWS needs welders and that includes those with pipe welding traingin especially in the public works department.

Kevin Westmoreland reported that it is beneficial that individuals looking for employment at Coso Operating Co. are trained in pipe welding.

The new welding facility was discussed as it is nearing completion along with the multi-use/electronics lab. The new welding facility will enhance the student learning experience by increasing the time that they are able to weld, since there will be more stations (30) and eliminate the need to share stations. The existing lab (room 192) will be a gas only lab for the oxyacetylene welding, brazing, and thermal cutting.

Completion of the new welding facility has been delayed and caused disruption to fall classes and scheduling. This has necessitated the running of two classes (oxyacetylene and fabrication) simultaneously in room 192.

The new welding facility was previously scheduled for completion prior to the start of the fall 2014 semester, but was not completed. Students and faculty went without air conditioning for several weeks as this was impacted by the roof project which was not completed. Now that the roof is completed and after a recent rain, there have been new leaks discovered in the electronics classroom and in the new welding area. Over 200 students are scheduled for classes in the new facilities in spring 2015.

The new multi-use/electronics lab was also discussed. New workstations for electronics have been built by the Tool and Equipment class. Testing equipment has been added: oscilloscopes, power supplies, meters, etc.

The INDE C060 Mathematical Applications for Trades class was discussed. The discussion centered on the recent change from MATH C056. The INDE C060 gives more practical applications of math for technicians. Topics such as the use of precision measuring instruments and other subjects not found in typical math classes are included.

The existing Industrial Technology AS and certificates were reviewed with respect to course content, program outcomes and pre-requisites. The group discussed the difference between an electronics course versus a basic electricity course such as INDE C115 Alternating and Direct Current Power. The group concluded that there is a need for both in industry.

Lloyd Plett described how the content of an electronics course fits into what he did while employed on base. The college had an electronics class for the Renewable Energy program but it was too high level. It is possible that an introductory electronics class could be added to the Industrial Technology AS and certificate in the future; however, more discussion would be needed if it were to be added. Employees on a path to be electricians will benefit from the INDE C115 AC/DC power course, but employees in the instrumentation area would benefit from an entry level electronics course such as ET C101, which has not been included in the proposed degree and certificate. ET C101 in its current form is a four-unit class that is too high level to be appropriate for the technician target level of the Industrial Technology program. Although Mark Ford said he has ten existing employees that would benefit from a basic electronics class, James O'Connor explained that the college cannot offer stand-alone courses and also insufficient enrollment has been a barrier of offering the electronics class in the recent past.

Engineering Tech program (Project Lead the Way)

Laura Hickel is currently discussing the math requirement for this program that is otherwise ready to go, with Cerro Coso administration.

Other Industry Comments & Feedback: The group discussed the fact that many employees in the trades are nearing retirement and there are not enough trained young people who can take their

place. This is a serious problem throughout industry. It is felt that the early education system is partly to blame due in part to lack of counselling and guiding them toward careers according to their aptitudes. It was also felt by the group that there has been a negative stigma in education attached to industrial arts and the trades.

Welding / Industrial Technology Advisory Meeting

Minutes Fall 2015

Grape Leaf Restaurant

Attendees: James O'Connor (CC Faculty / Department Chair), David Villicana (CC Faculty), Herman Foster (CC Faculty), David Lind (Coso Operating Co.), Gina Martin (Searles Valley Minerals) Kevin Westmoreland (Coso Operating Co.)

Introductions were made and lunch was ordered.

Discussions started regarding the new electric welding facility. David Villicana stated that the new laboratory is working well and that the student learning curve has increased dramatically due to the increased time in which students are able to weld. They no longer have to share work stations as in the old lab.

There has been some issues with some of the equipment installed for the fume extraction and with the work stations. The faculty has fabricated new table tops and fixtures for the stations. Lighting is a concern as the existing lights are not directly over the work stations and will be addressed in the unit plan.

The Mathematical Applications for the Trades course had gone through CIC and is scheduled to run in the spring. The course has more practical content than the Math for Trades course that it is replacing. The content gives more of the type of mathematics that trades people will use in the workplace. The course will also cover the use of precision measuring instruments and other subjects not covered in the previous class. The former math prerequisite has also been removed. The course will no longer be in the Math Department and will be taught by an Industrial Technology faculty.

The pipe welding class is being offered for the first time and is well received by the students. Industry is pleased to have the college offering the pipe class as it is an essential skill for many of their employees especially in the maintenance areas.

Industry expressed concern regarding the lack of trained people entering the workforce as many of the tradespeople are nearing retirement and their positions are not being filled by individuals with adequate training. This is a problem throughout industry with far reaching consequences.

David Lind suggested that a course in power generation operator could be a valuable class for many of the state and local industries that generate their own power.

Maintenance workers at SVM were also discussed and it was pointed out that part of their job description includes welding.

Industrial Arts Welding Department Advisory Meeting

Minutes Fall 2016

The Welding Technology Advisory Committee meeting was held at the Grape Leaf restaurant.

In attendance were:

David Villicana (Cerro Coso Faculty), James O'Connor (Cerro Coso Faculty) Shane Wilson (Cerro Coso TA), Herman Foster (Cerro Coso Faculty), Charles Roach (NAWS), Keven Westmoreland (Coso Operating Co.), David Lind (Coso Operating Co.), Will Zirger (SVM), Michael Dorrell (SVM), Kim Moulton (Rio Tinto).

James O'Connor opened the meeting with introductions and started the discussions by describing the progress made by the Cerro Coso welding department with the new electric facility equipment and infrastructure. He talked about the success of the new Mathematical Applications for the Trades class and also the new pipe welding class. James described that plans for modernization of the oxyacetylene lab are underway. The modernization would increase the size of the lab now that all electric operations are in the new electric lab. The number of stations would increase from 12 to 24 making it possible for each student to have his/her own work station. This would double the amount of time that students would be able to weld. As shown with the new electric lab, the extra time welding (by not sharing a station) has greatly increased the skill level of the students.

The Advisory members discussed with faculty what skills they want a perspective employee to have. Some of the things that were discussed besides actual welding skills were knowledge of practical math, ability to read and understand technical drawings. Soft skills especially good communication were important. Some employers felt that being computer literate is important as some employees may work with computer numerical controlled (CNC) machines and equipment.

It was discussed that many positions at various companies include welding in their job description but is not a welder position. It was pointed by faculty that this was a problem for the welding department gathering data for available jobs in the workforce because the search engines often only search specifically for "welder" positions.

After lunch some of the topics of discussion included types of equipment being used including CNC machinery, plasma and oxyacetylene thermal cutting equipment. Flux core and dual shield wire feed welding vs. gas shielded and shielded metal arc welding processes.

Another topic of discussion was the nationwide shortage of trades people in the industrial sectors.

Welding Advisory Committee Meeting

November 20th, 2017

Casey's Restuarant

Advisory Committee Meeting Minutes

- Dave Villicana welcomes everyone and explains briefly what the meeting is geared towards.

- Introductions, 10 people total.

- First topic discussed was Dave telling everyone about the new equipment (shear, saws, welders, plasma cutters) we are hoping to get and how all the paperwork for it is in the works. He explains how beneficial it will all be for our students.

- Dave discusses how we are going to try and donate some of our older welders to Herman Foster and his welding program out at Trona High school.

- James O'connor elaborates on the modernization of our oxyacetylene lab. 24 stations will be built so we can have more students and more torch time for each student.

- Dave mentions how there is talk to possibly rearranged the schedule of classes in our program to accommodate students better. Teaching machine tool in the summer allows students to take our Blueprints and Math for Trades classes every semester, not just once a year like before. This will hopefully result in more certificates and degrees issued in a span of no more than two years.

- Dave enlightens us about a camera he is interested in getting for the program that will aid students and teachers in various ways. This camera can film welding and can be used to film instructor demos, then shown on the projector and is easier for the students to see. It can also be used to help students understand which mistakes they may be making during difficult welding positions and situations. This camera will also allow us to make welding videos and post them to Canvas for students to study from while at home or work.

- Dave informs us that Tehachapi High School is looking to set up and teach our welding program using an adjunct instructor, possibly getting them enrolled in our dual enrollment program.

- Dave Villacana informs us all that the Industrial Technology program will be going away. Dave Lind and Dave Silva inquired about, what if maybe we should look into various stand- alone classes that could still be beneficial to the industry.

- James informs us that Welding is the leading program in awards for CTE programs here at Cerro Coso Community College.

- James and Dave both mention that they have an assistant who is really an asset to them this semester. James talks about how the TA has been through the program and is very knowledgeable as to how things run up at the CCCC welding lab. James also mentions how the TA is every polite and professional and how they are glad to have him on the team aiding them and students.

- Member of the meeting brings up the question, "Can we donate supplies or some kind of funding to Burroughs High school to help their welding program out and possibly someday get them on board with our dual enrollment program?" Burroughs has a welding class but it is way underfunded.

- Dave elaborates on how we can teach stand-alone classes now here at CCCC.

- Dave Lind inquired about some kind of an Industrial Plant Science class, based on various industrial plant and mining operations. Said guys get hired on at these plants with no knowledge of how to read a gauge or open or close a valve, as well as many other aspects of the industry.

- Meeting and chow commence and everyone returned to work.

Demographics (Unduplicated Students): Age This sheet illustrates the breakdown by Age of students enrolled in at least one course at census during the academic year(s) or term(s) selected.
College : 'CC' , Term : '201770, 201730, 201670, 201630, 201570, 201530, 201470, 201430, 201370, 201330'   29-JAN-18

| Term:<All> | Campus:<All> | CTE:<All> | Basic Skills:<All> | Major:<All> | Subj:<All> | Course ID:<All> | FinAid Awarded:<All> |

		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
		Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
CC	19 or Younger	853	17.8%	1,147	16.4%	1,071	15.5%	1,307	18.1%	1,630	21.2%	1,275	21.5%
	20 - 24	1,295	27.0%	1,900	27.1%	1,758	25.4%	1,726	23.9%	1,710	22.2%	1,230	20.8%
	25 - 29	823	17.2%	1,205	17.2%	1,210	17.5%	1,281	17.7%	1,306	17.0%	1,001	16.9%
	30 - 39	911	19.0%	1,361	19.4%	1,498	21.7%	1,456	20.2%	1,601	20.8%	1,228	20.7%
	40 - 49	547	11.4%	772	11.0%	817	11.8%	874	12.1%	915	11.9%	748	12.6%
	50 or Older	367	7.7%	617	8.8%	556	8.0%	575	8.0%	527	6.9%	438	7.4%
	Unknown									2	0.0%	1	0.0%
	Sum	4,796		7,002		6,910		7,219		7,691		5,921	
Sum		4,796		7,002		6,910		7,219		7,691		5,921	

Demographics (Unduplicated Students): Ethnic This sheet illustrates the breakdown by Ethnicity (self-identified) of students enrolled in at least one course at census during the academic year(s) or term(s) selected. College : 'CC' , Term : '201770, 201730, 201670, 201630, 201570, 201530, 201470, 201430, 201370, 201330'   29-JAN-18

Term:<All>	Campus:<All>	CTE:<All>	Basic Skills:<All>	Major:<All>	Subj:<All>	Course ID:<All>	FinAid Awarded:<All>

		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
		Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
CC	African American	226	4.7%	332	4.7%	327	4.7%	347	4.8%	401	5.2%	318	5.4%
	American Indian	97	2.0%	121	1.7%	111	1.6%	107	1.5%	119	1.5%	115	1.9%
	Asian	133	2.8%	150	2.1%	146	2.1%	145	2.0%	181	2.4%	142	2.4%
	Filipino	60	1.3%	78	1.1%	86	1.2%	94	1.3%	72	0.9%	62	1.0%
	Hispanic	1,653	34.5%	2,680	38.3%	2,700	39.1%	2,898	40.1%	3,057	39.7%	2,350	39.7%
	Pacific Islander	6	0.1%	19	0.3%	19	0.3%	26	0.4%	22	0.3%	17	0.3%
	White	2,399	50.0%	3,271	46.7%	3,186	46.1%	3,258	45.1%	3,385	44.0%	2,457	41.5%
	Two or More Races	214	4.5%	328	4.7%	321	4.6%	330	4.6%	347	4.5%	279	4.7%
	Not Reported	8	0.2%	23	0.3%	14	0.2%	14	0.2%	107	1.4%	181	3.1%
	Sum	4,796		7,002		6,910		7,219		7,691		5,921	
Sum		4,796		7,002		6,910		7,219		7,691		5,921	

Enrollment Activity - Multi Terms: Campus - FTES Note: Actual FTES is not complete until after 320 reporting is completed (i.e. spring after July, summer/fall after January). Current FTES is included for use when Actual is not yet available or not yet complete (ie between P2 & P3).   College : 'CC' , Term : '201370, 201470, 201570, 201670, 201770';   College = :College, Academic_Period = :Term, Status_Desc = 'Active'; 29-JAN-18

Dual Enrollmt:<All>	Dean:<All>	Dept:<All>	Subj:Welding	Crse:<All>	Acct Meth:<All>

		201370			
		Sections	Census Enrollmt	Current FTES	Actual FTES
CC East Kern	C101				
CC Main Campus	C101	3	63	14.5	10.8
	C102	1	22	3.1	3.1
	C200	2	38	7.6	5.4
	C201	1	17	3.0	3.0
	C203	1	16	2.3	2.3
	C204				
	C210				
Sum		8	156	30.4	24.5

		201470			
		Sections	Census Enrollmt	Current FTES	Actual FTES
CC East Kern	C101				
CC Main Campu	C101	3	53	12.3	9.2
	C102	1	15	2.1	2.1
	C200	2	30	6.9	4.3
	C201	1	16	2.8	2.8
	C203	1	20	2.8	2.8
	C204				
	C210				
		8	134	26.9	21.2

		201570			
		Sections	Census Enrollmt	Current FTES	**Actual FTES**
CC East Kern	**C101**				
CC Main Cam	**C101**	2	41	7.1	7.1
	C102	1	16	2.3	2.3
	C200	1	12	1.7	1.7
	C201				
	C203	1	21	3.0	3.0
	C204	1	18	3.1	3.1
	C210	1	17	3.0	3.0
		7	**125**	**20.2**	**20.2**

		201670			
		Sections	Census Enrollmt	Current FTES	**Actual FTES**
CC East Kern	**C101**	1	13	4.9	2.4
CC Main Campus	**C101**	2	36	6.3	6.3
	C102	1	13	1.9	1.9
	C200	1	11	1.6	1.6
	C201				
	C203	1	11	1.6	1.6
	C204	1	14	2.4	2.4
	C210	1	11	1.9	1.9
		8	**109**	**20.5**	**18.0**

		201770			
		Sections	Census Enrollmt	Current FTES	**Actual FTES**
CC East Kern	**C101**				
CC Main Campus	**C101**	3	40	7.0	7.0
	C102	1	27	3.9	3.9
	C200	1	11	1.6	1.6
	C201				
	C203	1	11	1.6	1.6
	C204	1	8	1.4	1.4
	C210	1	9	1.6	1.6
		8	**106**	**16.9**	**16.9**

Demographics (Unduplicated Students): Gender This sheet illustrates the breakdown by Gender of students enrolled in at least one course at census during the academic year(s) or term(s) selected. College : 'CC' , Term : '201770, 201730, 201670, 201630, 201570, 201530, 201470, 201430, 201370, 201330'   29-JAN-18

Term:<All> | Campus:<All> | CTE:<All> | Basic Skills:<All> | Major:<All> | Subj:<All> | Course ID:<All> | FinAid Awarded:<All>

		2012-13		2013-14		2014-15		2015-16		2016-17		2017-18	
		Students	%	Students	%	Students	%	Students	%	Students	%	Students	%
CC	Female	2,903	60.5%	4,328	61.8%	4,219	61.1%	4,369	60.5%	4,415	57.4%	3,247	54.8%
	Male	1,886	39.3%	2,664	38.0%	2,683	38.8%	2,845	39.4%	3,184	41.4%	2,593	43.8%
	Unk	7	0.1%	10	0.1%	8	0.1%	5	0.1%	92	1.2%	81	1.4%
	Sum	**4,796**		**7,002**		**6,910**		**7,219**		**7,691**		**5,921**	
Sum		**4,796**		**7,002**		**6,910**		**7,219**		**7,691**		**5,921**	

Retention & Success (Term): Summary Retention and Success are calculated using the following definitions: Retention = A,B,C,D,F,I,P/CR,NP/NC / A,B,C,P/CR,D,F,I,NP/NC,W,DR Success = A,B,C,P/CR / A,B,C,P/CR,D,F,I,NP/NC,W,DR Notes: Starting in Summer 2008, DR grades are included in the Retention and Success Rate calculations, generally leading to a higher denominator and a lower rate;   DR grades are assigned when a student drops between census day and the last date to drop without receiving a 'W' grade (30% date); DR grades did

Term:<All>	Dean:<All>	Transfer:<All>		VocEd:<All>	Basic Skills:<All>

		Cerro Coso College		
		Sections	**Retention Rate**	**Success Rate**
201730	C101	2	87.9%	75.8%
	C102	2	90.0%	80.0%
	C200	1	89.3%	71.4%
	C203	1	90.9%	90.9%
	C204	1	86.7%	73.3%
	C210	1	91.7%	83.3%
201630	C101	2	78.9%	65.8%
	C102	1	100.0%	95.0%
	C200	1	92.6%	88.9%
	C203	1	100.0%	91.7%
	C204	1	83.3%	72.2%
	C210	1	100.0%	88.9%
201530	C101	2	83.8%	70.3%
	C102	2	89.2%	86.5%
	C200	1	87.5%	87.5%
	C201	1	94.1%	94.1%
	C203	1	77.8%	66.7%
201430	C101	2	76.5%	58.8%
	C102	3	100.0%	93.3%
	C200	2	100.0%	93.5%
	C201	2	96.0%	84.0%
	C203	1	85.7%	85.7%
201330	C101	3	89.4%	74.2%
	C102	1	100.0%	100.0%
	C200	2	97.6%	80.5%
	C201	1	100.0%	88.9%
	C203	1	100.0%	85.0%
Sum		**40**	**90.9%**	**80.8%**

Enrollment Activity - Multi Terms: Campus - All Note: Students per Section = Census Enrollment / Sectic
Census Enrollment / Max Seats - Max Seats incorporates both curriculum and facility considerations. F
completed (i.e. spring after July, summer/fall after January). College : 'CC' , Term : '201330, 201430, 20
'Active';   29-JAN-18

Dual Enrollmt:<All>	Dean:<All>	Dept:<All>	Subj:Welding	Crse:<All>	Acct Meth:<All>

		201330			
		Sections	X-Listed Groups	Max Seats	Census Enrollmt
CC East Kern	C102				
CC Main Campus	C101	3		59	66
	C102	1		22	22
	C200	2		40	41
	C201	1		18	18
	C203	1		20	20
	C204				
	C210				
Sum		8		159	167

		201430			
		Sections	X-Listed Groups	Max Seats	Census Enrollmt
CC East Kern	C102				
CC Main Campus	C101	2		48	34
	C102	3		66	45
	C200	2		44	31
	C201	2		48	25
	C203	1		22	14
	C204				
	C210				
Sum		10		228	149

		201530			
		Sections	X-Listed Groups	Max Seats	Census Enrollmt
CC East Kern	C102				
CC Main Campus	C101	2		48	37
	C102	2		59	37
	C200	1		29	16
	C201	1		30	17
	C203	1		30	18
	C204				
	C210				
Sum		7		196	125

		201630			
		Sections	X-Listed Groups	Max Seats	Census Enrollmt

				Max Seats	Census Enrollmt
CC East Kern	C102				
CC Main Campus	C101	2		48	38
	C102	1		30	20
	C200	1		30	27
	C201				
	C203	1		30	12
	C204	1		30	18
	C210	1		30	9
Sum		7		198	124

		201730			
		Sections	X-Listed Groups	Max Seats	Census Enrollmt
CC East Kern	C102	1		20	6
CC Main Campus	C101	2		48	33
	C102	1		30	14
	C200	1		30	28
	C201				
	C203	1		30	11
	C204	1		30	15
	C210	1		30	12
Sum		8		218	119

ons - Cross-listed sections are identified but not accounted for in this calculation. Fill Rate =
TES/FTEF is based on Actual FTES which is blank/incomplete until 320 reporting is
1530, 201630, 201730';   College = :College, Academic_Period = :Term, Status_Desc =

Students per Section	Fill Rate	Current FTES	Actual FTES	FTEF	FTES/ FTEF
22	112%	14.9	11.4	1.0	11.4
22	100%	3.1	3.1	0.3	11.8
21	103%	8.4	5.7	0.5	10.8
18	100%	3.1	3.1	0.3	9.4
20	100%	2.9	2.9	0.3	10.7
21	105%	32.4	26.3	2.4	11.0

Students per Section	Fill Rate	Current FTES	Actual FTES	FTEF	FTES/ FTEF
17	71%	5.9	5.9	0.7	8.9
15	68%	6.1	6.3	0.8	7.9
16	70%	4.4	4.4	0.5	8.2
13	52%	4.3	4.3	0.7	6.5
14	64%	2.0	2.0	0.3	7.3
15	65%	22.6	22.8	2.9	7.8

Students per Section	Fill Rate	Current FTES	Actual FTES	FTEF	FTES/ FTEF
19	77%	6.5	6.5	0.7	9.7
19	63%	9.2	5.1	0.5	9.6
16	55%	2.2	2.2	0.3	8.4
17	57%	6.1	2.9	0.3	8.8
18	60%	2.5	2.5	0.3	9.4
18	64%	26.5	19.3	2.1	9.3

Students per Section	Fill Rate	Current FTES	Actual FTES	FTEF	FTES/ FTEF

19	79%	6.6	6.6	0.7	9.9
20	67%	2.9	2.9	0.3	10.7
27	90%	3.9	3.9	0.3	14.4
12	40%	1.7	1.7	0.3	6.4
18	60%	3.1	3.1	0.3	9.4
9	30%	1.6	1.6	0.3	4.7
18	**63%**	**19.7**	**19.7**	**2.1**	**9.2**

Students per Section	Fill Rate	Current FTES	**Actual FTES**	FTEF	FTES/ FTEF
6	30%	1.6	0.8	0.0	
17	69%	5.7	5.7	0.7	8.6
14	47%	2.0	2.0	0.3	7.5
28	93%	4.0	4.0	0.3	15.0
11	37%	1.6	1.6	0.3	5.9
15	50%	2.6	2.6	0.3	7.8
12	40%	2.1	2.1	0.3	6.3
15	**55%**	**19.6**	**18.8**	**2.1**	**8.8**

Retention & Success (Term): Summary Retention and Success are calculated using the following definitions: Retention = A,B,C,D,F,I,P/CR,NP/NC / A,B,C,P/CR,D,F,I,NP/NC,W,DR Success = A,B,C,P/CR / A,B,C,P/CR,D,F,I,NP/NC,W,DR Notes: Starting in Summer 2008, DR grades are included in the Retention and Success Rate calculations, generally leading to a higher denominator and a lower rate; DR grades are assigned when a student drops between census day and the last date to drop without receiving a 'W' grade (30% date); DR grades did not exist prior to Summer 2008; Returns only Active, Credit Sections College : 'CC' , Term : '201370, 201470, 201570, 201670, 201770'; Academic_Period = :Term, College = :College, Status_Desc = 'Active', Remove NonCredit (No Ungraded Classes)

Term:<All>	Dean:<All>	Transfer:<All>		VocEd:<All>	Basic Skills:<All>

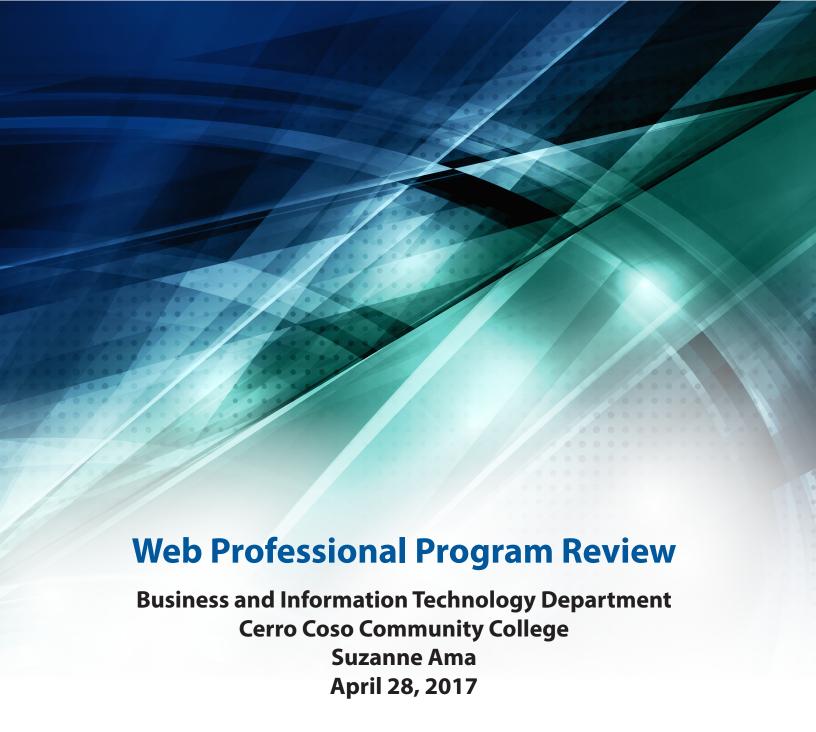|		Cerro Coso College		
		Sections	Retention Rate	Success Rate
201770	C101	3	96.9%	84.4%
	C102	1	96.3%	92.6%
	C200	1	81.8%	72.7%
	C203	1	72.7%	72.7%
	C204	1	100.0%	75.0%
	C210	1	100.0%	100.0%
201670	C101	3	95.9%	81.6%
	C102	1	100.0%	84.6%
	C200	1	100.0%	90.9%
	C203	1	100.0%	90.9%
	C204	1	100.0%	85.7%
	C210	1	100.0%	100.0%
201570	C101	2	95.1%	82.9%
	C102	1	100.0%	87.5%
	C200	1	100.0%	83.3%
	C203	1	90.5%	81.0%
	C204	1	88.9%	83.3%
	C210	1	100.0%	94.1%
201470	C101	3	96.2%	76.9%
	C102	1	93.3%	86.7%
	C200	2	100.0%	100.0%
	C201	1	100.0%	93.8%
	C203	1	90.0%	90.0%
201370	C101	3	87.1%	77.4%
	C102	1	100.0%	100.0%
	C200	2	97.4%	92.1%
	C201	1	100.0%	88.2%
	C203	1	100.0%	75.0%
Sum		38	95.3%	85.6%

Web Professional Program Review

Business and Information Technology Department
Cerro Coso Community College
Suzanne Ama
April 28, 2017

Web Professional Program

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Executive Summary

In 1997, the Cerro Coso Community College Educational Master Plan identified a need for curriculum in computer graphics and multimedia. A local certificate was developed that included courses in digital imaging, computer illustration, and desktop publishing. This certificate was discontinued in 2000, when a two-year economic development grant from the California Community Colleges Chancellor's Office funded a tenure-track faculty position to develop a web design program. The Web Design program, as it was initially named, has been an online program since its inception, although entry-level courses have also been offered at the Indian Wells Valley campus, Kern River Valley campus, and the Eastern Sierra College Center.

The Web Design program experienced a strong growth pattern from its inception through the 2011-2012 academic year. In fact, in 2011-2012, the unduplicated headcount was 393—as high as the best years of the combined enrollment of the Web Design and Digital Animation programs in previous years. This growth was owed to several factors. The curriculum appealed to a diverse student population, the program's brochure web site was well-ranked by Google, and there were still fairly limited high-quality options for web design/development skills attainment.

However, enrollment declined significantly from 2012 to the present. Enrollments were lost following a 2012 curriculum revision, loss of marketing exposure, and expanded training opportunities elsewhere. With this revision, the program was renamed Web Professional, electives were omitted, and the program acquired a narrow development focus. Inadvertently, this disenfranchised students who were interested in design. The first problem has already been resolved with a revision of the program in Fall 2016 to include design and development tracks, or options. The need for marketing is significant and has not been consistently met, but a modest campaign in 2014 provided a significant return on investment and supports the proposal for ongoing institutional support for marketing.

Retention and success across all classes lag behind the college and needs to be improved. Efforts for improvement need to be focused on entry-level courses and on closing equity gaps. Program completion also needs to be improved, however, this will be addressed if the above mentioned gaps are effectively resolved.

The strengths of the program are numerous. The Web Professional Program equips people to work in an industry with high wages, remarkable growth potential, and desirable working conditions. Statewide academic providers are not keeping pace with workforce demand, and there is a significant need for this program to serve California at large, in addition to the college's service area. Costs to students are reasonable, and students' return on investment is very high.

The curriculum aligns well with industry certifications and provides students with two focused options in their course of study. The Web Fundamentals Certificate provides students with certification of employable skills, while also providing a milestone of completion toward the full certificate or degree. Sixty-five percent of graduates are working in the web industry or in a field in which that knowledge base is required.

The program's online delivery is an optimal learning environment because it prepares students for the environment in which they will work, including remote collaboration with clients and other web professionals. As an online program, the need for institutional support for facilities, technology, and equipment is light.

Part 1 - Relevance

1. Catalog Description

Students have several awards for web design/development skill attainment:

- Web Professional Associate of Science Degree (60 units)
- Web Professional Certificate of Achievement (28 units)
- Web Fundamentals Certificate of Achievement (19 units)

The Web Professional awards are identical except that the associate degree adds Cerro Coso's local general education requirements. The Web Fundamentals certificate is intended to provide entry-level marketable skills and/or a milestone of completion toward the Web Professional certificate or degree.

Web Professional Associate of Science

The Web Professional Associate of Science Degree is designed to prepare students for employment or self-employment as web designers or developers, emphasizing standards-based coding, usability, accessibility, and creative problem solving. Adding to this foundation, students choose one of two options: design or development. With the former, students acquire multimedia design skills, and with the latter they acquire web programming skills. Students obtain skills in Adobe applications, as well as open source products. Students develop realistic expectations about work conditions through individual and collaborative work-based projects and by learning in the same technological environment in which they will eventually work. The web development option is also designed to equip students for Certified Internet Web Professional certifications, including the Web Foundations Associate Series and the Web Design Specialist certifications.

This degree is not specifically designed for transfer. Courses required for the Associate degree major at Cerro Coso Community College may not be the same as those required for a major at a four-year school. Students who plan to transfer should consult a counselor and visit http://www.assist.org to identify the courses needed for the major at the transfer school and to develop a plan that will best meet the student's goals. Students must complete a minimum of 60 units, including the courses listed in the major and general education requirements, with an overall GPA of 2.0 or better, and a grade of "A," "B," or "C," in all courses for the major. A minimum of 12 units must be completed at Cerro Coso Community College.
P/NP grading may not be used for courses in a student's major field.

Web Professional Certificate of Achievement

The Web Professional Certificate of Achievement is designed to prepare students for employment or self-employment as web designers or developers, emphasizing standards-based coding, usability, accessibility, and creative problem solving. Adding to this foundation, students choose one of two options: design or development. With the former, students acquire multimedia design skills, and with the latter they acquire web programming skills. Students obtain skills in Adobe applications, as well as open source products. Students develop realistic expectations about work conditions through individual and collaborative work-based projects and by learning in the same technological environment in which they will eventually work. The web development option is also designed to equip students for Certified Internet Web Professional certifications, including the Web Foundations Associate Series and the Web Design Specialist certifications.

Students must complete 28 units in the program with a grade of "A," "B," or "C," in all courses for the major. P/NP grading may not be used for courses in a student's major field.

Web Fundamentals Certificate of Achievement

The Web Fundamentals Certificate of Achievement prepares students for career entry in the Web industry by emphasizing standards-based coding and scripting, creative problem solving, digital imaging, layout and typography, usability, accessibility, customization of content management systems, and project management. The curriculum has the objective of developing technical and design skills, a combination of competencies that employers and clients value. Students develop realistic expectations about work conditions through individual and collaborative work-based projects and by learning in the same technological environment in which they will eventually work. Any student completing 18 units required for the major qualifies for a certificate in Web Fundamentals.

Each course for this certificate must be completed with a grade of "C" or better, or with a grade of "P" if the course is taken on a pass/no pass basis.

Program Revision History

The program was initially state-approved in 2002 as the Web Design Associate of Science Degree and Web Design Certificate of Achievement. It consisted of 8 required core courses (25 units) and a list of restricted electives from which students completed 9 units. The list of electives was quite long—approximately 20 courses, varying by a few courses with subsequent minor program revisions. Electives included courses in fine art, graphic design, digital video production, game design, programming, sound design, and e-commerce. Students were, thus, able to tailor the program to niche areas of web-based content and media development, according to their interests. The program experienced consistent growth from its inception to the 2011-2012 academic year, when unduplicated headcount reached 393 students.

A 12-unit local award, called the Digital Media Skills Certificate, was created and published in the 2009-2010 and 2010-2012 catalogs. This certificate was intended to equip individuals from the broader business community with visual literacy and digital media skills, such as the creation and editing of newsletters, advertisements, technical illustrations, photographs, web sites, videos, and presentations. Those who work in real estate, sales, marketing, administration, education, science, engineering, healthcare, small business, and other industries would benefit from these skills, as they communicate with customers, management, investors, colleagues, students, patients, and the general public. This certificate was discontinued because of the low numbers of students were selecting it as a major.

A 21-unit certificate in Mobile Media was also created and published in the 2010-2012 catalog as a grant outcome in partnership with Santa Barbara City College's Mobile Media Institute. The Mobile Media Institute was a National Science Foundation (NSF) grant project that addressed the shortage of qualified developers to create, produce, organize, and distribute micro-content for mobile devices. At that time, mobile device operating systems were not standardized, and numerous markup and programming languages were necessary to develop for different popular devices. Cerro Coso Community College's responsibility in this grant was to develop and offer an online certificate, whereas, Santa Barbara City College had an on-ground program. Cerro Coso was also tasked to share the model curriculum and train other digital media arts faculty across California in both the technical skills of mobile development and also in online learning theory through

Cerro Coso's state-renowned Online Faculty Certificate program. The grant outcomes were fully met and reported by the principle investigators. However, we discontinued the certificate for the subsequent catalog because the industry had evolved so substantially in two years, the curriculum was outdated. By that time, mobile device browsers were able to read standard hypertext markup language (HTML), and cascading stylesheets (CSS) techniques were able to effectively format content for small screens. When the Web Design program was revised to become the Web Professional program, these development techniques were embedded into the curriculum.

In Fall 2012, at the urging of the Curriculum and Instruction Council, the program was substantially revised to eliminate electives and, instead, prescribe a set of core courses that strictly pertained to web development. The philosophy was that too many elective choices are confusing, and a prescribed pathway would improve completion. Program content that is more strictly aligned with web design and development would also certainly better prepare students for work as a web design/developer upon graduation. In this iteration, the program was renamed Web Professional. In retrospect, this revision was both well-advised and ill-advised. On one hand, it has better prepared students for gainful work, but the narrower focus has also excluded students and career options. Enrollment has significantly declined, and this will be explained further in Section 2.5.

The 18-unit Web Fundamentals Certificate of Achievement was created and published in the 2016-2017 catalog in order to provide an incremental milestone of completion toward the Web Professional program. Despite being a low-unit certificate, the skillset is sufficient to prepare students for gainful employment as an entry-level web-content editor.

In Fall 2016, the Web Professional program was again significantly revised to correct the problems created by the 2012 revision. As shown in Section 1.3, in addition to core courses, there are now two options from which students can choose, Design and Development. The Design Option will accommodate formerly disenfranchised students who desire a stronger graphic design and multimedia emphasis.

2. Program Learning Outcomes

Web Professional Associate Degree and Certificate of Achievement
A. Identify concepts of Internet technology, databases, e-Commerce, and electronic communications.
B. Demonstrate technical mastery of open-source and commercial software applications to produce web content and media.
C. Use valid markup, cascading style sheets, semantic encoding, accessibility compliance, and error-free scripting in the creation of web content.
D. Apply principles of user-centered design, develop an attractive, accessible, and usable web site or mobile application.
E. Demonstrate professionalism in leadership, project management, and communications skills.

Web Fundamentals Certificate of Achievement
A. Identify concepts of Internet technology, networking, databases, and electronic communications.
B. Demonstrate technical and creative mastery of the creation of Web media, such as graphics, motion graphics, and interactive media.

C.   Use valid markup, cascading style sheets, semantic encoding, accessibility compliance, and error-free scripting in the creation of Web content.

D.   Apply design principles to solve visual communication problems.

All program learning outcomes have been reviewed by the advisory committee and are confirmed to address the spectrum of skills that are needed to be successful as a web designer or developer. Assessment artifacts are mostly work-based learning projects, ensuring that skills easily transfer over to post-graduation employment and self-employment. Outcomes are realistic and attainable, as indicated by assessment results and which will be explained further in Section 4.3.

3. Courses/Program Matrix

Courses

Web Professional AS / Certificate of Achievement (28 total units)
Students must complete all of the following courses (16 units)

• CSCI C101 – Introduction to Computer Information Systems	3 units
• DMA C102 – Digital Imaging	3 units
• DMA C111 – Fundamentals of Web Development	3 units
• DMA C113 – Accessibility and UX Design	4 units
• DMA C280 – Web Production Management	3 units

Students complete one of the following options

Option 1 – Design (12 units)

• DMA C107 – Computer Illustration	3 units
• DMA C117 – Web Design	3 units
• DMA C131 – Digital Video Production	3 units
• DMA C210 – E-Commerce	3 units

Option 2 – Development (12 units)

• DMA C119 – Advanced Web Development	3 units
• DMA C211 – Web Scripting with Javascript	3 units
• DMA C213 – Web Development with PHP and MySQL	3 units
• DMA C214 – Web Development with Python	3 units

Web Fundamentals Certificate of Achievement (19 total units)
Students must complete all of the following courses (19 units)

• CSCI C101 – Introduction to Computer Information Systems	3 units
• DMA C102 – Digital Imaging	3 units
• DMA C111 – Fundamentals of Web Development	3 units
• DMA C113 – Accessibility and UX Design	4 units
• DMA C117 – Web Design	3 units
• DMA C211 – Web Scripting with Javascript	3 units

The Web Professional core provides students with an overview of computer information systems, HTML and CSS markup, image creation and editing, principles of accessibility and usability, and project management in the capstone course. In the core, students acquire skills in Adobe Photoshop, plain text editor, file transfer protocol, and project management software applications. Students must also select either the Design Option or the Development Option to acquire more specialized skills.

The Design Option provides students with design principles and software skills to create logos, technical illustrations, flyers, web sites, and digital video. They further develop skills in Photoshop and acquire new software skills in Adobe Illustrator, Adobe Dreamweaver, Adobe Premier, and WordPress.

The Development Option provides students with advanced skills in development and scripting. The Advanced Web Development course (DMA C119) specifically equips students to develop web content for mobile devices. Cascading style sheets can control how content collapses and reformats in smaller screens. The technique replaces the numerous different markup languages that were previously necessary to develop content for mobile devices. Client-side scripting is addressed with Javascript in DMA C211. Server-side scripting is addressed with PHP and Python in DMA C213 and DMA C214, respectively. Web database development is also addressed in DMA C213.

Course/ Program Learning Outcome Matrices

Web Professional AS / Certificate of Achievement

	Program Learning Outcomes				
	A	**B**	**C**	**D**	**E**
CSCI C101	x				
DMA C102		x			
DMA C107		x			
DMA C111	x		x		
DMA C113		x	x	x	x
DMA C117		x	x	x	
DMA C119			x		
DMA C131		x			
DMA C201	x				
DMA C211			x		
DMA C213	x	x	x		
DMA C214			x		
DMA C280				x	x

Web Fundamentals Certificate of Achievement

	Program Learning Outcomes			
	A	**B**	**C**	**D**
CSCI C101	x			
DMA C102		x		x
DMA C111	x		x	
DMA C113		x	x	x
DMA C117		x	x	x
DMA C119			x	
DMA C211			x	

There is no unnecessary duplication of knowledge or skills, but there is a scaffolding of skill mastery. For example, HTML validation, which is a web-based test to identify syntax errors in code, is introduced in DMA C111. Students are expected to master the ability to interpret the validation report and correct errors as they progress through advanced development courses. Similarly, Gestalt principles are introduced in DMA C113, in which students work in groups to write critiques of the application of principles to web sites. In DMA C107 and DMA C117, they learn to apply these principles in graphic and web designs, respectively.

4. Program Pathway

Long Term Course Schedule

Courses	Fall Term 1	Spring Term 1	Fall Term 2	Spring Term 2
CSCI C101	x	x	x	x
DMA C102	x	x	x	x
DMA C107	x		x	
DMA C111	x	x	x	x
DMA C113		x		x
DMA C117		x		x
DMA C119	x		x	
DMA C131	x		x	
DMA C201		x		x
DMA C211		x		x
DMA C213	x		x	
DMA C214		x		x
DMA C280		x		x

All of the above courses are solely offered online, with the exception of a CSCI C101, which is offered online and on campus at the Indian Wells Valley campus.

As shown above, entry-level courses are offered every semester to accommodate demand for non-majors enrolling in these courses as electives or for exploration of potential interest in the web profession. Additionally, DMA C111 is an advisory requisite for DMA C113, DMA C117, DMA C119, DMA C211, and DMA C213 and is a prerequisite for the capstone course, DMA C280. Offering DMA C111 every semester naturally provides students with more opportunity to complete this important course.

The courses in the Development Option are scheduled to encourage the sequence of taking DMA C211 in the second semester, DMA C119 and DMA 213 in the third semester, and DMA C214 in the fourth semester. The courses in the Design Option can be completed in any sequence, but core courses DMA C102 and DMA C111 are both advisory requisites for DMA C117.

Recommended Pathways

Web Professional Associate Degree / Certificate of Achievement – Design Option

Fall, Term 1	Spring, Term 2	Fall, Term 3	Spring, Term 4
CSCI C101	DMA C113	DMA C107	DMA C201
DMA C102	DMA C117	DMA C131	DMA C280
DMA C111			

Web Professional Associate Degree / Certificate of Achievement – Development Option

Fall, Term 1	Spring, Term 2	Fall, Term 3	Spring, Term 4
CSCI C101	DMA C113	DMA C119	DMA C214
DMA C102	DMA C211	DMA C213	DMA C280
DMA C111			

Students who pursue the Web Professional Associate of Science incorporate general education courses into the 4-term plan, as those are available and according to students' preferences. Entry-level courses CSCI C101, DMA C102, and DMA C111 are also offered in the Spring term, affording students the option of beginning in the Spring. However, this would necessitate taking 5 terms to get in sync with other courses (shown in the long term schedule above) when they are offered once per year.

Web Fundamentals Certificate of Achievement

Fall, Term 1	Spring, Term 2
CSCI C101	DMA C113
DMA C102	DMA C117
DMA C111	DMA C211

5. Conditions of Enrollment
There are no conditions of enrollment for program entrance.

Part 2 – Appropriateness

1. Connection to College Mission

The college's mission is to provide programs that are relevant to the communities we serve, provide equitable student services, and support student success through effective traditional and distance instructional design. The college implements the following provisions for accomplishing this mission:

- "degrees and certificates in transfer and career technical education,
- "remedial instruction,
- "comprehensive support services,
- "learning opportunities that develop ethical and effective citizenry, and
- "continuing education that is compatible with the institution's primary mission."

As a career technical education program, the Web Professional program aligns with the college mission by offering marketable career technical skills to students in a field that continues to grow locally and statewide and that still has a scarcity of job applicants in certain areas of the web industry, such as mobile development. The completion of the Web Professional Associate Degree or Certificate of Achievement qualifies students for employment or self-employment in web design, web development, content management system development, content management theme design, web database development, mobile web development, e-commerce development, and search engine optimization.

Support for instructional effectiveness is provided in the following ways. The program is offered entirely online, in part to simulate the environment in which graduates will primarily work as a web professional. This also provides a uniform and equitable learning experience for students throughout our service area and state. Online courses exhibit best practices in providing students with varied modes of content presentation and learning activities that are accessible to all students, including students with disabilities. Student learning outcomes are assessed cyclically, and discipline faculty discuss the results and how to improve outcomes. Instructors, who maintain personal currency of knowledge and skill in the web industry, apply best practices of providing prompt and meaningful feedback to students and maintain regular and effective contact with students throughout the week. Prior to being certified to teach online, all instructors receive training in learning theory, in best practices in online teaching and learning, and in the college's learning management system software. Instructors are evaluated regularly, according to the evaluation schedule outlined in the faculty contract.

The program provides opportunities for students to develop and internalize citizenship and ethics for professional practice. In particular, DMA C113 Accessibility and UX Design teaches students about disabilities that impact access to web content. They learn that while the law mandates accessibility in certain circumstances, where the law is ambiguous, web professionals should promote accessibility to their clients as a matter of courtesy and ethics. Because techniques to make web content accessible involve more development time, this needs to be "sold" to clients. Consequently, students learn that they must be advocates for individuals with disabilities. Additionally, the capstone course, DMA C280 Web Production Management, entails service-based learning. Students work in teams to plan, design, and develop a functional web site for a real client—often a non-profit organization. Recent projects have included the Naval

Museum of Armament and Technology, Senior Services of Indian Wells Valley, Approach Robotics, California Business Educators Association, and Ridgecrest Regional Hospital.

Finally, students in the Web Professional program benefit from the college's comprehensive array of online support services, including counseling services, financial aid, learning resources, bookstore, and more.

2. Determination of Student Needs

The primary resource for determining skill requirements is the program's advisory committee, which is comprised of business owners, employed and self-employed web professionals, and faculty who maintain personal currency in the field. Faculty attend conferences annually to maintain currency about student needs in this discipline, including the Digital Media Educators Conference and the California Business Educators Association.

Labor market information is gathered from Economic Modeling Specialists, Inc. (EMSI), the California Economic Development Department (EDD), and job boards, such as Dice.com. EMSI and the EDD publish information about projected job outlook and wages. The EDDs occupational guide describes typical working conditions, industries that typically hire web developers, and guidelines for qualifying. Sampling job postings on Dice and other job boards confirms the specific skills that are currently in demand. For example, Python has recently emerged as an important scripting language for web development.

The web industry changes rapidly. Not only do necessary skills differ over time, but they have expanded in technical complexity as the industry has evolved. There is the strong potential for programmatic "scope-creep," and we have had to correct this via curriculum and instructional design revisions several times throughout the history of the program to ensure that course rigor does not exceed the unit value identified in the course outline of record and to ensure that the unit value of the program does not impede completion.

Student needs are also assessed on an on-going basis through assessment of student learning outcomes. Department faculty determine authentic and reliable methods for assessing outcomes, develop rubrics for assessing outcomes, score student artifacts, and discuss results.

Tutoring services through the Learning Assistance Center are available for students who are proximal to the college's campuses, especially to provide remedial assistance in reading, writing, and mathematics. Intermittently, tutoring is also available for discipline-specific skills, such as HTML coding and digital imaging. The college offers online tutoring, but currently tutors must conduct tutoring sessions at one of Cerro Coso's campuses in order that they may be supervised. This requirement limits the pool of tutors that are available to assist with web design and web development skills.

We would like to suggest that a synchronous online communication environment, like ConexEd Cranium Café or something similar, be adopted for remote tutoring. It would allow for supervision at a level that is comparable to the supervision of tutoring at the campuses. As the pool of tutors is expanded, this, in turn, would give students access to tutoring who do not currently have access.

If there is a tutor available in this subject area, students who seek tutoring must obtain an instructor-signed referral and enroll in EDUC C004 Supervised Tutoring. The Learning Assistance Center Coordinator signs referrals for students with instructors who are not proximal to our campuses. There does not appear to be a

direct obstacle for online students to receiving tutoring. The limitation is in qualifying tutors. The Learning Assistance Center Coordinator is actively seeking solutions to this problem.

Job development support is provided by Job Development Specialist at the Indian Wells Valley campus. He networks with local employers to learn about internship and employment opportunities for students and graduates, and he prepares students for employment application and interviews.

Although many students seek to complete the associate degree or certificates with the objective of obtaining fulltime employment or self-employment in the web industry, many students also avail themselves to courses that develop visual literacy, which has become imperative in almost every profession. In the digital age, professionals across diverse industries are expected to prepare web content, graphics, and even video to communicate effectively with customers, colleagues, and stakeholders.

3. Place of Program in Curriculum/Similar Programs

The Web Professional program is a fusion of design, development, and business. This program complements, but does not supplant, other programs at the college, including Computer Information Systems, Business, Business Office technology, and Studio Arts. The Web Professional and Computer Information Systems programs have a core course in common: CSCI C101 Introduction to Computer Information Systems. The Computer Information Systems (CIS) and the Fine Art programs used to also specify several DMA courses as electives. CIS included DMA C111 Fundamentals of Web Development and DMA C213 Web Development with PHP and MySQL – actually both of these courses were cross-listed in the CSCI course discipline. When the CIS program was aligned with model curriculum, its orientation shifted from developer training to technician training, and these course were omitted from the program. Likewise, the Associate of Art in Fine Art program formerly included a digital media elective track, which included the HTML, digital imaging, computer illustration, and desktop publishing courses. The Fine Art program has since been revised to become an Associate of Arts for Transfer in Studio Art, and those courses have been omitted from the program. These changes make sense for the respective programs, but it is regrettable that several digital media arts courses have experienced lower demand as a result.

Still, DMA C111 Fundamentals of Web Development remains a course of interest among CIS students. A four-semester survey of students enrolled in the entry-level DMA C111 Fundamentals of Web Development course shows that 15% are Computer Information Systems or Computer Science majors. However, students who progress through the program to the capstone course are almost exclusively Web Professional majors. There does not appear to be significant competition between programs. Non-majors seem to merely opt to enroll in selected courses in the Web Professional program, according to their interests and to fill general elective requirements.

There are no other similar programs in Cerro Coso's service area. Within the wider area of the Kern Community College District, Bakersfield College formerly had web development and digital arts programs, but those have been discontinued. A small percentage (7%) of our entering students are migrating to Cerro Coso from Bakersfield College's discontinued programs. Porterville College has not had a similar program. Outside of our district, Antelope Valley College offers an associate of arts and a certificate in Interactive Media-Web Design, Barstow College offers a certificate in Web Master, and Chaffey College offers an associate of arts in Web Design.
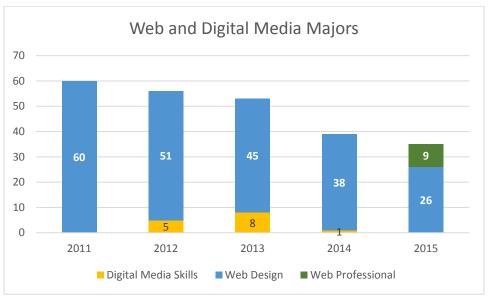
4. Majors and Completers

Majors

Majors have declined 42% over the past five years. The earlier configuration of the program (Web Design) was very popular. The substantial revision in 2012 (Web Professional), which more narrowly focused outcomes on web development and programming, excluded students who were interested in design and multimedia. However, many other majors at Cerro Coso have shown a similar downward trend over the past five years, including the somewhat related major of Computer Information Systems (36%).

Web and Digital Media Majors

Year	Digital Media Skills	Web Design	Web Professional
2011		60	
2012	5	51	
2013	8	45	
2014	1	38	
2015		26	9

Source: KCCD Program Review Data

A four-semester survey of students enrolled in the entry-level DMA C111 Fundamentals of Web Development course shows that 29% declare majors in Web Design, Web Professional, or one of Bakersfield College's discontinued Digital Arts or Web Development programs. Another 15% are Computer Information Systems or Computer Science majors. Consequently, 56% of DMA C111 students are in unrelated majors, and it is possible that many may have an expectation that web design and development is easier to master than it is.

A five-year survey of students who completed the capstone course, DMA C280 Web Production Management, shows that 81% (30) have been Web Design or Web Professional majors. Other majors that have been represented are Business Office Technology (1), Digital Media Skills (1), Computer Information Systems (1), Small Business (1), and Bakersfield College's discontinued Web Development major (2).
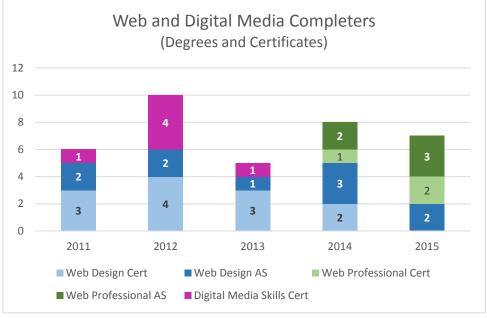
Completion

The program completion trend shows a staggered pattern that is difficult to interpret, but which is also reflected college-wide.
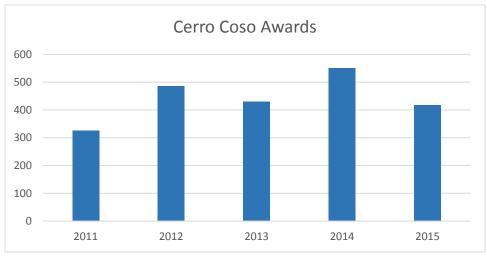
Web and Digital Media Completers
(Degrees and Certificates)

Source: KCCD Program Review Data

Cerro Coso Awards

Source: KCCD Program Review Data

We would like to see the program generate more completers – at least 10-15 per year. We think that the 2016 revision of the Web Professional program will increase interest in the program and enrollments, and we expect that it will have a downstream effect on completions. In particular, growing enrollment in entry-level DMA C111 Fundamentals of Web Development is essential because it is the primary stop-out point in the program.

The program, throughout its history and iterations, has always had clear entry points (DMA C102 and DMA C111, with the addition of CSCI C101 in the Web Professional program) and a capstone class (DMA C280). We feel this is a strength that promotes completion.

We also see the 19-unit Web Fundamentals certificate as having a positive effect on completions—both as a completion milestone itself and as encouragement to students to continue on with the Web Professional certificate or degree.

5. Summary of Student Demand Data
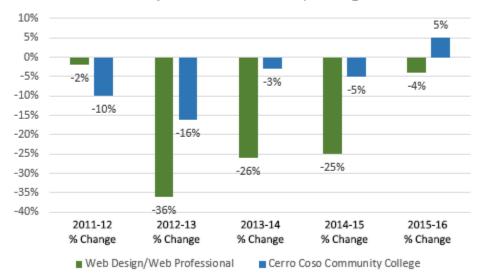
Student demand has declined substantially over the past five years.

Student Demand Summary	2011-12	2012-13	2013-14	2014-15	2015-16	Trendline
Active Sections	27	16	13	12	12	
First Day Enrollment	856	579	404	337	269	
Census Day Enrollment	598	376	270	228	182	
Unduplicated Headcount	393	253	187	140	135	
Students/Section	22	24	21	19	15	
First Day Waitlist	92	75	9	4	0	
Full Time Equivalent Students (FTES)	91.4	55.3	42.5	36.8	29.6	
Full Time Equivalent Faculty (FTEF)	8.8	4.9	5.7	3.9	3.9	
Productivity (FTES/FTEF)	10.4	11.2	7.5	9.5	7.7	

Source: KCCD Program Review Data

In 2011-2012, the unduplicated headcount was 393, which was as high as the best years of the combined enrollment of the Digital Animation and Web Design programs in previous years. Of great concern, enrollment is now 30% of what it was five years ago.

Source: KCCD Program Review Data

Compared to college trends, however, we note that from academic years 2010-2011 to 2011-2012, the college declined in enrollment at a greater rate than this program. It was only in the subsequent years that this program surpassed the college in the rate of enrollment decline. We believe this is due to the following factors:

1. In 2012, the program was revised to become more narrowly focused on web development and scripting, to the exclusion of multimedia and design. We noted that enrollment began falling rapidly in 2012-2013, but the college was also experiencing a decline in enrollment. It was not until we observed a pattern of decline in conjunction with the college's enrollment plateau that we realized there was a systemic problem with the program. Cerro Coso counselors also conveyed that the 2012 program revision was a disappointment to students and diminished their interest. As mentioned above, the program declined in enrollment only slightly compared to the college from 2010-2011 to 2011-2012, which leads us to conclude that the program would have weathered the college-wide pattern extremely well, had not the curriculum been revised to exclude a large group of students. This has been remedied by the 2016 revision, which introduces two 12-unit options from which students must choose (Design or Development), in addition to a core set of classes.

2. The program's brochure web site, http://www.academy-webdesign.com, formerly enjoyed exceptionally high Google positioning with search terms, "web design degrees," "web development degrees," "web design classes," and "web development classes." Visits to the brochure site generated a continuous volume of inquiries, which often converted into program entrance. These searches usually positioned the site on the fourth or fifth position on the first page of results returned. The site's prominent positioning has been lost, due to reasons that will be explained in Section 3.5 Marketing.

3. There are now many more opportunities for online self-training than there were a number of years ago. For example, while Lynda.com, a popular video-based software training site, has been in existence for over 20 years and has considerably extended its market reach in recent years. Massive Open Online Courses (MOOC), like Udemy.com also provide learners with the opportunity to learn software and technical skills. These options compete with this program; however, we can differentiate ourselves by emphasizing the meaningful instructor feedback that students obtain in this program at Cerro Coso.

4. Several entry-level courses were formerly electives in the Computer Information Systems and Fine Art programs. DMA C102 was particularly popular with Fine Art students, and we offered an on-ground section of DMA C102 each semester that was largely filled with these students. As mentioned previously, DMA C111 has also been popular with CIS students—and even more so when it was an elective in that program.

6. Labor Market Information and Analysis *(CTE Programs Only)*

The Employment Development Department (EDD) 2016 occupational guide for Web Developers in California reports that there will be 48% growth in the state, with 11,700 job openings from 2014 – 2024. Of these, 3,100 new positions will be created during this period. The EDD cites median hourly wages for web developers as $37.29/hour, with $25.42 in the 25th percentile and $51.77 in the 75th percentile. According to Robert Half Technology, the web developer is ranked #1 among technology positions in demand among Pacific states.

Economic Modeling Specialists, Inc. (EMSI) reports that 20 new web developer jobs are projected in the Cerro Coso service area between 2015 and 2020, with 7.1% growth. EMSI projects 7,891 new web developer positions in California over the same period, with 18.7% growth. Opportunities in our service area are mostly found in Kern County, with negligible opportunity in Inyo and Mono counties. EMSI reports that average hourly earnings in California are $29.41 per hour, with the national average being $26.25 per hour.
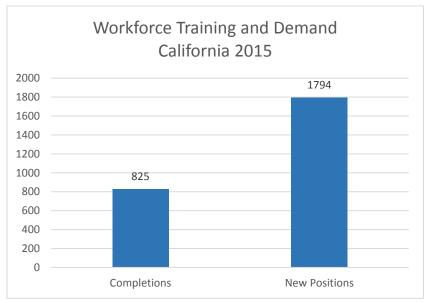
Regional Trends

	Region	2015 Jobs	2020 Jobs	Change	% Change
●	California	42,093	49,984	7,891	18.7%
■	Cerro Coso Region	282	302	20	7.1%
▲	Inyo County, CA	<10	<10	Insf. Data	Insf. Data
◆	Kern County, CA	269	286	17	6.3%
✦	Mono County, CA	<10	<10	Insf. Data	Insf. Data
★	United States	252,286	298,160	45,874	18.2%

Source: EMSI Q1 Data Set – Regional Trends for Web Developers

With such significant demand for statewide workforce training, the Web Professional program helps to meet this need, along with other web developer and web designer programs in the state. Yet, the supply of training is not nearly meeting the demand. EMSI reports that 109 regional institutions with academic programs in the categories "Web/Multimedia Management and Webmaster" and "Web Page, Digital/Multimedia and Information Resources Design" had 825 completions in 2015. Job openings in California for web professionals in 2015 was 7,625 (Program Report). Many of these are existing positions that have openings, due to turnover. But EMSI's Occupational Report for the same year indicates 1,794 new job openings. Thus, academic institutions in California are not adequately meeting the labor market demand, and Cerro Coso Community College should strongly support statewide outreach of the Web Professional program.

Workforce Training and Demand California 2015

Source: EMSI Q1 Data Set, Program Overview, Occupation Overview

7. Explanation of Employer Relationship *(CTE Programs Only)*

The primary employers of web developers and designers in our service area are represented on the Web Professional Advisory Committee, including the Naval Air Warfare Center, The Jacobs Group, New Directions Technologies, Inc., and Ridgecrest Regional Hospital, all located in Ridgecrest, California. We also participate in joint department-wide advisory meetings, including Business, Computer Information Systems, and Web Professional, in Bishop and Mammoth, however there are fewer than ten web developer/design positions held in Inyo and Mono Counties and no identifiable projected new positions, according to EMSI. While EMSI data does not isolate Kern River Valley employment trends, that community is equally limited with respect to employment. Employers convey what qualifications they seek in job applicants and identify concepts and learning outcomes that may be lacking in program design. Some examples will follow in the next section.

8. Advisory Committee *(CTE Programs Only)*

Indian Wells Valley

First Name	Last Name	Title	Organization
Suzie	Ama	Faculty Member	Cerro Coso Community College
Eric	Bleau	Senior System Administrator	New Directions Technologies
Lawrence	Cosner	Medical Director	Ridgecrest Regional Hospital
Thomas	Della Santina	Business Director	The Jacobs Group
Matthew	Denny	Web Developer	Naval Air Warfare Center
April	Hayman	Instructional Design Consultant	Self-employed
Ray	Hocker	Videographer	Naval Air Warfare Center
Elaine	Jackson	Adjunct Faculty Member	Cerro Coso Community College
Michael	Kane	Dean, Career Technical Education	Cerro Coso Community College
Valerie	Karnes	Faculty Member	Cerro Coso Community College

Forrest	Lloyd	Web Developer	Information Systems
Ashlin	Mattos	Job Development Specialist	Cerro Coso Community College
Rene	Mora	Counselor	Cerro Coso Community College
Karen	O'Connor	Faculty Chair, Business IT	Cerro Coso Community College
Ronnie	Rodriguez	Photographer	Self-employed
Frank	Timpone	Faculty Member	Cerro Coso Community College

Easter Sierra College Center (Inyo and Mono County)

First Name	Last Name	Title	Organization
Suzie	Ama	Faculty Member	Cerro Coso Community College
Deanna	Campbell	Director, ESCC	Cerro Coso Community College
Julie	Faber	Owner, Mountain Studio	Bishop Chamber of Commerce
Matt	Hightower	Faculty Member	Cerro Coso Community College
Gina	Jones	Director	Owens Valley Career Development Center
Vickie	Taton	Adjunct Faculty Member	Cerro Coso Community College

The Advisory Committees meet once per year at their respective locations: Indian Wells Valley and Eastern Sierra College Center. As mentioned above, the committees have played an important role in identifying emerging skills and knowledge domains.

Some recent requests that the advisory committee has made of the program include alignment of the curriculum to the CIW certification and inclusion of oral communication skills. The Jacobs Group requires that applicants for web developer positions have certification as a Certified Internet Webmaster (CIW) Web Foundations Associate. This certification covers concepts in markup, scripting, cascading stylesheets, search engine optimization, e-commerce solutions, networking, internet applications, privacy and security, and computer maintenance. The curriculum was revised in 2012 to fully align with the certification objectives. In 2015, the advisory committee requested the addition of SPCH C101 Elements of Speech to the program because of the stated need for oral communication skills. However, the addition of three units to the program would impact completions, and low completion rates put a program under scrutiny. Enhancing completion is already an identified need for the program. The decision was made to, instead, embed oral communications activities throughout the curriculum. An advisory committee member, representing the Naval Air Warfare Center, also recommended the addition of the Python programming language to the curriculum, and a new course was created to accommodate this.

The World Organization of Webmasters (WOW), now renamed WebProfessionals.org, has been an important resource for advisory input. It was the early mission of this organization to facilitate collaboration between industry and education to establish technical and professional standards for the web industry. Subsequent to that, they established numerous certifications, including a set of apprentice exams, a set of associate level exams, and a set of professional level exams. The objectives for these exams have provided guidance on learning outcomes for Cerro Coso's Web Professional program. Cerro Coso Community College is listed as an Education Alliance Affiliate with WebProfessionals.org.

Delivered entirely online, the Web Professional program also serves California, at large. Discipline faculty members attend the annual Digital Media Educators Conference, sponsored by the Information Communications Technologies and Digital Media (ICT-DM) Sector Navigator Team of California Community Colleges. The conference provides a broader perspective of trends and employment opportunities in digital media in California, which inform on-going evaluation and improvement of curricula.

9. Current Cost of the Program to Students

Current costs of the associate degree and certificates are the following:

Web Professional AS, 60 units

	Design Option		Development Option	
	CA Residents	**Non-residents**	**CA Residents**	**Non-residents**
Tuition	2,760.00	15,480.00	2,760.00	15,480.00
Software	339.98	339.98	339.98	339.98
Textbooks	790.00	790.00	640.00	640.00
Total	3,889.98	16,609.98	3,739.98	16,459.98

Web Professional Certificate, 28 units

	Design Option		Development Option	
	CA Residents	**Non-residents**	**CA Residents**	**Non-residents**
Tuition	1,288.00	7,224.00	1,288.00	7,224.00
Software	339.98	339.98	339.98	339.98
Textbooks	790.00	790.00	640.00	640.00
Total	2,417.98	8,353.98	2,267.98	8,203.98

Web Fundamentals Certificate, 19 units

	CA Residents	**Non-residents**
Tuition	874.00	4,902.00
Software	169.99	169.99
Textbooks	543.00	543.00
Total	1,586.99	5,614.99

California residents are charged an enrollment fee of $46 per unit. Non-residents also pay this fee, in addition to a tuition fee of $212 per unit.

Required software includes Microsoft Office, Adobe Creative Cloud (CC), and several open source applications. Microsoft Office 2016 is free for Cerro Coso students. Adobe CC is available to students from CollegeBuys.org for $169.99 per year (Adobe software is now only available via subscription). The software cost for the 4-semester Web Professional AS and Certificate of Achievement is $339.98. The software cost for the 2-semester Web Fundamentals Certificate of Achievement is $169.99.

Note that the textbook cost identified for the associate degree only include textbooks for discipline courses and do not include general education courses. A detail of textbook and software costs follows:

Core Courses		Design Option		Development Option	
CSCI C101	121.00	DMA C107	60.00	DMA C119	0.00
DMA C102	252.00	DMA C117	150.00	DMA C211	50.00
DMA C111	30.00	DMA C131	26.00	DMA C213	45.00
DMA C113	90.00	DMA C201	49.00	DMA C214	40.00
DMA C280	12.00				

The textbook cost for CSCI C101 has been minimized through the adoption of an eBook. Textbooks costs for most of the other courses are reasonable, however books for DMA C102 and DMA C117 are higher because of the expense of quality design textbooks. Faculty have considered open source textbooks, but the quality is not adequate.

There is an opportunity to cuts costs to students further by adopting Lynda.com across all digital media arts courses in lieu of textbooks. The primary difference between the basic and premium Lynda.com subscriptions is the premium subscription includes exercise files.

		Lynda.com	
	Textbooks	Basic	Premium
Web Professional, Design Option	$ 790.00	$ 479.76	$ 719.76
Web Professional, Dev Option	$ 640.00	$ 479.76	$ 719.76
Web Fundamentals Certificate	$ 534.00	$ 239.88	$ 359.88

All scenarios offer savings to students. This actually includes the Web Professional Development Option because that instructor is already requiring Lynda.com instead of a print textbook. A Lynda.com subscription can be canceled at any time, so DMA C119 students could subscribe to Lynda for 4 months at a cost of $79.96 (basic) or $119.96 (premium). Therefore current costs to students for the Development Option is $719.96 or $759.96, depending upon wither DMA C119 students choose basic or premium Lynda.com options. There is clearly a significant savings to students by adopting Lynda.com across the discipline. Additionally, it is a much greater value because the subscription provides full access to thousands of courses on software, design theory, programming, business and marketing, and much more. However, students would not be required to self-select relevant video courses to support their learning. Instructors would assign specific videos in course content to support course and module learning outcomes.

An additional opportunity to students is a free Lynda.com subscription, available to all County of Los Angeles Public Library card holders. A library card is available to all California residents—one need not live in Los Angeles County. However to obtain a card, one must visit a county library in person. The closest library to our service area is the Lancaster Library, which is adjacent to Cerro Coso Community College's service area and is 86 miles from Cerro Coso's Indian Wells Valley campus.

The department faculty will discuss this in the coming year to determine whether we wish to collectively pursue this option.

Part 3 – Currency

1. Staffing

One course, CSCI C101, is taught by two full-time faculty members from the computer information systems discipline. The program-specific DMA (Digital Media Arts) courses have been staffed by one full-time faculty member and three adjunct faculty members. Historical trends show a decline in staffing that parallels the trend in enrollment decline.

	2011-12	2012-13	2013-14	2014-15	2015-16
FTES	83.4	55.3	42.5	36.8	29.6
FTEF	8.3	4.9	5.7	3.9	3.9

Source: KCCD Program Review Data

Staffing has been adequate for the program, but a fourth adjunct faculty member will join the program, beginning in the fall of 2017, due to the addition of DMA C131 Digital Video production and his expertise in that area.

Productivity, as calculated by full-time equivalent students (FTES) divided by full-time equivalent faculty (FTEF), has also declined within the program and college-wide. Within the program, productivity has declined by 24%, owing to enrollment decline and smaller class sizes.

FTES/FTEF	2011-12	2012-13	2013-14	2014-15	2015-16
Program	10.1	11.2	7.5	9.5	7.7
College	15.2	15.1	14.1	13.9	13.9

Source: KCCD Program Review Data

2. Professional Development

Professional development is needed for faculty members to retain currency in software, markup and scripting standards, industry trends, and best practices in teaching. Software upgrades tend to be on an 18-month cycle, and some upgrades involve significant differences in interface and features. Markup language and scripting standards evolve a little more slowly, but significant differences can occur over 3-4 years. Currency in industry trends enables instructors to assign activities that are authentic and transferable. There is an on-going need for faculty members to apply techniques that improve student success.

An important resource for retaining currency in software, markup, and scripting is Lynda.com. This subscription is now free to California Community College faculty members through the California Community Colleges Chancellor's Office Professional Learning Network. As mentioned in Section 2.9, Lynda.com offers thousands of video courses, including all of the software applications and markup/scripting languages that we teach, as well as technologies to enhance classroom instruction and teaching techniques.

Discipline faculty members (full-time and adjunct) also attend the annual Digital Media Educators Conference (DMEC). As discussed in Section 2.8, the DMEC is sponsored by the Information Communications Technologies and Digital Media (ICT-DM) Sector Navigator Team of California Community Colleges. The conference informs faculty of current industry trends, which helps to guide the design of authentic activities

and assessments. The conference is free to California Community College faculty members. There is a travel stipend and the hotel cost is reimbursed, as well.

The college hosts an annual professional development day for adjunct faculty in November. This is hosted at the Indian Wells Valley campus, and adjunct members from IWV and the Eastern Sierra College Center have attended. Recent topics have included student learning outcome assessment and student equity. Adjunct faculty members who attend receive a $180 stipend.

There are also professional development opportunities for both full-time and adjunct faculty members throughout the year during Flex Day and through "Lunch and Learn" peer trainings.

The full-time faculty member in the program also attends the annual California Business Educators Association (CBEA) state conference. The web industry is a fusion of design, development, and business, and the CBEA conference complements the professional development venues discussed above. Recent conference keynote and breakouts have included Open Education Resources (OER), Introduction to Canvas, and analysis of educational research data. This conference is not free. Registration, hotel, and meals cost approximately $800. If a college car is not available, a car rental is also required.

3. Facilities and Physical Resources
CSCI C101 is offered both online and on-ground at the IWV campus. The computer classrooms undergo upgrade and replacement of computers and peripheral devices according to a replacement schedule, managed and funded by the Information Technology department. The facilities are sufficient for this course.

All other courses in this program are solely offered online and do not depend upon physical resources.

4. Technology
Beyond very limited classroom needs (for some sections of CSCI C101), technology needs for the program are minimal. The full-time faculty member requires a laptop with sufficient processing capacity, RAM, and hard drive space to run necessary applications. Of all applications that are used, the Adobe Creative Cloud applications (and Photoshop in particular) have the most demanding requirements (quoted from Adobe):

- Intel® Core 2 or AMD Athlon® 64 processor; 2 GHz or faster processor
- Microsoft Windows 7 with Service Pack 1, Windows 8.1, or Windows 10
- 2 GB or more of RAM (8 GB recommended)
- 2.6 GB or more of available hard-disk space for 32-bit installation; 3.1 GB or more of available hard-disk space for 64-bit installation; additional free space required during installation (cannot install on a volume that uses a case-sensitive file system)
- 1024 x 768 display (1280x800 recommended) with 16-bit color and 512 MB or more of dedicated VRAM; 2 GB is recommended*
- OpenGL 2.0-capable system
- Internet connection and registration are necessary for required software activation, validation of subscriptions, and access to online services.

The faculty member's laptop and second monitor are on a scheduled replacement plan, managed and funded by the Information Technology department.

5. Marketing

Due to the program's online delivery, Web Professional students reside within the college's service area and throughout California. Marketing efforts focus on both sources of student recruitment.

Local Marketing

Locally and among prospective students who are already familiar with Cerro Coso Community College, the following strategies are used to inform them of the Web Professional program:

- The college catalog
- The institutional web site
- College-sponsored outreach events
- Community presentations
- Campus advertising campaigns

Institutional Web Site

In addition to the college catalog, students become aware of the program on the institution's web site (Academics » Business & Information Technology » Web Professional AS). On this page, https://www.cerrocoso.edu/programs/web-professional-degree, students are informed about how the program prepares them for work in the web industry, what career niches within the industry may be available to them after completion, what the program learning outcomes are, what courses are required, what the approximate costs are, and who to contact for more information. Partly because the page is nested fairly deep in the site's navigation structure, this page is not well-optimized for search engines. Prospective students who search for a web design or development degree will not find this page through a Google search.

College-Sponsored Outreach and Community Presentations

The program has been marketed through regular participation in Cerro Coso events, such as Career Day, CTE Day, and the college's booth at the Desert Empire Fair. Community presentations to the Indian Wells Valley Rotary Club and the Bishop Chamber of Commerce have also been given. The college events occur annually, and it is easy to respond to the solicitation for participation. However, participation in special outreach could be more consistent if the full-time faculty member created a schedule for annual presentations with calendar reminders to initiate presentations. Materials that are provided at these events are designed by the full time faculty member and are printed by the college's print shop. The turn-around time on receiving printed materials is very good—usually within one day.

Campus Advertising Campaigns

The Office of Public Relations, Marketing, and Development coordinates and schedules advertising on the institutional web site and on television screens in student common areas. We have found it to be effective to promote Fall enrollment for DMA C111 Fundamentals of Web Development because it is a key entry level course and is an advisory and pre-requisite for several other courses in the program. Banner advertisements on the home page slider of the institutional web site have been employed for several years, and in Spring 2017, an ad that displays on monitors in student common spaces was added to the campaign.

The Office of Public Relations, Marketing, and Development has implemented a web form for marketing requests, http://surveys.cerrocoso.edu/content/publicity-request, which is intended to help that department improve services, prioritize requests, and track campaigns.

Direct Marketing

The full-time faculty member maintains a spreadsheet of current students and tracks their progress through the program. During periods of open registration, emails are sent to students, suggesting courses that would be appropriate for them for continued progress in the program.

Statewide Marketing

The program's most significant opportunity for growth is statewide enrollments, necessitating web marketing.

Brochure Web Site

The program's "brochure" web site, http://www.academy-webdesign.com, has historically been a vital method of outreach. This site includes degree and certificate requirements; the long term schedule of classes; instructions for enrolling and preparing for class; information about costs; information about careers and gainful employment; information about the college, faculty, and advisory committee; and a gallery of student work. Because this web site is dedicated exclusively to the program, it has an advantage with respect to Google search engine optimization. Boosting a site's placement in Google search results is determined by over 200 factors which are intended to ascertain a site's relevance for search terms. One of the most important factors is referred to as Page Rank and is determined by the number and quality of links pointing **to** the site. Several years ago, the brochure site enjoyed prominence in Google results placement for searches such as "web design degree" or "web development degree." The site usually displayed at the fifth or sixth position on the first results page. This was due to the face that two other sites of high ranking were linked to it:

- CerroCoso.edu (from the Web Professional program page)
- WebProfessionals.org (from the Industry Partners page)

However, several years ago, the link to the brochure site from the program page on the institution site was removed as a matter of institutional policy. The concern that was conveyed was the college does not have control over the content. However, the http://www.academy-webdesign.com site does not contain time sensitive information, except for announcements on the home page that are kept current. The program requirements on the web site will be updated to the 2016 curriculum revision when the 2017-2018 catalog is published in Summer 2017.

In the event that the faculty member should somehow become incapacitated and no longer able to maintain the brochure site, the institutional link could be removed. But outside that contingency, the link is worth thousands of dollars' worth of advertising that would need to be purchased to provide similar exposure. Consideration is requested for the brochure site to, again, be linked from the program web page on the institution site. At no cost to the college, this simple change can significantly increase program exposure. Once backlinks are established, it can take several months for Google to catalog these changes and boost ranking.

The link from the Industry Partners page on WebProfessionals.org needs to be corrected. It has been recently discovered that it points to the program page on an old iteration of Cerro Coso's institutional site. WebProfessionals.org has been contacted to correct the link and point to http://www.academy-webdesign.com.
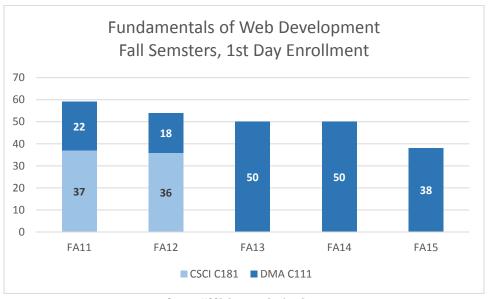
Web Advertising

Facebook Advertising

In Summer 2014, the full-time faculty member provided the Office of Public Relations, Marketing, and Development with artwork for a Facebook advertising campaign, and the office coordinated the implementation of the campaign. The amount of money spent was $774.61, 115,308 people saw the ad, and 891 people clicked the ad link to learn more. The average conversion rate of online advertising is about 2.35% across all industries, so there may have been approximately 20 additional enrollments in Fall 2014.

The chart below shows Fall semester enrollment trends for the entry-level course, DMA C111 Fundamentals of Web Development. Note that until 2013, CSCI C181 Fundamentals of Web Development was cross-listed and offered concurrently with DMA C111 Fundamentals of Web Development. The combined enrollments of both courses in 2011 and 2012 are reflective of total enrollments. There is a general decline in course enrollment that is consistent with total program enrollment trends, but there was a plateauing of enrollment immediately following the Facebook campaign.

Source: KCCD Program Review Data

The campaign may have contributed to enrollment in other courses, as well, but if only 6 students were gained as a result of this campaign (assuming FA14 enrollment would have otherwise been midway between FA13 and FA15 enrollments), the completion of this 90-hour course by those 6 students would have generated slightly more than 1 FTES (full time equivalent student). According to the Kern Community College District document on *How "FTES" Is Calculated*, the marginal rate that colleges receive is $4,564.83 for each credit FTES. Thus, a $774.61 marketing expenditure generated more than $4,564.83 in revenue, almost a six-fold return on investment.

In 2015 and 2016, we did not receive approval to run this campaign again, but we are requesting that this campaign be a consistently funded activity.

Google Advertising

In the event that Google ranking for the brochure site cannot be restored through linking from the institutional site to the brochure site, Google Search Ads can compensate for this by placing the brochure site at the top of search results. Google Display Ads and Google Video Ads may also be effective strategies. We suggest selecting one type of Google ad per year, and assessing results to ascertain which might be most effective for long term implementation.

We are requesting $4,000 per year in web marketing, divided between Facebook and Google advertising. Following each campaign, students in entry-level courses will be surveyed to find out how students learned about the program and which ads or communications they saw.
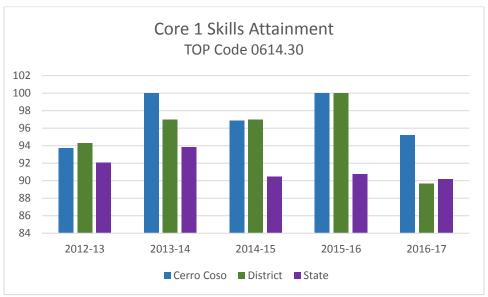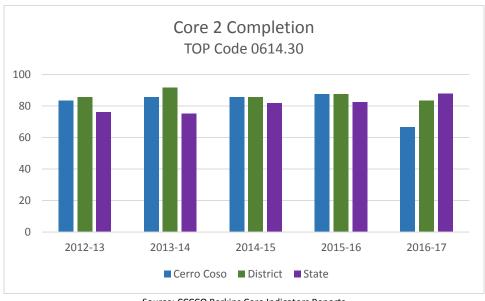
Part 4 – Student Achievement

1. Course-Level Student Performance Data

Perkins Core Indicator data shows that this program (TOP Code 0614.30 Web Design and Development) exceeds the State and District averages for Core 1 Technical Skill Attainment (essentially course completion). The program has exceeded State averages for Core 2 Completion (program completion) except for 2016-2017. And the program has exceeded State averages for Core 3 Persistence for most years except for 2015-2016.
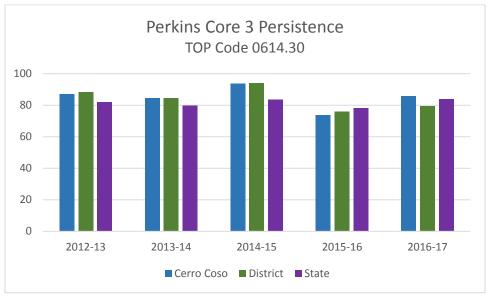
Core 1 Skills Attainment
TOP Code 0614.30

Source: CCCCO Perkins Core Indicators Reports

Core 2 Completion
TOP Code 0614.30

Source: CCCCO Perkins Core Indicators Reports

Perkins Core 3 Persistence
TOP Code 0614.30

Source: CCCCO Perkins Core Indicators Reports
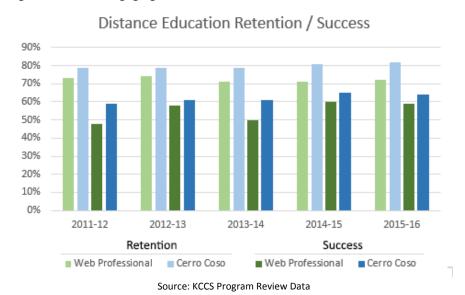
Retention and success in the program trail that of the college. There has been modest improvement as a result of dropping students who do not participate in the class during the first two weeks of the semester. Faculty members are vigilant about providing regular and effective contact with students and meaningful and constructive feedback. Faculty members also incorporate a variety of methods of instruction and activities to make the learning environment engaging.

Distance Education Retention / Success

Source: KCCS Program Review Data
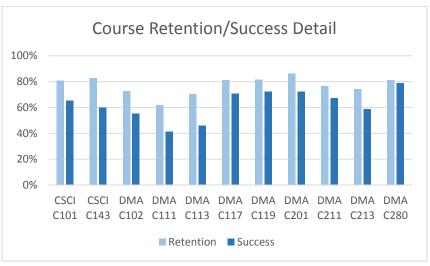
A view of course-by-course trends shows that DMA C111 Fundamentals of Web Development is the primary stop-out point in the program, with DMA C102 and DMA C113 also showing more attrition. Entry-level courses establish students' expectations about the work and the rigor of web development are informed, and some attrition is unavoidable in cases in which students alter their academic goals. However, we want to
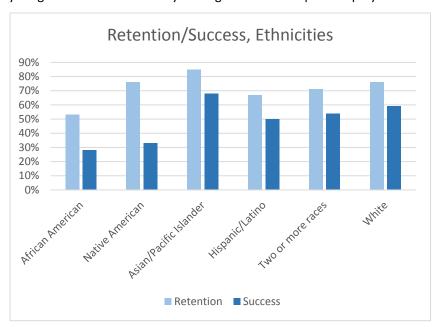
ensure that this is not occurring because of deficits in course delivery. As shown in Section 4.4, these three courses also have several unmet student learning outcomes, and addressing those gaps should improve retention and success.

Course Retention/Success Detail

Source: KCCS Program Review Data

Disaggregated data show that retention and success are slightly higher among males than female in this program and the college as a whole. In this program, retention is highest among students 19 years of age (79%) and younger and lowest among students 40 and older (68%). Success rates across age groups are more uniform, but students 30-39 years of age are most successful (57%) and students 40 and older are the least successful (53%). Across ethnicities, program trends mostly follow that of the college, with greater needs identified for African American and Native American students. The full-time faculty member is working with the Student Equity Program Director to identify strategies that can improve equity for all students.

Retention/Success, Ethnicities
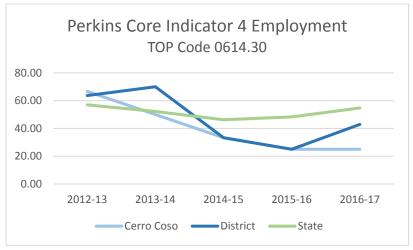
2. *Employment Data* (CTE Programs Only)

Perkins Core Indicator 4 Employment data show an average of 50% employment over 5 years, and a decline during that period.

Source: CCCCO Perkins Core Indicators Reports

The full-time faculty member in the discipline is connected with most graduates on LinkedIn and Facebook. According to MIS data, 23 students have graduated with one or more awards between 2012-2016. The following are the current job titles, according to those graduates' social media profiles:

1. Head Designer/Social Media Director
2. Freelance Web Designer
3. Web Developer
4. Accounting
5. Volunteer
6. Web Designer
7. Federal Contracting Officer
8. Electronic Technician
9. Web Designer/Developer
10. Writer/Film Director/Digital Media
11. Digital Media Producer
12. Web Developer
13. Web Designer/Photographer
14. WordPress Plugin Developer
15. Freelance Web Designer
16. Photographer
17. IT technician
18. T-shirt Designer/Printer
19. Graphic Designer
20. Unknown
21. Unknown
22. Unknown
23. Unknown

By this survey, 65% of graduates are working directly in the web industry or in a field in which web design or development would be part of their duties or knowledge-base. It is unclear how to reconcile the difference between Perkins Core Indicator data and our own direct knowledge of student employment and self-employment. It may be that Perkins is not capturing self-employment which is particularly high in this industry. Our data show that program learning outcomes are sufficiently equipping students for work in the web industry. We believe that the 2016 revision of the program will enhance this further by bolstering design skills.

3. Achievement of Program Learning Outcomes

PLO 1:	Identify concepts of Internet technology, networking, databases, and electronic communications.
Target:	80%
Assessment Method:	CSCI C101 exam, from Spring 2016 semester. All students who were actively participating in class and attempted the exam were included in the denominator.
Assessment Date:	Spring 2016
Recent Results:	90% (128 out of 143) met the target
PLO 2:	Demonstrate technical and creative mastery of the creation of Web media, such as graphics, motion graphics, and interactive media.
Target:	80%
Assessment Method:	Project 2 from DMA C117 was used to assess this outcome. All students who were actively participating in class and attempted the project were included in the denominator.
Assessment Date:	Spring 2016
Recent Results:	80% (4 out of 5) met the target.
PLO 3:	Use valid markup, cascading style sheets, semantic encoding, accessibility compliance, and error-free scripting in the creation of Web content.
Target:	80%
Assessment Method:	Project, Scored by Rubric. Students individually redesigned the China Lake Museum web site, and their projects were assessed. All students who were actively participating in class and attempted the project were included in the denominator.
Assessment Date:	Spring 2016
Recent Results:	2 out of 2 (100%) met the target.
PLO 4:	Apply design principles to solve visual communication problems.
Target:	80%
Assessment Method:	Project 2 in DMA C117 was assessed for application of design principles, scored by a rubric. All students who were actively participating in the class and who attempted the project were included in the denominator.
Assessment Date:	Spring 2016
Recent Results:	80% (4 out of 5) met the target
PLO 5:	Demonstrate life long learning skills in effective collaboration, leadership, written communication, management, and information search and retrieval.
Target:	80%
Assessment Method:	Students assessed themselves and their group peers for the level and quality of communication and accessibility, value of contributions, and leadership skills. Scores were averaged to produce a overall score. All students who were enrolled and actively participating in class were included in the denominator.
Assessment Date:	Spring 2015
Recent Results:	86% (6 out of 7) met the target.

Assessment History Summary

PLO #	Target	Semester	Met?	Target	Semester	Met?	Target	Semester	Met?
PLO 1	80%	-	-				80%	SP16	Yes
PLO 2	80%	FA09	No	80%	SP09	No	80%	SP16	Yes
PLO 3	80%	SU09	No				80%	SP16	Yes
PLO 4	80%	SP09	No				80%	SP16	Yes
PLO 5	90%	SU09	Yes				80%	SP15	Yes

Gaps and Improvements Made

There currently are no gaps in program learning outcomes.

Summary of Program Learning Outcome Achievement

Achievement of program learning outcomes has improved, following increased instructional emphasis on problematic concepts. All previous gaps were addressed by making modifications to instruction, including greater emphasis on Photoshop masking, stylesheet priority, stylesheet selectors, inline and block HTML elements, and design styles and trends. Program learning outcome 1 is new to the program, and was assessed for the first time in 2016.

We note that reassessment did not take place immediately after the reassessment of PLO 2. The gaps were addressed and enhancements to curriculum were made, but an immediate reassessment should have taken place to confirm the effectiveness of enhancements. This was an oversight. We look forward to the implementation of eLumen for greater ease of planning and recording assessments, which will also be integrated into the Canvas learning management system. eLumen has very favorable reviews among colleges that have adopted it, in contrast to CurricUNET, which has very limited tracking and reporting features.

Learning outcomes are discussed between department faculty and among full-time and adjunct faculty within the digital media arts discipline during department meetings, flex day workshops, and at conferences. Learning outcomes are also discussed at advisory meetings. Despite the fact that the web industry evolves quite rapidly, we believe that the current set of program learning outcomes represent durable categories of skills and should not need to be substantially revised in the foreseeable future. In other words, course content will likely evolve faster than the learning outcomes that are written with enough breadth to accommodate those changes. The value of this is we will better be able to collect longitudinal data on program learning outcomes.

4. Achievement of Course Student Learning Outcomes

Five-Year Assessment History

Course	SLO #	Target	Semester	Met?	Semester	Met?	Semester	Met?
CSCI C101	SLO 1	80%			FA12	No	SP12	No
	SLO 2	80%			FA12	Yes	SP12	Yes
	SLO 3	80%			SP11	Yes	SP12	Yes
	SLO 4	80%			SP11	Yes	SP12	Yes
	SLO 5	80%			SP11	Yes	SP12	Yes
	SLO 6	80%			SP11	No	SP12	Yes
DMA C102	SLO 1	80%			SP11	Yes	FA15	No
	SLO 2	80%			SP11	Yes	FA15	No
	SLO 3	80%			FA11	No	SP16	Yes
	SLO 4	80%			SP11	Yes	FA15	No
DMA C111	SLO 1	80%			SP11	No	FA15	Yes
	SLO 2	80%			FA10	No	FA15	No
	SLO 3	80%			FA10	No	FA15	Yes
	SLO 4	80%			FA12		FA15	No
	SLO 5	80%			SP11	No	FA15	Yes
DMA C113	SLO 1	80%			FA12	Yes	SP16	Yes
	SLO 2	80%			FA10	No	SP16	No
	SLO 3	80%			SP10	Yes	SP16	Yes
DMA C117	SLO 1	80%	SP11	No	SP12	Yes	SP16	Yes
	SLO 2	80%			SP12	Yes	SP16	Yes
	SLO 3	80%					SP16	Deleted
DMA C119	SLO 1	80%			FA13	Yes	FA15	Yes
	SLO 2	80%			FA13	No	FA15	Yes
	SLO 3	80%			FA13	No	FA15	Yes
	SLO 4	80%			FA13	No	FA15	Yes
	SLO 5	80%			FA13	No	FA15	Yes
DMA C201	SLO 1	80%			FA13	Yes	FA15	Yes
	SLO 2	80%			FA13	Yes	FA15	Yes
	SLO 3	80%			FA13	Yes	FA15	Yes
	SLO 4	80%			FA13	Yes	FA15	Yes
DMA C211	SLO 1	80%			FA10	Yes	SP16	Yes
	SLO 2	80%			FA10	Yes	SP16	Yes
	SLO 3	80%			FA10	Yes	SP16	Yes
	SLO 4	80%			FA10	Yes	SP16	Yes
DMA C213	SLO 1	80%			SP12	Yes	FA15	Yes
	SLO 2	80%			SP12	Yes	FA15	Yes
	SLO 3	80%			SP12	Yes	FA15	Yes
	SLO 4	80%			SP12	No	FA15	No
	SLO 5	80%			SP12	Yes	FA15	Yes
DMA C280	SLO 1	80%					FA16 (new)	Yes
	SLO 2	80%			SU11	Yes	FA16	Yes
	SLO 3	80%			SU11	Yes	FA16	Yes
	SLO 4	80%			SU11	Yes	FA16	Yes

Gaps and Improvements Made

CSCI C101

SLO 1 – *Identify the major components of hardware, software, and computing systems and their respective networks.*

Target 80%, Result 78%

The assessors felt that the assessment was fairly large and covered many technical areas and felt that perhaps a 70% target would be more appropriate.

DMA C102

SLO 1 – *Apply design principles and color theory in the design and enhancement of digital images and web interface elements.*

Target 80%, Result 72%

Sample critiques will be provided to students to model the quality that is expected. Critique assignments will be graded within 1 week to provide adequate formative feedback to assist with subsequent critiques.

SLO 2 – *Demonstrate proficiency in digital imaging software tools, including selections, masking, layers, adjustments, typography, filters, slicing, and optimizing.*

Target 80%, Result 79%

This result is barely below the target, however, greater emphasis will be conveyed for students to attend weekly live demonstrations.

SLO 4 - *Evaluate the application of copyright law to specific scenarios.*

Target 80%, Result 73%

This result is an improvement from the previous assessment, which had a result of 65%. Additional instructional emphasis had been placed on these concepts. Further plans for improve involve the incorporation of formative assessments for these concepts. It will be reassessed in Spring 2017.

DMA C111

SLO 2 - *Write valid XHTML code.*

Target 80%, Result 65%

HTML validation errors are often more forgiving than CSS validation errors, and despite there being assignment points assigned to validation, we suspect that a number of students stopped validating because they didn't feel it was important. We know that some students who didn't meet this outcome understand validation and are capable of meeting the outcome. In future classes, an assignment will be given during finals week in which validation is weighted heavily, motivating students to resolve errors.

SLO 4 – *Define the box model.*

Target 80%, Result 50%

This fell significantly below the target. Additional instruction on margin, padding, and border properties will be provided, and this outcome will be reassessed in Spring 2017.

DMA C113

SLO 2 – *Identify disabilities that impede access to Web content and categorize appropriate accommodations for each.*

Target 80%, Result 63%

Students did not meet this outcome, and this cohort did more poorly than the previous. Different instructors taught each cohort, so the department faculty will meet to optimize instructional materials.

DMA C213

SLO 4 - *Write programs that process form input data to a text file, database, or screen display.*

Target 80%, Result 75%

When this outcome was previously assessed, the result was 76%, and the plan had been to correct a lapse in time between presentation of this content and the assessment. The instructor also added a review lecture. This hasn't elevated the result above the target, and a formative assessment will be added give students added opportunity to master this.

Summary of Student Learning Outcome Achievement

Out of 43 student learning outcomes, 7 were not met. Gaps share a theme of necessary instructional enhancements. We feel that while the target may be more ambitious than are defined in other programs, it appropriately challenges discipline faculty to continue to apply best practices and improve instruction. One learning outcome was not assessed because it was not well aligned with the course and has been deleted from the course outline of record.

Full-time and adjunct faculty are conscientious about student learning and are engaged in the assessment process. We eagerly anticipate the implementation of the eLumen assessment module, which will integrate with Canvas and make conducing assessment every semester feasible and not burdensome. We think this will help make it easier to quickly loop back on unmet assessments and make changes, and it will provide longitudinal data for deeper analysis.

5. Assessment Schedule for Next Program Review Cycle

Note that the number of outcomes for each course may differ from the assessment history above. This is because outcomes may have been added or deleted in the 2016 curriculum revision. New courses have also been added.

	Year 1	Year 2	Year 3	Year 4
PLOs				
PLO 1				x
PLO 2				x
PLO 3				x
PLO 4				x

Web Professional Program

	Year 1	Year 2	Year 3	Year 4
SLOs				
CSCI C101				
SLO 1			x	
SLO 2			x	
SLO 3			x	
SLO 4			x	
SLO 5				
DMA C102				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
SLO 5			X	
DMA C107				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
DMA C111				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
DMA C113				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
DMA C117				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
DMA C119				
SLO 1			X	
SLO 2			X	
SLO 3			X	
SLO 4			X	
SLO 5			X	

DMA C131	
SLO 1	X
SLO 2	X
SLO 3	X
SLO 4	X
SLO 5	X
DMA C201	
SLO 1	X
SLO 2	X
SLO 3	X
SLO 4	X
DMA C211	
SLO 1	X
SLO 2	X
SLO 3	X
SLO 4	X
DMA C213	
SLO 1	X
SLO 2	X
SLO 3	X
SLO 4	X
SLO 5	
DMA C214	
SLO 1	X
SLO 2	X
SLO 3	X
SLO 4	X
DMA C280	
SLO 1	X
SLO 2	X
SLO 3	X
SLO 4	X

Part 5 – Action Plans

1. Analysis of Current Program Strengths

The Web Professional Program equips people to work in an industry with high wages, remarkable growth potential, and desirable working conditions. Statewide academic providers are not keeping pace with workforce demand, and there is a significant need for this program to serve California at large, in addition to the college's service area. Costs to students are reasonable, and there are opportunities for us to reduce costs further. Students' return on investment is very high for this program.

The curriculum aligns well with necessary skills and provides students with two focused options in their course of study. It is also aligned with industry certifications. The Web Fundamentals Certificate provides students with certification of employable skills, while also providing a milestone of completion toward the full certificate or degree. The program's online delivery is an optimal learning environment because it prepares students for the environment in which they will work, including remote collaboration with clients and other web professionals.

The program has experienced modest improvements in student success, evidenced by aggregated success rates and evidenced by improvements in student learning outcome assessment results. The program compares quite well with the State and District among Perkins Core Indicators 1 – 3 for most years. There is a strong culture of assessment among discipline faculty. Sixty-five percent of graduates from the past five years are currently working in the web industry or in a field in which web design or development would be part of their duties or knowledge-base.

As an online program, the need for institutional support for facilities, technology, and equipment is very light.

2. Analysis of Improvements Needed

The most significant need for improvement is increased enrollment. Enrollments that were lost due to the unintended consequences of the 2012 curriculum revision, loss of marketing exposure, and expanded training opportunities elsewhere need to be restored. The first problem has already been corrected with the 2016 curriculum revision. We expect to see some growth when students who are more interested in web design can be accommodated. The need for online marketing is significant, and has been proven to provide a significant return on investment. Marketing should also differentiate the academic experience in this program with other types of training venues. Specifically, students obtain formative and summative feedback of quality and quantity, consistently throughout each course. They also benefit from strong learning communities that emerge from well-designed course activities. Communicating this value may help steer prospective students away from self-training options and to our institution.

Retention and success across all classes lag behind the college and needs to be improved. Efforts to improve retention and success especially need to be focused on DMA C102, DMA C111, and DMA C113.

Program completion also needs to be improved. This will be addressed if the above mentioned gaps are effectively resolved.

3. Response to Previous Strategies

Strategies defined in the previous program review include the following:

1. ***Improve retention by 15 percentage points and success by 25 percentage points.***
   In Progress. Both retention and success have improved, but only modestly. DMA C102, DMA C111, and DMA C113 seem to be stop-out points for students, and we will develop strategies to address this.

2. ***Increase completion core indicators 26 percentage points.***
   Pending. Core Indicator 2 Completions have been strong during the past several years, exceeding State averages. However, in 2016-2017, they were a bit lower. We will keep an eye on this to see if a pattern is emerging. Core Indicator 4 Employment is inaccurate and at odds with our direct knowledge of student employment.

3. ***Implement instructional practices so that 80% of students attain program outcomes A, B, and C.***
   Completed. All program learning outcomes have been met.

4. ***Update course outlines for DMA C111 and DMA C109 to reflect course name changes.***
   Completed. Curriculum changes were made. DMA C109 Desktop Publishing was deleted from the program, however, in 2012 and was not added in 2016. It strictly a graphic design course, rather than a web design course.

4. Two-Year Program Strategies

Action Plan for Achieving Two-Year Strategies

1. Close equity gaps.

   o   Description. Develop and implement a plan to close equity gaps.
   o   Measurement. Improve success and retention by five percentage points.
   o   Timeline. Develop plan in Fall 2017 and implement in Spring 2018.
   o   Responsible party. Suzie Ama

2. Increase enrollment

   o   Description. Improve local and statewide outreach. Boost brochure web site search engine optimization, implement annual Facebook and Google marketing, continue campus marketing, and give more community presentations.
   o   Measurement. Obtain unduplicated headcount of 200 students.
   o   Timeline. Web marketing and campus campaigns will occur in May and June to increase Fall enrollment. Community presentations will occur in April. Request that link from institution site to brochure site be added in May 2017.
   o   Responsible party. Suzie Ama

3. Improve Retention and Success

   o   Description. Improve retention and success in DMA C102, DMA C111, and DMA C113, by adding additional multimedia instructional elements to close SLO gaps.
   o   Measurement. Improve retention and success by five percentage points.

o Timeline. Compare drops and withdrawals with course topics and activities and identify points in the semester that need attention. Develop strategies to fill these gaps.

o Responsible party. Suzie Ama

4. Evaluate Adoption of Lynda.com

o Description. Discuss with discipline faculty members whether to adopt Lynda.com in lieu of textbooks to offer more cost savings to students.

o Measurement. Evidence of discussion will be in department meeting minutes.

o Timeline. Fall 2017

o Responsible parties. Suzie Ama, Elaine Jackson, Vickie Taton, Kathleen O'Brien, Ray Hocker

5. Embed oral presentations within the program

o Description. Conduct department discussion about which courses and assignments are most appropriate for oral presentations.

o Measurement. Evidence of discussion will be in department meeting minutes.

o Timeline. Fall 2017

o Responsible parties. Suzie Ama, Elaine Jackson, Vickie Taton, Kathleen O'Brien, Ray Hocker

5. Five-Year Program Strategies

Action Plan for Achieving Five-Year Strategies

1. Close equity gaps.

o Description. Develop and implement a plan to close equity gaps.

o Measurement. Improve success and retention by ten percentage points.

o Timeline. Continue plan developed in two-year strategy

o Responsible party. Suzie Ama

2. Increase enrollment

o Description. Improve local and statewide outreach. Boost brochure web site search engine optimization, implement annual Facebook and Google marketing, continue campus marketing, and give more community presentations.

o Measurement. Obtain unduplicated headcount of 300 students.

o Timeline. Continue plan developed in two-year strategy.

o Responsible party. Suzie Ama

3. Improve Retention and Success

o Description. Improve retention and success in DMA C102, DMA C111, and DMA C113.

o Measurement. Improve retention and success by ten percentage points.

o Timeline. Continue plan developed in two-year strategy.

o Responsible party. Suzie Ama

Part 6 – Supporting Documentation

Table of Contents

Digital Media Arts

Student Demographic Information

Unduplicated Headcount [1]	2011-12		2012-13		2013-14		2014-15		2015-16	
	#	% Change	#	% Change	#	% Change	#	% Change	#	% Change
Cerro Coso College	393	-2%	253	-36%	187	-26%	140	-25%	135	-4%

Gender	Digital Media Arts										Collegewide	
	2011-12		2012-13		2013-14		2014-15		2015-16		2015-16	
	#	%	#	%	#	%	#	%	#	%	#	%
Female	210	53%	141	56%	99	53%	79	56%	75	56%	5,255	62%
Male	181	46%	112	44%	88	47%	61	44%	60	44%	3,192	38%
Not Reported	2	1%									5	0%

Age	Digital Media Arts										Collegewide	
	2011-12		2012-13		2013-14		2014-15		2015-16		2015-16	
	#	%	#	%	#	%	#	%	#	%	#	%
19 & Younger	72	18%	30	12%	26	14%	18	13%	22	16%	1,445	17%
20-29	157	40%	108	43%	68	36%	54	39%	52	39%	3,653	43%
30-39	61	16%	51	20%	37	20%	29	21%	24	18%	1,704	20%
40 & Older	103	26%	64	25%	56	30%	39	28%	37	27%	1,650	20%

Ethnicity	Digital Media Arts										Collegewide	
	2011-12		2012-13		2013-14		2014-15		2015-16		2015-16	
	#	%	#	%	#	%	#	%	#	%	#	%
African American	24	6%	11	4%	10	5%	4	3%	8	6%	425	5%
American Indian	6	2%	2	1%	1	1%	1	1%	3	2%	118	1%
Asian/Filipino/Pac. Islander	20	5%	18	7%	12	6%	10	7%	9	7%	348	4%
Hispanic/ Latino	86	22%	63	25%	61	33%	54	39%	46	34%	3,382	40%
White	233	59%	144	57%	94	50%	66	47%	59	44%	3,768	45%
Two or More Races	21	5%	13	5%	8	4%	5	4%	9	7%	385	5%
Not Reported	3	1%	2	1%	1	1%			1	1%	26	0%

Completed Ed Plan	Digital Media Arts										Collegewide	
	2011-12		2012-13		2013-14		2014-15		2015-16		2015-16	
	#	%	#	%	#	%	#	%	#	%	#	%
Completed Student Ed Plan	218	55%	147	58%	114	61%	77	55%	85	63%	5,229	62%

Completed Matriculation[2]	Digital Media Arts											Collegewide	
	2011-12		2012-13		2013-14		2014-15		2015-16			2015-16	
	#	%	#	%	#	%	#	%	#	%		#	%
Fully Matriculated	162	41%	122	48%	93	50%	65	46%	75	56%		4,684	55%

Student Majors Information

Subject Majors[3]	Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	5-Year Average
Digital Media*		5	8	1		5
Web Design*	60	51	45	38	26	44
Web Professional					9	9

Course Enrollments

Active Sections	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	2				
Distance Ed	25	16	13	12	12
Total	27	16	13	12	12

First Day Enrollment[4]	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	60				
Distance Ed	796	579	404	337	269
Total	856	579	404	337	269

Census Day Enrollment[4]	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	52				
Distance Ed	546	376	270	228	182
Total	598	376	270	228	182

Subject Students/Section[5]	Subject				
	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	26				
Distance Ed	22	24	21	19	15
Total	22	24	21	19	15

Collegewide Students/Section[5]	Collegewide				
	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	15	18	19	17	17
Distance Ed	31	29	28	27	27
Total	22	24	24	22	22

First Day Waitlist [6]	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	0				
Distance Ed	92	75	9	4	0
Total	**92**	**75**	**9**	**4**	**0**

FTES, FTEF & Productivity

FTES [7]	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	7.9				
Distance Ed	83.4	55.3	42.5	36.8	29.6
Total	**91.4**	**55.3**	**42.5**	**36.8**	**29.6**

FTEF [7]	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	0.6				
Distance Ed	8.3	4.9	5.7	3.9	3.9
Total	**8.8**	**4.9**	**5.7**	**3.9**	**3.9**

FTEF By Contract Type	2011-12		2012-13		2013-14		2014-15		2015-16	
	#	%	#	%	#	%	#	%	#	%
1) Full-Time	2.1	24%	1.8	38%	2.0	35%	1.3	34%	1.3	35%
2) Overload	0.4	5%	0.2	5%						
3) Adjunct	5.1	58%	2.0	41%	3.0	53%	2.2	57%	2.2	57%
4) Summer	1.2	13%	0.8	17%	0.7	12%	0.3	9%	0.3	9%
5) Banked Load					0.0	0%				

Subject Productivity (FTES/FTEF) [8]	Subject				
	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	14.3				
Distance Ed	10.1	11.2	7.5	9.5	7.7
Productivity (FTES/FTEF)	**10.4**	**11.2**	**7.5**	**9.5**	**7.7**

Collegewide Productivity (FTES/FTEF) [8]	Collegewide				
	2011-12	2012-13	2013-14	2014-15	2015-16
Traditional	13.4	13.9	13.0	12.4	12.3
Distance Ed	15.2	15.1	14.1	13.9	13.9
Productivity (FTES/FTEF)	14.3	14.5	13.6	13.1	13.1

Success & Retention Rates

Subject [9]	2011-12		2012-13		2013-14		2014-15		2015-16	
	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success
Traditional	85%	83%								

Subject [9]	2011-12		2012-13		2013-14		2014-15		2015-16	
	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success
Distance Ed	73%	48%	74%	58%	71%	50%	71%	60%	72%	59%
Total	**74%**	**51%**	**74%**	**58%**	**71%**	**50%**	**71%**	**60%**	**72%**	**59%**

Collegewide [9]	2011-12		2012-13		2013-14		2014-15		2015-16	
	Retention	Success	Retention	Success	Retention	Success	Retention	Success	Retention	Success
Traditional	89%	73%	90%	76%	89%	75%	90%	79%	91%	80%
Distance Ed	79%	59%	79%	61%	79%	61%	81%	65%	82%	64%
Total	83%	65%	83%	67%	82%	66%	85%	71%	86%	70%

Success & Retention Rates Disaggregated

Because of small numbers, the five years represented in this report were combined. Percentages shown in grey italics are from groups of less than 30 where overall results are more influenced by individual results.

Subject Overall Combined	Retention	Success	Collegewide Overall Combined	Retention	Success
Digital Media Arts	73%	55%	Cerro Coso College	84%	68%

Subject Gender	Retention	Success	Collegewide Gender	Retention	Success
Female	71%	54%	Female	83%	67%
Male	75%	55%	Male	85%	69%

Subject Age	Retention	Success	Collegewide Age	Retention	Success
19 & Younger	79%	54%	19 & Younger	87%	69%
20-29	73%	54%	20-29	82%	65%
30-39	75%	57%	30-39	83%	69%
40 & Older	68%	53%	40 & Older	84%	73%

Subject Ethnicity	Retention	Success	Collegewide Ethnicity	Retention	Success
African American	53%	28%	African American	71%	44%
American Indian	*76%*	*33%*	American Indian	79%	57%
Asian/Filipino/Pac. Islander	85%	68%	Asian/Filipino/Pac. Islander	88%	75%
Hispanic/ Latino	67%	50%	Hispanic/ Latino	83%	65%
Two or More Races	71%	54%	Two or More Races	83%	66%
White	76%	59%	White	86%	72%

Subject Completed Ed Plan	Retention	Success	Collegewide Completed Ed Plan	Retention	Success
Completed Student Ed Plan	74%	57%	Completed Student Ed Plan	85%	70%

Subject Fully Matriculated	Retention	Success	Collegewide Fully Matriculated	Retention	Success
Fully Matriculated	73%	58%	Fully Matriculated	85%	71%

Student Awards

Awards by Type & Program [10]		2011-12	2012-13	2013-14	2014-15	2015-16	5-Year Total
AS	Web Design*	2	2	1	3	2	10
	Web Professional				2	3	5
	Award Type Total	2	2	1	5	5	15
Cert	Digital Media*	1	4	1			6
	Web Design*	3	4	3	2		12
	Web Professional				1	2	3
	Award Type Total	4	8	4	3	2	21
Total Awards		6	10	5	8	7	36

1 The Unduplicated Headcount is the number of students enrolled on census day, where each student is counted one time.

2 Fully matriculated is completing (or being exempt from) all matriculation components (Assessment, Orientation, Counseling, and Ed Plan).

3 When the same major is offered at another KCCD college, the student count includes students who selected their major at the other college but who attended this college. Only majors that students have declared are shown. An '*' indicates that a Major does not exist in the 2015-16 college catalog.

4 Enrollments are reported on both First Day and Census Day. Each course a student is enrolled in is counted as one enrollment.

5 Students per Section is defined as census enrollments divided by active sections. Cross-listed sections are not combined.

6 Waitlisted Enrollments on First Day (determined by section start date) where each section a student is waitlisted in counts as one waitlisted enrollment.

7 Acronyms FTES and FTEF represent full-time equivalent students and full-time equivalent faculty, respectively.

8 FTES/FTEF: A measurement of productivity where the generally accepted target is 17.5.

9 Success rate numerator: Number of course enrollments with a successful passing grade (A,B,C,P).
Retention rate numerator: Number of course enrollments retained through the semester (grade=A,B,C,P,D,F,NP,I).
Success and Retention rate denominator: Number of enrollments retained (A,B,C,P,D,F,NP,I), dropped after Census Day (DR), and withdrawn (W).

10 Only programs with student awards will be shown. An '*' indicates that the program major does not exist in 2015-16 college catalog.

			Sections	1st Day Enroll	Census Enrollmt	Ending Enroll	Students /Section	Waitlist First Day	Actual FTES	FTEF	FTES/ FTEF	Retention Rate	Success Rate
CSCI C101	**2015-2016**	201630	6	211	146	123	24	3	24.0	2.0	12.0	84.2%	69.2%
		201570	5	173	122	110	24	1	20.7	1.7	12.4	90.2%	77.9%
		201550	2	76	50	46	25		8.2	0.7	12.4	92.0%	84.0%
		Annual Yr Sum	**13**	**460**	**318**	**279**	**24**	**4**	**52.9**	**4.3**	**12.2**	**87.7%**	**74.8%**
	2014-2015	201530	4	153	120	99	30	2	20.2	1.3	15.2	82.5%	73.3%
		201470	6	199	148	131	25	6	25.2	1.7	15.1	89.7%	74.7%
		201450	2	82	50	33	25	0	8.4	0.7	12.6	67.3%	36.7%
		Annual Yr Sum	**12**	**434**	**318**	**263**	**27**	**8**	**53.9**	**3.7**	**14.7**	**83.5%**	**68.3%**
	2013-2014	201430	4	154	109	86	27	1	18.4	1.6	11.5	78.9%	65.1%
		201370	4	185	125	90	31	32	21.1	1.3	15.8	72.6%	54.0%
		201350	1	55	36	24	36	7	5.9	0.3	17.8	66.7%	50.0%
		Annual Yr Sum	**9**	**394**	**270**	**200**	**30**	**40**	**45.4**	**3.3**	**13.9**	**74.3%**	**58.0%**
	2012-2013	201330	3	142	100	83	33	24	16.7	1.0	16.7	83.0%	65.0%
		201270	5	173	112	75	22	55	18.9	1.3	14.2	67.0%	52.7%
		201250	1	68	30	22	30	22	4.9	0.3	14.9	73.3%	50.0%
		Annual Yr Sum	**9**	**383**	**242**	**180**	**27**	**101**	**40.6**	**2.7**	**15.2**	**74.4%**	**57.4%**
	2011-2012	201230	4	155	126	106	32	42	21.2	1.9	11.2	84.1%	63.5%
		201170	3	143	88	68	29	51	14.7	1.0	14.7	75.6%	63.3%
		201150	1	68	26	21	26	22	4.3	0.3	12.9	80.8%	69.2%
		Annual Yr Sum	**8**	**366**	**240**	**195**	**30**	**115**	**40.2**	**3.2**	**12.5**	**80.6%**	**64.0%**
			51	2,037	1,388	1,117	27	268	232.9	17.1	13.6	80.6%	65.2%
CSCI C143	**2015-2016**	201630	1	52	42	33	42	7	7.0	0.3	21.1	78.6%	66.7%
		Annual Yr Sum	**1**	**52**	**42**	**33**	**42**	**7**	**7.0**	**0.3**	**21.1**	**78.6%**	**66.7%**
	2014-2015	201530	1	46	36	33	36	2	6.0	0.3	18.1	91.7%	66.7%
		201470	1	48	35	28	35	0	5.9	0.3	17.6	84.8%	69.7%
		Annual Yr Sum	**2**	**94**	**71**	**61**	**36**	**2**	**11.9**	**0.7**	**17.9**	**88.4%**	**68.1%**
	2013-2014	201430	1	47	40	30	40	5	6.7	0.7	10.1	75.0%	62.5%
		Annual Yr Sum	**1**	**47**	**40**	**30**	**40**	**5**	**6.7**	**0.7**	**10.1**	**75.0%**	**62.5%**
	2012-2013	201330	1	42	31	28	31	0	5.1	0.3	15.3	90.3%	58.1%
		Annual Yr Sum	**1**	**42**	**31**	**28**	**31**	**0**	**5.1**	**0.3**	**15.3**	**90.3%**	**58.1%**
	2011-2012	201230	1	34	25	20	25	0	4.1	0.7	6.2	80.0%	36.0%
		201170	1	51	35	28	35	2	5.8	0.3	17.3	80.0%	51.4%
		Annual Yr Sum	**2**	**85**	**60**	**48**	**30**	**2**	**9.9**	**1.0**	**9.9**	**80.0%**	**45.0%**
			7	320	244	200	35	16	40.7	3.0	13.6	82.6%	59.9%
DMA C102	**2015-2016**	201630	1	46	33	22	33	0	5.5	0.3	16.8	66.7%	60.6%
		201570	1	45	28	19	28	0	4.7	0.3	14.1	67.9%	53.6%
		201550	1	37	22	19	22		3.6	0.3	10.9	86.4%	68.2%
		Annual Yr Sum	**3**	**128**	**83**	**60**	**28**	**0**	**13.9**	**1.0**	**13.9**	**72.3%**	**60.2%**
	2014-2015	201530	1	47	37	25	37	2	6.2	0.3	18.6	67.6%	56.8%
		201470	1	54	27	20	27	2	4.5	0.3	13.6	76.9%	69.2%
		201450	1	40	22	18	22	0	3.6	0.3	10.9	81.8%	59.1%
		Annual Yr Sum	**3**	**141**	**86**	**63**	**29**	**4**	**14.4**	**1.0**	**14.4**	**74.1%**	**61.2%**
	2013-2014	201430	1	44	37	26	37	0	6.2	0.7	9.3	70.3%	37.8%
		Annual Yr Sum	**1**	**44**	**37**	**26**	**37**	**0**	**6.2**	**0.7**	**9.3**	**70.3%**	**37.8%**
	2013-2014	201370	1	56	34	27	34	6	5.7	0.3	17.1	79.4%	61.8%
		201350	1	49	36	25	36	2	5.9	0.3	17.8	69.4%	63.9%
		Annual Yr Sum	**2**	**105**	**70**	**52**	**35**	**8**	**11.6**	**0.7**	**17.5**	**74.3%**	**62.9%**
	2012-2013	201330	1	54	39	25	39	10	6.4	0.3	19.3	64.1%	53.8%
		201270	1	52	33	23	33	15	5.4	0.3	16.3	69.7%	54.5%
		201250	1	60	36	30	36	20	5.9	0.3	17.8	83.3%	58.3%
		Annual Yr Sum	**3**	**166**	**108**	**78**	**36**	**45**	**17.8**	**1.0**	**17.8**	**72.2%**	**55.6%**
	2011-2012	201230	1	47	41	27	41	22	6.8	0.7	10.1	65.9%	41.5%
		201170	2	87	62	45	31	16	10.8	0.7	16.2	72.6%	58.1%
		201150	1	62	38	30	38	19	6.3	0.3	18.8	78.9%	44.7%
		Annual Yr Sum	**4**	**196**	**141**	**102**	**35**	**57**	**23.8**	**1.7**	**14.3**	**72.3%**	**49.6%**
			16	780	525	381	33	114	87.7	6.0	14.6	72.7%	55.3%
DMA C111	**2013-2014**	201370	1	50	24	15	24	1	4.0	0.3	12.1	62.5%	33.3%
		201350	1	27	13	9	13	0	2.1	0.3	6.4	69.2%	23.1%
		Annual Yr Sum	**2**	**77**	**37**	**24**	**19**	**1**	**6.2**	**0.7**	**9.3**	**64.9%**	**29.7%**
	2012-2013	201330	1	52	30	22	30	0	4.9	0.3	14.9	73.3%	50.0%
		201270	1	18	10	1	10	11	1.6	0.3	5.0	10.0%	10.0%
		201250	1	16	15	12	15	15	2.5	0.3	7.4	80.0%	46.7%
		Annual Yr Sum	**3**	**86**	**55**	**35**	**18**	**26**	**9.1**	**1.0**	**9.1**	**63.6%**	**41.8%**
	2011-2012	201230	1	28	18	10	18	6	3.0	0.7	4.5	55.6%	38.9%
		201170	1	22	10	6	10	5	1.6	0.3	5.0	60.0%	30.0%
		201150	1	23	16	7	16	3	2.6	0.3	7.9	37.5%	37.5%
		Annual Yr Sum	**3**	**73**	**44**	**23**	**15**	**14**	**7.3**	**1.3**	**5.4**	**50.0%**	**36.4%**
	2015-2016	201630	1	30	17	8	17	0	2.9	0.3	8.6	47.1%	23.5%
		201570	1	38	24	20	24	0	4.0	0.3	12.1	83.3%	66.7%
		Annual Yr Sum	**2**	**68**	**41**	**28**	**21**	**0**	**6.9**	**0.7**	**10.3**	**68.3%**	**48.8%**
	2014-2015	201530	1	28	14	6	14	0	2.3	0.3	7.0	42.9%	42.9%

DMA	Year	Code											
		201470	1	50	33	25	33	0	5.5	0.3	16.6	75.8%	57.6%
		Annual Yr Sum	**2**	**78**	**47**	**31**	**24**	**0**	**7.9**	**0.7**	**11.8**	**66.0%**	**53.2%**
	2013-2014	201430	1	46	21	11	21	0	3.5	0.7	5.3	52.4%	28.6%
		Annual Yr Sum	**1**	**46**	**21**	**11**	**21**	**0**	**3.5**	**0.7**	**5.3**	**52.4%**	**28.6%**
			13	428	245	152	19	41	40.8	5.0	8.2	61.6%	41.2%
DMA C113	2015-2016	201630	1	14	11	11	11	0	1.0	0.2	5.1	100.0%	72.7%
		Annual Yr Sum	**1**	**14**	**11**	**11**	**11**	**0**	**1.0**	**0.2**	**5.1**	**100.0%**	**72.7%**
	2014-2015	201530	1	22	18	10	18	0	1.7	0.2	8.4	55.6%	33.3%
		Annual Yr Sum	**1**	**22**	**18**	**10**	**18**	**0**	**1.7**	**0.2**	**8.4**	**55.6%**	**33.3%**
	2013-2014	201430	1	20	19	13	19	0	1.8	0.2	8.8	68.4%	31.6%
		Annual Yr Sum	**1**	**20**	**19**	**13**	**19**	**0**	**1.8**	**0.2**	**8.8**	**68.4%**	**31.6%**
	2012-2013	201330	1	20	19	14	19	0	1.8	0.2	8.8	73.7%	42.1%
		Annual Yr Sum	**1**	**20**	**19**	**14**	**19**	**0**	**1.8**	**0.2**	**8.8**	**73.7%**	**42.1%**
	2011-2012	201230	1	34	31	21	31	0	2.9	0.2	14.4	67.7%	54.8%
		Annual Yr Sum	**1**	**34**	**31**	**21**	**31**	**0**	**2.9**	**0.2**	**14.4**	**67.7%**	**54.8%**
			5	110	98	69	20	0	9.1	1.0	9.1	70.4%	45.9%
DMA C117	2015-2016	201630	1	9	8	6	8	0	1.3	0.3	4.0	75.0%	62.5%
		Annual Yr Sum	**1**	**9**	**8**	**6**	**8**	**0**	**1.3**	**0.3**	**4.0**	**75.0%**	**62.5%**
	2014-2015	201530	1	13	12	8	12	0	2.0	0.3	6.0	66.7%	50.0%
		Annual Yr Sum	**1**	**13**	**12**	**8**	**12**	**0**	**2.0**	**0.3**	**6.0**	**66.7%**	**50.0%**
	2013-2014	201430	1	11	11	8	11	0	1.8	0.7	2.8	72.7%	63.6%
		Annual Yr Sum	**1**	**11**	**11**	**8**	**11**	**0**	**1.8**	**0.7**	**2.8**	**72.7%**	**63.6%**
	2012-2013	201330	1	11	12	12	12	0	2.0	0.3	5.9	100.0%	83.3%
		Annual Yr Sum	**1**	**11**	**12**	**12**	**12**	**0**	**2.0**	**0.3**	**5.9**	**100.0%**	**83.3%**
	2011-2012	201230	1	18	15	13	15	0	2.5	0.3	7.4	86.7%	86.7%
		Annual Yr Sum	**1**	**18**	**15**	**13**	**15**	**0**	**2.5**	**0.3**	**7.4**	**86.7%**	**86.7%**
			5	62	58	47	12	0	9.6	2.0	4.8	81.0%	70.7%
DMA C119	2015-2016	201570	1	7	5	3	5	0	0.8	0.3	2.5	60.0%	60.0%
		Annual Yr Sum	**1**	**7**	**5**	**3**	**5**	**0**	**0.8**	**0.3**	**2.5**	**60.0%**	**60.0%**
	2014-2015	201470	1	17	15	13	15	0	2.5	0.3	7.6	86.7%	86.7%
		Annual Yr Sum	**1**	**17**	**15**	**13**	**15**	**0**	**2.5**	**0.3**	**7.6**	**86.7%**	**86.7%**
	2013-2014	201370	1	29	23	19	23	0	3.9	0.3	11.6	82.6%	65.2%
		Annual Yr Sum	**1**	**29**	**23**	**19**	**23**	**0**	**3.9**	**0.3**	**11.6**	**82.6%**	**65.2%**
			3	53	43	35	14	0	7.2	1.0	7.2	81.4%	72.1%
DMA C201	2015-2016	201570	1	6	5	3	5	0	0.8	0.3	2.5	60.0%	60.0%
		Annual Yr Sum	**1**	**6**	**5**	**3**	**5**	**0**	**0.8**	**0.3**	**2.5**	**60.0%**	**60.0%**
	2014-2015	201470	1	15	13	12	13	0	2.2	0.3	6.5	92.3%	84.6%
		Annual Yr Sum	**1**	**15**	**13**	**12**	**13**	**0**	**2.2**	**0.3**	**6.5**	**92.3%**	**84.6%**
	2013-2014	201370	1	20	19	17	19	0	3.0	0.1	22.5	88.9%	66.7%
		Annual Yr Sum	**1**	**20**	**19**	**17**	**19**	**0**	**3.0**	**0.1**	**22.5**	**88.9%**	**66.7%**
			3	41	37	32	12	0	6.0	0.8	7.5	86.1%	72.2%
DMA C211	2015-2016	201630	1	18	14	11	14	0	2.3	0.3	7.1	78.6%	71.4%
		Annual Yr Sum	**1**	**18**	**14**	**11**	**14**	**0**	**2.3**	**0.3**	**7.1**	**78.6%**	**71.4%**
	2014-2015	201530	1	22	17	10	17	0	2.9	0.3	8.6	58.8%	52.9%
		Annual Yr Sum	**1**	**22**	**17**	**10**	**17**	**0**	**2.9**	**0.3**	**8.6**	**58.8%**	**52.9%**
	2013-2014	201430	1	22	15	8	15	0	1.5	0.7	2.2	53.3%	53.3%
		Annual Yr Sum	**1**	**22**	**15**	**8**	**15**	**0**	**1.5**	**0.7**	**2.2**	**53.3%**	**53.3%**
	2012-2013	201270	1	34	23	20	23	0	3.8	0.3	11.4	87.0%	78.3%
		Annual Yr Sum	**1**	**34**	**23**	**20**	**23**	**0**	**3.8**	**0.3**	**11.4**	**87.0%**	**78.3%**
	2011-2012	201170	1	44	28	25	28	0	4.6	0.3	13.9	89.3%	71.4%
		Annual Yr Sum	**1**	**44**	**28**	**25**	**28**	**0**	**4.6**	**0.3**	**13.9**	**89.3%**	**71.4%**
			5	140	97	74	19	0	15.1	2.0	7.6	76.3%	67.0%
DMA C213	2015-2016	201570	1	14	11	8	11	0	1.8	0.3	5.5	72.7%	54.5%
		Annual Yr Sum	**1**	**14**	**11**	**8**	**11**	**0**	**1.8**	**0.3**	**5.5**	**72.7%**	**54.5%**
	2014-2015	201470	1	20	11	7	11	0	1.8	0.3	5.5	63.6%	54.5%
		Annual Yr Sum	**1**	**20**	**11**	**7**	**11**	**0**	**1.8**	**0.3**	**5.5**	**63.6%**	**54.5%**
	2013-2014	201370	1	21	10	6	10	0	1.7	0.3	5.0	60.0%	40.0%
		Annual Yr Sum	**1**	**21**	**10**	**6**	**10**	**0**	**1.7**	**0.3**	**5.0**	**60.0%**	**40.0%**
	2012-2013	201330	1	14	12	8	12	0	2.0	0.3	5.9	66.7%	58.3%
		Annual Yr Sum	**1**	**14**	**12**	**8**	**12**	**0**	**2.0**	**0.3**	**5.9**	**66.7%**	**58.3%**
	2011-2012	201230	1	36	26	23	26	0	4.3	0.7	6.4	88.5%	69.2%
		Annual Yr Sum	**1**	**36**	**26**	**23**	**26**	**0**	**4.3**	**0.7**	**6.4**	**88.5%**	**69.2%**
			5	105	70	52	14	0	11.6	2.0	5.8	74.3%	58.6%
DMA C280	2015-2016	201630	1	5	4	2	4	0	0.7	0.3	2.0	50.0%	50.0%
		Annual Yr Sum	**1**	**5**	**4**	**2**	**4**	**0**	**0.7**	**0.3**	**2.0**	**50.0%**	**50.0%**
	2014-2015	201530	1	9	9	7	9	0	1.5	0.3	4.5	87.5%	87.5%
		Annual Yr Sum	**1**	**9**	**9**	**7**	**9**	**0**	**1.5**	**0.3**	**4.5**	**87.5%**	**87.5%**
	2013-2014	201430	1	9	8	8	8	0	1.3	0.7	2.0	100.0%	87.5%
		Annual Yr Sum	**1**	**9**	**8**	**8**	**8**	**0**	**1.3**	**0.7**	**2.0**	**100.0%**	**87.5%**
	2012-2013	201270	1	18	15	15	15	0	2.5	0.3	7.4	100.0%	100.0%
		Annual Yr Sum	**1**	**18**	**15**	**15**	**15**	**0**	**2.5**	**0.3**	**7.4**	**100.0%**	**100.0%**
	2011-2012	201150	1	32	12	6	12	0	2.0	0.3	5.9	50.0%	50.0%
		Annual Yr Sum	**1**	**32**	**12**	**6**	**12**	**0**	**2.0**	**0.3**	**5.9**	**50.0%**	**50.0%**

| | | 5 | 73 | 48 | 38 | 10 | 0 | 8.0 | 2.0 | 4.0 | 80.9% | 78.7% |

			Sections	1st Day Enroll	Census Enrollmt	Ending Enroll	Students /Section	Waitlist First Day	Actual FTES	FTEF	FTES/ FTEF	Retention Rate	Success Rate
CSCI C101	2015-2016	201630	6	211	146	123	24	3	24.0	2.0	12.0	84.2%	69.2%
		201570	5	173	122	110	24	1	20.7	1.7	12.4	90.2%	77.9%
		201550	2	76	50	46	25		8.2	0.7	12.4	92.0%	84.0%
		Annual Yr Sum	**13**	**460**	**318**	**279**	**24**	**4**	**52.9**	**4.3**	**12.2**	**87.7%**	**74.8%**
	2014-2015	201530	4	153	120	99	30	2	20.2	1.3	15.2	82.5%	73.3%
		201470	6	199	148	131	25	6	25.2	1.7	15.1	89.7%	74.7%
		201450	2	82	50	33	25	0	8.4	0.7	12.6	67.3%	36.7%
		Annual Yr Sum	**12**	**434**	**318**	**263**	**27**	**8**	**53.9**	**3.7**	**14.7**	**83.5%**	**68.3%**
	2013-2014	201430	4	154	109	86	27	1	18.4	1.6	11.5	78.9%	65.1%
		201370	4	185	125	90	31	32	21.1	1.3	15.8	72.6%	54.0%
		201350	1	55	36	24	36	7	5.9	0.3	17.8	66.7%	50.0%
		Annual Yr Sum	**9**	**394**	**270**	**200**	**30**	**40**	**45.4**	**3.3**	**13.9**	**74.3%**	**58.0%**
	2012-2013	201330	3	142	100	83	33	24	16.7	1.0	16.7	83.0%	65.0%
		201270	5	173	112	75	22	55	18.9	1.3	14.2	67.0%	52.7%
		201250	1	68	30	22	30	22	4.9	0.3	14.9	73.3%	50.0%
		Annual Yr Sum	**9**	**383**	**242**	**180**	**27**	**101**	**40.6**	**2.7**	**15.2**	**74.4%**	**57.4%**
	2011-2012	201230	4	155	126	106	32	42	21.2	1.9	11.2	84.1%	63.5%
		201170	3	143	88	68	29	51	14.7	1.0	14.7	75.6%	63.3%
		201150	1	68	26	21	26	22	4.3	0.3	12.9	80.8%	69.2%
		Annual Yr Sum	**8**	**366**	**240**	**195**	**30**	**115**	**40.2**	**3.2**	**12.5**	**80.6%**	**64.0%**
			51	2,037	1,388	1,117	27	268	232.9	17.1	13.6	80.6%	65.2%
CSCI C143	2015-2016	201630	1	52	42	33	42	7	7.0	0.3	21.1	78.6%	66.7%
		Annual Yr Sum	**1**	**52**	**42**	**33**	**42**	**7**	**7.0**	**0.3**	**21.1**	**78.6%**	**66.7%**
	2014-2015	201530	1	46	36	33	36	2	6.0	0.3	18.1	91.7%	66.7%
		201470	1	48	35	28	35	0	5.9	0.3	17.6	84.8%	69.7%
		Annual Yr Sum	**2**	**94**	**71**	**61**	**36**	**2**	**11.9**	**0.7**	**17.9**	**88.4%**	**68.1%**
	2013-2014	201430	1	47	40	30	40	5	6.7	0.7	10.1	75.0%	62.5%
		Annual Yr Sum	**1**	**47**	**40**	**30**	**40**	**5**	**6.7**	**0.7**	**10.1**	**75.0%**	**62.5%**
	2012-2013	201330	1	42	31	28	31	0	5.1	0.3	15.3	90.3%	58.1%
		Annual Yr Sum	**1**	**42**	**31**	**28**	**31**	**0**	**5.1**	**0.3**	**15.3**	**90.3%**	**58.1%**
	2011-2012	201230	1	34	25	20	25	0	4.1	0.7	6.2	80.0%	36.0%
		201170	1	51	35	28	35	2	5.8	0.3	17.3	80.0%	51.4%
		Annual Yr Sum	**2**	**85**	**60**	**48**	**30**	**2**	**9.9**	**1.0**	**9.9**	**80.0%**	**45.0%**
			7	320	244	200	35	16	40.7	3.0	13.6	82.6%	59.9%
DMA C102	2015-2016	201630	1	46	33	22	33	0	5.5	0.3	16.8	66.7%	60.6%
		201570	1	45	28	19	28	0	4.7	0.3	14.1	67.9%	53.6%
		201550	1	37	22	19	22		3.6	0.3	10.9	86.4%	68.2%
		Annual Yr Sum	**3**	**128**	**83**	**60**	**28**	**0**	**13.9**	**1.0**	**13.9**	**72.3%**	**60.2%**
	2014-2015	201530	1	47	37	25	37	2	6.2	0.3	18.6	67.6%	56.8%
		201470	1	54	27	20	27	2	4.5	0.3	13.6	76.9%	69.2%
		201450	1	40	22	18	22	0	3.6	0.3	10.9	81.8%	59.1%
		Annual Yr Sum	**3**	**141**	**86**	**63**	**29**	**4**	**14.4**	**1.0**	**14.4**	**74.1%**	**61.2%**
	2013-2014	201430	1	44	37	26	37	0	6.2	0.7	9.3	70.3%	37.8%
		Annual Yr Sum	**1**	**44**	**37**	**26**	**37**	**0**	**6.2**	**0.7**	**9.3**	**70.3%**	**37.8%**
	2013-2014	201370	1	56	34	27	34	6	5.7	0.3	17.1	79.4%	61.8%
		201350	1	49	36	25	36	2	5.9	0.3	17.8	69.4%	63.9%
		Annual Yr Sum	**2**	**105**	**70**	**52**	**35**	**8**	**11.6**	**0.7**	**17.5**	**74.3%**	**62.9%**
	2012-2013	201330	1	54	39	25	39	10	6.4	0.3	19.3	64.1%	53.8%
		201270	1	52	33	23	33	15	5.4	0.3	16.3	69.7%	54.5%
		201250	1	60	36	30	36	20	5.9	0.3	17.8	83.3%	58.3%
		Annual Yr Sum	**3**	**166**	**108**	**78**	**36**	**45**	**17.8**	**1.0**	**17.8**	**72.2%**	**55.6%**
	2011-2012	201230	1	47	41	27	41	22	6.8	0.7	10.1	65.9%	41.5%
		201170	2	87	62	45	31	16	10.8	0.7	16.2	72.6%	58.1%
		201150	1	62	38	30	38	19	6.3	0.3	18.8	78.9%	44.7%
		Annual Yr Sum	**4**	**196**	**141**	**102**	**35**	**57**	**23.8**	**1.7**	**14.3**	**72.3%**	**49.6%**
			16	780	525	381	33	114	87.7	6.0	14.6	72.7%	55.3%
DMA C111	2013-2014	201370	1	50	24	15	24	1	4.0	0.3	12.1	62.5%	33.3%
		201350	1	27	13	9	13	0	2.1	0.3	6.4	69.2%	23.1%
		Annual Yr Sum	**2**	**77**	**37**	**24**	**19**	**1**	**6.2**	**0.7**	**9.3**	**64.9%**	**29.7%**
	2012-2013	201330	1	52	30	22	30	0	4.9	0.3	14.9	73.3%	50.0%
		201270	1	18	10	1	10	11	1.6	0.3	5.0	10.0%	10.0%
		201250	1	16	15	12	15	15	2.5	0.3	7.4	80.0%	46.7%
		Annual Yr Sum	**3**	**86**	**55**	**35**	**18**	**26**	**9.1**	**1.0**	**9.1**	**63.6%**	**41.8%**
	2011-2012	201230	1	28	18	10	18	6	3.0	0.7	4.5	55.6%	38.9%
		201170	1	22	10	6	10	5	1.6	0.3	5.0	60.0%	30.0%
		201150	1	23	16	7	16	3	2.6	0.3	7.9	37.5%	37.5%
		Annual Yr Sum	**3**	**73**	**44**	**23**	**15**	**14**	**7.3**	**1.3**	**5.4**	**50.0%**	**36.4%**
	2015-2016	201630	1	30	17	8	17	0	2.9	0.3	8.6	47.1%	23.5%
		201570	1	38	24	20	24	0	4.0	0.3	12.1	83.3%	66.7%
		Annual Yr Sum	**2**	**68**	**41**	**28**	**21**	**0**	**6.9**	**0.7**	**10.3**	**68.3%**	**48.8%**
	2014-2015	201530	1	28	14	6	14	0	2.3	0.3	7.0	42.9%	42.9%
		201470	1	50	33	25	33	0	5.5	0.3	16.6	75.8%	57.6%
		Annual Yr Sum	**2**	**78**	**47**	**31**	**24**	**0**	**7.9**	**0.7**	**11.8**	**66.0%**	**53.2%**
	2013-2014	201430	1	46	21	11	21	0	3.5	0.7	5.3	52.4%	28.6%
		Annual Yr Sum	**1**	**46**	**21**	**11**	**21**	**0**	**3.5**	**0.7**	**5.3**	**52.4%**	**28.6%**
			13	428	245	152	19	41	40.8	5.0	8.2	61.6%	41.2%
DMA C113	2015-2016	201630	1	14	11	11	11	0	1.0	0.2	5.1	100.0%	72.7%
		Annual Yr Sum	**1**	**14**	**11**	**11**	**11**	**0**	**1.0**	**0.2**	**5.1**	**100.0%**	**72.7%**

	2014-2015	201530	1	22	18	10	18	0	1.7	0.2	8.4	55.6%	33.3%
		Annual Yr Sum	**1**	**22**	**18**	**10**	**18**	**0**	**1.7**	**0.2**	**8.4**	**55.6%**	**33.3%**
	2013-2014	201430	1	20	19	13	19	0	1.8	0.2	8.8	68.4%	31.6%
		Annual Yr Sum	**1**	**20**	**19**	**13**	**19**	**0**	**1.8**	**0.2**	**8.8**	**68.4%**	**31.6%**
	2012-2013	201330	1	20	19	14	19	0	1.8	0.2	8.8	73.7%	42.1%
		Annual Yr Sum	**1**	**20**	**19**	**14**	**19**	**0**	**1.8**	**0.2**	**8.8**	**73.7%**	**42.1%**
	2011-2012	201230	1	34	31	21	31	0	2.9	0.2	14.4	67.7%	54.8%
		Annual Yr Sum	**1**	**34**	**31**	**21**	**31**	**0**	**2.9**	**0.2**	**14.4**	**67.7%**	**54.8%**
			5	110	98	69	20	0	9.1	1.0	9.1	70.4%	45.9%
DMA C117	2015-2016	201630	1	9	8	6	8	0	1.3	0.3	4.0	75.0%	62.5%
		Annual Yr Sum	**1**	**9**	**8**	**6**	**8**	**0**	**1.3**	**0.3**	**4.0**	**75.0%**	**62.5%**
	2014-2015	201530	1	13	12	8	12	0	2.0	0.3	6.0	66.7%	50.0%
		Annual Yr Sum	**1**	**13**	**12**	**8**	**12**	**0**	**2.0**	**0.3**	**6.0**	**66.7%**	**50.0%**
	2013-2014	201430	1	11	11	8	11	0	1.8	0.7	2.8	72.7%	63.6%
		Annual Yr Sum	**1**	**11**	**11**	**8**	**11**	**0**	**1.8**	**0.7**	**2.8**	**72.7%**	**63.6%**
	2012-2013	201330	1	11	12	12	12	0	2.0	0.3	5.9	100.0%	83.3%
		Annual Yr Sum	**1**	**11**	**12**	**12**	**12**	**0**	**2.0**	**0.3**	**5.9**	**100.0%**	**83.3%**
	2011-2012	201230	1	18	15	13	15	0	2.5	0.3	7.4	86.7%	86.7%
		Annual Yr Sum	**1**	**18**	**15**	**13**	**15**	**0**	**2.5**	**0.3**	**7.4**	**86.7%**	**86.7%**
			5	62	58	47	12	0	9.6	2.0	4.8	81.0%	70.7%
DMA C119	2015-2016	201570	1	7	5	3	5	0	0.8	0.3	2.5	60.0%	60.0%
		Annual Yr Sum	**1**	**7**	**5**	**3**	**5**	**0**	**0.8**	**0.3**	**2.5**	**60.0%**	**60.0%**
	2014-2015	201470	1	17	15	13	15	0	2.5	0.3	7.6	86.7%	86.7%
		Annual Yr Sum	**1**	**17**	**15**	**13**	**15**	**0**	**2.5**	**0.3**	**7.6**	**86.7%**	**86.7%**
	2013-2014	201370	1	29	23	19	23	0	3.9	0.3	11.6	82.6%	65.2%
		Annual Yr Sum	**1**	**29**	**23**	**19**	**23**	**0**	**3.9**	**0.3**	**11.6**	**82.6%**	**65.2%**
			3	53	43	35	14	0	7.2	1.0	7.2	81.4%	72.1%
DMA C201	2015-2016	201570	1	6	5	3	5	0	0.8	0.3	2.5	60.0%	60.0%
		Annual Yr Sum	**1**	**6**	**5**	**3**	**5**	**0**	**0.8**	**0.3**	**2.5**	**60.0%**	**60.0%**
	2014-2015	201470	1	15	13	12	13	0	2.2	0.3	6.5	92.3%	84.6%
		Annual Yr Sum	**1**	**15**	**13**	**12**	**13**	**0**	**2.2**	**0.3**	**6.5**	**92.3%**	**84.6%**
	2013-2014	201370	1	20	19	17	19	0	3.0	0.1	22.5	88.9%	66.7%
		Annual Yr Sum	**1**	**20**	**19**	**17**	**19**	**0**	**3.0**	**0.1**	**22.5**	**88.9%**	**66.7%**
			3	41	37	32	12	0	6.0	0.8	7.5	86.1%	72.2%
DMA C211	2015-2016	201630	1	18	14	11	14	0	2.3	0.3	7.1	78.6%	71.4%
		Annual Yr Sum	**1**	**18**	**14**	**11**	**14**	**0**	**2.3**	**0.3**	**7.1**	**78.6%**	**71.4%**
	2014-2015	201530	1	22	17	10	17	0	2.9	0.3	8.6	58.8%	52.9%
		Annual Yr Sum	**1**	**22**	**17**	**10**	**17**	**0**	**2.9**	**0.3**	**8.6**	**58.8%**	**52.9%**
	2013-2014	201430	1	22	15	8	15	0	1.5	0.7	2.2	53.3%	53.3%
		Annual Yr Sum	**1**	**22**	**15**	**8**	**15**	**0**	**1.5**	**0.7**	**2.2**	**53.3%**	**53.3%**
	2012-2013	201270	1	34	23	20	23	0	3.8	0.3	11.4	87.0%	78.3%
		Annual Yr Sum	**1**	**34**	**23**	**20**	**23**	**0**	**3.8**	**0.3**	**11.4**	**87.0%**	**78.3%**
	2011-2012	201170	1	44	28	25	28	0	4.6	0.3	13.9	89.3%	71.4%
		Annual Yr Sum	**1**	**44**	**28**	**25**	**28**	**0**	**4.6**	**0.3**	**13.9**	**89.3%**	**71.4%**
			5	140	97	74	19	0	15.1	2.0	7.6	76.3%	67.0%
DMA C213	2015-2016	201570	1	14	11	8	11	0	1.8	0.3	5.5	72.7%	54.5%
		Annual Yr Sum	**1**	**14**	**11**	**8**	**11**	**0**	**1.8**	**0.3**	**5.5**	**72.7%**	**54.5%**
	2014-2015	201470	1	20	11	7	11	0	1.8	0.3	5.5	63.6%	54.5%
		Annual Yr Sum	**1**	**20**	**11**	**7**	**11**	**0**	**1.8**	**0.3**	**5.5**	**63.6%**	**54.5%**
	2013-2014	201370	1	21	10	6	10	0	1.7	0.3	5.0	60.0%	40.0%
		Annual Yr Sum	**1**	**21**	**10**	**6**	**10**	**0**	**1.7**	**0.3**	**5.0**	**60.0%**	**40.0%**
	2012-2013	201330	1	14	12	8	12	0	2.0	0.3	5.9	66.7%	58.3%
		Annual Yr Sum	**1**	**14**	**12**	**8**	**12**	**0**	**2.0**	**0.3**	**5.9**	**66.7%**	**58.3%**
	2011-2012	201230	1	36	26	23	26	0	4.3	0.7	6.4	88.5%	69.2%
		Annual Yr Sum	**1**	**36**	**26**	**23**	**26**	**0**	**4.3**	**0.7**	**6.4**	**88.5%**	**69.2%**
			5	105	70	52	14	0	11.6	2.0	5.8	74.3%	58.6%
DMA C280	2015-2016	201630	1	5	4	2	4	0	0.7	0.3	2.0	50.0%	50.0%
		Annual Yr Sum	**1**	**5**	**4**	**2**	**4**	**0**	**0.7**	**0.3**	**2.0**	**50.0%**	**50.0%**
	2014-2015	201530	1	9	9	7	9	0	1.5	0.3	4.5	87.5%	87.5%
		Annual Yr Sum	**1**	**9**	**9**	**7**	**9**	**0**	**1.5**	**0.3**	**4.5**	**87.5%**	**87.5%**
	2013-2014	201430	1	9	8	8	8	0	1.3	0.7	2.0	100.0%	87.5%
		Annual Yr Sum	**1**	**9**	**8**	**8**	**8**	**0**	**1.3**	**0.7**	**2.0**	**100.0%**	**87.5%**
	2012-2013	201270	1	18	15	15	15	0	2.5	0.3	7.4	100.0%	100.0%
		Annual Yr Sum	**1**	**18**	**15**	**15**	**15**	**0**	**2.5**	**0.3**	**7.4**	**100.0%**	**100.0%**
	2011-2012	201150	1	32	12	6	12	0	2.0	0.3	5.9	50.0%	50.0%
		Annual Yr Sum	**1**	**32**	**12**	**6**	**12**	**0**	**2.0**	**0.3**	**5.9**	**50.0%**	**50.0%**
			5	73	48	38	10	0	8.0	2.0	4.0	80.9%	78.7%

Occupation Overview

Emsi Q1 2017 Data Set

April 2017

3000 College of Heights Blvd
Ridgecrest, California 93555
760.384.6258

Parameters

Occupations

Code	Description
15-1134	Web Developers

Regions

Code	Description
6	California

Timeframe

2015 - 2020

Datarun

2017.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Web Developers in State of California

Web Developers (SOC 15-1134):

Design, create, and modify Web sites. Analyze user needs to implement Web site content, graphics, performance, and capacity. May integrate Web sites with other computer applications. May convert written, graphic, audio, and video components to compatible Web formats by using software designed to facilitate the creation of Web and multimedia content. Excludes "Multimedia Artists and Animators" (27-1014).

Sample of Reported Job Titles:
Web Designer
Webmaster
Web Developer
Web Content Developer
Internet Developer
Internet Application Developer
Web Specialist
Web Software Engineer
Web Site Specialist
Web Site Developer
Related O*NET Occupation:
Web Developers (15-1134.00)

Occupation Summary for Web Developers

43,887	+18.7%	$29.41/hr
Jobs (2016)	% Change (2015-2020)	Median Hourly Earnings
40% above National average	Nation: +18.2%	Nation: $26.25/hr
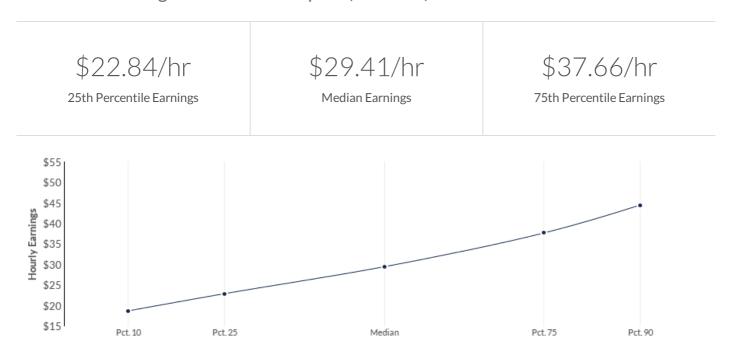
Growth for Web Developers (15-1134)

42,093	49,984	7,891	18.7%
2015 Jobs	2020 Jobs	Change (2015-2020)	% Change (2015-2020)
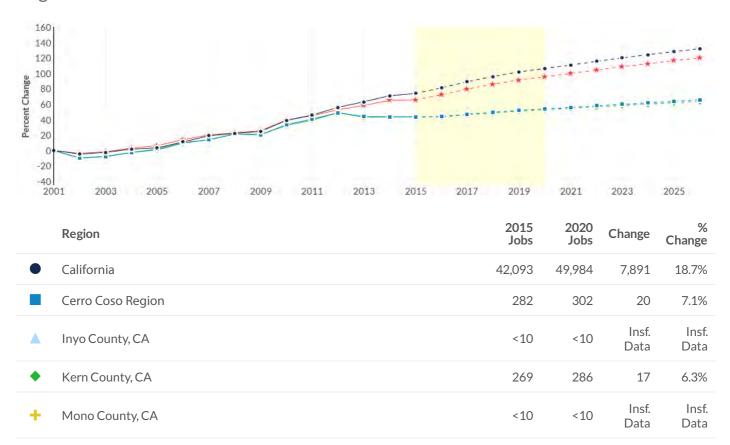
Percentile Earnings for Web Developers (15-1134)

$22.84/hr	$29.41/hr	$37.66/hr
25th Percentile Earnings	Median Earnings	75th Percentile Earnings

Regional Trends

	Region	2015 Jobs	2020 Jobs	Change	% Change
●	California	42,093	49,984	7,891	18.7%
■	Cerro Coso Region	282	302	20	7.1%
▲	Inyo County, CA	<10	<10	Insf. Data	Insf. Data
◆	Kern County, CA	269	286	17	6.3%
✚	Mono County, CA	<10	<10	Insf. Data	Insf. Data
★	United States	252,286	298,160	45,874	18.2%

Regional Breakdown

County	2020 Jobs
San Bernardino County, CA	1,022
Kern County, CA	286
Tulare County, CA	89
Inyo County, CA	<10
Mono County, CA	<10

Job Postings Summary

178,601	**5 : 1**
Unique Postings (Jan 2015 - Feb 2017)	Posting Intensity (Jan 2015 - Feb 2017)
954,447 Total Postings	Regional Average: 7 : 1

There were 954,447 total job postings for your selection from January 2015 to February 2017, of which 178,601 were unique. These numbers give us a Posting Intensity of 5-to-1, meaning that for every 5 postings there is 1 unique job posting.

This is lower than the Posting Intensity for all other occupations and companies in the region (7-to-1), indicating that they may not be trying as hard to hire for this position.
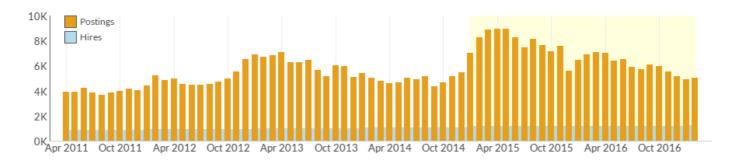
Job Postings vs. Hires

6,869	**1,179**
Avg. Monthly Postings (Jan 2015 - Feb 2017)	Avg. Monthly Hires (Jan 2015 - Feb 2017)

In an average month, there were 6,869 unique job postings for *Web Developers*, and 1,179 actually hired. This means there was approximately 1 hire for every 6 unique job postings for *Web Developers*.

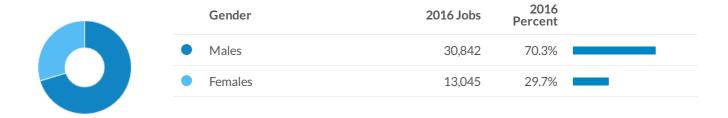| Occupation	Avg Monthly Postings (Jan 2015 - Feb 2017)	Avg Monthly Hires (Jan 2015 - Feb 2017)
Web Developers	6,869	1,179

Occupation Gender Breakdown

	Gender	2016 Jobs	2016 Percent	
🔵	Males	30,842	70.3%	▬▬▬▬▬
🔵	Females	13,045	29.7%	▬▬

Occupation Age Breakdown

	Age	2016 Jobs	2016 Percent	
🟢	14-18	216	0.5%	▏
🟢	19-24	3,305	7.5%	▪
⬤	25-34	15,851	36.1%	▬▬▬
⬤	35-44	13,047	29.7%	▬▬
🔵	45-54	7,583	17.3%	▪▪
🔵	55-64	3,013	6.9%	▪
🔵	65+	871	2.0%	▏

Occupation Race/Ethnicity Breakdown

	Race/Ethnicity	2016 Jobs	2016 Percent	
🟢	White	27,168	61.9%	▬▬▬
🟢	Asian	8,520	19.4%	▬
🔵	Hispanic or Latino	4,976	11.3%	▬
🟢	Black or African American	1,587	3.6%	▪
🔵	Two or More Races	1,525	3.5%	▪
🔵	Native Hawaiian or Other Pacific Islander	69	0.2%	▏
🔵	American Indian or Alaska Native	43	0.1%	▏

National Educational Attainment

	Education Level	2016 Percent	
🟢	Less than high school diploma	0.5%	▏
🟢	High school diploma or equivalent	4.3%	▪
🔵	Some college, no degree	17.3%	▬
🟢	Associate's degree	9.9%	▪
🔵	Bachelor's degree	52.2%	▬▬▬
🔵	Master's degree	14.6%	▬
🔵	Doctoral or professional degree	1.2%	▏

Occupational Programs

15	13,891	2,359
Programs (2015)	Completions (2015)	Openings (2015)

CIP Code	Program	Completions (2015)
11.0701	Computer Science	5,800
11.0901	Computer Systems Networking and Telecommunications	1,427
11.0103	Information Technology	1,327
14.0901	Computer Engineering, General	1,287
11.1003	Computer and Information Systems Security/Information Assurance	828

Industries Employing Web Developers

Industry	Occupation Jobs in Industry (2016)	% of Occupation in Industry (2016)	% of Total Jobs in Industry (2016)
Custom Computer Programming Services	10,270	23.4%	5.1%
Computer Systems Design Services	6,381	14.5%	4.9%
Internet Publishing and Broadcasting and Web Search Portals	4,229	9.6%	4.7%
Other Computer Related Services	1,421	3.2%	5.5%
Data Processing, Hosting, and Related Services	1,327	3.0%	2.7%

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

CareerBuilder/Emsi Job Postings

Job postings are collected from various sources and processed/enriched by Careerbuilder to provide information such as standardized company name, occupation, skills, and geography. Emsi performs additional filtering and processing to improve compatibility with Emsi data.

Completers Data

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

State Data Sources

This report uses state data from the following agencies: California Labor Market Information Department

Program Overview

2 Computer and Information Sciences and Support Services in State of California

Emsi Q1 2017 Data Set

April 2017

3000 College of Heights Blvd
Ridgecrest, California 93555
760.384.6258

Parameters

Programs

Code	Description
11.1004	Web/Multimedia Management and Webmaster
11.0801	Web Page, Digital/Multimedia and Information Resources Design

Regions

Code	Description
6	California

Completions Year

2015

Jobs Timeframe

2014 - 2015

Datarun

2017.1 – QCEW Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors

Program Overview

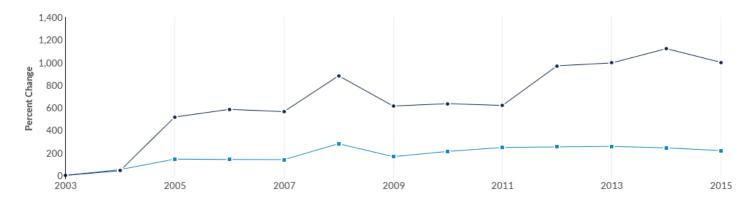| 109	825	7,625
Regional Institutions had Completions in the last 13 years	Regional Program Completions (2015)	Annual Openings (2015)

Regional Trends

Region	2003 Completions	2015 Completions	% Change
● Region	75	825	1,000.0%
■ Nation	2,217	7,075	219.1%

Regional Completions by Award Level

	Award Level	Completions (2015)	Percent	
🟢	Award of less than 1 academic year	161	19.5%	▬
🟢	Award of at least 1 but less than 2 academic years	134	16.2%	▬
🔵	Associates degree	156	18.9%	▬
🔵	Bachelors degree	282	34.2%	▬▬
🔵	Masters degree	92	11.2%	▪
	Award of at least 2 but less than 4 academic years	0	0.0%	
	Postbaccalaureate certificate	0	0.0%	
	Post-masters certificate	0	0.0%	
	Doctors degree	0	0.0%	

Regional Completions by Institution

Institution	Certificates (2015)	Degrees (2015)	Total Completions (2015)
Academy of Art University	0	166	166
DeVry University-California	0	91	91
Advanced Computing Institute	70	3	73
Argosy University-The Art Institute of California-Inland Empire	2	34	36
Argosy University-The Art Institute of California-San Diego	4	30	34
Argosy University-The Art Institute of California-Hollywood	0	22	22
Argosy University-The Art Institute of California-Orange County	0	19	19
Argosy University-The Art Institute of California-San Francisco	2	17	19
Cabrillo College	16	2	18
Westwood College-Los Angeles	0	16	16
American River College	14	0	14
Laurus College	14	0	14
City College of San Francisco	14	0	14
Argosy University-The Art Institute of California-Los Angeles	2	13	15
Argosy University-The Art Institute of California-Sacramento	0	13	13
University of Phoenix-California	0	12	12
Argosy University-The Art Institute of California-Silicon Valley	0	12	12
Cuyamaca College	2	12	14
Santa Rosa Junior College	12	0	12
San Diego Mesa College	11	8	19
Berkeley City College	11	1	12
Santa Clara University	0	10	10
Mission College	8	0	8
Irvine Valley College	8	0	8
Fremont College	0	8	8
Allied American University	8	0	8
West Los Angeles College	8	2	10
ABCO Technology	7	0	7

Institution	Certificates (2015)	Degrees (2015)	Total Completions (2015)
Sacramento City College	7	3	10
Saddleback College	6	3	9
Moreno Valley College	5	0	5
Los Angeles Pierce College	5	0	5
Cerro Coso Community College	3	5	8
Chaffey College	5	2	7
Southwestern College	3	5	8
Glendale Community College	5	1	6
Institute of Technology Inc	4	0	4
Palomar College	4	1	5
Grossmont College	4	4	8
Coleman University	0	4	4
Canada College	4	0	4
Shasta College	3	0	3
Columbia College	3	0	3
University of San Francisco	0	3	3
West Valley College	2	0	2
Mt San Jacinto Community College District	2	0	2
MiraCosta College	2	0	2
San Jose City College	2	1	3
Riverside City College	2	0	2
Skyline College	1	2	3
Lake Tahoe Community College	2	1	3
Fresno City College	2	0	2
Cosumnes River College	2	0	2
Norco College	2	0	2
International Academy of Design and Technology-Sacramento	0	1	1
El Camino Community College District	1	0	1
Imperial Valley College	0	1	1

Institution	Certificates (2015)	Degrees (2015)	Total Completions (2015)
Coastline Community College	1	0	1
Sierra College	0	1	1
Solano Community College	0	1	1
Victor Valley College	0	0	0
ITT Technical Institute-Sylmar	0	0	0
University of Phoenix-Southern California Campus	0	0	0
Westwood College-Inland Empire	0	0	0
Westwood College-Anaheim	0	0	0
Folsom Lake College	0	0	0
Remington College-San Diego Campus	0	0	0
ITT Technical Institute-Lathrop	0	0	0
University of Phoenix-Central Valley Campus	0	0	0
CIT College of InfoMedical Technology	0	0	0
University of Phoenix-Sacramento Valley Campus	0	0	0
Ventura Adult and Continuing Education	0	0	0
West Hills College-Lemoore	0	0	0
Baldwin Park Adult & Community Education	0	0	0
ITT Technical Institute-Oxnard	0	0	0
Los Angeles Trade Technical College	0	0	0
Long Beach City College	0	0	0
Reedley College	0	0	0
ITT Technical Institute-San Dimas	0	0	0
ITT Technical Institute-National City	0	0	0
Hartnell College	0	0	0
Fullerton College	0	0	0
ITT Technical Institute-Rancho Cordova	0	0	0
DeVry University-California	0	0	0
Crafton Hills College	0	0	0
University of California-Santa Cruz	0	0	0

Institution	Certificates (2015)	Degrees (2015)	Total Completions (2015)
Bakersfield College	0	0	0
College of the Siskiyous	0	0	0
College of the Sequoias	0	0	0
Santa Barbara Business College-Bakersfield	0	0	0
College of San Mateo	0	0	0
College of the Redwoods	0	0	0
MTI College	0	0	0
Santa Ana College	0	0	0
Platt College-San Diego	0	0	0
Pepperdine University	0	0	0
Ohlone College	0	0	0
National University	0	0	0
Mt San Antonio College	0	0	0
Mendocino College	0	0	0

Similar Programs

29 Programs (2015)	**19,096** Completions (2015)

CIP Code	Program	Completions (2015)
11.0701	Computer Science	5,800
50.0409	Graphic Design	1,661
11.0901	Computer Systems Networking and Telecommunications	1,427
11.0103	Information Technology	1,327
14.0901	Computer Engineering, General	1,287

Target Occupations

163,008 Jobs (2016) 28% above National average	**+3.4%** % Change (2014-2015) Nation: +3.0%	**$29.81/hr** Median Hourly Earnings Nation: $27.80/hr

Occupation	2014 Jobs	Annual Openings	Median Hourly Earnings	Growth (2014 - 2015)	Location Quotient (2014)
Graphic Designers	66,111	4,189	$22.61/hr	+3.86%	1.33
Web Developers	41,413	2,149	$29.41/hr	+1.64%	1.40
Multimedia Artists and Animators	21,799	1,510	$24.79/hr	+4.97%	1.85
Computer Network Architects	15,994	912	$57.28/hr	+4.15%	0.87
Information Security Analysts	8,068	413	$49.86/hr	+3.77%	0.78

Growth

153,385	158,670	5,285	3.4%
2014 Jobs	2015 Jobs	Change (2014-2015)	% Change (2014-2015)

| Occupation	2014 Jobs	2015 Jobs	Change	% Change
Information Security Analysts (15-1122)	8,068	8,372	304	4%
Web Developers (15-1134)	41,413	42,093	680	2%
Computer Network Architects (15-1143)	15,994	16,657	663	4%
Multimedia Artists and Animators (27-1014)	21,799	22,882	1,083	5%
Graphic Designers (27-1024)	66,111	68,665	2,554	4%

Percentile Earnings

$24.01/hr	$29.81/hr	$36.55/hr
25th Percentile Earnings	Median Earnings	75th Percentile Earnings
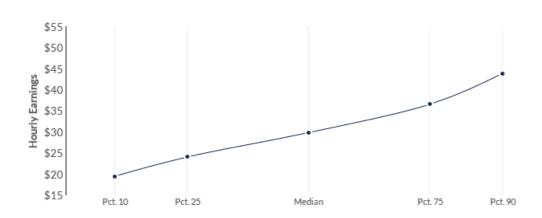
Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Information Security Analysts (15-1122)	$40.26	$49.86	$60.67
Web Developers (15-1134)	$22.84	$29.41	$37.66
Computer Network Architects (15-1143)	$46.07	$57.28	$69.03
Multimedia Artists and Animators (27-1014)	$19.22	$24.79	$30.12
Graphic Designers (27-1024)	$19.00	$22.61	$27.18

Appendix A - Data Sources and Calculations

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Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level Emsi earnings by industry.

State Data Sources

This report uses state data from the following agencies: California Labor Market Information Department

TECHNOLOGY POSITIONS IN DEMAND

rh

1 PACIFIC
1. Web Developer
2. Software Engineer
3. Help Desk
4. JavaScript Developer
5. Network Engineer

2 MOUNTAIN
1. .NET Developer
2. JavaScript Developer
3. Help Desk
4. Database Administrator
5. Network Administrator

3 WEST SOUTH CENTRAL
1. .NET Developer
2. Systems Engineer
3. Network Engineer
4. Database Administrator
5. Help Desk

4 WEST NORTH CENTRAL
1. C# Developer
2. Java Developer
3. Network Security Administrator
4. Information Systems Security Manager
5. Systems Administrator

5 EAST NORTH CENTRAL
1. Web Developer
2. Programmer Analyst
3. Systems Administrator
4. Help Desk
5. Software Engineer

6 EAST SOUTH CENTRAL
1. .NET Developer
2. Java Developer
3. Front-End Web Developer
4. Help Desk
5. Network Administrator

7 NEW ENGLAND
1. Network Engineer
2. Help Desk
3. .NET Developer
4. Web Developer
5. Software Engineer

8 MIDDLE ATLANTIC
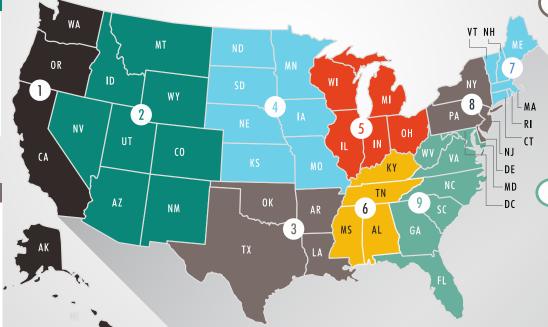1. Front-End Web Developer
2. Desktop Support Analyst
3. Help Desk
4. Developer/Programmer Analyst
5. Database Developer

9 SOUTH ATLANTIC
1. Web Developer
2. .NET Developer
3. Systems Administrator
4. Help Desk
5. Software Engineer

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California Occupational Guides

Detailed Guide for

Web Developers in California

May also be called: Back End Developers; Front End Developers; User Interface Developers; Web Applications Developers; Web Architects; and Web Designers

What Would I Do?

Web Developers are responsible for the technical aspects of website creation. They use software languages and tools to create applications for the Web. They identify the audience as well as determine the site's content and organization. They oversee production and implementation. They may integrate databases and other information systems into the websites. They may convert written, graphic, audio, and video components to compatible Web formats.

Web Developers build, customize, and manage Web content and develop Web applications using programming languages and databases. They write the code that the browser receives when a user types in a Web address or clicks on a link. They create the home page and lay out pages. They assign visual properties like fonts and colors to items for a visually appealing result. Web Developers write custom scripts to make Web pages more dynamic and easier to navigate. They use various browsers to check pages and forms to ensure cross-browser and platform compatibility.

They may focus on front-end or back-end development. Front end developers design the user interface and are responsible for visual design, user interaction, and browser compatibilities. Back end developers work with databases, servers, networks, and performance/scalability. In smaller companies, they may do it all or work the "full stack".

Tools and Technology

Web Developers use a variety of tools and technology in their work. In addition to computers, they use computer servers and high capacity removable media drives. They primarily use Web platform development software, such as HTML, CSS, and JavaScript. They may also use database management system, database user interface and query, development environment, enterprise application integration, graphics or photo imaging, object or component oriented development, and operating system software.

Important Tasks and Related Skills

Each task below is matched to a sample skill required to carry out the task.

	Skill Used in this

Task	Task
Design, build, or maintain web sites, using authoring or scripting languages, content creation tools, management tools, and digital media.	Computers and Electronics
Perform or direct web site updates.	Deductive Reasoning
Write, design, or edit web page content, or direct others producing content.	English Language
Confer with management or development teams to prioritize needs, resolve conflicts, develop content criteria, or choose solutions.	Operations Analysis
Back up files from web sites to local directories for instant recovery in case of problems.	Problem Sensitivity
Identify problems uncovered by testing or customer feedback, and correct problems or refer problems to appropriate personnel for correction.	Active Listening
Evaluate code to ensure that it is valid, is properly structured, meets industry standards and is compatible with browsers, devices, or operating systems.	Critical Thinking
Maintain understanding of current web technologies or programming practices through continuing education, reading, or participation in professional conferences, workshops, or groups.	Programming

Source: U.S. Department of Labor Occupational Information Network (O*NET) at online.onetcenter.org

Working Conditions

Web Developers usually work in offices or laboratories in comfortable surroundings. They work about 40 hours a week, but may be required to work some evenings or weekends to meet deadlines or solve specific problems. In addition, they may need to be available on an on-call basis and also may have the option of working flexible hours. This type of work may be stressful for some. They may experience eyestrain, back discomfort, and hand and wrist problems from using a computer for long periods of time. Telecommuting is becoming more common allowing Web Developers to do even more work from remote locations, reducing or eliminating the need to travel to the customer's workplace.

Large numbers of Web Developers work on a temporary or contract basis. A number of workers are needed to get a new website up and running; fewer may be required once it is established.

Although most Web Developers are not represented by unions, unionization varies by industry. Those working in the public sector may join the Service Employees International Union.

Will This Job Fit Me?

The job of Web Developers may appeal to those who enjoy activities that involve following set procedures and routines. This occupation involves working with data and details more than with ideas. Individuals who like to work on their own and make decisions should enjoy this occupation.

Web Developers need problem solving and analytical skills as well as the ability to handle multiple projects and choose the right technology for the job. Effective communications skills are also important as Web Developers consult with customers, programmers, managers, and other staff members. They frequently work in teams, but may also work independently. Because of the nature of the work, they also need creativity, flexibility, good attention to detail, and the ability to stay current on the changing standards and

tools used in Web development.

What Wages and Benefits Can I Expect?

Wages

The median wage in 2016 for Web Developers in California was $77,568 annually, or $37.29 hourly. The median is the point at which half of the workers earn more and half earn less.

Annual Wages for 2016	Low (25th percentile)	Median (50th percentile)	High (75th percentile)
California	$52,875	$77,568	$107,678

Source: EDD/LMID Occupational Employment Statistics Survey, 2016 at www.labormarketinfo.edd.ca.gov/data/wages.html Wages do not reflect self-employment.

Hourly Wages for 2016	Low (25th percentile)	Median (50th percentile)	High (75th percentile)
California	$25.42	$37.29	$51.77

Source: EDD/LMID Occupational Employment Statistics Survey, 2016 at www.labormarketinfo.edd.ca.gov/data/wages.html. Wages do not reflect self-employment.

Benefits

Most Web Developers receive medical and dental insurance, as well as vacation, sick leave, and retirement plans from their employers. Self-employed or independent contractors must provide for their own insurance and other benefits.

What is the Job Outlook?

Employment growth for Web Developers will be strong as e-commerce continues to expand. As retail firms expand their online offerings, the demand for Developers will increase. In addition, an increase in the use of mobile devices to search the web will also lead to an increase in employment of Web Developers. Instead of designing a website for a desktop computer, Developers will have to create sites that work on mobile devices with many different screen sizes, leading to more work.

The number of Web Developers in California is unknown at this time since this is a new occupation and there is no employment projections data available. There will be a strong demand for Web Developers in California. As the amount of data sent over the Internet increases, more Web Developers will be needed. In addition, the growing number of Internet users and expansion of Internet services, such as e-commerce, will also drive the demand.

Projections of Employment

In California, the number of Web Developers is expected to grow much faster than average growth rate for all occupations. Jobs for Web Developers are expected to increase by 48.3 percent, or 11,700 jobs between 2014 and 2024.

Estimated Employment and Projected Growth Web Developers

Geographic Area (Estimated Year-Projected Year)	Estimated Employment	Projected Employment	Numeric Change	Percent Change	Additional Openings Due to Net Replacements
California (2014-2024)	24,200	35,900	11,700	48.3	3,100

Source: EDD/LMID Projections of Employment by Occupation at www.labormarketinfo.edd.ca.gov/data/employment-projections.html

Annual Job Openings

In California, an average of 1,170 new job openings per year is expected for Web Developers, plus an additional 310 job openings due to net replacement needs, resulting in a total of 1,480 job openings.

Estimated Average Annual Job Openings Web Developers			
Geographic Area (Estimated Year-Projected Year)	Jobs From Growth	Jobs Due to Net Replacements	Total Annual Job Openings
California (2014-2024)	1,170	310	1,480

Source: EDD/LMID Projections of Employment by Occupation at www.labormarketinfo.edd.ca.gov/data/employment-projections.html

How Do I Qualify?

Education, Training, and Other Requirements

The level of education and type of training required vary by employer. A bachelor's degree in a computer-related field is required for most jobs; however, some employers may accept related experience and certification. Relevant work experience is very important in this occupation, particularly in working with various scripting languages. Knowledge of Web standards, usability, and best practices is important.

Early Career Planning

High school students interested in this kind of work should take classes in mathematics, computer science, information technology, and language arts. Other helpful classes may include business, physical science, and art. Training programs are also available through Regional Occupational Programs (ROP) in Web design, Web page design, and website development. To find an ROP program near you, go to the California Association of Regional Occupational Centers and Programs Web site at www.carocp.org/carocps.html.

Continuing Education

Web Developers need to stay current on emerging Web technologies and keep their skills up to date. Employers, software vendors, colleges and universities, and private training institutions offer continuing education. Attending professional seminars can also enhance skills and advancement opportunities.

Certification

Professional certification has become the industry standard and can demonstrate competence in a particular field. Certification programs are available through product vendors, computer associations, and other training institutions. Many product vendors require those who work with their products to be certified. For more information, go to the U.S. Department of Labor's Career InfoNet Web site at www.acinet.org and

scroll down to "Career Tools." Click on "Certification Finder" at www.acinet.org/certifications_new/default.aspx and follow the instructions to locate certification programs.

Where Can I Find Training?

There are two ways to search for training information at www.labormarketinfo.edd.ca.gov/resources/training-and-apprenticeships.html

- Search by Field of Study to find what programs are available and what schools offer those programs. You may use keywords such as: Internet and Web.
- Search by Training Provider to find schools by name, type of school, or location.

Contact the schools you are interested in to learn about the classes available, tuition and fees, and any prerequisite course work.

Where Would I Work?

Web Developers work in a variety of industries such as computer systems design and related services, management and technical consulting services, management of companies and enterprise, other information services, and local government. The largest industries employing Web Developers are as follows:

Industry Title	Percent of Total Employment for Occupation in California
Computer Systems Design and Rel Services	22.8%
Other Information Services	7.5%
ISPs, Search Portals, & Data Processing	5.5%
Management of Companies and Enterprises	5.2%
Management & Technical Consulting Svc	4.9%

Source: EDD/LMID Staffing Patterns at www.labormarketinfo.edd.ca.gov/iomatrix/staffing-patterns1.asp

Finding a Job

Networking is important in this occupation, since many Web Developers find work through referrals. Jobs can also be found through direct application to employers, newspaper classified advertisements, online job boards, and professional organizations. **Online job opening systems** include JobCentral at www.jobcentral.com and CalJOBS^{SM} at www.caljobs.ca.gov.

To find your nearest One-Stop Career Center, go to Service Locator. View the helpful job search tips for more resources. (requires Adobe Reader).

Yellow Page Headings

You can focus your local job search by checking employers listed online or in your local telephone directory.

Below are some suggested headings where you might find employers of Web Developers.

- City Government
- Computer System Designers & Consultants
- County Government
- Internet Access Providers Wireless
- Internet Service Providers (ISP)
- Management Consultants
- Network Design & Systems
- Web Site Design & Services

Find Possible Employers

To locate a list of employers in your area, use "Find Employers" on the LaborMarketInfo Web site at http://www.labormarketinfo.edd.ca.gov/aspdotnet/databrowsing/empMain.aspx?menuChoice=emp

- Select the search for employers by occupation.
- Select a geographic area.
- Search for an occupation by keyword, occupation, or category.
- Select one of the top industries that employ the occupation.
- This will give you a list of employers in that industry in your area.
- Click on "View Filter Selections" to limit your list to specific cities or employer size.
- Click on an employer for the street address, telephone number, size of business, Web site, etc.
- Contact the employer for possible employment.

Where Could This Job Lead?

Some Web Developers may advance to managerial or project leadership positions. Others with significant expertise in a specific area may find opportunities as an independent consultant.

Related Occupations

Below is a list of occupations related to Web Developers.

- Computer Network Architects (SOC 15-1143)
- Computer Programmers (SOC 15-1131)
- Computer Science Teachers, Postsecondary (SOC 25-1021)
- Computer Systems Analysts (SOC 15-1121)
- Computer User Support Specialists (SOC 15-1151)
- Database Administrators (SOC 15-1141)
- Information Security Analysts (SOC 15-1122)
- Network and Computer Systems Administrators (SOC 15-1142)

Other Sources

- Association for Computing Machinery (ACM)
  www.acm.org
- Association for Web Professionals
  www.webprofessionals.org
- Computing Technology Industry Association, Inc.
  www.comptia.org

Institute for the Certification of Computing Professionals (ICCP)
www.iccp.org
- Institute of Electrical and Electronics Engineers (IEEE) Computer Society
www.computer.org
- National Workforce Center for Emerging Technologies
www.nwcet.org
- Web Developer Degrees
www.webdeveloperdegrees.org
- Web Professional Jobs
webprofessional.jobs

These links are provided for your convenience and do not constitute an endorsement by EDD.

For the Career Professional

The following codes are provided to assist counselors, job placement workers, or other career professionals.

System	Code
SOC - Standard Occupational Classification at www.bls.gov/soc/	15-1134
O*NET - Occupational Information Network at online.onetcenter.org/	
Web Developers	15-1134.00
Interest Codes (RIASEC) at online.onetcenter.org/find/descriptor/browse/Interests/#cur	CIR
CIP - Classification of Instructional Programs at nces.ed.gov/pubs2002/cip2000/	
Computer Programming/Programmer, General	110201
Computer Science.	110701
Web Page, Digital/Multimedia & Information Resources Design	110801
Web/Multimedia Management and Webmaster	111004
TOP - Taxonomy of Programs at www.ccccurriculum.info/ (California Community Colleges)	
Website Design and Development	061430
Computer Science (transfer)	070600
Computer Software Development	070700
Computer Programming	070710
World Wide Web Administration	070900

The California Occupational Guides are a product of:
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CERRO COSO COLLEGE

061430 Website Design and Development

	Core 1 Skill Attainment			Core 2 Completions			Core 3 Persistence		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	93.75	30	32	83.33	10	12	87.10	27	31
Female	92.86	13	14	66.67	4	6	85.71	12	14
Male	94.44	17	18	100.00	6	6	88.24	15	17
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	83.33	10	12	83.33	5	6	91.67	11	12
Limited English Proficiency		0	0		0	0		0	0
Single Parent	100.00	1	1		0	0	100.00	1	1
Students with Disabilities	100.00	1	1		0	0	100.00	1	1
Technical Preparation		0	0		0	0		0	0
District	94.29	33	35	85.71	12	14	88.24	30	34
State	92.06	3,492	3,793	76.02	1,008	1,326	82.14	3,095	3,768

	Core 4 Employment			Core 5a NT Participation			Core 5b NT Completion		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	66.67	6	9		0	0		0	0
Female	80.00	4	5		0	0		0	0
Male	50.00	2	4		0	0		0	0
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	66.67	2	3		0	0		0	0
Limited English Proficiency		0	0		0	0		0	0
Single Parent		0	0		0	0		0	0
Students with Disabilities		0	0		0	0		0	0
Technical Preparation		0	0		0	0		0	0
District	63.64	7	11		0	0		0	0
State	56.98	649	1,139		0	0		0	0

The DR notation indicates privacy requirements - EDD requires that counts less than six not be displayed.

Performance Rate Less Than Goal is Shaded

Core 1 - Skill Attainment, GPA 2.0 & Above: 88.82% Performance Goal - (2009- 2010)

Core 2 - Completions, Certificates, Degrees and Transfer Ready: 80.93% Performance Goal - (2009- 2010)

Core 3 - Persistance in Higher Education: 85.86% Performance Goal - (2009- 2010)

Core 4 - Employment: 81.48% Performance Goal - (2009- 2010)

Core 5 - Training Leading to Non-traditional Employment: Greater than 16.93% Participation & 21.58% Completion - (2009- 2010)

CERRO COSO COLLEGE

061430 Website Design and Development

	Core 1 Skill Attainment			Core 2 Completions			Core 3 Persistence		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	100.00	26	26	85.71	6	7	84.62	22	26
Female	100.00	9	9	66.67	2	3	88.89	8	9
Male	100.00	17	17	100.00	4	4	82.35	14	17
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	100.00	11	11	75.00	3	4	72.73	8	11
Limited English Proficiency		0	0		0	0		0	0
Single Parent	100.00	1	1		0	0	100.00	1	1
Students with Disabilities	100.00	1	1		0	0	100.00	1	1
Technical Preparation		0	0		0	0		0	0
District	96.97	32	33	91.67	11	12	84.38	27	32
State	93.87	3,862	4,114	75.13	1,169	1,556	79.65	3,241	4,069

	Core 4 Employment			Core 5a NT Participation			Core 5b NT Completion		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	50.00	3	6		0	0		0	0
Female	100.00	1	1		0	0		0	0
Male	40.00	2	5		0	0		0	0
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	50.00	2	4		0	0		0	0
Limited English Proficiency		0	0		0	0		0	0
Single Parent		0	0		0	0		0	0
Students with Disabilities		0	0		0	0		0	0
Technical Preparation		0	0		0	0		0	0
District	70.00	7	10		0	0		0	0
State	52.17	686	1,315		0	0		0	0

The DR notation indicates privacy requirements - EDD requires that counts less than six not be displayed.

Performance Rate Less Than Goal is Shaded

Core 1 - Skill Attainment, GPA 2.0 & Above: 88.83% Performance Goal - (2010- 2011)

Core 2 - Completions, Certificates, Degrees and Transfer Ready: 82.15% Performance Goal - (2010- 2011)

Core 3 - Persistance in Higher Education: 85.80% Performance Goal - (2010- 2011)

Core 4 - Employment: 80.76% Performance Goal - (2010- 2011)

Core 5 - Training Leading to Non-traditional Employment: Greater than 18.28% Participation & 21.95% Completion - (2010- 2011)

CERRO COSO COLLEGE

061430 Website Design and Development

	Core 1 Skill Attainment			Core 2 Completions			Core 3 Persistence		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	96.88	31	32	85.71	6	7	93.75	30	32
Female	93.33	14	15	100.00	4	4	93.33	14	15
Male	100.00	17	17	66.67	2	3	94.12	16	17
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	100.00	10	10	100.00	2	2	100.00	10	10
Limited English Proficiency		0	0		0	0		0	0
Single Parent	100.00	1	1	100.00	1	1	100.00	1	1
Students with Disabilities	100.00	1	1		0	0	100.00	1	1
Technical Preparation		0	0		0	0		0	0
District	96.97	32	33	85.71	6	7	93.94	31	33
State	90.48	3,458	3,822	81.69	1,035	1,267	83.44	3,160	3,787

	Core 4 Employment			Core 5a NT Participation			Core 5b NT Completion		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	33.33	1	3		0	0		0	0
Female	50.00	1	2		0	0		0	0
Male	0.00	0	1		0	0		0	0
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged		0	0		0	0		0	0
Limited English Proficiency		0	0		0	0		0	0
Single Parent		0	0		0	0		0	0
Students with Disabilities		0	0		0	0		0	0
Technical Preparation		0	0		0	0		0	0
District	33.33	1	3		0	0		0	0
State	46.24	461	997	0.00	0	16	0.00	0	16

The DR notation indicates privacy requirements - EDD requires that counts less than six not be displayed.

Performance Rate Less Than Goal is Shaded

Core 1 - Skill Attainment, GPA 2.0 & Above: 89.46% Performance Goal - (2011- 2012)

Core 2 - Completions, Certificates, Degrees and Transfer Ready: 81.50% Performance Goal - (2011- 2012)

Core 3 - Persistance in Higher Education: 86.50% Performance Goal - (2011- 2012)

Core 4 - Employment: 80.06% Performance Goal - (2011- 2012)

Core 5 - Training Leading to Non-traditional Employment: Greater than 18.20% Participation & 22.25% Completion - (2011- 2012)

CERRO COSO COLLEGE

061430 Website Design and Development

	Core 1 Skill Attainment			Core 2 Completions			Core 3 Persistence		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	100.00	23	23	87.50	7	8	73.91	17	23
Female	100.00	9	9	75.00	3	4	66.67	6	9
Male	100.00	14	14	100.00	4	4	78.57	11	14
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	100.00	8	8	100.00	1	1	100.00	8	8
Limited English Proficiency		0	0		0	0		0	0
Single Parent		0	0		0	0		0	0
Students with Disabilities	100.00	1	1	100.00	1	1	100.00	1	1
Technical Preparation		0	0		0	0		0	0
District	100.00	25	25	87.50	7	8	76.00	19	25
State	90.77	3,451	3,802	82.56	1,387	1,680	78.09	2,951	3,779

	Core 4 Employment			Core 5a NT Participation			Core 5b NT Completion		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	25.00	2	8		0	0		0	0
Female	0.00	0	4		0	0		0	0
Male	50.00	2	4		0	0		0	0
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged		0	0		0	0		0	0
Limited English Proficiency		0	0		0	0		0	0
Single Parent		0	0		0	0		0	0
Students with Disabilities		0	0		0	0		0	0
Technical Preparation		0	0		0	0		0	0
District	25.00	2	8		0	0		0	0
State	48.26	609	1,262	42.86	3	7	42.86	3	7

The DR notation indicates privacy requirements - EDD requires that counts less than six not be displayed.

Performance Rate Less Than Goal is Shaded

Core 1 - Skill Attainment, GPA 2.0 & Above: 87.85% Performance Goal - (2012- 2013)

Core 2 - Completions, Certificates, Degrees and Transfer Ready: 82.00% Performance Goal - (2012- 2013)

Core 3 - Persistance in Higher Education: 86.75% Performance Goal - (2012- 2013)

Core 4 - Employment: 77.40% Performance Goal - (2012- 2013)

Core 5 - Training Leading to Non-traditional Employment: Greater than 19.14% Participation & 22.54% Completion - (2012- 2013)

CERRO COSO COLLEGE

061430 Website Design and Development

	Core 1 Skill Attainment			Core 2 Completions			Core 3 Persistence		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	95.24	20	21	66.67	4	6	85.71	18	21
Female	87.50	7	8	66.67	2	3	87.50	7	8
Male	100.00	13	13	66.67	2	3	84.62	11	13
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	91.67	11	12	75.00	3	4	91.67	11	12
Limited English Proficiency		0	0		0	0		0	0
Single Parent	0.00	0	1		0	0	100.00	1	1
Students with Disabilities	100.00	2	2	100.00	1	1	100.00	2	2
Technical Preparation		0	0		0	0		0	0
District	89.66	26	29	83.33	10	12	79.31	23	29
State	90.19	3,152	3,495	87.94	1,517	1,725	84.05	2,892	3,441

	Core 4 Employment			Core 5a NT Participation			Core 5b NT Completion		
	Percent	Count	Total	Percent	Count	Total	Percent	Count	Total
Program Area Total	25.00	1	4		0	0		0	0
Female	0.00	0	2		0	0		0	0
Male	50.00	1	2		0	0		0	0
Non-traditional		0	0		0	0		0	0
Displaced Homemaker		0	0		0	0		0	0
Economically Disadvantaged	0.00	0	2		0	0		0	0
Limited English Proficiency		0	0		0	0		0	0
Single Parent		0	0		0	0		0	0
Students with Disabilities		0	0		0	0		0	0
Technical Preparation		0	0		0	0		0	0
District	42.86	3	7		0	0		0	0
State	54.74	601	1,098	0.00	0	5	0.00	0	5

The DR notation indicates privacy requirements - EDD requires that counts less than six not be displayed.

Performance Rate Less Than Goal is Shaded

Core 1 - Skill Attainment, GPA 2.0 & Above: 87.56% Performance Goal - (2013- 2014)

Core 2 - Completions, Certificates, Degrees and Transfer Ready: 83.00% Performance Goal - (2013- 2014)

Core 3 - Persistance in Higher Education: 88.00% Performance Goal - (2013- 2014)

Core 4 - Employment: 66.44% Performance Goal - (2013- 2014)

Core 5 - Training Leading to Non-traditional Employment: Greater than 20.19% Participation & 22.81% Completion - (2013- 2014)

Source: CCCCO MIS Database, EDD Base Wage File, CSU Chancellor's Offce,
UC Office of the President, 2000 Census, Student Loan Clearing House

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Report Create Date: 02/01/2010

Business and Information Technology
Advisory Committee Meeting
Meeting Date November 30, 2012
Meeting Location IWV Room 722
Bishop ITV room
Meeting time 12:00-2:00

Minutes

I. Attendees:

Business Office Technology group:

Present at IWV:
- Michelle Lemke HR Administrator Ridgecrest Regional Hospital michelle.lemke@rrh.org
- Patricia Keith, BSOT student
- Jan Moline, Counseling chair

Present at Bishop:
- Gina Jones OVCDC
- Joanie Hanson OVCDC
- Karen O'Connor BSOT Faculty and chair

Absent:
- Carter Pope, HR Alta One (Also for Business and CIS)
- Patricia Gresham, Navy patrica.gresham@navy.mil
- Nicole Osborne: Executive Office Manager, China Lake Nicole.osborne@navy.mil
- S Kennedy, Sierra Sands School District
- Margaret Porter
- Sean Callahan: Jacobs Industries (Also for Business, CIS, and DMA)

Digital Media Arts Group:

Present at IVW:

- Jim Fallgatter: Business Owner and Entrepreneurs group, iPad App developer (also BSAD)
- Forrest Lloyd: Business Owner and Retired Lab Administrator (also BSAD)
- Cherie Plett: eMarketing Specialist Alta One
- Richard Swift: Graphic artist

- Suzie Ama: DMA faculty
- Lisa Darty: DMA Faculty
- Elaine Rudis-Jackson DMA part time faculty

Present in Bishop:

- Vickie Taton: DMA part time faculty

Absent:

- Rich Christensen: Recruiter and Training Coordinator, Jacobs Industries
- Ronald Rodriguez: Head, Visual Communications Office ronaldrodriguez@navy.mil
- Abigail Gardner: Abigail.gardner@ndti.net
- Julia Stepro: Stepro Web Design juliastepro@yahoo.com

Business Group

Attendees at IWV:

- Barbara D. Agerton CPA barb@agertoncpa.com (also for BSOT)
- Merrie Giles NAWCWC Comptroller merrie.giles@navy.mil (also for BSOT)
- Russ Mathewson, Sole Proprietor
- Jim Fallgatter: Business Owner and Entrepreneurs group, iPad App developer (also DMA)
- Forrest Lloyd: Business Owner and Retired Lab Administrator (also DMA)
- Frank Timpone: Business Faculty IWV
- Anthony Damiano: BSAD and PARA part time faculty IWV and online

Attendees at Bishop:

- Randy Broderick: Mammoth Mountain
- Sophie Kenn: School District
- Billy G: Business Owner, Pupfish Design
- Bishop Chamber of Commerce
- Matt Hightower, Business Faculty ESCC
- rboccia@mammothusd.org
- Veronica Daugherty: Bishop High School
- Billy Gogesch:
- DeeAnn Chiatovich:

Absent:

- Swift@iwvisp.com
- Lois Johnson: Chief Financial Officer Ridgecrest Regional Hospital
- Ronald Rodriguez: Head, Visual Communications Office ronaldrodriguez@navy.mil
- Laura Hickle: Sierra Sands

Computer Science/Computer Information Systems Group:

Attendees at IWV:

- John Bradley: Operations Lead johnbradley@navy.mil
- Alan Van Nevel: Branch Head/Academic Coordinator alan.vannevel@navy.mil
- Jonathan Bushnell: Cyber Security Lead and Branch Head, CC part time faculty
- Forrest Lloyd: Business Owner
- April Browne: CIS/CS faculty IWV

Absent:

- John Dancy: Branch Head Systems Engineering, Navair
- Jason Hayes: Computer Scientist, Navair
- Rafaele Hill: System Administrator, Booze Allen Hamilton
- Steven Burns : Real Time Data Network Systems Administrator, L-3 Communications
- Christ Ricketts: Branch Head Software Division Navair

II.   Meeting Overview: This was led by department chair, Karen O'Connor. Discussion followed in the following areas as orientation to assist small group breakouts.
   a. Program areas: Career Pathways for Degrees and Certificates
   b. Course Outlines of Record: What they are and why we need to review.
   c. Outcomes Assessments:
   d. Program Reviews (2 and 6 year)

III. Matt Hightower led a discussion on Employable Graduates/ Internships and job shadowing/job placements and tracking.

IV. Breakouts for Program Areas: *Discussion followed on the following general topics:* 30 minutes
   a. The breakout session for Business discussed the following topics:
       i. Quarters System vs. Semester – The business community was unclear about the difference between the course content in both systems. I explained that the course content for both formats is the same. The only difference is that each student only takes

12 quarter hours (3 courses) per quarter compared to 15 semester hours (5 courses) per semester.

ii. Internship Program – The business community agreed that an active internship program is very valuable for the student as well as for the employer. Two employers, one from the Base and the other from a CPA firm, are willing to partner with the college in hiring student interns. Frank Timpone has some students that would be interested in such a program.

iii. Ethics – The group agreed that business ethics is a vital part of the curriculum. Frank explained that many of our courses include chapters in ethics. Frank explained that Cerro Coso is committed to promoting ethical and sound business practices in all of our courses. The group was encouraged with our leadership role in this area.

iv. Financial Analysis – The group wants to see the college place significant emphasis on financial analysis. This is important because it demonstrates an understanding of the interrelationships of the accounting concepts, principles and practices. One member of the group mentioned that some of her employees do not have a thorough understanding of the entire accounting cycle and the formulation of the financial statements. Frank explained that he spends several class periods demonstrating the use of Ratio, Vertical, Horizontal and Common-size Analysis, along with real-world examples and hands-on exercises.

v. Diversity – We discussed the impact and emphasis of actively managing diversity in the workplace. Frank explained that we have a course that addresses this, and, it is incorporated in many of our other courses. The participants from the Base were very concerned that this be an area that we teach throughout our programs.

vi. Alumni Association – One member asked if Cero Coso has an active Alumni Association. She cited that their active participation with the college could aid in determining the number of students that complete our programs.

vii. Grooming – The group agreed that academic and practical understanding of the content of our courses is only part of the necessary requirements for a potential employee. Being well groomed and dressed is also very vital. Visible Tattoos, piercings, multi-colored hair and inappropriate attire is not tolerated in most businesses. An employee is a reflection of the organization that it represents, and therefore, must reflect the desired image of the business. The group suggests that we explain to the students that successful employability relies on acceptable grooming.

viii. Written and verbal communication – The group strongly suggest that we emphasize the use of proper written and verbal communication skills. Frank explained that all of our classes, even the quantitative courses, require the students to use these skills in all of their exercises, assignments, exams and presentations.

b. The Computer Science Area discussed the following:

i. The group was presented with the current CIS program. It was brought up that a Systems Engineering course would be beneficial. It would address the issue of students

being able to take the skills they have learned in all of the classes and use them to solve problems.

    ii. CS program: Presented the current CS program and the Transfer Model Curriculum. Discussed how the TMC would allow students to transfer at the junior level. Discussed how it would change the current program. Talked about how it was modeled on the ACM program

    iii. Internship: Jonathon sends recommendations for IT to his boss.

c.   The Digital Media Arts area discussed the following:

    i. Suzie Ama distributed outlines of the recently restructured Web Fundamentals Certificate, Web Professional Certificate, and Web Professional Associate Degree. She presented the list of courses for each of the certificates and degree, and outlined how each course relates to CIW certification. Suzie explained that the program has been revised as a result of input from advisory group members; it now includes more CIS components, and has been streamlined to facilitate student completion.

    ii. Suzie asked advisory group members for suggestions on the specific skills that employers are looking for in graduates from our program. Richard Swift stated that graduates need to be able to come into a job well prepared to begin work, since on the job training is not always offered. Cheri Plett suggested that students need the soft skill of being able to hear and recognize the needs of any client, rather than focusing on the development of their own individual style. Jim Fallgatter stated that he recently utilized the services of an online design marketplace called 99designs, in order to find a design for an application he was promoting; he suggested that students could promote their designs in this type of market in order to build a portfolio and gain experience in industry. Forrest Lloyd pointed out that search engine optimization is a critical skill. Cheri noted that students also need to be able to create proposals and contracts.

    iii. The group discussed the paradigm shift within the community college system from an open-ended center of learning for all, to one focused on transfer, degree and/or certificate completion.

    iv. Jim commended the inclusion of an e-Commerce course within the Web Professional Certificate and Associate Degree, but noted that e-Commerce would not fully prepare students to be entrepreneurs.

    v. Forrest asserted that the issue of increasing student completion numbers needs to be addressed via marketing and outreach. Suzie discussed the brochure website, and noted that she will be promoting the programs to area high schools. Elaine Rudis-Jackson added that home school populations could also be targeted.

d.   The Business Office Technology area discussed the following:

i. Program Outcomes were reviewed and found to be excellent. **All** existing outcomes are deemed to be of great value, with particular emphasis on the first outcome related to professionalism and the last outcome related to listening.

ii. The hospital representative said that when they call our admissions and records to verify whether students really have the degrees and certificates stated on resumes, they never get a call back in a timely manner. This is detrimental to hiring Cerro Coso grads. This came up when the group discussed hospital hiring procedures and the kinds of office jobs that come available.

iii. Although the hospital does have customized hospital software for use in some of the offices, they expect their hires to know how to use MS Office and those programs, Excel, Word, PowerPoint, Outlook, and Access are all either used or have great value in areas for skill transferability.

iv. Certificates and the degree were discussed, as well as course content and areas of emphasis.

v. The importance of good writing skills was reflected and confirmed by advisory members.

e. The ESCC group discussed the following:

i. Our session was lively and more general in nature. We talked about the gap between education and business; how we as instructors tend to nurture our students along which might not actually be the best way to prepare them for the fast pace of the business world but unfortunately is often the way to keep them in the class and help them complete the class. We talked about online classes and keeping students. Joanie Hanson attended a conference in Vegas last week that addressed creating community in online classrooms - and recommended hybrid classes as the most successful. Evidently establishing a F2F connection between the instructor and other students is hard to replace. She did say if hybrid classes are not an option, then video instruction by the instructor (and by extension I think our Connect sessions) where the students can see the instructor is next best.

ii. The OVCDC tried an informal internship placement program this past summer. They only had two students take internships and one dropped out midway.

iii. We talked about motivation - none of us had any epiphany on new and effective ways to motivate and all of us agreed that it is so frustrating when students just disappear mid-semester, especially when there had been no sign that he or she was struggling.

iv. We discussed learning outcomes and measuring success. How do you create learning outcomes that encompass the abstract thinking that Billy Gogesch brought up and how do you measure it?

v. We brainstormed on ways each class might incorporate independent and create problem-solving and how to avoid students learning "steps" instead of concepts. Like teaching a technique using Photoshop and then asking the students to achieve a similar

result using alternate software (like GIMP). I thought that would be great for our classes - to help students understand the underlying image editing concepts and then be able to figure out a similar but not mirror process (does that make sense?).

    vi. We talked about internships and how business groups (like Rotary and Kiwanis) might be able to help with them. I'll bring it up at Bishop Sunrise and see what the reaction is.

    vii. Billy Gogesch is still interested in talking to Suzie and /or Elaine about a Mammoth Chamber website intern (and perhaps other projects).

V. Anatomy of Computer Science 6-year Program Review: April Browne gave a brief report on the upcoming Computer Science Program review and the importance of getting feedback on industry hiring of our degree and certificate completers.

VI. Between meetings communication was discussed. We meet on Friday at noon partly because that is when the faculty are not already teaching and also because many are available on non-flex Fridays for lunch meetings. However, Mammoth and Bishop Campuses are closed during this time and Matt can only open one of the rooms and be in one place at a time. This meant we lost our Mammoth participants. Groups will have follow up communication as needed as well as individual meetings before we meet again in the spring. The group will strive to be inclusive with members that were unable to attend this meeting.

BUSINESS AND INFORMATION TECHNOLOGY/MEDIA ARTS
JOINT ADVISORY COMMITTEE –by ITV Ridgecrest/Mammoth/Bishop
MINUTES – April 20, 2012

JOINT MEETING: Business, Computer Information Systems, Business Office Technology, Paralegal, Media Arts, Computer Science

RIDGECREST:
Karen O'Connor: Chair Department of Business and Information Technology, President, California Business Education Association
Sean Callihan: IT director for Jacobs Industries
Elaine Jackson: teaches HTML, started here at CC as a student
Jason Hayes-
Cherie Plett: Alta One, e-marketing
Suzie Ama: Cerro Coso faculty graphic design, web design
April Browne: Cerro Coso Computer Science faculty
Charles Osteen: Distance Education
Lisa Darty: Chair of the Digital Media Arts department
Patricia Keith: Cerro Coso BSOT student
Tony Damiano: Paralegal adjunct faculty
Valerie Karnes: Dean of Career Technical Education
Absent: Carter Pope HR Alta One
Absent: Jennifer Schwerin Job Development Specialist
Absent: Representative from TOSS
Absent: Margaret Porter

MAMMOTH:
Matt Hightower: Business/CIS faculty ESCC
Andy Cullen: Mammoth High School
Rich Boccia: Superintendent of Mammoth Schools, Mono County Superintendent of Schools Representative
Absent: Billy Gogesch Consultant, Pupfish Design as Mammoth Chamber of Commerce rep
Absent: Jennifer Kimble, Mammoth High School

BISHOP:
Joanie Hansen: Career Counselor at Owens Valley Career Center
Keith Glidwell: ESCC Counselor
Vickie Taton: Eastern Sierra Field rep
Deana Campbell: Director of Bishop and Mammoth
Ron Rodriguez: employ a lot of graphics people on base
Absent: Gina Jones, Director, Owens Valley Career Development Center
Absent: Tawni Thomson Executive Director Bishop Chamber of Commerce
Absent: Sophie Kenn Coordinator ROP and Inyo County Superintendent of Schools rep

Karen O'Connor: Introductions were held and the meeting agenda was outlined. General information comes first and then sub groups will be formed to discuss various topics related to the different programs. A feedback survey will be collected at the end of the meeting to provide further information from employers and other stakeholders.

Agenda Item/Career Pathways for Degrees and Certificates: Career Pathways documents for all area programs were distributed by the Business and Information Technology Chair and these documents were discussed.   Feedback was requested on our target of employability for students at the end of pathway completion. No suggestions for changes were made at this time, but the consensus was that these documents will be a good guide for students in the programs and they should aid in completion and preparation for the workplace.   The difference between certificates and degrees was discussed, as well as the stepping of levels in the BSOT program area. Program outcomes were discussed as a connection to the completion of the pathways.

Agenda Item/Programs and Courses:

Business Office Technology: Led by Karen O'Connor.   We offer both the degree and three certificates (12 units, 18, 30.) The 12 and 18 unit certificates have recently been approved at the state level.   As a follow up to the Program Review completed in the prior year, the BSOT program has been revised and it includes a new course, BSOT C100 Intro to Business Office Technology taking the place of BSAD C100 Intro to Business. This course will help with identification of a cohort moving into the BSOT certs and degree and take some pressure off the capstone class in the way of content. This course will also introduce a much needed grammar refresher for students.   The course also provides an opportunity to introduce a focus on helping students improve their own writing skills. One of the books we are using in BSOT C100 will be a reference book across all the BSOT classes and some other college courses.

Small Business Management Entrepreneurship – (Matt Hightower) – We have lots of people taking courses in it, but not completing the degree. The degree and the certificate have the same requirements in the major. It appears that those wishing to start their own business are not as focused on degree completion.

Some of the dialog went as follows:

Cheri Plett– I am one of those students who took a few of those classes, but never completed the certificate or degree. It was difficult to use the classes as someone who is going out and freelancing as a web designer. I really needed a small business accounting class that wasn't offered. (We do have that course, but she must not have seen it at the time or it wasn't marketed as such.)

Matt Hightower spoke about the

Matt Hightower presented the various Business degrees:

- Associate of Arts for Business Administration which is geared towards a student who wishes to transfer. This program has been very popular. A few weeks ago we worked on cleaning up the Business programs. There were too many crossover classes that applied to so many certificates.

- Business A. S. is more of a general business degree, more general business classes, business law, personal finance

- Management – non-transferable degree and certificate – more technical classes, problem solving class, this degree is to get someone ready for management or running a business.

Joanie – Brought up a point about if the student plans to transfer, they need to follow the path of the transferrable degree.

The Paralegal Studies degree and certificate pathways was also presented. We are always seeking internship positions for our near grads.

Media Arts were also represented. We are always looking for opportunities for experience for our grads.

Karen recapped: We have the career pathways for the students to see, pages from the catalog that describe the classes, talking about the program outcomes. Please let us know as employers if the outcomes in these courses are what you want in an employee. That is the kind of conversation we want to have with you. We need your feedback.

Agenda Item/Student Learning Outcomes: Suzie Ama - We have been measuring the student learning outcomes. We build courses and programs around these outcomes. Suzie explained SLO and Assessments ongoing.

Agenda Item/Draft Employer Survey: Matt Hightower presented the Employer's survey- We need to survey business about the types of things business owners want.   It's the only way we are going to be able to offer courses that people want.   It is appropriate to survey businesses in all of the Cerro Coso area. What we are looking for here is some sort of feedback on if this survey would be useful. We would like to collect the data electronically and filter through it that way.

Survey Description:

Questions include the following themes:

Should the training be credit based or not?
Comment section for other requirements for the employer.
Time of day. Would they want the classes during the day or in the evening?
Willingness to pay to train employees? Add a comment or other box below that question.
Some small companies might come together for group based training.

Agenda Item/Digital Media Skills: Lisa Darty – We added a new certificate in Digital Media Arts for people who didn't want to go the course for a degree.   Do we need to present or offer a certificate for the general population? Do you look for digital media skills in employees? What are the types of basic media skills that will help all of us in other spectrums? Do our courses need to be more general rather than software dependent?

Questions:
Digital imaging with free applications: This community class was geared towards small business owners. There is definitely a market for this type of class.
Getting input from the students would be helpful.
Should we be offering these classes in a shorter format?   Or maybe community based?
What do they use already?
There are some applications that are already integrated on Windows and Apple. Computers on the base cannot download other apps, we would like to have employees know these skills applications that are already integrated on their computers.
If the students know how the steps work, they should be able to adapt to whatever software they are using.
The fundamental concepts need to be addressed.
There still have to be areas of expertise, even though the programs do a lot of the work now.
There will always be businesses where people wear a lot of hats.

What are the types of digital media you want people to have skills in?
All kind of formats exist. You have to know the skills behind the software.
Skills include: File formats, pixel sizes, Power Point, file management, web based digital media. Gimp, Picasa.
People who are trying to archive all their family photos would love to take a short class on how to do that. Perhaps we need a CSCI 101 for digital media Or an elective covering these topics for BSOT students.

Web Design Certificate and Degree: Suzie Ama presented a Power Point on the Web Design program. Current certificate is 34 units. It is fairly sequenced, has a small elective requirement, and includes a capstone course.

Program Highlights:
- National and State-wide curriculum model (WOW Professional Academy Member)
- Increased student demand over past 6 years
- 4.6% job growth in our region (4.5% national)

- Can be completed 100% online, although entry level courses are also offered on campus
- Program completion ranks higher than State goal for Skill Attainment (course completion) and Completion (certificate or degree completion)
- 50% of graduates are self-employed
- Local graduates are also employed at New Directions Technologies, Inc., Ridgecrest Regional Hospital (IT), Cerro Coso Community College, and Tehachapi Hospital (IT)
- The program has been supportive of community organizations through capstone course projects, including Drummond Medical Group, Ridgecrest Community Calendar, Ridgecrest Regional Hospital, and the Wild Iris crisis center.

Program Challenges:
- Student retention and success is dropping.
- Need to further increase program completions, particularly for non-traditional students (males).
- Increase local awareness of program for improved job opportunities for graduates.
- Need for stronger pathways for high school students.
- Retain program currency to align with continual evolution of industry standards.

Discussion: This field has a higher than average self-employment. Students coming into classes with less computer skills, non-traditional students are males, increase local awareness. We continue to upgrade the program as technology evolves. Add HTML5 class. Perhaps add an E-commerce class. Possibly reduce electives even further and add more core classes. There was discussion about the need for the Technical Communications course. Programs in the Business Technology department require Business Communications.

Sean Callihan indicated that the majority of Jacobs' IT positions require IAT 2 level certifications, which includes CIW certification. The Web Design program aligns well with CIW certification, and we will purchase the CIW curriculum to ensure that students are fully prepared to take the exam, if they choose pursue employment with Jacobs.

Agenda Item Paralegal Studies Program Review: Karen O'Connor -- Program Review was sent by email for review. We need more feedback for program review.
How can our programs be improved? Are students getting hired in the jobs we trained them for? We want to do more internship.

Feedback survey and expression of interest forms were distributed and completed.

The follow up survey was distributed and the meeting date was set for next fall.

Web Professional Program Advisory Group Meeting

April 3, 2013

Attendees:

- Larry Cosner – Cosner-Neipp Corporation, Ridgecrest Regional Hospital
- Rich Christensen – Jacobs Technologies, Inc.
- Julia Stepro – Petra Web Design
- Suzie Ama – Cerro Coso Community College, Business IT Dept Faculty, Web Professional Program Coordinator
- Lisa Darty – Cerro Coso Community College, Business IT Department Faculty
- Valerie Karnes - Cerro Coso Community College, Dean of Career Technical Education
- Karen O'Connor – Cerro Coso Community College, Business IT Department Faculty and Chair
- Frank Timpone – Cerro Coso Community College, Business IT Department Faculty

Absent:

- Abigail Gardner – New Directions Technologies, Inc.
- Cheri Plett – ArtSci Designs, Alta One Credit Union
- Dan Wood – Indian Wells Valley Internet Service Provider
- Elaine Rudis-Jackson - Cerro Coso Community College, Business IT Department Adjunct Faculty

1. **Introductions.** Suzie Ama provided a welcome for attendees. Introductions were made, and each attendee spoke a bit about themselves and their work. Suzie distributed meeting packets, outlined the purpose and charge of the Advisory Group, and discussed the need for all CTE programs to solicit input from the Advisory Group regarding curriculum, employment, mentoring, industry trends, and staffing.

2. **Review.** Suzie provided a review of previous Advisory Group meetings, and discussed the changes in the program that have resulted from those meetings. In particular, the need for professional certification noted in previous meetings has driven significant changes in the curriculum, which is now closely aligned with Certified Internet Web (CIW) Professional certification. She also noted the elimination of electives from the program, the focus on web development (as opposed to graphic design), the addition of e-commerce and advanced web development courses, as well as the inclusion of Intro to CIS and Networking Fundamentals.

3. **Current Program.** Suzie delineated the courses currently offered, noted the stacked nature of the certificate/degree awards, and asked for input on both the topics covered and the stacking nature of the certificate/degree awards.

   Larry asked for clarification on the topics covered in DMA C213, Web Development with PHP and MySQL, noting that, although the shopping cart model and retail-oriented focus of the web is certainly well established, it is probable that there is an emerging trend in XML Web Services applications, and mobile applications in general.

   Julia stated that the Web Fundamentals Certificate offered a very solid foundation for working in web development. The others concurred.

Rich pointed out that, in addition to the types of courses outlined in the program, Jacobs Technology is also looking for potential employees who have a balance of both education and work experience, and noted that small, local jobs or volunteer work could be very beneficial to students who are preparing to graduate. Suzie mentioned that we are now requiring that students acquire their own hosting service and domain very early in the program, so that they can immediately begin posting the work they do in the program and developing a portfolio web site. Suzie asked if internships would be helpful; Rich remarked that, although they would help in terms of providing students with work experience, internships at the Naval Air Warfare Center are not frequent, due to security clearance requirements.

Suzie presented the CIW/Cerro Coso course matrix, which outlines the alignment between our courses and CIW certification topics.

Rich mentioned that Jacobs is always looking for people with Security+ certification and experience, and asked if we offered Security+ courses. Karen stated that Security+ instruction is available in the CIS program, and noted that this course could be added to the Web Professional Program lineup. Valerie proposed instead a local mini-certificate that included 2-3 IT related components that prepared students for various certifications, as a foundation for seeking base employment. Suzie inquired if the hospital required much in the way of certification; Larry replied that certification is not absolutely essential for prospective hospital web development employees.

4. **Trends.** Suzie asked the group if they have noticed any trends in their respective industries.

   Larry noted that the Web Professional program does not include specific courses related to security, but there is a distinct and rapidly growing need to address security concerns, so this should be included in the topics for some classes. Suzie noted that security is addressed in CIS 101 and DMA C201, and could also be included in the topical outlines for other courses, as the curriculum undergoes regular review and revision.

   Rich stated that he has not seen much of a shift away from a system administration focus toward web development at Jacobs, but that he will contact Sean Callahan to see if he has any input on this topic. Rich reiterated the focus observed previously by Larry on security issues.

   Larry noted that the need for web development across multiple platforms, particularly mobile devices, is growing.

   Julia mentioned that the inclusion of the e-commerce class to the program lineup is very timely, as most of her clients are retail-based, and require experience working with shopping carts, pricing and other commerce-related tasks.

   Larry noted that in the health industry, there is a growing need for continuing education, in terms of keeping current with technological advances; Rich concurred and mentioned a similar need for regular updates in skills acquisition and certification on base.

   Suzie also shared that Dan Wood of the Indian Wells Valley Internet Service Provider agreed to serve on the advisory committee, but could not attend that day. Suzie asked him via email what impact the Digital 395 Project would have on our community. Dan said the cable will increase bandwidth in the "middle mile," but not the "last mile." In other words, because of limitations of the telephone network infrastructure, there is a bottleneck at individual residences and businesses and there will not be appreciable improvements in performance. That said, he has applied to connect into Digital 395 and is the only local provider that he is aware of who has done so.

5. **Adjournment.** Karen invited the group to remain in regular contact with Cerro Coso, outside of the formal Advisory Group meeting format, and noted that we are always open to receiving input from group members. Suzie thanked the attendees for their valuable input, and expressed the appreciation of the program and the college for the group members' time and expertise.

Web Professional Program Advisory Meeting

November 6, 2013

Attendees

- Suzie Ama - Cerro Coso Community College, Business & Information Department Faculty Chair and Web Professional Program Lead
- Eric Bleu – New Directions Technologies
- Rich Christensen – Jacobs Technologies
- Lisa Darty – Cerro Coso Community College, Business and Information Department Faculty
- Valerie Karnes – Cerro Coso Community College, Dean of Career Technical Education
- Forrest Lloyd – Information Systems
- Ron Rodriguez – Naval Air Warfare Center, Weapons Division (NAWCWD)
- Elaine Rudis-Jackson – Cerro Coso Community College, Business & Information Dept Faculty
- Julia Stepro – Petra Web Design

Meeting Agenda

1. **Introductions and Sign In**. Suzie Ama provided a welcome for attendees. Introductions were made, and each attendee spoke a bit about their background and the companies they represent.

2. **Purpose and Charge of Advisory Committees**. Suzie outlined the purpose and charge of the Advisory Committee, and directed the group's attention to the Advisory Committee Handbook. She highlighted the need for the Web Professional Program to have input from group members on careers, specific employment opportunities, industry trends, curriculum, and other aspects of the program. She also reviewed the desired demographics of the group, and its designated meeting schedule.

3. **Approval of April 3, 2013 Minutes**. Suzie provided a brief outline of the minutes from the April meeting, asked members to review the minutes, and note any changes. The minutes were approved without changes.

4. **Industry Updates and News**. Suzie invited all members to discuss trends in their respective industries.

   a. Forrest reported on behalf of Rick at AT&T that there seems to be a lack of sales and communication skills in their job applicants. He also reported on behalf of Carol Vaughn at Vaughn Realty, a lack of skills in social media applications, sales, and professional writing. Suzie inquired if Carol needed any assistance with the Vaughn Realty website or internet media campaign. Forrest will contact Carol to inquire about this topic and subsequently contact Suzie.

   b. Elaine reported that there is a huge focus on responsive design in web development. Responsive design - building websites that are modular and able to be deployed on a multitude of devices via CSS - is a growing trend, and signals a significant shift in the philosophical underpinnings of web design. She noted that this shift is reflected in our current classes, particularly in Advanced Web Development, but also mentioned that we're trying to build this foundation into classes that fall

earlier in the program pathway, as well.

Valerie mentioned that she attended a social media workshop recently, where she learned that over 90% of people in low socioeconomic sectors access the internet primarily through mobile devices; she commented that the need for web sites to be deployed on mobile devices is expected to increase.

Ron inquired if media professionals such as videographers might be expected to adjust their work practices to accommodate the wide variety of platforms, particularly in terms of video file format and aspect ratio. Elaine noted that the aspect ratio of videos is not the primary concern; issues of bandwidth are more pressing. She did state that video needs to be provided in several different formats, though, so that programs can call on whichever format is required for a particular device. Suzie added that HTML5 is replacing Flash.

c. Julia stated that her clients are voicing an increasing desire to be able to update their sites themselves, and thus content management systems (CMS) are growing in popularity. She mentioned that she has been using Wordpress as a platform for some of her clients, and that has been working well. She suggested that this trend might indicate a need for additional classes in more advanced aspects of CMS and eCommerce. Forrest inquired if CMS is addressed in the program; Suzie responded that there is introductory CMS instruction in DMA C117. She went on to explain that our program line-up had to be streamlined for enrollment management purposes, which resulted in an optimized core set of courses with no electives. She added that one of the outcomes of the program is to teach students how to be lifelong learners; this is a necessary skill in the web design industry, which changes rapidly. Students are provided with enough foundation that they are well equipped to self-train and continue learning advanced topics and emerging technologies after they graduate.

d. Eric noted that NDTI hasn't had much need to contract out for web design, although they did recently redesign their website in-house, with the assistance of a single contractor. They ran into several problems initially, and he noted that it would have been very helpful to have a program intern with experience in CSS. Suzie responded that Cerro Coso has a new Job Development Specialist; she will put Eric in touch with her, for any upcoming internship needs. Elaine mentioned that she has students who would be a good fit for the needs that Eric described.

e. Rich noted that there has recently been a shift in the type of obstacles observed in the employment applications - rather than a lack of a particular skill set, security issues are becoming more prevalent. He also pointed out that Jacobs is currently looking for a Business Manager with Navy finance experience, as well as a Software Requirements Engineer, and that Edwards AFB is advertising for a Senior Social Media Specialist.

Eric asked Rich if Jacobs uses a lot of social media marketing; Rich responded that they use it quite frequently. Eric stated that there seems to be a lot of resistance at NDTI to using social media. A group discussion followed, where several members commented on the growing need for employees with social media marketing skills. Ron stated that the Navy recently combined a lot of visual communication tasks into a more generalized mass communication position; he noted that this type of merge is slightly problematic, since most people have relatively

specialized skill sets. Eric outlined a recent task at NDTI that could have benefitted from using Facebook, and explained that the resistance to doing so created some obstacles to completing the task. Elaine suggested that Eric look into a service called Buffer, which coordinates and automates the posting of social media content.

f. Eric, Ron and Elaine agreed that a single person to handle all aspects of mass media, such as social media, communication and branding, would be best practice.

g. Ron said that there are often opportunities on base for outside individuals, such as interns, to provide assistance with certain projects, and outlined a significant desire on the part of base employees to acquire Photoshop, Illustrator, PowerPoint and videographic skills, particularly the use of video in PowerPoint presentations. Valerie mentioned that Cerro Coso has an education partnership in place with the base, which would work as a conduit to address these opportunities.

Suzie and Lisa discussed the possibility of further revision to DMA C102, to incorporate Illustrator and PowerPoint, but noted that the more advanced Photoshop instruction would need to be reduced in order to do so. Valerie mentioned that the Digital Media Skills course line-up was intended to address these types of generalized communication and presentation needs. Lisa suggested that more informal, short term internships could be a more manageable way to both give students real-world experience, and meet some of the needs on base for assistance with singular projects.

h. Rich noted that there is also a growing need for workshops at Jacobs, to provide employees with Continuing Education Units.

5. **Web Professional Program Updates and News**.

a. Suzie briefly reviewed the curriculum documents provided in the meeting packets, highlighting the alignment of classes with CIW certification requirements.

b. Suzie asked group members to inquire in their respective areas if there is a local non-profit organization in need of a website redesign, which could be completed in the next capstone DMA C280 class. Group members will contact Suzie with potential candidates.

6. **Adjournment.** Suzie thanked the attendees for their valuable input, and expressed the appreciation of the program and the college for the group members' time and expertise. The meeting was adjourned at 1:30 p.m.

Web Professional Program Advisory Meeting

April 15, 2014

Attendees

- Suzie Ama - Cerro Coso Community College, Business & Information Department Faculty and Web Professional Program Lead
- Eric Bleu – New Directions Technologies
- Larry Cosner – Ridgecrest Regional Hospital
- Forrest Lloyd – Information Systems
- Karen O'Connor - Cerro Coso Community College, Business & Information Department Faculty Chair
- Elaine Rudis-Jackson – Cerro Coso Community College, Business & Information Dept Faculty
- Julia Stepro – Petra Web Design

Meeting Agenda

1. **Introductions and Sign In**. Suzie Ama provided a welcome for attendees. Introductions were made, and each attendee spoke a bit about their background and the companies they represent.

2. **Purpose and Charge of Advisory Committees**. Suzie outlined the purpose and charge of the Advisory Committee, and directed the group's attention to the Advisory Committee Handbook. She highlighted the need for the Web Professional Program to have input from group members on careers, specific employment opportunities, industry trends, curriculum, and other aspects of the program. She also reviewed the desired demographics of the group, and its designated meeting schedule.

3. **Approval of April 15, 2014 Minutes**. Suzie provided a brief outline of the minutes from the April meeting, asked members to review the minutes, and note any changes. The minutes were approved.

4. **Industry Updates and News**. Suzie invited all members to discuss trends in their respective industries.

    a. Forrest reported he hasn't been busy with web work, and the Fun Mud Run will not likely have another event. The Boys and Girls Club is struggling and in need a President of their Board. Forrest shared about trying to find an old friend and stumbled across a tragic medical racket in which many people were harmed from unnecessary back surgeries. I speculated whether a web site could be created to try to find people who had been harmed and try to get them some legal remedy. Larry suggested that Forrest contact a tort lawyer for help. The farm workers union might also be of help.

    b. Elaine reported that the first offering of Advanced Web Development in the Fall 2013 went very well. Everyone was excited about using responsive design. She will be incorporating outlining more extensively in DMA C111 next time she teaches it. She discussed the importance of content management skills—especially for freelance web developers. Good grammar, good communication skills, good organization skills. Forrest asked whether a class on writing newspaper articles was available. We discussed the former Technical Communications class, which really met this need, but it is not offered anymore. Karen offered that Business

Communications can meet this need. The HOW 2013 book is a good resource, as well. However, it is $110. Elaine asked Eric, of NDTI, whether they were involved in content formatting. He said that he and Abigail didn't have a lot of input about making changes to content organization in the creation of their company web site.

c. Larry observed that web design is actually 3 parallel cognitive domains: artistic, human interface design, and a deeper alignment of the content hierarchy with the conceptual model that is presented. He suggested that counselors be made more aware of the complexity of skills as they make pathway recommendations to students. Elaine added that design goes beyond the information—that the core concept is the user. Forrest added that the coding is almost insignificant compared to usability design. Suzie added that another important domain for students to understand is understanding business and, more specifically, their clients' businesses.

d. Eric inquired whether students predominantly communicate in 'text-talk'. Elaine responded that the youngest students do—those who are just out of high school. Eric said that in the gaming community, members are chastised for correcting others' grammar. The group discussed the importance of communication skills as they relate to communicating with clients at a distance and with the development community.

e. Internship. Karen said that a local accountant, Barbara, is looking for help with her web site design. Karen said

f. Julia said that more and more of her clients are requesting instruction on how to use their site. So far, she hasn't charge them for this, but it is becoming a problem because it is quite time consuming. Elaine suggested that she give them a choice: some free tutorials online or a fee for her instructional services. Julia said that local clients are reluctant to pay for the true value of services provided. Julia has decided to produce some instructional videos for this purpose. Elaine commented that recording canned videos, rather than doing live demos has helped a lot. She offered an idea of having students create their own screen capture video to communicate problems they are having. Larry suggested to Julia that she use SQL databases and teach clients how to maintain their content through the database.

g.   Eric said that NDTI was recently received iso-2000-1-2011 certification. The preparation for this took about a year. There are less than 40 companies in the U.S. with that certification. This certification is for information technology management. It is a more popular certification to seek internationally, but for some reason U.S. companies do not seek it out as frequently. NDTI is in the process of migrating to Windows 8.1. Suzie asked if NDTI was growing and if they planned on hiring more people, and Elaine followed up asking if they still do web contracts. Eric said they generally don't, but if they get the NASA Mars contract, they will having to build a web portal. He did say that it would be a benefit to have more usability input.

h. Forrest asked about clients being able to update their own sites and how might that work. Suzie said that if they don't know HTML or CSS, it is best to implement a content management system. Forrest asked how he might learn more about that and what the best CMS is. Suzie and Elaine suggested Drupal, WordPress, Joomla. Forrest said he has used WordPress before. Julia explained that users can have different levels of permissions in a CMS.

5. **Web Professional Program Updates and News**.

   a. Suzie shared labor market information, citing that the industry is growing, with 13% projected growth in our service area. 20% growth is projected statewide. However, a BS is expected for many of these positions. Elaine inquired whether we are articulated with any 4-year schools, and Suzie said that the curriculum at the 4-year level tends to focus on computer science or on graphic design. The profession is interdisciplinary, but the 4-year schools keep the curriculum sequestered.

6. **Adjournment.** Suzie thanked the attendees for their valuable input, and expressed the appreciation of the program and the college for the group members' time and expertise. The meeting was adjourned at 1:30 p.m.

Web Professional Program Advisory Meeting

Oct. 29, 2014

Attendees

- Suzie Ama - Cerro Coso Community College, Business & Information Department Faculty and Web Professional Program Lead
- Eric Bleu – New Directions Technologies
- April Hayman – Freelance Instructional Designer
- Forrest Lloyd – Information Systems
- Mike McNair – Cerro Coso Community College, Dean Career Technical Education
- Karen O'Connor - Cerro Coso Community College, Business & Information Department Faculty Chair
- Elaine Rudis-Jackson – Cerro Coso Community College, Business & Information Dept Faculty
- Julia Stepro – Petra Web Design

Meeting Agenda

1. **Introductions and Sign In**. Suzie Ama provided a welcome for attendees. Introductions were made, and each attendee spoke a bit about their background and the companies they represent.

2. **New CTE Funding**.

   a. Mike McNair reported that the legislature has approved $50 million in seed money to be divided between Regions and then between colleges. Cerro Coso will receive approximately $300K. We also were awarded a $46K grant. These funds have fewer restrictions than VTEA funds. Curriculum, outreach, advertising, equipment. We need to collaborate with another college on projects. He suggested getting 3D printers.

   b. Mike: Enhanced non-credit is an alternative to credit programs for skill certificates. Faculty receive regular load for teaching these courses. Sean: Added that this sounds like continuing education. Elaine: Freelancers may only need 1 or 2 classes for skills. Valerie: Will they tie certifications to this? Mike: They can. Suzie to Sean: Jacobs needs recertification, and would this meet that need? Elaine: Which certifications are needed? Sean: Security+ is the main one. Operating system certification. Certification comes first, and then to maintain certification, continuing education is required thereafter. 50 hours over a 3 year period. Skillport is an option, but a lot of people don't like it and prefer other training. Valerie: Several years ago CC provided some contract ed to Jacobs—is that the model the Jacobs needs? Sean: No, it is ongoing and individual. They can't offer a block of training to a group because of logistics. Mike: We can do this; it falls into a different category than credit courses. What the State is trying to accommodate is flexibility to meet workforce needs rapidly. It's a different market than what our existing programs are addressing. Developing academies is a big push, as well. Mike said that in 10 years, the state will be short a million workers.

3. **Industry and Community Updates**

a. Forrest: He's working on 2 web site. One is a site to try to drive Death Valley tourism into Ridgecrest. The other is a site to connect farm workers who were injured by unnecessary back surgery with resources to help them get compensation. In general, he's also finding a need to provide content in Spanish, maximize SEO, social networks, and develop for mobile devices. Suzie asked how he is driving victims to his site, and he didn't know. Elaine suggested pinpoint Facebook advertising. Sean pointed out that farm workers physically go to sites to obtain work and advertising can be posted. Forrest is also trying to figure out how to monetize this. Mike suggested a referral or finder's fee from attorneys for connecting them with victims. Forrest said he doesn't want to be an "ambulance chaser." Sean suggested getting attorneys to purchase advertising on his site. Mike suggested working with the union, as well. Forrest commented that DMA C201 E-Commerce has proven to be beneficial in his works.

b. Sean: Someone asked Sean if internships were available with Jacobs, and Sean responded that a budget for that has never been established, but they are trying to work on accommodating this. A limitation is the positions that Sean is seeking to fill require several years of experience within the DoD information assurance realm. Suzie asked if applicants need a security clearance, and Sean responded that it is preferable because of the length of time required to obtain one. Jacobs' biggest need is information assurance officers. It is a year-long process to train them. The first 6 months involves learning the regulations of the DoD and obtain their security plus certification. The second 6 months involves honing their technology skills and learning operating systems. An important skill is the ability to build security into the software. Elaine asked about the need for web design skills for people who post content, and Sean responded that a small number of people do that. And it is centralized—most are run out of Pax River. Local people submit content, but the sites are managed back East. A few codes here at NAWC, however, run their own web sites. But this practice is diminishing because of the DoD's objective to centralize.

c. April: She is an instructional designer and develops e-learning. Her clients are quite diverse. She is also involved with project management and, more recently, agile project management. She could use help with graphics. She will work with local help or remote help. They need excellent communication skills.

d. Julia: She is using content management systems. Ridgeproject web site. Images and video are becoming more important as content. Suzie asked about Julia's previous need for training clients to use the CMS, but overcoming resistance to being paid for that training. She is using screen shots to build simply tutorials. Elaine suggested a CMS class as a possibility for a community ed class.

e. Elaine: HTML5 is finally well supported by browsers. Responsive design is central.

4. **Minutes from Last Meeting:** Members approved.

5. **Adjournment.** Suzie thanked the attendees for their valuable input, and expressed the appreciation of the program and the college for the group members' time and expertise. The meeting was adjourned at 1:30 p.m.

Web Professional Advisory Meeting
Agenda
September 30, 2015
Grape Leaf Restaurant
11:30 am – 1:00 pm

Present: Suzie Ama, Rich Christenson, Larry Cosner, Anthony Damiano, Matt Denny, Ray Hocker, Valerie Karnes, Ashlin Mattos, Mike McNair, Rene Mora, Frank Timone

Absent: Eric Bleau, April Hayman, Thomas Della Santina, Forrest Lloyd, Karen O'Connor, Ron Rodriguez, Elaine Rudis-Jackson, Julia Stepro

TOPIC	FACILITATOR	SUMMARY/ FOLLOW-UP	O	C
1. Call to order	S. Ama			
2. Approval of Agenda	S. Ama	Approved		X
3. Introductions	S. Ama	Introductions were made.		X
4. Web Professional Curriculum Updates	S. Ama	Digital Media Arts (Web Professional program) has experienced a severe decline in enrollments over the past 5 years (from 403 to 140). From 2010-2013, enrollments dropped commensurately with other programs at the college during a general downturn in college attendance. But during the past 2 years the college as a whole has plateaued, whereas the Web Professional program has continued to decline. This coincides with the conversion of the Web Design program, which included a large set of electives of graphic design, videography, art, and computer science courses, to the Web Professional program, which is now a linear program consisting solely of core requirements and focusing exclusively on web development. It has been speculated that the much narrower focus has excluded a population of students who desired the broader subject area exposure. Conversations with Cerro Coso counselors, Rene Mora and Missy Gross, confirmed that there is a significant population of students who are not being served by the new configuration. During this meeting, Rene also pointed out that the previous program configuration had several courses that also met General Education requirements, reducing the total number of courses that students needed. A		

TOPIC	FACILITATOR	SUMMARY/ FOLLOW-UP	O	C
		revision to the program is being proposed that has 4 foundation courses and 1 capstone course. Then students choose from one of two options, each option emphasizing either design or development and including 4 courses. Rene provided handouts of the previous program, highlighting courses that had dual applicability to general education requirements. Suzie also explained that DMA C280, currently named Web Production Management, would be renamed to Capstone Project (or similar), in which design-option students would develop a highly interactive web site and development-option students would develop an app. The committee was unanimously supportive of the proposal. Matt Denny shared that python is emerging as a high-demand scripting language, and Javascript skills would provide sufficient prerequisite skills. He said they do not use Java in his area of work (user experience design). Rich Christenson said that the classification of jobs that his colleague, Thomas Della Santina, oversees often list Python as a requirement. Rich also said that 8570 (Information Assurance) compliance is a requirement for most IT jobs on the base. Rich provided job descriptions for several opening positions. The positions require a B.S. or B.A Computer Science or a related field. Mike McNair suggested dual-enrollment possibilities for pathway courses or entry-level core courses at the high school. There was consensus that this would be a good way to generate interest among high school students. Rich pointed out that the student trend data shows that over 50% of our students are 29 years of age or younger. The majority have grown up playing video games and are relatively poor communicators. He stressed the need for communication skills to be taught, and others agreed. Students need to be able to accurately hear what the client needs and requests, and they should be able to effectively present a proposal. Students should be able to communicate orally and in writing with clients and colleagues. Ray Hocker added that students should be able to work with content--to integrate it into media effectively and appropriately. Rene suggested that Speech be added to the curriculum. The Business Communications course, which Frank Timpone teaches was also suggested as a possibility. The Technical Communication course,		

TOPIC	FACILITATOR	SUMMARY/ FOLLOW-UP	O	C
		which was previously part of the Web Design program was discontinued by the English Department, due to low enrollments. Suzie suggested that an alternative to adding course requirements might be to use embedded instruction and to use supplemental college resources. For example, it is likely that this year, the college will migrate to the learning management system, Canvas, which allows for video posting to class discussions. Students could receive instruction on how to deliver an effective oral presentation and have repeated opportunities throughout each semester and throughout the program to hone these skills. Also, Ashlin Mattos, the college's Job Development Specialist, has started offering resume writing and interviewing skills workshops to students and conducted mock interviews with several of Valerie Karnes' students last week. This program could potentially be expanded to assist more students. Larry Cosner asked how students might learn and understand the importance of certain courses or content that, at first glance, may not appear to be relevant to the program or the career for which they are preparing. Valerie said that we try to do this within courses—explain the relevance of content that is being presented. But conveying this to potential students is more challenging. Counselors may be able to contribute, and Rene said that PDEV C052 Becoming a Successful College Student helps students gain an appreciation how foundation classes do, in fact, make later content much more relevant and applicable. There was discussion about the name of the program, Web Professional, as being off-putting. Web Development would be an improvement. It was mentioned that the name of CSCI C101 Introduction to Computer Information Systems, might be off-putting to students who are interested in graphic design. CSCI C101 feeds into other programs, however, and there isn't as much flexibility with name changing of this course as there is with the web program. Suzie asked Ray about videography jobs on the Base. How many openings are there per year, and what kind of training is required? He said that 4 positions were filled in the past month, but this was unusual. Typically a couple positions need to be filled		

TOPIC	FACILITATOR	SUMMARY/ FOLLOW-UP	O	C
		annually. The Base prefers candidates with a B.A., but it is not required. Computer literacy with video editing software is essential. Ray said that the Design option in the proposed curriculum would enhance a candidate's prospects. He said that the title of the video course, Digital Video Production, would appeal to the broadest audience. Anthony Damiano conveyed that Forrest Lloyd was interested in the following topics. 1. Responsive web design 2. Latest SEO strategies and tools 3. Web design (layout, colors, fonts, navigation, etc) These topics are, indeed, covered in existing courses: 1) DMA C119 Advanced Web Development, 2) DMA C113 Accessibility and Usability, and 3) DMA C117 Web Design with Dreamweaver. The meeting was adjourned at 1:00 PM.		
7. Adjourned		1:00 PM		

Facilitator: S. Ama   Recorder: S. Ama   **O** Open/**C** Closed

Business Office Technology

Instructional Program Review

Cerro Coso Community College

Karen O'Connor

04/17/2016

Table of Contents

Business Office Technology

Executive Summary

The Business Office Technology (BSOT) program area, including the BSOT AS Degree, the 30 unit BSOT Certificate of Achievement (COA), the 18 unit Administrative Assistant Certificate and the 12 unit Office Clerk Certificate, has now reached the culmination of a decade of course and program development, including aligning correct taxonomy of program (TOP) codes, renaming discipline designators for course, updating course content, creation of the new gateway course BSOT C100 Introduction to Business Office Technology, and program revisions to the certificates of achievement and degree.

The certificates and degree that comprise the BSOT area program are strategically designed to serve groups of students in steps, from Office Clerk, to Administrative Assistant, to expert in the field, the Business Office Technology COA or Degree.   The entire program is primarily offered online, though some classes shared with other program areas are offered strategically at Ridgecrest/Indian Wells Valley (IWV) or other campuses as the need arises or through planned dual enrollment beginning Fall 2016.

Some BSOT courses are now presented as models for the state C-ID program and the middle certificate of the program is aligned with the state-recognized Business Information Worker Level I. An appointment has already been set to confirm the alignment of the higher level of the program with the Business Information Worker Level II, confirming what we already knew through discussion with advisory and others that our program is on target to deliver what employers want and need. We also know that the need for skilled workers in this field is growing, due to both an increase in volume of industry need and an aging workforce.

Additionally, courses in the BSOT area continually evolve toward integrating both evolving workplace skills and also employability skills, or soft skills, as are greatly desired by employers.   Although there is always much more development and room for innovation on the horizon to keep a program such as BSOT current, the BSOT area is now fully prepared to increase the volume of course offerings both online and through dual enrollment with area high schools and in doing so, show increased success and retention in the next program review cycle.

Three year program strategies include the revision of all courses to remain current with industry software, such as Office 2016. Discipline changes, from CSCI to BSOT mean many courses are ready for reassessment in the new cycle. Additionally, the time is right for additional marketing strategies to be fulfilled and also for further outreach to be made both to incoming students as well as to employers who hire the graduates of this program area. The department will also track declared majors against offerings of BSOT C100.

Six year strategies include working with college resources to create additional workplace tracking and monitoring of student employment as well as increased partnership with advisory committees to stay current with industry and workforce needs and find placements for students after graduation.

Part 1 - Relevance

1. Catalog Description

The descriptions stated below describe the Business Office Technology AS Degree (60 units), the Business Office Technology Certificate, the Office Assistant Certificate, and the Office Clerk Certificate.

BUSINESS OFFICE TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE is designed for students preparing for challenging positions as administrative assistants and office managers through courses in communication, industry standard computer applications, business, and bookkeeping in order to meet the needs of the technologically dynamic office.

You must complete a minimum of 60 units, including the courses listed in the major and general education requirements, with an overall GPA of 2.0 or better, and a grade of "A", "B", "C", or "P", in all courses for the major. A minimum of 12 units must be completed at Cerro Coso Community College.

Note: Some courses within the major may have a required prerequisite. If you feel you have equivalent knowledge and skills to those included in the prerequisite course through professional experience, licensure, or certification, you have the opportunity to submit a Prerequisite Challenge to be reviewed by the faculty chair. For the Prerequisite Challenge to be considered, you must submit the documentation/verification to substantiate the basis for the challenge. Please consult a counselor for more information regarding Prerequisite Challenge.

This program prepares students for careers in Business Office Technology: office assistant, receptionist, data entry clerk, mail room clerk, sales clerk, filing clerk, inventory clerk, counter clerk, clerk I, clerk II, bookkeeper, accounts receivable clerk, accounts payable clerk, payroll clerk, office manager entry level.

BUSINESS OFFICE TECHNOLOGY CERTIFICATE is designed to prepare learners for employment in challenging positions as administrative assistants and office managers through courses in communication, industry standard computer applications, business, office procedures, and bookkeeping in order to meet the needs of the technologically dynamic office.

Complete each course to be applied toward the certificate with a "C" or better. Complete a minimum of 12 units in residence at Cerro Coso Community College.

This program prepares students for careers in Business Office Technology: Employment preparation for such careers as Office Assistant, Receptionist, Data entry clerk, Mail room clerk, Sales clerk, Filing clerk, Inventory.

OFFICE ASSISTANT CERTIFICATE   This course of study equips the student with the range of skills necessary to perform the duties of an entry level administrative assistant in today's technological office. Completers master skills in communication, bookkeeping, office skills, and an essential selection of

intermediate computer applications for business. Those completing the Office Assistant Certificate may choose to continue with the Business Office Technology Associate of Science Degree.

Complete each course to be applied toward the certificate with a grade of "C" or better. Complete a minimum of 12 units in residence at Cerro Coso Community College.

This program prepares students for careers in Office Technology: Employment preparation for such careers as Office Assistant, Receptionist, Data entry clerk, Mail room clerk, Sales clerk, Filing.

OFFICE CLERK CERTIFICATE This course of study prepares the student to perform basic competencies as an entry level office clerk whether or not the individual has previous office experience. This certificate of achievement is a foundation for the Office Assistant Certificate and the Business Office Technology Certificate or Associate of Science Degree.

Complete each course to be applied toward the certificate with a grade of "C" or better. Complete a minimum of 12 units in residence at Cerro Coso Community College.

This program prepares students for careers in Business Office Technology: Employment preparation for such careers as Office Clerk, Receptionist, Data entry clerk, Mail room clerk, Sales clerk, Filing clerk, Inventory clerk, Counter clerk, Clerk I, clerk, Inventory clerk, Counter clerk, Clerk I, Clerk II, Bookkeeper, Accounts Receivable Clerk, Accounts Payable clerk, Payroll clerk.

2. Program Learning Outcomes

BUSINESS OFFICE TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE PROGRAM OUTCOMES

   A. Display business standards for efficiency, time management, and quality of work while projecting a professional image including ethical standards with respect to privacy, confidentiality, and personal behavior both independently and in group situations.
   B. Apply fundamental principles of spelling, grammar, and punctuation to a wide variety of business communication messages, documents, and reports appropriate for the intended viewing audience.
   C. Select, apply, and adapt computer software tools such as word processing, spreadsheet, database, accounting, presentation, and desktop publishing, to business related tasks and assess the logic of the results.
   D. Analyze and record a variety of business financial transactions including but not limited to petty cash, accounts receivable, accounts payable, payroll, and process through the accounting cycle from journalizing to financial statements.
   E. Apply standard records management procedures when establishing and maintaining systems to classify, organize, store, and retrieve both hard copy and electronic files.
   F. Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.

BUSINESS OFFICE TECHNOLOGY CERTIFICATE PROGRAM OUTCOMES

A. Display business standards for efficiency, time management, and quality of work while projecting a professional image including ethical standards with respect to privacy, confidentiality, and personal behavior both independently and in group situations.

B. Apply fundamental principles of spelling, grammar, and punctuation to a wide variety of business communication messages, documents, and reports appropriate for the intended audience.

C. Select, apply, and adapt computer software tools such as word processing, spreadsheet, data base, accounting, presentation, and desktop publishing, to business related tasks and assess the logic of the results.

D. Analyze and record a variety of business financial transactions such as petty cash, bank deposits, accounts receivable, and accounts payable.

E. Apply standard records management procedures when establishing and maintaining systems to classify, organize, store, and retrieve hard copy and electronic files.

F. Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.

OFFICE ASSISTANT CERTIFICATE PROGRAM OUTCOMES

A. Display business standards for efficiency, time management, and quality of work while projecting a professional image including ethical standards with respect to privacy, confidentiality, and personal behavior both independently and in group situations.

B. Apply fundamental principles of spelling, grammar, and punctuation to a wide variety of business communication messages, documents, and reports, appropriate for the intended audience.

C. Demonstrate intermediate skills and problem solving ability in the use of industry standard applications and technology such as Microsoft Word, Excel, Access, and PowerPoint, to office related tasks.

D. Analyze and record a variety of business financial transactions such as petty cash, bank deposits, accounts receivable, and accounts payable.

E. Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.

OFFICE CLERK CERTIFICATE PROGRAM OUTCOMES

A. Display business standards for efficiency, time management, and quality of work while projecting a professional image, including ethical standards with respect to privacy, confidentiality, and personal behavior.

B. Demonstrate introductory skills in the use of software tools such as Microsoft Word, Excel, and Access, to entry level office related tasks such as letter and report creation, basic spreadsheet creation and data entry.

C. Demonstrate accuracy and efficiency using a desktop calculator to perform business mathematics calculations appropriate for routine office tasks requiring calculation.

D. Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.

3. Courses/Program Matrix

BUSINESS OFFICE TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE

Complete all of the following courses in the major (30 units):
- BSOT C070 Business Mathematics 3
- BSOT C072 Introduction to Accounting 3
- BSAD C145 Business Communication 3
- BSOT C100 Introduction to Business Office Technology 3
- BSOT C121 Beginning Word 1
- BSOT C123 Beginning Excel 1
- BSOT C125 Beginning Access 1
- BSOT C127 MS PowerPoint 1
- BSOT C129 Microsoft Outlook 1
- BSOT C132 Intermediate Computer Keyboarding 1
- BSOT C133 Advanced Computer Keyboarding 1
- BSOT C135 Beginning Adobe Acrobat 1
- BSOT C151 Intermediate Word 1
- BSOT C153 Intermediate Excel 1
- BSOT C154 Office Personnel Seminar 3
- BSOT C155 Intermediate Access 1
- BSOT C161 Advanced Word 1
- BSOT C163 Advanced Excel 1
- BSOT C165 Advanced Access 1
- CSCI C070 Computer Literacy 1

Plus Complete general education requirements and electives for a minimum of 60 total units.

Course Map to Program Learning Outcomes

	A	B	C	D	E	F
BSAD C145	X	X				X
BSOT C070				X		
BSOT C072				X		
BSOT C100						X
BSOT C121			X			
BSOT C123			X			
BSOT C125			X			
BSOT C127			X			
BSOT C129			X			
BSOT C132						
BSOT C133			X			
BSOT C135			X			
BSOT C151			X			
BSOT C153			X			
BSOT C154	X				X	X
BSOT C155			X			
BSOT C161			X			
BSOT C163			X			
BSOT C165			X			
CSCI C070			X			

BUSINESS OFFICE TECHNOLOGY CERTIFICATE

Complete all of the following courses (30 units):
- BSOT C070 Business Mathematics 3
- BSOT C072 Introduction to Accounting 3
- BSAD C145 Business Communication 3
- BSOT C100 Introduction to Business Office Technology 3
- BSOT C121 Beginning Word 1
- BSOT C123 Beginning Excel 1
- BSOT C125 Beginning Access 1
- BSOT C127 MS PowerPoint 1
- BSOT C129 Microsoft Outlook 1

- BSOT C132 Intermediate Computer Keyboarding 1
- BSOT C133 Advanced Computer Keyboarding 1
- BSOT C135 Beginning Adobe Acrobat 1
- BSOT C151 Intermediate Word 1
- BSOT C153 Intermediate Excel 1
- BSOT C154 Office Personnel Seminar 3
- BSOT C155 Intermediate Access 1
- BSOT C161 Advanced Word 1
- BSOT C163 Advanced Excel 1
- BSOT C165 Advanced Access 1
- CSCI C070 Computer Literacy 1

Course Map to Program Learning Outcomes

	A	B	C	D	E	F
BSAD C145	X	X				X
BSOT C070				X		
BSOT C072				X		
BSOT C100			X			X
BSOT C121			X			
BSOT C123			X			
BSOT C125			X			
BSOT C127			X			
BSOT C129			X			
BSOT C132			X			
BSOT C133			X			
BSOT C135			X			
BSOT C151			X			
BSOT C153			X			
BSOT C154	X				X	X
BSOT C155			X			
BSOT C161			X			
BSOT C163			X			
BSOT C165			X			
CSCI C070			X			

OFFICE ASSISTANT CERTIFICATE

Complete all of the following courses (18 units):

- BSOT C070 Business Mathematics 3
- BSOT C072 Introduction to Accounting 3
- BSAD C145 Business Communication 3
- BSOT C100 Introduction to Business Office Technology 3
- BSOT C129 Microsoft Outlook 1
- BSOT C132 Intermediate Computer Keyboarding 1
- BSOT C135 Beginning Adobe Acrobat 1
- BSOT C151 Intermediate Word 1
- BSOT C153 Intermediate Excel 1
- BSOT C155 Intermediate Access 1

Course Map to Program Learning Outcomes

	A	B	C	D	E
BSAD C145		X			
BSOT C070				X	
BSOT C072				X	
BSOT C100	X				X
BSOT C127			X		
BSOT C129			X		
BSOT C132			X		
BSOT C135			X		
BSOT C151			X		
BSOT C153			X		
BSOT C155			X		

OFFICE CLERK CERTIFICATE

Complete all of the following core courses (12 units):
- BSOT C070 Business Mathematics 3
- BSOT C100 Introduction to Business Office Technology 3
- BSOT C127 MS PowerPoint 1
- BSOT C131 Basic Computer Keyboarding 1
- CSCI C070 Computer Literacy 1
- BSOT C121 Beginning Word 1
- BSOT C123 Beginning Excel 1
- BSOT C125 Beginning Access 1

Course Map to Program Learning Outcomes

	A	B	C	D
BSOT C070			X	
BSOT C100	X			X
BSOT C121		X		
BSOT C123		X		
BSOT C125		X		
BSOT C127		X		
CSCI C070		X		

4. Program Pathway

Business Office Technology Associate in Science Degree Pathway (60 units)

Fall (15)	BSOT C070 (3)	BSOT C100 (3)	BSOT C121 (1)	CSCI C070 (1)	*BSOT C131 If needed*		General Ed (3)	ENGL C101 (4)
Spring (15)	BSOT C072 (3)	BSAD C145 (3)	BSOT C123 (1)	BSOT C125 (1)	BSOT C151 (1)	BSOT C127 (1)		MATH C055 or higher (4)
Fall (14)	BSOT C135 (1)	BSOT C155 (1)	BSOT C161 (1)	BSOT C165 (1)	BSOT C132 (1)	General Ed (3)	General Ed (3)	General Ed (3)
Spring (16)	BSOT C129 (1)	BSOT C133 (1)	BSOT C153 (1)	BSOT C154 (3)	BSOT C163 (1)	General Ed (3)	General Ed (3)	General Ed (3)

This pathway is offered entirely online. Students begin the first semester of the program with the BSOT C100 Introduction to Business Office Technology class as well as Business Math, Computer Literacy, and Word Processing, skills that are the foundation for the rest of the program and also employment in the field. Computer Literacy and Word are also classes that will assist students in any college course. BSAD C100 also begins a grammar refresher and introduces the Handbook for Office Workers, a resource that will be used throughout the program and also assist writing skills for any college class. Although students are not required to take the first keyboarding class, BSOT C131, they may take it here in the first semester if they are starting from scratch on home row as a typist. The remaining two keyboarding classes are spread out in the program with the specific purpose of allowing students to build keyboarding skills as they work through the courses.

In semester two students build on the business math skills to learn first year accounting skills up to balance sheet and income statement. These are typical skills required by bookkeepers in the field. As they are beginning semester two with some computer skills, students now are introduced to fundamental spreadsheet, database, and presentation software and also build on their word processing skills with the next level of Word. In the second fall students are introduced to Adobe Acrobat and build on basic keyboarding skills with intermediate keyboarding.

In this second fall, the intermediate and advanced database classes are held in sequence, to facilitate good use of the same version of the textbook and to bring students to an appropriate understanding of how to use do preliminary building of databases in the workplace at the user level. In the final semester students expand applications skills by taking the mail application course which they begin to apply to a level appropriate in an office environment. The spreadsheet software, one of the more advanced topics

to be covered is presented in sequence at the intermediate and advanced level. The timing of the spreadsheet classes will benefit from any math courses the students may have taken on the road to graduation and there will be problem solving in the form of skills transfer from the other applications courses to date. The highest level of keyboarding class is taught in this last semester, as is the final capstone type class that closes the loop on the concepts presented in BSOT C100 at the very start.

Business Office Technology Certificate (30)

Fall (8)	BSOT C070 (3)	BSOT C100 (3)	BSOT C121 (1)	CSCI C070 (1)		
Spring (10)	BSOT C072 (3)	BSOT C145 (3)	BSOT C123 (1)	BSOT C125 (1)	BSOT C151 (1)	BSOT C127 (1)
Fall (5)	BSOT C135 (1)	BSOT C155 (1)	BSOT C161 (1)	BSOT C165 (1)	BSOT C132 (1)	
Spring (7)	BSOT C129 (1)	BSOT C133 (1)	BSOT C153 (1)	BSOT C154 (3)	BSOT C163 (1)	

This pathway is offered entirely online. Students begin the first semester of the program with the BSOT C100 Introduction to Business Office Technology class as well as Business Math, Computer Literacy, and Word Processing, skills that are the foundation for the rest of the program and also employment in the field. Computer Literacy and Word are also classes that will assist students in any college course. BSAD C100 also begins a grammar refresher and introduces the Handbook for Office Workers, a resource that will be used throughout the program and also assist writing skills for any college class. Although students are not required to take the first keyboarding class, BSOT C131, they may take it here in the first semester if they are starting from scratch on home row as a typist. The remaining two keyboarding classes are spread out in the program with the specific purpose of allowing students to build keyboarding skills as they work through the courses.

In semester two students build on the business math skills to learn first year accounting skills up to balance sheet and income statement. These are typical skills required by bookkeepers in the field. As they are beginning semester two with some computer skills, students now are introduced to fundamental spreadsheet, database, and presentation software and also build on their word processing skills with the next level of Word. In the second fall students are introduced to Adobe Acrobat and build on basic keyboarding skills with intermediate keyboarding.

In this second fall, the intermediate and advanced database classes are held in sequence, to facilitate good use of the same version of the textbook and to bring students to an appropriate understanding of how to use do preliminary building of databases in the workplace at the user level. In the final semester students expand applications skills by taking the mail application course which they begin to apply to a level appropriate in an office environment. The spreadsheet software, one of the more advanced topics to be covered is presented in sequence at the intermediate and advanced level. The timing of the spreadsheet classes will benefit from any math courses the students may have taken on the road to

graduation and there will be problem solving in the form of skills transfer from the other applications courses to date. The highest level of keyboarding class is taught in this last semester, as is the final capstone type class that closes the loop on the concepts presented in BSOT C100 at the very start.

Office Assistant Certificate (18)

Fall (9)	BSOT C070 (3)	BSOT C100 (3)	BSOT C132 (1)	CSCI C135 (1)	BSOT C155
Spring (9)	BSOT C072 (3)	BSOT C145 (3)	BSOT C129 (1)	BSOT C153 (1)	BSOT C151 (1)

This pathway is offered entirely online. Students in the Office Assistant certificate program may come to the college with some experience on the job, but needing upgrading or training for job promotion. The BSOT C100 Introduction to Business Office Technology class introduces concepts appropriate for office managers and business mathematics allows a brush up to fill-in-the-gap approach that covers concepts required in today's business calculations. The keyboarding picks up at an intermediate level, to allow credit for those who already have a start but need to improve technique, speed, and accuracy. The intermediate levels of spreadsheet, word processing, database, and e-mail program for the office are also covered and this serves to let participants know if they need further training or not and also fills in the gaps in self-taught training. Accounting is taught in the second semester, building on the business mathematics, to the degree needed by a bookkeeper.

Office Clerk Certificate (12)

Fall (9)	BSOT C070 (3)	BSOT C100 (3)	CSCI C070 (1)	BSOT C121 (1)	BSOT C131 (1)
Spring (3)	BSOT C123 (1)	BSOT C125 (1)	BSOT C127 (1)	Or BSOT C100 (3)	OR BSOT C121 (1)

This pathways is offered entirely online, though CSCI C070 Computer Literacy which is required by additional program areas, is also taught at IWV on campus and at Kern River Valley (KRV) as the need arises. Students in the Office Clerk may be brand new to college and may not have any experience in the workforce. This is a launching point for students to succeed at college and learn basic skills for the workforce. BSOT C100 Introduction to Business Office Technology and Business Mathematics quickly equip students with first level skills as does CSCI C070 Computer Literacy, BSOT C131 Basic Keyboarding, and BSOT C121 Beginning Word. These courses are all first semester to help get the student up to speed on skills needed at college and in the workforce. The 12-unit Office Clerk Certificate may also be offered in one semester as is beginning in Fall 2016. Basic spreadsheets, database, and presentation skills follow in semester two.

4. Conditions of Enrollment:

N/A

Part 2 – Appropriateness

1. Connection to College Mission

College Mission: The mission of Cerro Coso Community College is to provide tailored programs and equitable services to the students in the communities and rural areas we serve. We demonstrate a conscious effort to produce and support student success and achievement through traditional and distance delivery. To accomplish this mission we will provide:

- degrees and certificates in transfer and career technical education,
- remedial instruction,
- comprehensive support services,
- learning opportunities that develop ethical and effective citizenry, and
- Continuing education that is compatible with the institutions primary mission.

Department Mission: It is the mission of the Department of Business and Information Technology to provide courses and instruction that will meet the academic, career, and general education needs of our students, college, and communities.

BSOT Program Mission: The Business Office Technology Program mission is to provide an environment and curriculum designed to equip learners with the skills necessary to compete for employment in an entry-level administrative assistant position while encouraging a desire for life-long learning.

The Business Office Technology program follows the department and college mission in the following ways.

- The Business Office Technology Program provides instruction leading to the Associate degree and certificates.
- The Business Office Technology program provides life-long learning and support to students in their academic, technical, and vocational pursuits. The goal of this programs is to foster in students a lifelong desire to learn, a passion to excel, and a commitment to contribute actively to their local community.
- Students earning Associate degrees, certificates, and awards that are under the Department of Business and Information Technology will be prepared to enter the job market in entry level positions with a variety of focus including but not limited to: programmers, help desk providers, computer operators, desktop publishers, office clerks, administrative support specialists, computer support specialists, legal assistants, and web developers/designers.
- This program is offered to students in the communities and rural areas served by the college. This program is offered both on ground as well as online.

The Business Office Technology Program at Cerro Coso Community College, as is described in each of the degree and certificate descriptions, relates directly to the College's Mission by 1) offering degrees and

certificates in transfer and career technical education, 2) providing learning opportunities that develop ethical and effective citizenry, and 3) providing programs to the students in the communities and rural areas that we serve. The catalog description for the degree and the certificates also lists careers and positions that a student could aspire to when the program elements have been completed.

The Business Office Technology program is very popular as the content is required in very many careers, beginning with office and administrative work. The Administrative Assistant Certificate of Achievement level of this program has been accepted as equivalent to the Business Information Worker program that has been developed through the Deputy Sector Navigators for the state and is featured on the website www.ict-dm.net/biw. Discussions indicate that when and if the second level is determined, the full BSOT certificate already meets the standards that are expected to be described.

One faculty is currently a member of the faculty discipline area committee for the state and five of our one-unit application courses are currently modeled as proposals for the state C-ID system.

2. Determination of Student Needs

Students in the Business Office Technology Program at Cerro Coso have access to college-provided Student Services including the bookstore, the library, proctoring services, financial aid, job development, and tutoring. The department relies on these services to assist students in all facets of their studies. Faculty in the department work with the bookstore to arrange required and recommended materials for courses. Additionally, faculty in the department work with the college librarian and support staff to arrange for textbooks to be placed on reserve and for additional reading and reference materials for students. Suggestions for content as well as reading and reference material come from various sources including advisory committee members, members of the community, employers, faculty research, etc. The recent addition of a job development specialist has helped the program area begin to coordinate job placements that seem to be growing in number for students of this program area.

Although, at the time of this writing, none of the courses in the program require proctored exams for online courses, several general education courses do. Students are notified of this requirement in their courses and are instructed to make their own arrangements for proctoring using the college-provided proctoring services. Additionally, the department uses proctoring services for make-up exams in face-to-face courses when necessary.

Although supporting data is not available, it is felt that the program's students rely heavily on financial aid from various sources. Students in the program regularly request scholarship references from department faculty.

Text and supporting materials for courses in this program are generally expensive and must be current to meet the program's requirements for currency and allows for dynamic online teaching tools for

technology subjects. However, many textbooks and software are used among more than one class, often up to three in the case of textbooks and ten in the case of software such as the Skills Assessment Management (SAM) software. For example, the same book is used for three levels each of Word, Excel, Access, and Keyboarding.   The same text and resource book is also used for the gateway class and the last class in the program. Consequently if a student were to take all 21 courses in the major for this program, they would only need to purchase books at the start of 11 courses.

The program pathway and courses are designed to allow the students to integrate new concepts from beginning, to intermediate, to advanced, at an appropriate timing in their studies, leaving intermediate and advanced concepts to be built upon after the beginning concepts have been mastered and used in early courses.

The Skills Assessment Management (SAM) software is used for up to ten courses once a student has purchased the SAM account with one of the textbooks, usually for CSCI C070 Computer Literacy. Faculty in the department attempt to keep student costs as low as possible by encouraging textbook rentals, e-texts, and textbook packages. Tutoring services are available for students for some courses. Courses in the program require that students read and write at college-level. Students that require assistance use the tutoring services for writing and math support as well as for some specific courses such as accounting. Faculty in the department hold regular office hours and are available by appointment and adjunct faculty work with students as well.

3. Place of Program in Curriculum/Similar Programs

The Business Office Technology program is very popular as the content is required in many employment positions, beginning with office and administrative work and extending to complement a wide variety of careers.   The Administrative Assistant Certificate of Achievement level of this program has been accepted as equivalent to the Business Information Worker program that has been developed through the Deputy Sector Navigators for the state and is featured on the website www.ict-dm.net/biw. Discussions indicate that when and if the second level is determined, the full BSOT certificate already meets the standards that are expected to be described. One Cerro Coso faculty is currently a member of the faculty discipline area committee for the state and five of our one-unit application courses are currently modeled as proposals for the state C-ID system.

There are no similar programs at Cerro Coso. However, some of the courses are used in other programs, so there is no overlap or competition between classes.

- CSCI C070 Computer Literacy is a beginning level computer class originating and maintained in the BSOT program area that includes and exceeds basic computer competencies for any student. In addition to being a core class for the Business Office Technology Office Clerk certificate, this class is also a core requirement for the Industrial Technology certificate/degree, the Human Services certificate/degree and the Medical Assisting certificate/degree.

- CSCI C070 is a pre-requisite for the vocational nursing program.
- BSOT C121 Beginning Word is a beginning level word processing class originating and maintained in the BSOT program area. In addition to being a core class for the Business Office Technology Office Clerk certificate and the Business Office Technology certificate/degree, this class is also a core requirement for the Industrial Technology certificate/degree as well as the Medical Assisting certificate/degree.
- BSOT C123 Beginning Excel is a beginning level spreadsheet class originating and maintained in the BSOT program area. In addition to being a core class for the Business Office Technology Office Clerk certificate and the Business Office Technology certificate/degree, this class is also a core requirement for the Industrial Technology certificate/degree, as well as the Medical Assisting certificate/degree.
- BSAD C145 Business Communication is transfer level class maintained by the BSOT program area. This course is also included in the Management certificate and degree as a core requirement. BSAD C145 transfers to CSU.
- All BSOT application courses transfer to CSU.

4. Majors and Completers
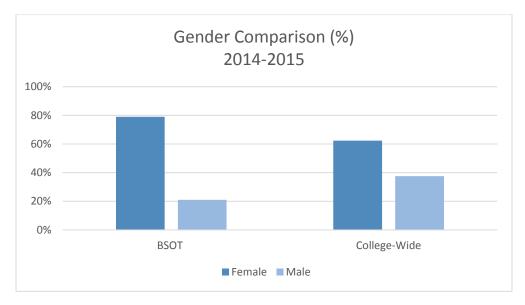
The demographics of students in the Business Office Technology Program at Cerro Coso fairly closely resemble those of the college overall. The charts below compare the percentage of unduplicated headcount of students in the Business Office Technology Program to those of the college overall for the 2014-2015 year. There are no dramatic differences but it may be worth noting that, based on groups with a two or more percentage point difference, when compared to the college, the Business Office Technology Program has a:
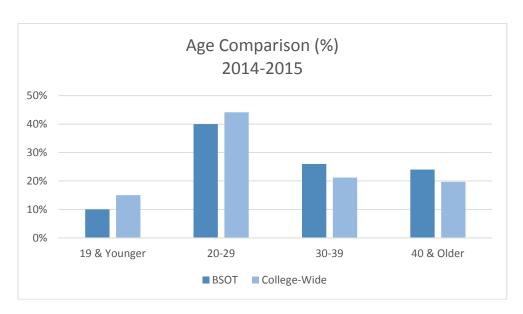
- higher percentage of female students (79% vs. 62% college wide 2014-2015),
- lower percentage of male students, (21% vs. 38% college wide 2014-2015)
- lower percentage of 19 years and younger students (10% vs 15% college wide 2014-2015),
- lower percentage of students between 20-29 (40% vs. 44% college wide 2014-2015),
- higher percentage of students between 30 and 29 (26% vs 21% college wide 2014-2015),
- higher percentage of students 40% and older (24% vs 20% college wide 2014-2015).

This information is not surprising as a major in the Business Office Technology program can be viewed as being a practical, applied approach to using college for career advancement. Older learners often find the BSOT program very popular following more strenuous careers that are no longer possible to continue for health related reasons. Additionally, BSOT certificates and the degree serve as a feasible entry level or complementary program to make themselves current and more marketable in a wide range of careers and positions.

Gender Comparison (%)
2014-2015

Chart with categories BSOT and College-Wide, Female and Male.

BSOT: Female ~79%, Male ~21%
College-Wide: Female ~62%, Male ~38%

Legend: ■ Female ■ Male

Age Comparison (%)
2014-2015

Chart with categories 19 & Younger, 20-29, 30-39, 40 & Older, comparing BSOT and College-Wide.

19 & Younger: BSOT ~10%, College-Wide ~15%
20-29: BSOT ~40%, College-Wide ~44%
30-39: BSOT ~26%, College-Wide ~21%
40 & Older: BSOT ~24%, College-Wide ~20%

Legend: ■ BSOT ■ College-Wide

Ethnicity Comparison (%)
2014-2015

The number of students that have selected majors in the Business Office Technology Program at Cerro Coso are represented in the chart below (Business Office Technology Program Majors). The decline in enrollment in the program over the five year period (-34%) is a little higher than the decline in overall number of declared majors at Cerro Coso (-27.1%) over the same period. However, since Fall 2012 the program has begun offering the gateway course BSOT C100 Introduction to Business Office Technology. In spring 2015 the department offered this gateway course for the first time outside the fall semester, which provided two sections a year for cohort intake. In Fall 2015 the department offered two sections of BSOT C100 for the first time, making three sections a year possible for cohort intake. During summer 2016 the program is offering the first summer opportunity for this gateway course which at four intake opportunities a year is expected to show an increase in declared majors.

BSOT Programs Majors

Chart showing BSOT Program Majors by year:

Year	BSOT	Admin Asst	Office Clerk
2010-2011	69	6	0
2011-2012	66	6	0
2012-2013	62	4	0
2013-2014	43	8	12
2014-2015	34	13	2

BSOT Program Completers
(Degrees and Certificates)

Year	BSOT AS/Cert	Admin Asst	Office Clerk
2010-2011	7	1	1
2011-2012	2	1	0
2012-2013	6	5	7
2013-2014	5	0	1
2014-2015	4	2	6

The number of completers could be higher, but many of the students are working at part-time jobs while attending school so the percentage of full-time students seems low compared to the part-time students.

Since the program has changed to include the gateway class BSOT C100 for the past four years and since this class has been expanded to three and planned for four offerings a year instead of the traditional one offering a year, it is expected that the cohort will grow. Students are encouraged to apply for their
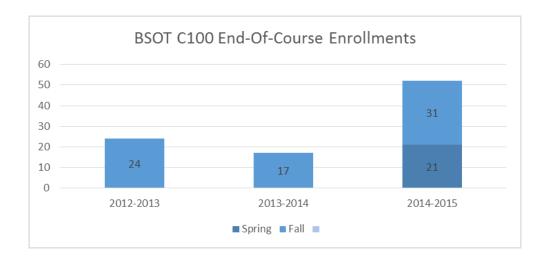
certificates and/or the degree when program requirements are met, though there is sporadic method in practice (beyond instructor encouragement) to track who is following up and who is not with respect to actually applying for recognition of certificate and degree completions.   Students are encouraged to work with counselors in this regard throughout their program of study.

As shown in the program description area, the certificates and degree build one upon the other, so that students may step their way up through the three certificates and then earn the degree. Each level allows students a pathway into the workforce.

BSOT C100 End of Course Enrollments

The chart below (BSAD 100 End-Of-Course Enrollments) shows the annual end-of-course enrollment in BSOT 100 by term over the past 3 years the course has been offered. The number of students enrolled seems to be growing as we have offered more sections of the gateway class BSOT C100.   The next few years will reveal the impact these additional sections of BSOT C100 Introduction to Business Office Technology will have on completers.

BSOT C100 End-Of-Course Enrollments

5. **Summary of Student Demand Data**

As listed in section one, there are 21 courses in the Business Office Technology Program. Only one, BSOT 131, is not in the BSOT AS Degree or BSOT COA, but is part of the Office Clerk program. Sixteen courses are one unit applications or keyboarding courses and five are three unit courses. Several courses are used to satisfy requirements in more than one degree or certificate. CSCI C070 Computer Literacy, BSOT C121 Beginning Word, BSOT C123 Beginning Excel, and BSOT C145 Business Communication are specifically used by other majors. CSCI C070 has a TOP code for BSOT (514) as this is where the course originated and from which the content was driven for advancement to further BSOT classes.

It should also be noted that, for much of this review period the BSOT applications courses (10) were included in the CSCI discipline, and for part of this period many of the BSOT courses were listed under the CIS TOP code. BSAD 100 is no longer required of BSOT programs and has been replaced by the program-specific BSOT C100 Introduction to Business Office Technology. Additionally, the three year old BSOT C100 Introduction to Business Office Technology is also frequented by Paralegal and Administrative Medical Assistant majors who recognize the benefit of having office training to complement their primary major.   The Computer Literacy, Word, Excel, Access, PowerPoint, Acrobat, and Outlook courses are also popular with a very wide range of college students, as skills with these applications are generally required by employers in most areas of employment in today's workforce.

Course Requirements by Certificate and Degree					
Course	Unit	BSOT AS/Cert	Administrative Asst. COA	Office Clerk COA	Other
BSOT C070 Business Mathematics	3	X	X	X	
BSOT C072 Introduction to Accounting	3	X	X		
BSAD C145 Business Communication	3	X	X		
BSOT C100 Introduction to Business Office Technology	3	X	X	X	
BSOT C121 Beginning Word	1	X		X	X
BSOT C123 Beginning Excel	1	X		X	X
BSOT C125 Beginning Access	1	X		X	
BSOT C127 MS PowerPoint	1	X		X	
BSOT C129 MS Outlook	1	X	X		
BSOT C131 Basic Keyboarding	1			X	
BSOT C132 Intermediate Computer Keyboarding	1	X	X		
BSOT C133 Advanced Computer Keyboarding	1	X			
BSOT C135 Beginning Adobe Acrobat	1	X	X		
BSOT C151 Intermediate Word	1	X	X		
BSOT C153 Intermediate Excel	1	X	X		
BSOT C154 Office Personnel Seminar	3	X			
BSOT C155 Intermediate Access	1	X	X		
BSOT C161 Advanced Word	1	X			
BSOT C163 Advanced Excel	1	X			
BSOT C165 Advanced Access	1	X			
CSCI C070 Computer Literacy	1	X		X	X

The number of sections offered for each course during the review period are listed below. The number of section offerings has been fairly consistent during this time period though there has been a re-arrangement of the pathways to align intermediate and advanced applications courses. Enrollment management consists of following published pathways and adding additional sections if early enrollment patterns warrant it. The Business Office Technology degree and certificate have been primarily offered online with the exception of CSCI C070 Computer Literacy which has additional on campus classes at IWV each semester. CSCI C070 Computer Literacy, BSOT C123 Beginning Excel, and BSOT C121 Beginning Word has also been offered (though not this past year due to construction) at the KRV campus. Also during the past five years, but ending three years ago, the Office Clerk certificate was a focused offering at the Bishop campus supplemented by funding from the Owens Valley Career Development Center (OVCDC) organization that supports the American Indian population in Bishop. Targeted funding for the BSOT program at Bishop has subsequently been discontinued by the OVCDC due to changes in their source funding.

Sections Offered						
	2010-2011[4]	2011-2012[4]	2012-2013[4]	2013-2014	2014-2015	Trendline
BSOT C070	1	1	1	1	1	
BSOT C072	2	1	1	1	1	
BSAD C145	1	0	2	1	1	
BSOT C100	0	0	1	1	3	
CSCI/BSOT C121	11	7	5	6	2	
CSCI/BSOT C123	6	7	5	6	4	
CSCI/BSOT C125	6	6	3	2	1	
CSCI/BSOT C127	4	2	3	2	2	
CSCI/BSOT C129	1	1	1	2	1	
BSOT C131	7	3	4	2	2	
BSOT C132	6	3	4	2	1	
BSOT C133	1	1	1	1	1	
CSCI/BSOT C135	1	1	0	0	1	
CSCI/BSOT C151	10	7	4	2	1	
CSCI/BSOT C153	1	2	5	6	2	
BSOT C154	2	1	1	1	1	
CSCI/BSOT C155	6	6	3	2	1	
CSCI/BSOT C161	6	4	3	2	2	
CSCI/BSOT C163	4	4	2	2	1	
CSCI/BSOT C165	5	6	2	2	1	
CSCI C070	11	9	8	10	12	

In the first four years of this review, several sections of intermediate and advanced classes were customarily offered as stacked sections. This includes the keyboarding series (BSOT C132, and 133), the Word series (BSOT C151, and 161), the Excel series (BSOT C153 and 163) and the Access series (BSOT C155 and 165). On campus, the applications classes were stacked with all three levels for Word, Excel, Access, and Keyboarding. During this review period the change was made to no stacked classes in the last year 2014-2015 and during this year there were no further on campus classes at IWV except for the CSCI C070 computer literacy. Additionally, some of the classes are typically offered during the summer semester with the exception of summer 2012 when no courses were offered. Typical summer classes include: BSOT C131 Basic Keyboarding, BSOT C121 Beginning Word, and BSOT C123 Beginning Excel, though others have been offered according to demand and in summer 2016 these three plus BSOT C127 PowerPoint (which is no longer offered both spring and fall) and BSOT C100 Introduction to Business Office Technology are being offered.

The courses are offered in a logical pathway that meets the needs of all certificates and the degree and minimizes duplication of offerings where it is not needed. The notes and planning for reorganization of the pathways to align more strategically is attached at the end of this document.

Average section size has depended on enrollment patterns and offerings.   The average full-time equivalent student (FTES) divided by the average full-time equivalent faculty (FTEF) calculation for each course by review period year is listed below as well as a trend line. Additionally, the average FTES/FTEF calculation for all BSOT area courses and the Cerro Coso average is included. This calculation is often used for productivity comparisons. The cells that are shaded in blue are the sections that fall below the Cerro Coso average. As can be seen by the trend lines and the number of shaded cells, the FTES/FTEF number is falling for most courses in the program. Several courses are below 10.

Beginning in Fall 2016 courses in the Office Clerk COA are offered in Tehachapi and California City High Schools under dual enrollment in the 2016-2017 school year. First courses are BSOT C123 Beginning Excel and BSOT C121 Beginning Word in Tehachapi Fall 2016 while BSOT C127 PowerPoint and BSOT C125 Beginning Access are approved for spring 2017. California City is offering BSOT C131 Basic Keyboarding and CSCI C070 Computer Literacy in Fall 2016.

	Average FTES/FTEF					
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Trendline
BSAD C145		17.2	12.8	19.6	16.3	
BSAD/BSOT C070	21.0	21.4	15.8	14.0	10.2	
BSAD/BSOT C072		9.1	22.3	18.1	12.1	
BSOT C100			15.8	9.3	11.5	
CSCI/**BSOT C121**	10.3	8.3	7.1	10.3	16.2	
CSCI/**BSOT C123**	12.6	11.5	9.1	8.5	14.8	
CSCI/**BSOT C125**	9.6	8.4	9.4	5.4	5.6	
CSCI/**BSOT C127**	8.7	6.5	10.0	10.1	11.7	
CSCI/**BSOT C129**	14.6	9.3	7.0	5.7	16.1	
BSOT C131	10.6	7.0	7.9	9.3	9.9	
BSOT C132	11.4	3.8	7.4	6.6	10.1	
BSOT C133				3.3	4.6	
CSCI/**BSOT C135**	25.2	10.6			4.6	
CSCI/**BSOT C151**	21.8	13.1	5.9	11.4	11.1	
CSCI/**BSOT C153**	22.1	9.2	7.9	10.6	5.1	
BSOT C154	11.2		5.1	2.8	2.3	
CSCI/**BSOT C155**	1.2	12.1	7.6	6.6	3.0	
CSCI/**BSOT C161**	26.5			9.1	4.1	
CSCI/**BSOT C163**				5.1	5.6	
CSCI/**BSOT C165**	4.6		6.0	1.5	1.5	
CSCI C070	12.7	13.3	12.0	10.7	10.4	
BSAD Average	14.0	10.7	9.9	8.9	8.9	
Cerro Coso Average	15.1	14.3	14.5	13.6	13.1	

A similar table shows the success rates for the individual courses and compares them to the Program and Cerro Coso averages. The cells that are shaded in blue represent those that are below the Cerro Coso average for that year. While the overall trend is increasing, the Business Office Technology Program offers several courses that appear to be difficult for students to successfully complete.

The newly developed long term plan and pathway for BSOT program areas strategically aligns courses that are offered in a sequence and is having some impact this current year 2015-2016 particularly in late start classes. This method has evolved from the days when the applications classes were offered as stacked classes and are now not offered as stacked classes so therefore the classes are no longer offered every semester.

Success Rates for BSOT Program Area Courses						
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Trendline
BSAD C145	64.9	75.9	42.3	40.4	65.7	
BSAD/BSOT C070	60.0	54.3	58.8	50.0	57.1	
BSAD/BSOT C072	78.1	60.0	52.3	47.2	66.7	
BSOT C100			52.9	60.0	60.0	
CSCI/**BSOT C121**	64.1	66.4	69.1	59.7	**68.2**	
CSCI/**BSOT C123**	79.7	63.3	58.0	64.4	**68.5**	
CSCI/**BSOT C125**	57.4	70.1	55.6	73.5	**45.5**	
CSCI/**BSOT C127**	54.8	**61.5**	**43.1**	**61.3**	**71.1**	
CSCI/**BSOT C129**	41.4	81.6	64.3	73.5	**62.5**	
BSOT C131	77.0	73.8	73.1	72.7	86.1	
BSOT C132	57.6	57.9	57.8	82.4	88.9	
BSOT C133						
CSCI/**BSOT C135**	50.0	71.4				
CSCI/**BSOT C151**	5.0	64.1	62.9	79.5	**54.5**	
CSCI/**BSOT C153**	77.2	63.0	65.2	76.5	**90.0**	
BSOT C154	58.3		90.9	33.3	100.0	
CSCI/**BSOT C155**	47.9	62.0	69.0	70.6	33.3	
CSCI/**BSOT C161**	69.2	67.6	81.3	88.2	75.0	
CSCI/**BSOT C163**	64.0	66.7	54.5	100.0	**90.9**	
CSCI/**BSOT C165**	88.9	94.1	50.0	83.3	**66.7**	
CSCI C070	71.7	61.6	79.6	73.2	74.0	
BSOT Average	60.9	67.9	61.2	67.6	69.7	
Cerro Coso Average	65.0	65.0	67.0	66.0	71.0	

6. Labor Market Information and Analysis *(CTE Programs Only)*

The occupational outlook in the areas of Business Office Technology in Kern, Inyo, and Mono counties for the next five years is generally good. According to the California Employment Development Department's Labor Market Information Division, management office positions in Kern, Inyo, and Mono counties will grow by 8% static over the next five year. While data entry-keyers and word processor typists may reduce by 4% and 9% respectively, office clerks in general will increase by at least 8%. In addition, advisory members alert us to the aging population currently hired as office managers on base and that non-base businesses have difficulty finding trained applicants as they lose their employees to base jobs regularly.

2015-2020 Occupational Employment Projections

Occupational Title	Estimated Empl. 2015	Projected 2020	Change 2015-2020	% Change 2015-2020	Annual Avg % Change
Kern, Inyo, Mono Counties					
Office Clerks General	4,532	4,408	376	8%	1.6%
First Line Supervisors of Office and Administrative Support Workers	2,568	2,838	270	11%	2.2%
Insurance Claims and Policy Processing Clerks	997	1146	149	15%	3%
Office and Administrative Support Workers	933	969	36	4%	1.25
All categories including many not listed. (See Part 6)	18,368	19,910	1542	8.4%	1.7%

Percentile Earnings

Occupation	25% Percentile Earnings	Median Earnings	75% Percentile Earnings
Business Operations Specialists	$24.41	$32.45	$42.03
Supervisors of Office and Administrative Support Workers	$18.68	$23.20	$29.14
Other Office and Administrative Support Workers	$12.66	$15.20	$18.07

Industries Employing Business Office Technology

Industry Inyo, Kern, Mono Counties	Occupation Group Jobs in Industry (2015)	% of Occupation Group in Industry	% of Total Jobs in Industry
Federal Government, Civilian, Excluding Postal Service	2082	11.3%	22.5%
Local Government Excluding Education and Hospitals	1302	7.1%	8.8%
State Government Excluding Education and Hospitals	886	4.8%	12%
Elementary and Secondary Schools (Local Government)	816	4.4%	3.2%
Direct Property and Casualty Insurance Carriers	774	4.2%	62.5%

7. Explanation of Employer Relationship

At this point in time, there are no specific relationships between employers and the Business Office Technology Program, aside from members who participate on the advisory committee. The program has a wide scope and attracts students from a wide employer base in and out of the service area. Employers in the area have encouraged working students to complete degrees and certificates to advance their salaries and position mobility.

8. Advisory Committee

The Advisory Committee for Business Office Technology plays an active role in advising the BSOT Program at Cerro Coso. The committee meets each semester to review, discuss and make recommendations regarding the curriculum, program outcomes, and job outlook. A current list of Advisory Committee members for each location is located in the Supporting Documentation.

9. Current Cost of the Program to Students

All courses in the Business Office Technology Program require textbooks which can be expensive but students are not required to pay additional fees for other materials or for facility use. Faculty are cognizant of textbook costs and do what they can to keep them down. Estimates of the costs to

students for the Business Office Technology Program degrees and two certificates of achievement follow.

BUSINESS OFFICE TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE

Estimated Cost for Business Office Technology Degree	CA Residents	Non-residents
Units	60	60
Cost per unit	46	242
Tuition	2,760	14,520
Books and Supplies	3,500	3,500
Total	6,260	18,020
Per semester (4) Cost	1,565	4,505

BUSINESS OFFICE TECHNOLOGY CERTIFICATE

Estimated Cost for Business Office Technology COA	CA Residents	Non-residents
Units	30	30
Cost per unit	46	242
Tuition	1,380	7,260
Books and Supplies	2,498	2,498
Total	3,878	9,758
Per semester (4) Cost	970	2,439

OFFICE ASSISTANT CERTIFICATE

Estimated Cost for Administrative Assistant COA		
	CA Residents	**Non-residents**
Units	18	18
Cost per unit	46	242
Tuition	828	4,356
Books and Supplies	1,665	1,665
Total	2,493	6,021
Per semester (2) Cost	1,247	3,011

OFFICE CLERK CERTIFICATE

Estimated Cost for Office Clerk COA		
	CA Residents	**Non-residents**
Units	12	12
Cost per unit	46	242
Tuition	552	2904
Books and Supplies	833	833
Total	1385	3737
Per semester (2) Cost	693	1869

As described in earlier sections, the textbook costs are made smaller by using the same book for up to three classes and the same Skills Assessment Management (SAM) software for up to ten classes. The SAM software has no expiry limit except when the program moves from one version of Office to the next (2013 to 2016), but students are given a reasonable length of time, usually approximately a year, to complete the three course series with the lower level textbook, even when the course has moved on to include a higher version. The department plans to check these figures to see if they are correct, as they seem high for the BSOT AS and BSOT COA.

Part 3 – Currency

1. Staffing

There is one full-time faculty hired specifically for the BSOT area, but three other full-time faculty regularly teach one or more courses in this program. Two of these people teach CSCI C070 Computer Literacy, and the third teaches three of the 3.0 unit classes, BSOT C070, BSOT072, and BSAD C145 due to the overlap with the Business area. Adjuncts are used from time to time. Additional adjuncts are currently being recruited at the high schools to teach dual enrollment classes, most notably in Tehachapi and California City at this time.   At this point, current full-time staffing levels are adequate.

As can be seen in the table in the Supporting Documents section, the number of adjuncts has declined over the five-year period since the last review, but this will increase again with the planned dual enrollment development.

Distance Ed		6		6		5.7		5.5		5.5
Total FTEF by Contract Type	#	%	#	%	#	%	#	%	#	%
Full-time	1	15%	1.5	22%	3.2	52%	3.2	47%	2.2	31%
Overload	0.8	12%	0.2	3%	0.4	7%	0.5	7%	2.2	31%
Adjunct	4.1	60%	3.9	57%	1.7	27%	1.8	26%	1.3	18%
Summer	0.9	14%	1.2	17%	0.9	14%	1.3	20%	1.3	19%
Productivity (FTES/FTEF)										
Total		16.1		15		14.9		13.5		11.3
Traditional		9.8		7.7		6.2		8.6		6
Distance Ed		17.1		16		15.6		14.7		12.8
Collegewide Productivity										
Total		15.1		14.3		14.5		13.6		13.1
Traditional		14.1		13.4		13.9		13		12.4
Distance Ed		16.1		15.2		15.1		14.1		13.9

2. Professional Development

The department's professional development needs are concentrated in four areas: College Flex days, Conferences, Advisory Meetings, and online training provided by webinars, Lynda.com, Coursera, edX, and @ONE.   Conference include California Business Education Association (CBEA), Western Business Education Association (WBEA), National Business Education Association (NBEA), and occasionally the Cengage Learning conference when it is held in the western states. Faculty actively participant in the fall and spring flex day. Faculty attend the breakout sessions and provide a leadership role in the California Business Education Association, the C-ID Faculty Discipline area committee for BSOT and online sources for professional development.

One full-time faculty in this area requires continual updating of skills to meet the needs of program content, particularly with the Microsoft Office products that are industry standard.   A second full-time faculty hired for business teaches three of the three unit classes in the program, BSOT C070, BSOT C072, and BSAD C145. In addition, faculty participate in state-wise associations such as California Business Education Association, because this organization allows communication with K-12, other colleges, and university as well as being a meeting place for discussion on current events in the state. Deputy sector navigators also are part of the communication network for CBEA.   Conference reports are written and shared with department members.

Faculty also participate in C-ID focus groups and one is a member of the Business Office Technology state wide resource focus group.

Faculty also participate and seek out continual upgrading of skills related to the teaching and learning environment, such as learning Canvas, or keeping abreast of current teaching/learning strategies afforded by developing technologies.

The department faculty have completed advanced degrees in Business Administration and Education.

Each year, Advisory Committee meetings are held at IWV campus and at the ESCC. Members of the community attend and provide discussion and recommendations that relate to all of the programs and certificates that are offered.

3. Facilities and Physical Resources

The facility needs for the department are minimal. For face-to-face classes, there is a need for a computer lab with an instructor station for with a computer, white board and smart projector. Many classes use PowerPoint presentations along with videos and content articles. The department utilizes the services provided by the college print department for copies, flyers, banners and business cards.

The CSCI C070 Computer Literacy (1.0 unit) course is offered during the afternoons and also in the evenings on a rotating basis, to ensure that both day-time and evening students have a scheduling option for this essential class.

All courses in this program are offered in a repeating and predictable pattern through online delivery so that it is possible to complete the 30 unit certificate in a logical progressive manner blended with general education requirements over two years. Scheduling has also been designed to provide the opportunity to complete the 18 unit certificate in one year (fall, spring, and summer).   One unit classes are strategically placed in either the first eight weeks of the semester or the last eight weeks of the semester, according to a pattern that best serves the student body. For example, Computer Literacy is offered (when possible) before Keyboarding, beginning applications before intermediate or advanced and so forth. Business Mathematics is offered in the fall with the hope that students will take this

course before they take Introduction to Accounting in the spring. Office Personnel Seminar is offered online in the spring as well to allow maximum enrollment from the variety of program option levels.

4. Technology

The department's technology needs are very few but they meet the integrity and quality needs of the program. The publishers that are used provide the resources that help faculty teach and communicate with the students. These include ebooks, power points, study tools, case studies, sample test questions and instructional videos. CCC Confer is used for department meetings and communication with each other and our students. Faculty have created chapter summary and course videos for students and will continue to do so in the future. The faculty look forward to transitioning to the new Canvas platform for online classes. The department uses the online databases provided by the library and public databases provided free on the Internet. Lynda.com and @One and other websites are used for training and updating skills. As stated above, some instructors use college computers, speaker phones, iPads, tablets, calculators, printers, memory sticks and cell phones to enhance the services to students.

Students have the option of purchasing the hard copy or the ebook from the bookstore or other sources. This option may reduce the student's financial burden. Students communicate with instructors using the college email and Moodle system. Utilizing these verifies regular and effective contact with online and on-ground students. The department faculty annually meet to discuss technology and other needs when they jointly create the unit plan.

Although all but the CSCI C070 Computer Literacy classes are now online, students studying on campus should be able to access the current version of Microsoft Office which is moving to Office 2016 beginning in Fall 2016. The department has requested one round of tables in the LRC to keep Office 2013 at each campus location, in order to meet the needs of students who are continuing with the book purchased for 2013 for Word, Excel, or Access which is intended to serve three levels within a reasonable amount of time. The decision to move to a new level of a program is balanced between industry needs, book availability, and what software is available for students to purchase at the time.

5. Marketing

The marketing of the program's degrees and certificates takes many forms. The faculty in the department advertise in local publications, utilize several forms of social media, attend local community meetings such as the Chamber of Commerce and the Rotary, and participate in the college's annual Career Exploration and Preview Day events. The department keeps the counseling staff updated and local high schools are communicated with to promote the program.

Degree and certificate brochures have been created for distribution throughout the community and beyond and the CTE program guide has been updated.

The department is continually updating courses to stay current and provide students with the most relevant information related to offerings. Through professional development efforts, faculty are improving skills and knowledge related to the material that is offered. All of these efforts will assist the department in promoting the program. However, marketing is an ongoing and dynamic process and the department is always looking for ways to expand and improve its efforts in this area.

Part 4 – Student Achievement

1. Course-Level Student Performance Data

Taken as a whole, success rates and retention rates are generally lower in the Business Office Technology Program courses than they are at Cerro Coso in general.

Success rates for Business Office Technology Program courses are described below. As can be seen, except for 2011-2012, and 2013-2014, the Business Office Technology Program courses on average are below the Cerro Coso Average. The cells that are shaded in blue are the sections that fall below the Cerro Coso average for that year. The only course that is above the Cerro Coso average for all years is BSOT C131 Beginning Keyboarding and BSOT C161 Advanced Word, two courses that are at complete opposites in terms of level. One is taken at the very beginning of the Office Clerk program and the other has a prerequisite of BSOT C151 Intermediate Word and is taken during the final semester of the BSOT AS Degree or BSOT COA.

The number of courses under the college average beginning with 2010 and moving forward are: 12, 10, 14, 8, 11. The past two years combined are 19 and the two years before that 24 shows an improvement. The department is seeing benefits to the more rigorous attention to participating students prior to census as well, and this should keep success rising into the future. The percentage 70.1 is close to the college average for 2014-2015.

Success Rates for BSOT Program Area Courses						
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Trendline
BSAD C145	64.9	75.9	42.3	40.4	65.7	
BSAD/BSOT C070	60.0	54.3	58.8	50.0	57.1	
BSAD/BSOT C072	78.1	60.0	52.3	47.2	66.7	
BSOT C100			52.9	60.0	60.0	
CSCI/**BSOT C121**	64.1	66.4	69.1	59.7	**68.2**	
CSCI/**BSOT C123**	79.7	63.3	58.0	64.4	**68.5**	
CSCI/**BSOT C125**	57.4	70.1	55.6	73.5	**45.5**	
CSCI/**BSOT C127**	54.8	**61.5**	**43.1**	**61.3**	**71.1**	
CSCI/**BSOT C129**	41.4	81.6	64.3	73.5	**62.5**	
BSOT C131	77.0	73.8	73.1	72.7	86.1	
BSOT C132	57.6	57.9	57.8	82.4	88.9	
BSOT C133	68.0	61.1	53.3	76.9	88.9	
CSCI/**BSOT C135**	50.0	71.4				
CSCI/**BSOT C151**	5.0	64.1	62.9	79.5	**54.5**	
CSCI/**BSOT C153**	77.2	63.0	65.2	76.5	**90.0**	
BSOT C154	58.3		90.9	33.3	100.0	
CSCI/**BSOT C155**	47.9	62.0	69.0	70.6	33.3	
CSCI/**BSOT C161**	69.2	67.6	81.3	88.2	75.0	
CSCI/**BSOT C163**	64.0	66.7	54.5	100.0	**90.9**	
CSCI/**BSOT C165**	88.9	94.1	50.0	83.3	**66.7**	
CSCI C070	71.7	61.6	79.6	73.2	74.0	
BSOT Average	61.2	67.5	60.8	68.1	70.7	
Cerro Coso Average	65.0	65.0	67.0	66.0	71.0	

Retention rates for Business Office Technology Program courses are described in the table below. As can be seen, the Business Office Technology Program courses on average are below the Cerro Coso Average. The cells that are shaded in blue are the sections that are below the Cerro Coso average for that year. Given the nature of the content and the desirability by industry for the Microsoft applications, it is almost surprising that the numbers are not lower. There are a lot of students who drop in for the one unit applications classes. Still, the program has undergone many changes in the past cycle and now that these changes have been made, CSCI to BSOT renaming of the discipline, pathways updates, and program revisions, the department is hopeful that the retention will increase.
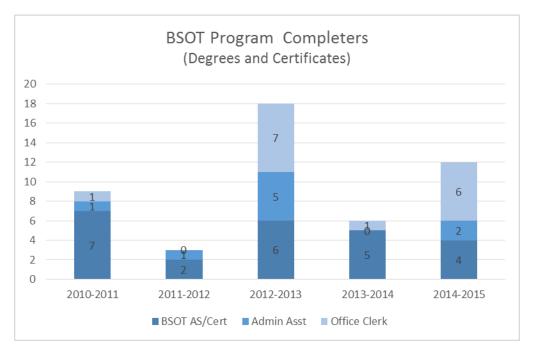
Retention Rates for BSOT Program Area Courses						
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Trendline
BSAD C145	89.2		74.5	69.0	80.0	
BSAD/**BSOT C070**	68.9	84.8	82.4	70.0	**81.0**	
BSAD/**BSOT C072**		85.7	75.0	72.2	**79.2**	
BSOT C100			70.6	85.0	70.3	
CSCI/**BSOT C121**	80.7	87.5	83.8	72.9	**82.0**	
CSCI/**BSOT C123**	83.1	76.6	71.6	78.0	**76.1**	
CSCI/**BSOT C125**		81.4	75.9	85.3	**63.6**	
CSCI/**BSOT C127**	65.2	69.2	63.8	77.4	**77.8**	
CSCI/**BSOT C129**	72.4	86.0	78.6	73.5	**62.5**	
BSOT C131	85.8	80.0	85.1	77.3	86.1	
BSOT C132	72.7	73.7	75.6	91.2	94.4	
BSOT C133	96.0	77.8	73.3	76.9	88.9	
CSCI/**BSOT C135**	58.0	88.1			**75.0**	
CSCI/**BSOT C151**	70.2	75.7	74.3	92.3	**77.3**	
CSCI/**BSOT C153**	81.5	70.4	76.1	91.2	**76.3**	
BSOT C154	58.3	81.3	100	66.7	100.0	
CSCI/**BSOT C155**	63.0	62.0	69.0	70.6	**33.3**	
CSCI/**BSOT C161**	84.6	88.2	87.5	94.1	**75.0**	
CSCI/**BSOT C163**	68	88.9	81.8	100.0	**90.9**	
CSCI/**BSOT C165**	100	100	75	100.0	**66.7**	
CSCI C070	82.7	74.8	92.3	83.0	87.0	
BSOT Average	76.7	80.6	78.3	81.3	77.3	
Cerro Coso Average	82.0	83.0	83.0	82.0	85.0	

While the success and retention rates are lower than the college-wide averages, the faculty in the department feel that the program design is effective. The lower numbers are likely attributed to the desirability of many of the applications courses by the general population and students from other colleges who cannot get their entire program online or to fit into their schedule.

Degrees and certificates awarded are described in the chart below (Business Office Technology Program Awards). The highest number of degrees and certificates were awarded in 2012-2013. The growth from 2013-2014 to 2014-2015 is expected to be a result of completers that started the program two years prior with the BSOT C100 gateway course. The year 2012-2013 was the year that Bishop area's Owens Valley Career Development Center offered the Office Clerk certificate in the summer. This topic was also discussed in Part 2.

BSOT Program Completers
(Degrees and Certificates)

2. Employment Data

The advisory committee at the IWV area meets at least annually and the committee at ESCC meets annually. Committee members have expressed satisfaction in the program's degree, certificates, and courses and their preparation for employment. The concentration on communication, soft skills, industry standard software and problem solving skills is deemed essential to today's workplace. At this point in time, however, employment tracking of students is not done. In informal classroom discussions, many students have identified that they are taking courses in the program for job advancement and acquisition.

The department is exploring use of LinkedIn to track a portion of student success with employment, and also to help support students in their job quest during studies and beyond graduation.

3. Achievement of Program Learning Outcomes

BUSINESS OFFICE TECHNOLOGY ASSOCIATE OF SCIENCE DEGREE and

BUSINESS OFFICE TECHNOLOGY CERTIFICATE OF ACHIEVEMENT

PLO 1:	Display business standards for efficiency, time management, and quality of work while projecting a professional image including ethical standards with respect to privacy, confidentiality, and personal behavior both independently and in group situations.
Target:	90%
Assessment Method:	This outcome is assessed in BSOT C100 in a time management project and is also assessed in the applications courses with respect to the Timely Completion Points. This is from SLO assessment Fall 2012.
Assessment Date:	Fall 2015
Recent Results:	75% of the students were successful in meeting the outcomes during the class BSOT C154 Office Personnel Seminar. 75% of the students in BSAD C145 met the outcomes. 100% of the students who were Business Office Technology graduates met this outcome.
PLO 2:	Apply fundamental principles of spelling, grammar, and punctuation to a wide variety of business communication messages, documents, and reports appropriate for the intended viewing audience.
Target:	90%
Assessment Method:	Students are assessed for this outcome during BSAD C145 Business Communication. During the last cycle, success with elements of BSAD C145 were measured by exam. This is from SLO assessment Fall 2012.
Assessment Date:	This is from SLO assessment Fall 2012.
Recent Results:	75% of students were successful with this outcome.
PLO 3:	Select, apply, and adapt computer sofware tools such as word processing, spreadsheet, database, accounting, presentation, and desktop publishing, to business related tasks and assess the logic of the results.
Target:	90%
Assessment Method:	projects, scored by rubric
Assessment Date:	Fall 2015
Recent Results:	92% of the students in BSOT C129 Outlook were successful. 100% of the students in all other measured classes were successful. 100% of the students completing the program were successful in meeting this program learning outcome. The relevant courses were CSCI C161, CSCI C163, CSCI C165, CSCI 127, and BSAD C072. These classes are now named BSOT C161, BSOT C163, BSOT C165, and BSOT C072. This is from SLO assessment Fall 2014..

PLO 4:	Analyze and record a variety of business financial transactions including but not limited to petty cash, accounts receivable, accounts payable, payroll, and process through the accounting cycle from journalizing to financial statements.
Target:	90%
Assessment Method:	Practical exams: Students are assessed for this outcome in BSOT C070 Business Mathematics (formerly BSAD C070) and in BSOT C072 Introduction to Accounting, (formerly BSAD C072). Students complete business calculations using a calculator and also complete a final accounting exam that covers all listed accounting procedures.(FA14)
Assessment Date:	Fall 2015
Recent Results:	88% were successful in meeting this outcome in BSAD (now BSOT) C072 and 100% were successful in BSAD (now BSOT) C070.
PLO 5:	Apply standard records management procedures when establishing and maintaining systems to classify, organize, store, and retrieve both hard copy and electronic files.
Target:	90%
Assessment Method:	This outcome is assessed by assignments in BSOT C154 Office Personnel Seminar. In the Managing Records chapter 11 of the Administrative Procedures text, students complete the Alphabetic Filing assignment. (FA14)
Assessment Date:	Fall 2015
Recent Results:	62% were successful with the hard copy filing assignment, which is measured in BSOT C154 Office Personnel Seminar. 100% were successful with electronic filing assignments in the Intermediate and Advanced Applications classes.
PLO 6:	Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.
Target:	90%
Assessment Method:	This outcome is assessed through a listening assignment in Chapter 7 of the Administrative Procedures textbook. Students play a data file and take notes and list everything they can remember from the instructions. They then note any questions they would ask their supervisor and then listen again to see what they missed. Did they hear all parts of the assignment? Were their questions answered when they listened again?
Assessment Date:	Fall 2015
Recent Results:	The success level was 75%. Students were completing this assignment in BSOT C154 and the needed pre-requisites were not in place. This assignment has now been moved to BSOT C100 Introduction to Business Office Technology. FA 14

Assessment History Summary							
SLO #	Target	Semester	Met?	Semester	Met?	Semester	Met?
PLO 1	90%	FA15	No				

PLO 2	90%	FA15	No				
PLO 3	90%	FA15	Yes				
PLO 4	90%	FA15	No				
PLO 5	90%	FA15	No				
PLO 6	90%	FA15	No				

OFFICE ASSISTANT CERTIFICATE

PLO 1:	Display business standards for efficiency, time management, and quality of work while projecting a professional image including ethical standards with respect to privacy, confidentiality, and personal behavior both independently and in group situations.
Target:	90%
Assessment Method:	This outcome is assessed in BSOT C100 in a time management project and is also assessed in the applications courses with respect to the Timely Completion Points. This is from SLO assessment Fall 2014.
Assessment Date:	Fall 2015
Recent Results:	92% of the students in BSOT C129 Outlook were successful. 100% of the students in all other measured classes were successful. 100% of the students completing the program were successful in meeting this program learning outcome. The relevant courses were CSCI C161, CSCI C163, CSCI C165, CSCI 127, and BSAD C072. These classes are now named BSOT C161, BSOT C163, BSOT C165, and BSOT C072. The goal is 90%. At the time of the original assessment, there were not appropriate pre-requisites in place for the class which should be taken in the last semester of study of the major classes for the BSOT certificate or degree. Although the tools for assessment were adequate, the students had not all taken the necessary courses to succeed, as at the time this course was assessed there were not enough BSOT courses to name as a pre-requisite. Courses were in the CSCI discipline, even though they were BSOT content courses, and this has since been corrected. The course has subsequently been updated to include pre-requisites. The course will be assessed again in cycle and a new more comprehensive assessment tool will be designed.
PLO 2:	Apply fundamental principles of spelling, grammar, and punctuation to a wide variety of business communication messages, documents, and reports, appropriate for the intended audience.
Target:	98%
Assessment Method:	Students are assessed for this outcome during BSAD C145 Business Communication. During the last cycle, success with elements of BSAD C145 were measured by exam. This is from SLO assessment Fall 2012.
Assessment Date:	Fall 2015
Recent Results:	75% of students were successful with this outcome. The plan is to increase the success to 80% and to use a mixture of exams and practical writing exercises to measure this outcome in the future. Success with this outcome is now assisted by the introduction in the recent cycle of

	the new BSOT C100 Introduction to Business Office Technology class that introduces good communication skills through the resource Handbook For Office Workers.
PLO 3:	Demonstrate intermediate skills and problem solving ability in the use of industry standard applications and technology such as Microsoft Word, Excel, Access, and PowerPoint, to office related tasks.
Target:	90%
Assessment Method:	The relevant intermediate level applications courses were CSCI C151, CSCI C153, CSCI C155, and CSCI 127. These classes are now named BSOT C151, BSOT C153, BSOT C155, and BSOT C127. This outcome is assessed by projects that are scored by a rubric in the intermediate level classes for Word, Excel, and Access and the PowerPoint class. This is from SLO assessment Fall 2014.
Assessment Date:	Fall 2015
Recent Results:	99 to 100% of students completing the projects in the various courses were successful meeting this outcome. PowerPoint: 100% of students completing this project were able to succeed with this outcome. 95% of students completing the course were successful.
	Excel: This course was offered in stacked classes with other levels of Excel on campus on campus at IWV (2) and online (16). 17 of 18 (94%) students met success with this outcome. The student who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
	Intermediate level students are almost 100% successful every semester when attempting this skills based project.
	Access: 100% of students completing the project for this outcome were successful. This is highly typical.
	Intermediate Word is often taught as a stacked class with other levels of Word. In fall 2011 results total 100% success for students attempting the project and 78% for students enrolled in the course.
	4 out of 4 on campus students were 100% successful. 14 out of 19 online students were successful but four of the five who were not successful did not attempt the project.
	There is a high rate of success with the assessment tools. A table could be created to show the inputs from the various course. This will be created at the next cycle.
	At this time, there are no on campus classes for the intermediate level and there are no further stacked classes. This means that 100% of the time there is only one offering of each course in any given semester. The final rubrics for the most advanced Tutorial covered are used to determine success. This is from SLO assessment Fall 2014.
PLO 4:	Analyze and record a variety of business financial transactions such as petty cash, bank deposits, accounts receivable, and accounts payable.
Target:	90%
Assessment Method:	Students are assessed for this outcome in BSOT C070 Business Mathematics by exam (formerly BSAD C070) and in BSOT C072 Introduction to Accounting, (formerly BSAD

	C072). Students complete a final exam for business calculations using a calculator and also complete a final accounting exam that covers all listed accounting procedures. This is from SLO assessment Fall 2014.
Assessment Date:	Fall 2015
Recent Results:	88% were successful in meeting this outcome in BSAD (now BSOT) C072 and 100% were successful in BSAD (now BSOT) C070. BSOT C072 shows a progression from BSOT C070 as it is taken later in the program, so this is sufficient to recognize that the 90% goal has been more than met.
PLO 5:	Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.
Target:	90%
Assessment Method:	This outcome is assessed through a listening assignment in Chapter 7 of the Administrative Procedures textbook. Students play a data file and take notes and list everything they can remember from the instructions. They then note any questions they would ask their supervisor and then listen again to see what they missed. Did they hear all parts of the assignment? Were their questions answered when they listened again? This is from SLO assessment Spring 2011.
Assessment Date:	Fall 2015
Recent Results:	The success level was 75%. Students were completing this assignment in BSOT C154 and the needed pre-requisites were not in place. This assignment has now been moved to BSOT C100 Introduction to Business Office Technology. The current method is a good exercise but it really isn't comprehensive enough to indicate true success with this important program outcome. In addition to not meeting the 90% goal, this outcome is not being adequately measured and further tools should be created. For example, audio files explaining the syllabus or specific assignments can be created and followed by quizzes that will also demonstrate listening skills. This outcome should be assessed in a greater variety of instances in the BSOT C100 Introduction to Business Office Technology class and again in BSOT C154 Office Personnel Seminar. Additional tools will be created for the next assessment of this outcome the next time BSOT C100 and C154 are offered so they will be in place for the semester when they are assessed.

		Assessment History Summary					
SLO #	**Target**	**Semester**	**Met?**	**Semester**	**Met?**	**Semester**	**Met?**
PLO 1	90%	FA15	Yes				
PLO 2	90%	FA15	No				
PLO 3	90%	FA15	Yes				
PLO 4	90%	FA15	Yes				
PLO 5	90%	FA15	No				

OFFICE CLERK CERTIFICATE

PLO 1:	Display business standards for efficiency, time management, and quality of work while projecting a professional image, including ethical standards with respect to privacy, confidentiality, and personal behavior.
Target:	90%
Assessment Method:	This outcome is assessed in BSOT C100 in a time management project and is also assessed in the applications courses with respect to the Timely Completion Points. This outcome is assessed in BSOT C100 in a time management project and in case studies and is also assessed in the applications courses with respect to the Timely Completion Points. Additionally, outcome #1 of BSOT C100 is as follows: Describe the skills, knowledge, attitudes, and traits employers expect in an entry level office clerk or administrative assistant as presented in the Business Office Technology certificates and degree. Throughout the course, students submit eight discussions and a final report on the topic of this outcome. The eight discussions cover skills, knowledge, attitudes, and traits employers expect, culminating with the eighth discussion post that provides an overall summary. All discussions are included in this plan. The final report covers these topics "as presented in the Business Office Technology certificates and degree" pertaining specifically to each student's plan. This is from SLO assessment Fall 2014.
Assessment Date:	Fall 2015
Recent Results:	There were two sections in Fall 2014. The first section had 16 students who received a grade the second section had 15 students who received a grade. Of the 31 students 27 were successful with completing the eight discussion assignments and the final written project. 100% of the students completing the discussions and the final project were successful. The students who earned a D completed fewer of the assignments but were successful with them. The two students who failed did not complete enough assignments to pass the course but were successful with all assignments completed.
PLO 2:	Demonstrate introductory skills in the use of software tools such as Microsoft Word, Excel, and Access, to entry level office related tasks such as letter and report creation, basic spreadsheet creation and data entry.
Target:	90%
Assessment Method:	Students complete projects in each of the software applications. These projects are scored by rubrics. This is from SLO assessment Fall 2014.
Assessment Date:	Fall 2015
Recent Results:	The relevant courses were CSCI C121, CSCI C123, CSCI C125, CSCI 127, and BSAD C072. These classes are now named BSOT C121, BSOT C123, BSOT C125, BSOT C072. In all three classes, CSCI C121 Beginning Word, CSCI C123 Beginning Excel, and CSCI C125 Beginning Access, all students completing the assessments succeeded with meeting this outcome. 100%

PLO 3:	Demonstrate accuracy and efficiency using a desktop calculator to perform business mathematics calculations appropriate for routine office tasks requiring calculation.
Target:	90%
Assessment Method:	This outcome is assessed as a final exam in BSOT C070 Business Mathematics. (Previously BSAD C070 Business Mathematics. This is from SLO assessment Fall 2012.
Assessment Date:	Fall 2015
Recent Results:	100% of the student completing the final exam in BSAD C070 were successful. 88% of the students in the class completed the final exam.
PLO 4:	Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.
Target:	90%
Assessment Method:	This outcome is assessed through a listening assignment in Chapter 7 of the Administrative Procedures textbook. Students play a data file and take notes and list everything they can remember from the instructions. They then note any questions they would ask their supervisor and then listen again to see what they missed. Did they hear all parts of the assignment? Were their questions answered when they listened again? This is from SLO assessment Spring 2011.
Assessment Date:	Fall 2015
Recent Results:	The success level was 75%. Students were completing this assignment in BSOT C154 and the needed pre-requisites were not in place. This assignment has now been moved to BSOT C100 Introduction to Business Office Technology. The current method is a good exercise but it really isn't comprehensive enough to indicate true success with this important program outcome. In addition to not meeting the 90% goal, this outcome is not being adequately measured and further tools should be created. For example, audio files explaining the syllabus or specific assignments can be created and followed by quizzes that will also demonstrate listening skills. This outcome should be assessed in a greater variety of instances in the BSOT C100 Introduction to Business Office Technology class.

Assessment History Summary							
SLO #	Target	Semester	Met?	Semester	Met?	Semester	Met?
PLO 1	90%	FA15	Yes				
PLO 2	90%	FA15	Yes				
PLO 3	90%	FA15	Ye				
PLO 4	90%	FA15	No				

a. Gaps and Improvements Made

Analysis of PLO Assessment of the Business Office Technology AS and Certificate

Analysis of BSOT AS and COA program outcome one: *Display business standards for efficiency, time management, and quality of work while projecting a professional image including ethical standards with respect to privacy, confidentiality, and personal behavior both independently and in group situations.* Target 90%/Results 75%

At the time of the original assessment for Program Outcome One, which is primarily mapped to BSOT C154 Office Personnel Seminar, there were not appropriate pre-requisites in place for the class which should be taken in the last semester of study of the major classes for the BSOT certificate or degree. Although the tools for assessment were adequate, the students had not all taken the necessary courses to succeed, as at the time this course was assessed there were not enough BSOT courses to name as a pre-requisite. Courses were in the CSCI discipline, even though they were BSOT content courses, and this has since been corrected. BSOT C154 has subsequently been updated to include pre-requisites. The course will be assessed again in cycle and a new more comprehensive assessment tool will be designed.

Analysis of BSOT AS and COA program outcome two: *Apply fundamental principles of spelling, grammar, and punctuation to a wide variety of business communication messages, documents, and reports appropriate for the intended viewing audience.* Target 90%/Result 75%

The plan is to increase the success to 90% and to use a mixture of exams and practical writing exercises to measure this outcome in the future. Success with this outcome is now assisted by the introduction in the recent cycle of the new BSOT C100 Introduction to Business Office Technology class that introduces good communication skills through the resource Handbook For Office Workers.

Analysis of BSOT AS and COA program outcome three: *Select, apply, and adapt computer sofware tools such as word processing, spreadsheet, database, accounting, presentation, and desktop publishing, to business related tasks and assess the logic of the results.* Target 90%/Result 92% **Target met.**

The applications courses are well measured by numerous rubrics for practical assignments indicating mastery of relevent elements of each application program. There is no need to change the methods of assessment. Rubrics are updated each time the application programs are updated to a new version.

Analysis of BSOT AS and COA program outcome four: *Analyze and record a variety of business financial transactions including but not limited to petty cash, accounts receivable, accounts payable, payroll, and process through the accounting cycle from journalizing to financial statesments.*

This Target 90%/Result88% (BSOT C072) Students are assessed for this outcome in BSOT C070 Business Mathematics (formerly BSAD C070) and in BSOT C072 Introduction to Accounting, (formerly BSAD C072). Students complete business calculations using a calculator and also complete a final accounting exam that covers all listed accounting procedures.   The result is very close to the target and the means of assessing this course will remain the same for the next cycle to see if there is a pattern. BSAD C070 Business Mathematics is an advisory for BSAD C072. If there is a pattern of low success if taken out of order (in reverse) then the department will consider making BSAD C070 Business Mathematics an actual pre-requisite for BSAD C072. The reason this has not been done already is that a second group of students may take BSAD C072 as a preparation for courses in the Business or Management programs and not need the BSAD C070 Business Mathematics as they may have proven these skills through other courses.

Analysis of BSOT AS and COA program outcome five: *Apply standard records management procedures when establishing and maintaining systems to classify, organize, store, and retrieve both hard copy and electronic files.* Target 90%/Results: 62%

Sixty-two percent were successful with the hard copy filing assignment, which is measured in BSOT C154 Office Personnel Seminar. 100% were successful with electronic filing assignments in the Intermediate and Advanced Applications classes.

The portion of this outcome that is measured in BSOT C154 did not meet the expected level of success. To remedy this shortfall, the BSOT C100 Introduction to Business Office Technology course was created and set up as a pre-requisite for students entering BSOT C154. In subsequent courses, this has provided students in BSOT C154 with the basic skills required to move forward with success with this outcome.

Analysis of BSOT AS and COA program outcome six: *Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.* Target 90%/Results 75%

The current method is a good exercise but it really isn't comprehensive enough to indicate true success with this important program outcome. In addition to not meeting the 90% goal, this outcome is not being adequately measured and further tools should be created.   For example, audio files explaining the syllabus or specific assignments can be created and followed by quizzes that will also demonstrate listening skills. This outcome should be assessed in a greater variety of instances in the BSOT C100 Introduction to Business Office Technology class and again in BSOT C154 Office Personnel Seminar. Additional tools will be created for the next assessment of this outcome the next time BSOT C100 and BSOT C154 are offered so they will be in place for the semester when they are assessed.

Analysis of Administrative Assistant Program Outcomes:

Analysis of Administrative Assistant program outcome two: *Apply fundamental principles of spelling, grammar, and punctuation to a wide variety of business communication messages, documents, and reports appropriate for the intended viewing audience.* Target 90%/Result 75%

The plan is to increase the success to 90% and to use a mixture of exams and practical writing exercises to measure this outcome in the future. Success with this outcome is now assisted by the introduction in the recent cycle of the new BSOT C100 Introduction to Business Office Technology class that introduces good communication skills through the resource Handbook For Office Workers.

Analysis of Administrative Assistant COA program outcome five: *Apply standard records management procedures when establishing and maintaining systems to classify, organize, store, and retrieve both hard copy and electronic files.*
Target 90%/Results: 62% were successful with the hard copy filing assignment, which is measured in BSOT C154 Office Personnel Seminar. 100% were successful with electronic filing assignments in the Intermediate and Advanced Applications classes.

The portion of this outcome that is measured in BSOT C154 did not meet the expected level of success. To remedy this shortfall, the BSOT C100 Introduction to Business Office Technology course was created and set up as a pre-requisite for students entering BSOT C154. In subsequent courses, this has provided students in BSOT C154 with the basic skills required to move forward with success with this outcome.

Analysis of Office Clerk Certificate Program Outcomes:

Analysis of Office Clerk COA program outcome four: *Demonstrate active listening skills to accurately condense and record verbal information, instructions, and ideas.* Target 90% Result 75%

Originally students were completing this assignment in BSOT C154 and the needed pre-requisites were not in place. This assignment has now been moved to BSOT C100 Introduction to Business Office Technology.
The current method is a good exercise but it really isn't comprehensive enough to indicate true success with this important program outcome. In addition to not meeting the 90% goal, this outcome is not being adequately measured and further tools should be created. For example, audio files explaining the syllabus or specific assignments can be created and followed by quizzes that will also demonstrate listening skills.
This outcome will be assessed in a greater variety of instances in the BSOT C100 Introduction to Business Office Technology class*.*

b. Summary of Program Learning Outcome Achievement

Overall, changes have been implemented in areas where there were gaps, by adding an appropriate pre-requisite course BSOT C100 Introduction to Business Office Technology to the program. The move to realign the CSCI courses to BSOT courses has led to better alignment of prerequisites and this is leading to higher achievement by students who now have also more often taken the courses in a recommended pathway. For example, BSOT C100 comes before BSOT C154 with the latter now having appropriate pre-requisites in the BSOT discipline. The added grammar refresher in BSOT C100 is better preparing students across the BSOT curriculum for writing skills. Writing assignments have also been more fully developed in all the applications classes and these are used to record problem solving and measure progress with business writing skills at the same time.

The program also has set a high goal of 90% for each outcome. Changes have been mentioned in the previous section and most have already been implemented. Faculty in this area discuss outcomes assessment with adjuncts but the conversation will increase as the next course and program outcome cycle begins. Courses are shared for the sake of continuity, whenever possible and there is a dialog among those teaching CSCI C070 Computer Literacy to keep a similar rigor and style to the class. Faculty are encouraged to use the same textbook for all versions of the class in the same semester.   Overall, achievement is high but strategies to perfect and improve assessment tools and results are continually being researched through discussion and professional development.

Graduates of the program hold a high percent of success in all program review outcomes, but because there were only four BSOT classes prior to the changes in the past five year cycle, the absence of appropriate pre-requisites brought the success level down for some students in BSOT C154 in particular. This has now been solved by the addition of the BSOT C100 Introduction to Business Office Technology class which is now also the gateway class for the program certificates and degree.

4. Achievement of Course Student Learning Outcomes

Course	SLO #	Target	5-Year Assessment History					
			Semester	Met?	Semester	Met?	Semester	Met?
BSAD/**BSOT C070**	SLO 1	85%	FA12	Yes				
	SLO 2	80%	FA12	Yes				
	SLO 3	90%	FA12	Yes				
	SLO 4	90%	FA12	Yes				
	SLO 5	90%	FA12	Yes				
	SLO 6	90%	FA12	Yes				
	SLO 7	90%	FA12	Yes				
	SLO 8	90%	FA12	Yes				
BSAD/**BSOT C072**	SLO 1	90%	SP13	Yes				
	SLO 2	90%	SP13	Yes				
	SLO 3	90%	SP13	Yes				

	SLO 4	90%	SP13	Yes				
	SLO 5	90%	SP13	Yes				
BSAD C145	SLO 1	75%	FA12	Yes				
	SLO 2	85%	FA12	No				
	SLO 3	85%	FA12	No				
	SLO 4	85%	FA12	No				
	SLO 5	85%	FA12	No				
	SLO 6	85%	FA12	No				
BSOT C100	SLO 1	95%	FA14	Yes				
	SLO 2	90%	FA14	Yes				
	SLO 3	90%	FA14	Yes				
CSCI/**BSOT C121**	SLO 1	95%	FA12	Yes				
	SLO 2	95%	FA12	Yes				
	SLO 3	95%	FA12	Yes				
	SLO 4	95%	FA12	Yes				
CSCI/**BSOT C123**	SLO 1	95%	FA11	Yes				
	SLO 2	95%	FA11	Yes				
	SLO 3	95%	FA11	Yes				
	SLO 4	95%	FA11	Yes				
CSCI/**BSOT C125**	SLO 1	95%	SU11	Yes				
	SLO 2	95%	SU11	Yes				
	SLO 3	95%	SU11	Yes				
	SLO 4	95%	SU11	Yes				
	SLO 5	95%	SU11	Yes				
BSOT C127	SLO 1	95%	FA12	Yes				
	SLO 2	95%	FA12	Yes				
	SLO 3	95%	FA12	Yes				
CSCI/**BSOT C129**	SLO 1	80%	SP12	Yes				
	SLO 2	85%	SP12	Yes				
	SLO 3	85%	SP12	Yes				
	SLO 4	85%	SP12	Yes				
	SLO 5	85%	SP12	Yes				
	SLO 6	85%	SP12	Yes				
BSOT C131	SLO 1	98%	FA12	Yes				
	SLO 2	96%	FA12	Yes				
BSOT C132	SLO 1	96%	FA12	Yes				
	SLO 2	96%	FA12	Yes				
	SLO 3	96%	FA12	Yes				
BSOT C133	SLO 1	70%	FA12	Yes				
	SLO 2	80%	FA12	Yes				

CSCI/**BSOT C135**	SLO 1	80%	SP12	Yes			
	SLO 2	80%	SP12	Yes			
	SLO 3	80%	SP12	Yes			
CSCI/**BSOT C151**	SLO 1	85%	FA12	Yes			
	SLO 2	90%	FA12	Yes			
	SLO 3	95%	FA12	Yes			
	SLO 4	95%	FA12	Yes			
	SLO 5	95%	FA12	Yes			
CSCI/**BSOT C153**	SLO 1	95%	FA11	Yes			
	SLO 2	95%	FA11	Yes			
	SLO 3	95%	FA11	Yes			
	SLO 4	95%	FA11	Yes			
	SLO 5	90%	FA11	Yes			
BSOT C154	SLO 1	90%	FA12	No	SP15	Yes	
	SLO 2	95%	FA12	No	SP15	Yes	
	SLO 3	90%	FA12	No	SP15	Yes	
	SLO 4	90%	FA12	Yes	SP15	Yes	
	SLO 5	95%	FA12	Yes	SP15	Yes	
	SLO 6	95%	FA12	Yes	SP15	Yes	
CSCI/**BSOT C155**	SLO 1	95%	SP11	Yes			
	SLO 2	95%	SP11	Yes			
	SLO 3	95%	SP11	Yes			
	SLO 4	95%	SP11	Yes			
	SLO 5	95%	SP11	Yes			
	SLO 6	95%	SP11	Yes			
CSCI/**BSOT C161**	SLO 1	95%	FA12	Yes			
	SLO 2	95%	FA12	Yes			
	SLO 3	95%	FA12	Yes			
CSCI/**BSOT C163**	SLO 1	95%	FA11	Yes			
	SLO 2	95%	FA11	Yes			
	SLO 3	95%	FA11	Yes			
	SLO 4	95%	FA11	Yes			
	SLO 5	95%	FA11	Yes			
CSCI/**BSOT C165**	SLO 1	70%	FA12	Yes			
	SLO 2	70%	FA12	Yes			
	SLO 3	70%	FA12	Yes			
	SLO 4	70%	FA12	Yes			
	SLO 5	70%	FA12	Yes			
	SLO 6	70%	FA12	Yes			
CSCI C070	SLO 1	85%	FA12	Yes			

	SLO 2	85%	FA12	Yes			
	SLO 3	85%	FA12	Yes			
	SLO 4	85%	FA12	Yes			
	SLO 5	85%	FA12	Yes			

a. Gaps and Improvements Made
Analysis of Student Learning Outcome Gaps for BSAD C145 Business Communication

SLO 2: Prepare business communication including letters, reports, presentations, and other messages that are clear, concise, courteous, complete and grammatically correct. Target 85% Results 70%

In the past review cycle, 70% were successful with meeting this outcome but our goal was 85% because communication is so important in the workplace. Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during Spring 2016 offering of the course and should include some students who will have taken the preparatory class BSOT C100. New strategies for training are also being developed using publisher technology that accompanies the textbook.

SLO 3: Critique oral communication skills to determine effective techniques. Target 85% Results 70%

In the past review cycle, 70% were successful with meeting this outcome but our goal was 85% because communication is so important in the workplace. Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the Spring 2017 offering of the course and should include some students who will have taken the preparatory class BSOT C100. New strategies for training are also being developed using publisher technology that accompanies the textbook.

SLO 4: Plan and produce visual aids using presentation software. Target 85% Results 70%

In the past review cycle, 70% were successful with meeting this outcome but our goal was 85%. Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course

is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the Spring 2017 offering of the course and should include some students who will have taken the preparatory class BSOT C100. Additionally, the pathways document should ensure that the BSOT C127 PowerPoint class is taken prior or at the same time as BSAD C145.

SLO 5:   Identify appropriate strategies for resume writing including use of electronic media.   Target 85% Results 70%

In the past review cycle, 70% were successful with meeting this outcome but our goal was 85% because communication is so important in the workplace. Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the Spring 2017 offering of the course and should include some students who will have taken the preparatory class BSOT C100. New strategies for training are also being developed using publisher technology that accompanies the textbook.

SLO 6:   Practice effective business communication techniques in independent and group projects. Target 85% Results 70%

In the past review cycle, 70% were successful with meeting this outcome but our goal was 85% because communication is so important in the workplace. Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the Spring 2017 offering of the course and should include some students who will have taken the preparatory class BSOT C100. New strategies for training are also being developed using publisher technology that accompanies the textbook.

Analysis of BSOT C154 Office Personnel Seminar:

SLO 1 Describe the roles and responsibilities of the administrative professional in the workplace including collaboration, teamwork, leadership skills, and management characteristics. Target 90 Results 62%

- The course content is being revised with fewer topics and better coverage of remaining topics. Most significantly, BSOT C100 Introduction to Business Office Technology is created and scheduled to allow students to focus on introductory skills (including business English) at the outset of their program of study in the Business Office Technology program.
- Additionally, because of the former strict discipline requirement for course pre-requisites, too many students were able to enroll in BSOT C154 as if it were the introduction to the program or a survey course instead of being the capstone. Now that BSOT C100 has been created as a gateway introductory course for the BSOT program, BSOT C154 can have an appropriate pre-requisite. Students will be introduced to business English and other elements at the outset of the study of Business Office Technology. This will mean that the students enrolled in the course have met the appropriate course of study prior to enrollment and should increase the success for students achieving success with all outcomes.

The outcome was reassessed in Spring 2015 and the result was 100% success.

BSOT C154 Office Personnel Seminar: SLO 2 Recognize and display proficiency with various workplace technologies. Target 95% Results 62%

- Because of the former strict discipline requirement for course pre-requisites, too many students were able to enroll in BSOT C154 as if it were the introduction to the program or a survey course instead of being the capstone. Now that the CSCI applications courses have been renamed as BSOT courses the students take all the BSOT applications classes for Word, Excel, Access, PowerPoint, Outlook, and Acrobat prior to taking BSOT C154.

The outcome was reassessed in Spring 2015 and the result was 100% success.

BSOT C154 Office Personnel Seminar: SLO 3 Demonstrate effective business communication. Target 90% Results 62%

- The course content is being revised with fewer topics and better coverage of remaining topics. Most significantly, BSOT C100 Introduction to Business Office Technology is created and scheduled to allow students to focus on introductory skills (including business English) at the outset of their program of study in the Business Office Technology program.
- BSAD C145 also has been placed in the pathway ahead of BSOT C154, so students have skills to build on prior to taking BSOT C154.
- Additionally, because of the former strict discipline requirement for course pre-requisites, too many students were able to enroll in BSOT C154 as if it were the introduction to the program or a survey course instead of being the capstone. Many of these students are not at all proficient enough in writing skills to meet the advisory for this course. Now that BSOT C100 has been created as a gateway introductory course for the BSOT program, BSOT C154 can have an appropriate pre-requisite. Students will be introduced to business English and other elements at the outset of the study of Business Office Technology. This will mean that the students enrolled

in the course have met the appropriate course of study prior to enrollment and should increase the success for students achieving success with all outcomes.

The outcome was reassessed in Spring 2015 and the result was 100% success.

b. Summary of Student Learning Outcome Achievement

Overall student success with outcomes achievement is high, but the program would benefit by applying more consistency with the target level during the next assessment round. Assessment percentages are determined by the students actually attempting the assessment. Rubrics are used for all the applications courses and the success level is high, due to the pattern of training, practice, repetition and exam sequences, both in the instructor graded work and the Skills Assessment Management (SAM) graded work which allows for instant feedback to students.

Additionally, the department plans to record all tools used for assessment in one master file to facilitate long term coordination among full and part-time faculty members teaching the same class. The department shares all curriculum, developed websites, and syllabi among various instructors when there is more than on person teaching the class and in most cases if not all, the same materials are used by all instructors whether full or part time, when teaching the same class.

Student learning outcomes are discussed within the department and assessments are performed by full-time and adjunct instructors. Several of the outcomes have changed due to alignment with State curriculum. The faculty in the department are working on reassessing the courses. Beginning in Spring 2016. As a note, several of the applications courses are presented and through the first stages as a model for the state-wide development of C-ID's for Business Office Technology classes, and the courses themselves align as a program toward the Business Information Worker program that has been recognized across the state.

All of the courses that are Microsoft Office or Adobe Acrobat are updated as industry moves to the next version, so there is constant updating even when outcomes are met.

Another strategy that is being woven into all the program's courses is to integrate workplace soft skills as much as possible through all the curriculum. Topics include time management, attention to detail, critical thinking, and writing skills.

The Business Office Technology program parallels an industry that is in a state of constant change, so the content of the courses is continually inspected and updated even beyond the scope of student learning outcomes measurement.

Students who complete the courses and attempt work related to outcomes assessment are largely successful as seen by the table above. However, student success rates by course shown in a previous section show that there is a rate of withdrawal that negatively impacts the overall success rate, and in

these cases students are not engaging with the assessment tools at all. There are a variety of reasons for this, including perceptions about rigor in one unit classes, and in some cases advisories that are not considered, such as for the intermediate levels of the applications courses. Nevertheless, more can be done ahead of the start of class and in the first week of the eight week classes to help students realize what is expected and required time wise for successful completion of a course. This relay of expectations and development of strategies to help students be successful with their goals is an ongoing project in the department. Success rates are growing slightly due to progress in this area, but there is more that can be done to narrow the gap with students that withdraw after census in all courses.

Part 5 – Action Plans

1. Analysis of Current Program Strengths

The Business Office Technology Program at Cerro Coso is popular with both first time and returning students and the content is proven to be useful for employers. The number of declared majors is high and the number of completers is consistent. Success with additional introductory course sections for the BSOT C100 gateway course for the program are proving that sections beyond one per year is highly warranted. Skills sought by employers are integrated throughout the program's curriculum: writing skills, time management, industry standard computer skills, problem solving, and communication.

The courses, certificates, and degree have been recently reviewed for currency and is also in parallel with the Business Information Worker program that has been recognized state wide. Students from around the state can find the CCCC version of the Business Office Technology degree and certificates by visiting the "Doing What Matters" website at www.ict-dm.net/biw. The current degree and three certificates have no electives and are focused on the described outcomes and ease of scheduling. The scheduling provides for courses to be offered in the same semester each year. All courses are offered online, with CSCI C070 Computer Literacy also offered at IWV and sometimes KRV. The Office Clerk Certificate of Achievement is now planned for dual enrollment at California City and at least three courses are planned for Tehachapi High School. Courses in the program are being discussed as models for the new state wide C-ID for the BSOT program area.

Program outcomes and assessments have been designed and implemented and long term schedules have been developed to provide students, counselors, and the department members with the ability to plan well into the future. Existing courses have been reviewed by both staff and industry to assure that relevant topics, concepts and information are provided to the students. The long term schedules include tracked offerings. Enrollments are strong and the program continues to be popular with students. The Ridgecrest community has indicated that there is a growing need for graduates of this program.

The successful online offering of the complete program is reaching students from both local and remote areas of CCCC service area and also around the state. The online offering is also serving part-time

students and those upgrading their skills toward moving to a better job or keeping a job that is increasingly demanding higher levels of skills with technology.

2. Analysis of Improvements Needed

Regardless of the many strengths, the Business Office Technology Program has areas that can use improvement. For a start, the curriculum related to applications classes must continually be reviewed for currency with evolving industry standard software Microsoft Office and other procedures that evolve in the changing workforce of the twenty-first century. The program's degree and certificates must be continuously reviewed and evaluated for currency and alignment with industry needs and additional workplace and employability skills will be integrated with course content.

Marketing of programs and long term schedules needs to be implemented across all college locations and additional relationships with industry and advisory committee members need to be fostered. Now that the program has culminated in the collective changes to courses and structure over the past review cycle and beyond, it is prime time to market the program to CCCC communities in an even more determined manner than has been accomplished in the past. This includes working with CCCC service area high schools to bring business back to the junior and senior curriculum by way of dual enrollments and collaboration.

Student success and retention rates should be monitored and student preparedness should be evaluated and compared to success rates. Student equity gaps need to be addressed and a plan for bridging these gaps must be implemented. All courses need to be reassessed in the coming year to two years to meet the needs of the next program review cycle. It is possible that further courses might benefit from additional pre-requisites vs. having advisories, which seem to be largely ignored.

3. Three-Year Program Strategies

Description	Measurement	Timeline	Responsibility
Improve marketing efforts to increase enrollments in courses and hiring of graduates for service area jobs.	Increase in first day enrollments and course section offerings. Materials for Preview Day, Career Day, Fall fair, and other Present at area Chamber of Commerce and Rotary club.	2016-2017 and 2017-2018	Department faculty and College PIO.
Revise all BSOT applications courses to remain current with evolving industry software.	Courses updated, approved, and in line with C-ID where possible for BSOT.	2016-2017, 2017-2018, and 2018-2019.	Full-time faculty in department.
Complete course and program outcomes assessments, coordinate among all offerings and create a spreadsheet record of artifacts used.	Increase success rates	2016-2017, 2017-2018, and 2018-2019.	Full-time faculty, and Department Chair.
Monitor number of declared majors against offerings of BSOT C100.	Increase in FTES/FTEF productivity ratio for	2016-2017 and 2017-2018.	Department faculty.

4. Six-Year Program Strategies

The Business Office Technology program offered by the Department of Business and Information Technology provides life-long learning and support to students in their academic, technical, and vocational pursuits. The goal of the program is to foster in students a lifelong desire to learn, a passion to excel, and a commitment to contribute actively to their local community. In addition to carrying out the strategies from the three-year plan above throughout the six-year period, the department's faculty suggest the following.

Description	Measurement	Timeline	Responsibility
Create current student and graduate workplace tracking system to monitor student employment.	Ability to quantify employment status.	Ongoing	Department faculty, Institutional Researcher, and Office of Academic Affairs.
Work with Advisory Committees to update courses, degrees, and certificates to align with industry/ workforce needs.	Increase in enrollments and employability of graduates.	2016-2017, 2017-2018, 2018-2019, 2019-2020, 2020-2021.	Department faculty and advisory committees.

Part 6 – Supporting Documentation

[The following data is to be supplied by the Office of Institutional Research:]

1. Section Level data by *course* (5 year aggregate broken out online, onsite, combined)
    a. Number of sections
    b. Enrollment first day, census, end of term
    c. FTES, FTEF, Productivity (FTES/FTEF)
    d. Course Retention Rate
    e. Course Success Rate
    f. Method of delivery (F2F, hybrid, ITV, online)
2. Student Demography by *discipline* (5 years aggregate)
    a. Headcount
    b. Age
    c. Gender
    d. Ethnicity
3. Awards (5 years)
4. Others as appropriate, in consultation with the Institutional Researcher

[The following data is to be supplied by the department:]

1. SLO Reports for all courses within the program(s) (from CurricUNET)
2. PLO Report for each program (from CurricUNET)
3. Advisory Committee Meeting minutes *(CTE Only)*
4. Others, as appropriate, such as department minutes, employer surveys, marketing brochures

FTES-FTEF Productivity

			#		#	%	#	%	#	%	#	%
	Distance Ed			6		6		5.7		5.5		5.5
Total FTEF by Contract Type		#	%	#	%	#	%	#	%	#	%
	Full-time	1	15%	1.5	22%	3.2	52%	3.2	47%	2.2	31%
	Overload	0.8	12%	0.2	3%	0.4	7%	0.5	7%	2.2	31%
	Adjunct	4.1	60%	3.9	57%	1.7	27%	1.8	26%	1.3	18%
	Summer	0.9	14%	1.2	17%	0.9	14%	1.3	20%	1.3	19%
Productivity (FTES/FTEF)												
	Total		16.1		15		14.9		13.5		11.3
	Traditional		9.8		7.7		6.2		8.6		6
	Distance Ed		17.1		16		15.6		14.7		12.8
Collegewide Productivity												
	Total		15.1		14.3		14.5		13.6		13.1
	Traditional		14.1		13.4		13.9		13		12.4
	Distance Ed		16.1		15.2		15.1		14.1		13.9

Section Level Data by Course: Business Office Technology AS and COA

				Sections	1st Day Enroll	Census Enrollmt	Ending Enroll	Students /Section	Actual FTES	FTEF	FTES/ FTEF	Retention Rate	Success Rate
Business Math BSAD C070	2014-2015	201470	Fall 2014	1	48	22	17	22	2.0	0.2	10.2	81.0%	57.1%
		Annual Yr Sum		**1**	**48**	**22**	**17**	**22**	**2.0**	**0.2**	**10.2**	**81.0%**	**57.1%**
	2013-2014	201370	Fall 2013	1	52	30	21	30	2.8	0.2	14.0	70.0%	50.0%
		Annual Yr Sum		**1**	**52**	**30**	**21**	**30**	**2.8**	**0.2**	**14.0**	**70.0%**	**50.0%**
	2012-2013	201270	Fall 2012	1	53	34	28	34	3.2	0.2	15.8	82.4%	58.8%
		Annual Yr Sum		**1**	**53**	**34**	**28**	**34**	**3.2**	**0.2**	**15.8**	**82.4%**	**58.8%**
	2011-2012	201170	Fall 2011	1	73	46	39	46	4.3	0.2	21.4	84.8%	54.3%
		Annual Yr Sum		**1**	**73**	**46**	**39**	**46**	**4.3**	**0.2**	**21.4**	**84.8%**	**54.3%**
	2010-2011	201070	Fall 2010	1	75	45	31	45	4.2	0.2	21.0	68.9%	60.0%
		Annual Yr Sum		**1**	**75**	**45**	**31**	**45**	**4.2**	**0.2**	**21.0**	**68.9%**	**60.0%**
BSAD C072 Introduction to Accounting	2014-2015	201530	Spring 2015	1	45	24	19	24	4.0	0.3	12.1	79.2%	66.7%
		Annual Yr Sum		**1**	**45**	**24**	**19**	**24**	**4.0**	**0.3**	**12.1**	**79.2%**	**66.7%**
	2013-2014	201430	Spring 2014	1	47	36	26	36	6.0	0.3	18.1	72.2%	47.2%
		Annual Yr Sum		**1**	**47**	**36**	**26**	**36**	**6.0**	**0.3**	**18.1**	**72.2%**	**47.2%**
	2012-2013	201330	Spring 2013	1	54	44	33	44	7.4	0.3	22.3	75.0%	52.3%
		Annual Yr Sum		**1**	**54**	**44**	**33**	**44**	**7.4**	**0.3**	**22.3**	**75.0%**	**52.3%**
	2011-2012	201230	Spring 2012	1	15	10	8	10	0.9	0.3	2.8	80.0%	60.0%

Course	Year	Code	Term										
		201150	Summer 2011	1	60	31	28	31	5.1	0.3	15.4	87.5%	78.1%
		Annual Yr Sum		**2**	**75**	**41**	**36**	**21**	**6.0**	**0.7**	**9.1**	**85.7%**	**73.8%**
BSAD C145 Business Communication	**2014-2015**	201530	Spring 2015	1	47	35	28	35	3.3	0.2	16.3	80.0%	65.7%
		Annual Yr Sum		**1**	**47**	**35**	**28**	**35**	**3.3**	**0.2**	**16.3**	**80.0%**	**65.7%**
	2013-2014	201430	Spring 2014	1	49	42	29	42	3.9	0.2	19.6	69.0%	40.5%
		Annual Yr Sum		**1**	**49**	**42**	**29**	**42**	**3.9**	**0.2**	**19.6**	**69.0%**	**40.5%**
	2012-2013	201330	Spring 2013	1	46	26	17	26	2.4	0.2	12.1	65.4%	42.3%
		201270	Fall 2012	1	51	29	24	29	2.7	0.2	13.5	82.8%	75.9%
		Annual Yr Sum		**2**	**97**	**55**	**41**	**28**	**5.1**	**0.4**	**12.8**	**74.5%**	**60.0%**
	2010-2011	201130	Spring 2011	1	48	37	33	37	3.4	0.2	17.2	89.2%	64.9%
		Annual Yr Sum		**1**	**48**	**37**	**33**	**37**	**3.4**	**0.2**	**17.2**	**89.2%**	**64.9%**
BSOT C100 Intro to BSOT	**2014-2015**	201530	Spring 2015	1	43	25	21	25	2.3	0.2	11.6	84.0%	72.0%
		201470	Fall 2014	2	91	49	31	25	4.6	0.4	11.4	63.3%	55.1%
		Annual Yr Sum		**3**	**134**	**74**	**52**	**25**	**6.9**	**0.6**	**11.5**	**70.3%**	**60.8%**
	2013-2014	201370	Fall 2013	1	54	20	17	20	1.9	0.2	9.3	85.0%	60.0%
		Annual Yr Sum		**1**	**54**	**20**	**17**	**20**	**1.9**	**0.2**	**9.3**	**85.0%**	**60.0%**
	2012-2013	201270	Fall 2012	1	67	34	24	34	3.2	0.2	15.8	70.6%	52.9%
		Annual Yr Sum		**1**	**67**	**34**	**24**	**34**	**3.2**	**0.2**	**15.8**	**70.6%**	**52.9%**

Course	Year		Term										
BSOT C100 Beginning Word	2014-2015	201530	Spring 2015	1	44	34	31	34	2.3	0.1	17.5	91.2%	70.6%
		Annual Yr Sum		**1**	**44**	**34**	**31**	**34**	**2.3**	**0.1**	**17.5**	**91.2%**	**70.6%**
BSOT C123 Beginning Excel	2014-2015	201530	Spring 2015	2	80	58	38	29	3.9	0.3	14.8	65.5%	50.0%
		Annual Yr Sum		**2**	**80**	**58**	**38**	**29**	**3.9**	**0.3**	**14.8**	**65.5%**	**50.0%**
BSOT C125 Beginning Access	2014-2015	201530	Spring 2015	1	23	11	7	11	0.7	0.1	5.6	63.6%	45.5%
		Annual Yr Sum		**1**	**23**	**11**	**7**	**11**	**0.7**	**0.1**	**5.6**	**63.6%**	**45.5%**
BSOT C127 MS PowerPoint	2014-2015	201530	Spring 2015	1	28	16	12	16	1.1	0.1	8.2	75.0%	68.8%
		201470	Fall 2014	1	55	30	23	30	2.0	0.1	15.2	79.3%	72.4%
		Annual Yr Sum		**2**	**83**	**46**	**35**	**23**	**3.1**	**0.3**	**11.7**	**77.8%**	**71.1%**
	2013-2014	201430	Spring 2014	1	21	14	6	14	0.9	0.1	7.1	50.0%	41.7%
		201370	Fall 2013	1	51	26	18	26	1.7	0.1	13.1	94.7%	73.7%
		Annual Yr Sum		**2**	**72**	**40**	**24**	**20**	**2.7**	**0.3**	**10.1**	**77.4%**	**61.3%**
	2012-2013	201330	Spring 2013	1	46	16	13	16	1.1	0.1	8.1	81.3%	56.3%
		201270	Fall 2012	1	53	30	14	30	2.0	0.1	15.1	46.7%	30.0%

		201250	Summer 2012	1	13	12	10	12	0.9	0.1	6.9	83.3%	58.3%
		Annual Yr Sum		**3**	**112**	**58**	**37**	**19**	**4.0**	**0.4**	**10.0**	**63.8%**	**43.1%**
	2011-2012	201230	Spring 2012	1	51	25	20	25	0.8	0.3	2.9	80.0%	76.0%
		201170	Fall 2011	1	64	27	16	27	1.8	0.1	13.6	59.3%	48.1%
		Annual Yr Sum		**2**	**115**	**52**	**36**	**26**	**2.6**	**0.4**	**6.5**	**69.2%**	**61.5%**
Microsoft Outlook	2014-2015	201530	Spring 2015	1	48	32	20	32	2.1	0.1	16.1	62.5%	59.4%
		Annual Yr Sum		**1**	**48**	**32**	**20**	**32**	**2.1**	**0.1**	**16.1**	**62.5%**	**59.4%**
Intermediate Word	2014-2015	201530	Spring 2015	1	45	22	17	22	1.5	0.1	11.1	77.3%	54.5%
		Annual Yr Sum		**1**	**45**	**22**	**17**	**22**	**1.5**	**0.1**	**11.1**	**77.3%**	**54.5%**
Intermediate Excel	2014-2015	201530	Spring 2015	1	19	10	9	10	0.7	0.1	5.1	90.0%	90.0%
		Annual Yr Sum		**1**	**19**	**10**	**9**	**10**	**0.7**	**0.1**	**5.1**	**90.0%**	**90.0%**
Office Personnel Seminar	2014-2015	201530	Spring 2015	1	5	5	5	5	0.5	0.2	2.3	100.0%	100.0%
		Annual Yr Sum		**1**	**5**	**5**	**5**	**5**	**0.5**	**0.2**	**2.3**	**100.0%**	**100.0%**
	2013-2014	201430	Spring 2014	1	26	6	4	6	0.6	0.2	2.8	66.7%	33.3%
		Annual Yr Sum		**1**	**26**	**6**	**4**	**6**	**0.6**	**0.2**	**2.8**	**66.7%**	**33.3%**
	2012-2013	201330	Spring 2013	1	24	11	11	11	1.0	0.2	5.1	100.0%	90.9%
		Annual Yr Sum		**1**	**24**	**11**	**11**	**11**	**1.0**	**0.2**	**5.1**	**100.0%**	**90.9%**
	2010-2011	201130	Spring 2011	1	43	16	13	16	1.5	0.2	7.5	81.3%	50.0%
		201050	Summer 2010	1	46	32	15	32	3.0	0.2	14.9	46.9%	40.6%

Course	Year	Code	Term										
		Annual Yr Sum		**2**	**89**	**48**	**28**	**24**	**4.5**	**0.4**	**11.2**	**58.3%**	**43.8%**
Advanced Excel	**2014-2015**	201530	Spring 2015	1	12	11	10	11	0.7	0.1	5.6	90.9%	90.9%
		Annual Yr Sum		**1**	**12**	**11**	**10**	**11**	**0.7**	**0.1**	**5.6**	**90.9%**	**90.9%**
Advanced Access	**2014-2015**	201530	Spring 2015	1	4	3	2	3	0.2	0.1	1.5	66.7%	66.7%
		Annual Yr Sum		**1**	**4**	**3**	**2**	**3**	**0.2**	**0.1**	**1.5**	**66.7%**	**66.7%**
Computer Literacy	**2014-2015**	201530	Spring 2015	4	149	97	85	24	5.2	0.5	9.8	87.6%	74.2%
		201470	Fall 2014	5	174	109	95	22	7.4	0.7	10.6	88.0%	75.0%
		201450	Summer 2014	3	93	63	49	21	4.3	0.4	10.7	84.2%	71.9%
		Annual Yr Sum		**12**	**416**	**269**	**229**	**22**	**16.9**	**1.6**	**10.4**	**87.0%**	**74.0%**
	2013-2014	201430	Spring 2014	3	110	72	65	24	5.0	0.5	9.3	82.3%	75.9%
		201370	Fall 2013	4	137	89	76	22	6.1	0.5	11.5	85.4%	71.9%
		201350	Summer 2013	3	99	67	54	22	4.6	0.4	11.4	80.6%	71.6%
		Annual Yr Sum		**10**	**346**	**228**	**195**	**23**	**15.6**	**1.5**	**10.7**	**83.0%**	**73.2%**
	2012-2013	201330	Spring 2013	3	109	78	73	26	5.4	0.4	13.5	93.6%	83.3%
		201270	Fall 2012	3	102	65	57	22	4.5	0.4	11.4	89.1%	76.6%
		201250	Summer 2012	2	56	42	37	21	2.8	0.3	10.6	94.9%	76.9%
		Annual Yr Sum		**8**	**267**	**185**	**167**	**23**	**12.8**	**1.1**	**12.0**	**92.3%**	**79.6%**
	2011-2012	201230	Spring 2012	3	107	89	71	30	6.2	0.5	11.7	78.9%	61.1%
		201170	Fall 2011	4	150	120	85	30	8.1	0.5	15.3	70.8%	60.8%
		201150	Summer 2011	2	54	49	37	25	3.4	0.3	12.8	77.1%	64.6%

Business Office Technology

		Annual Yr Sum		9	311	258	193	29	17.7	1.3	13.3	74.8%	61.6%
	2010-2011	201130	Spring 2011	5	151	124	107	25	8.6	0.7	13.0	85.6%	76.0%
		201070	Fall 2010	5	153	120	98	24	8.3	0.7	12.5	79.7%	70.7%
		201050	Summer 2010	1	24	24	20	24	1.7	0.1	12.6	83.3%	54.2%
		Annual Yr Sum		11	328	268	225	24	18.6	1.5	12.7	82.7%	71.7%

Section Level Data by Course: Administrative Assistant COA

				Sections	1st Day Enroll	Census Enrollmt	Ending Enroll	Students /Section	Waitlist First Day	Actual FTES	FTEF	FTES / FTEF	Retention Rate	Success Rate
BSOT C070 Business Math	**2014-2015**	201470	Fall 2014	1	48	22	17	22	7	2.0	0.2	10.2	81.0%	57.1%
		Annual Yr Sum		1	48	22	17	22	7	2.0	0.2	10.2	81.0%	57.1%
	2013-2014	201370	Fall 2013	1	52	30	21	30	13	2.8	0.2	14.0	70.0%	50.0%
		Annual Yr Sum		1	52	30	21	30	13	2.8	0.2	14.0	70.0%	50.0%
	2012-2013	201270	Fall 2012	1	53	34	28	34	5	3.2	0.2	15.8	82.4%	58.8%
		Annual Yr Sum		1	53	34	28	34	5	3.2	0.2	15.8	82.4%	58.8%
	2011-2012	201170	Fall 2011	1	73	46	39	46	14	4.3	0.2	21.4	84.8%	54.3%
		Annual Yr Sum		1	73	46	39	46	14	4.3	0.2	21.4	84.8%	54.3%

	2010-2011	201070	Fall 2010	1	75	45	31	45	16	4.2	0.2	21.0	68.9%	60.0%
		Annual Yr Sum		**1**	**75**	**45**	**31**	**45**	**16**	**4.2**	**0.2**	**21.0**	**68.9%**	**60.0%**
BSOT C072 Introduction to Accounting	**2014-2015**	201530	Spring 2015	1	45	24	19	24	1	4.0	0.3	12.1	79.2%	66.7%
		Annual Yr Sum		**1**	**45**	**24**	**19**	**24**	**1**	**4.0**	**0.3**	**12.1**	**79.2%**	**66.7%**
	2013-2014	201430	Spring 2014	1	47	36	26	36	2	6.0	0.3	18.1	72.2%	47.2%
		Annual Yr Sum		**1**	**47**	**36**	**26**	**36**	**2**	**6.0**	**0.3**	**18.1**	**72.2%**	**47.2%**
	2012-2013	201330	Spring 2013	1	54	44	33	44	15	7.4	0.3	22.3	75.0%	52.3%
		Annual Yr Sum		**1**	**54**	**44**	**33**	**44**	**15**	**7.4**	**0.3**	**22.3**	**75.0%**	**52.3%**
	2011-2012	201230	Spring 2012	1	15	10	8	10	0	0.9	0.3	2.8	80.0%	60.0%
		201150	Summer 2011	1	60	31	28	31	24	5.1	0.3	15.4	87.5%	78.1%
		Annual Yr Sum		**2**	**75**	**41**	**36**	**21**	**24**	**6.0**	**0.7**	**9.1**	**85.7%**	**73.8%**
BSAD C145 Business Communication	**2014-2015**	201530	Spring 2015	1	47	35	28	35	1	3.3	0.2	16.3	80.0%	65.7%

			Annual Yr Sum	**1**	**47**	**35**	**28**	**35**	**1**	**3.3**	**0.2**	**16.3**	**80.0%**	**65.7%**
	2013-2014	201430	Spring 2014	1	49	42	29	42	4	3.9	0.2	19.6	69.0%	40.5%
			Annual Yr Sum	**1**	**49**	**42**	**29**	**42**	**4**	**3.9**	**0.2**	**19.6**	**69.0%**	**40.5%**
	2012-2013	201330	Spring 2013	1	46	26	17	26	0	2.4	0.2	12.1	65.4%	42.3%
		201270	Fall 2012	1	51	29	24	29	13	2.7	0.2	13.5	82.8%	75.9%
			Annual Yr Sum	**2**	**97**	**55**	**41**	**28**	**13**	**5.1**	**0.4**	**12.8**	**74.5%**	**60.0%**
	2010-2011	201130	Spring 2011	1	48	37	33	37	6	3.4	0.2	17.2	89.2%	64.9%
			Annual Yr Sum	**1**	**48**	**37**	**33**	**37**	**6**	**3.4**	**0.2**	**17.2**	**89.2%**	**64.9%**
BSOT C100 Intro to BSOT	**2014-2015**	201530	Spring 2015	1	43	25	21	25	0	2.3	0.2	11.6	84.0%	72.0%
		201470	Fall 2014	2	91	49	31	25	0	4.6	0.4	11.4	63.3%	55.1%
			Annual Yr Sum	**3**	**134**	**74**	**52**	**25**	**0**	**6.9**	**0.6**	**11.5**	**70.3%**	**60.8%**
	2013-2014	201370	Fall 2013	1	54	20	17	20	5	1.9	0.2	9.3	85.0%	60.0%
			Annual Yr Sum	**1**	**54**	**20**	**17**	**20**	**5**	**1.9**	**0.2**	**9.3**	**85.0%**	**60.0%**
	2012-2013	201270	Fall 2012	1	67	34	24	34	7	3.2	0.2	15.8	70.6%	52.9%

		Annual Yr Sum		**1**	**67**	**34**	**24**	**34**	**7**	**3.2**	**0.2**	**15.8**	**70.6%**	**52.9%**
BSOT C120 Microsoft Outlook	**2014-2015**	201530	Spring 2015	1	48	32	20	32		2.1	0.1	16.1	62.5%	59.4%
		Annual Yr Sum		**1**	**48**	**32**	**20**	**32**		**2.1**	**0.1**	**16.1**	**62.5%**	**59.4%**
BSOT C132 Inter Computer Keyboarding	**2014-2015**	201470	Fall 2014	1	62	20	17	20		1.3	0.1	10.1	94.4%	88.9%
		Annual Yr Sum		**1**	**62**	**20**	**17**	**20**		**1.3**	**0.1**	**10.1**	**94.4%**	**88.9%**
	2013-2014	201430	Spring 2014	1	47	20	19	20	0	1.3	0.3	5.1	95.0%	80.0%
		201370	Fall 2013	1	46	19	12	19	14	1.3	0.1	9.6	85.7%	85.7%
		Annual Yr Sum		**2**	**93**	**39**	**31**	**20**	**14**	**2.6**	**0.4**	**6.6**	**91.2%**	**82.4%**
	2012-2013	201330	Spring 2013	2	58	26	22	13	9	1.8	0.3	6.6	84.6%	61.5%
		201270	Fall 2012	1	35	18	12	18	4	1.2	0.1	9.1	66.7%	55.6%
		201250	Summer 2012	1	1	1	0	1	0	0.0	0.0		0.0%	0.0%
		Annual Yr Sum		**4**	**94**	**45**	**34**	**11**	**13**	**3.0**	**0.4**	**7.4**	**75.6%**	**57.8%**

Cerro Coso Community College

Business Office Technology

Course	Year	Code	Term	Sections	1st Day Enroll	Census Enrollmt	Ending Enroll	Students /Section	Waitlist First Day	Actual FTES	FTEF	FTES/ FTEF	Retention Rate	Success Rate
	2011-2012	201230	Spring 2012	1	37	13	9	13	23	0.9	0.3	3.3	69.2%	61.5%
		201170	Fall 2011	1	56	16	14	16	22	1.1	0.3	4.0	87.5%	75.0%
		201150	Summer 2011	1	29	9	5	9	3	0.6	0.1	4.5	55.6%	22.2%
			Annual Yr Sum	**3**	**122**	**38**	**28**	**13**	**48**	**2.5**	**0.7**	**3.8**	**73.7%**	**57.9%**
	2010-2011	201130	Spring 2011	3	49	31	26	10	23	2.2	0.1	16.2	86.7%	66.7%
		201070	Fall 2010	2	73	15	13	8	35	1.0	0.1	7.5	86.7%	73.3%
		201050	Summer 2010	1	36	21	9	21	2	1.4	0.1	10.6	42.9%	33.3%
			Annual Yr Sum	**6**	**158**	**67**	**48**	**11**	**60**	**4.6**	**0.4**	**11.4**	**72.7%**	**57.6%**
BSOT C151 Intermediate Word	2014-2015	201530	Spring 2015	1	45	22	17	22		1.5	0.1	11.1	77.3%	54.5%
			Annual Yr Sum	**1**	**45**	**22**	**17**	**22**		**1.5**	**0.1**	**11.1**	**77.3%**	**54.5%**
BSOT C153 Intermediate Excel	2014-2015	201530	Spring 2015	1	19	10	9	10	0	0.7	0.1	5.1	90.0%	90.0%
			Annual Yr Sum	**1**	**19**	**10**	**9**	**10**	**0**	**0.7**	**0.1**	**5.1**	**90.0%**	**90.0%**

Section Level Data by Course: Office Clerk COA

	Sections	1st Day Enroll	Census Enrollmt	Ending Enroll	Students /Section	Waitlist First Day	Actual FTES	FTEF	FTES/ FTEF	Retention Rate	Success Rate

2014-2015	201470	Fall 2014	1	48	22	17	22	7	2.0	0.2	10.2	81.0%	57.1%
	Annual Yr Sum		**1**	**48**	**22**	**17**	**22**	**7**	**2.0**	**0.2**	**10.2**	**81.0%**	**57.1%**
2013-2014	201370	Fall 2013	1	52	30	21	30	13	2.8	0.2	14.0	70.0%	50.0%
	Annual Yr Sum		**1**	**52**	**30**	**21**	**30**	**13**	**2.8**	**0.2**	**14.0**	**70.0%**	**50.0%**
2012-2013	201270	Fall 2012	1	53	34	28	34	5	3.2	0.2	15.8	82.4%	58.8%
	Annual Yr Sum		**1**	**53**	**34**	**28**	**34**	**5**	**3.2**	**0.2**	**15.8**	**82.4%**	**58.8%**
2011-2012	201170	Fall 2011	1	73	46	39	46	14	4.3	0.2	21.4	84.8%	54.3%
	Annual Yr Sum		**1**	**73**	**46**	**39**	**46**	**14**	**4.3**	**0.2**	**21.4**	**84.8%**	**54.3%**
2010-2011	201070	Fall 2010	1	75	45	31	45	16	4.2	0.2	21.0	68.9%	60.0%
	Annual Yr Sum		**1**	**75**	**45**	**31**	**45**	**16**	**4.2**	**0.2**	**21.0**	**68.9%**	**60.0%**
2014-2015	201530	Spring 2015	1	43	25	21	25	0	2.3	0.2	11.6	84.0%	72.0%
	201470	Fall 2014	2	91	49	31	25	0	4.6	0.4	11.4	63.3%	55.1%
	Annual Yr Sum		**3**	**134**	**74**	**52**	**25**	**0**	**6.9**	**0.6**	**11.5**	**70.3%**	**60.8%**
2013-2014	201370	Fall 2013	1	54	20	17	20	5	1.9	0.2	9.3	85.0%	60.0%
	Annual Yr Sum		**1**	**54**	**20**	**17**	**20**	**5**	**1.9**	**0.2**	**9.3**	**85.0%**	**60.0%**
2012-2013	201270	Fall 2012	1	67	34	24	34	7	3.2	0.2	15.8	70.6%	52.9%
	Annual Yr Sum		**1**	**67**	**34**	**24**	**34**	**7**	**3.2**	**0.2**	**15.8**	**70.6%**	**52.9%**
2014-2015	201530	Spring 2015	1	44	34	31	34	0	2.3	0.1	17.5	91.2%	70.6%
	Annual Yr Sum		**1**	**44**	**34**	**31**	**34**	**0**	**2.3**	**0.1**	**17.5**	**91.2%**	**70.6%**

2014-2015	201530	Spring 2015	2	80	58	38	29	0	3.9	0.3	14.8	65.5%	50.0%
	Annual Yr Sum		**2**	**80**	**58**	**38**	**29**	**0**	**3.9**	**0.3**	**14.8**	**65.5%**	**50.0%**
2014-2015	201530	Spring 2015	1	23	11	7	11	0	0.7	0.1	5.6	63.6%	45.5%
	Annual Yr Sum		**1**	**23**	**11**	**7**	**11**	**0**	**0.7**	**0.1**	**5.6**	**63.6%**	**45.5%**
2014-2015	201530	Spring 2015	1	28	16	12	16	0	1.1	0.1	8.2	75.0%	68.8%
	201470	Fall 2014	1	55	30	23	30		2.0	0.1	15.2	79.3%	72.4%
	Annual Yr Sum		**2**	**83**	**46**	**35**	**23**	**0**	**3.1**	**0.3**	**11.7**	**77.8%**	**71.1%**
2013-2014	201430	Spring 2014	1	21	14	6	14	0	0.9	0.1	7.1	50.0%	41.7%
	201370	Fall 2013	1	51	26	18	26	3	1.7	0.1	13.1	94.7%	73.7%
	Annual Yr Sum		**2**	**72**	**40**	**24**	**20**	**3**	**2.7**	**0.3**	**10.1**	**77.4%**	**61.3%**
2012-2013	201330	Spring 2013	1	46	16	13	16	0	1.1	0.1	8.1	81.3%	56.3%
	201270	Fall 2012	1	53	30	14	30	3	2.0	0.1	15.1	46.7%	30.0%
	201250	Summer 2012	1	13	12	10	12	0	0.9	0.1	6.9	83.3%	58.3%
	Annual Yr Sum		**3**	**112**	**58**	**37**	**19**	**3**	**4.0**	**0.4**	**10.0**	**63.8%**	**43.1%**
2011-2012	201230	Spring 2012	1	51	25	20	25	5	0.8	0.3	2.9	80.0%	76.0%
	201170	Fall 2011	1	64	27	16	27	24	1.8	0.1	13.6	59.3%	48.1%
	Annual Yr Sum		**2**	**115**	**52**	**36**	**26**	**29**	**2.6**	**0.4**	**6.5**	**69.2%**	**61.5%**

2014-2015	201470	Fall 2014	1	46	16	15	16	0	1.1	0.1	8.1	100.0%	100.0%
	201450	Summer 2014	1	39	23	16	23	0	1.5	0.1	11.6	76.2%	76.2%
	Annual Yr Sum		**2**	**85**	**39**	**31**	**20**	**0**	**2.6**	**0.3**	**9.9**	**86.1%**	**86.1%**
2013-2014	201370	Fall 2013	1	48	19	18	19	3	1.3	0.1	9.5	69.2%	65.4%
	201350	Summer 2013	1	48	18	16	18	0	1.2	0.1	9.0	88.9%	83.3%
	Annual Yr Sum		**2**	**96**	**37**	**34**	**19**	**3**	**2.5**	**0.3**	**9.3**	**77.3%**	**72.7%**
2012-2013	201330	Spring 2013	2	62	30	25	15	1	2.0	0.3	7.5	83.3%	76.7%
	201270	Fall 2012	1	52	25	20	25	0	1.7	0.1	12.6	80.0%	68.0%
	201250	Summer 2012	1	16	13	12	13	0	0.5	0.1	3.9	100.0%	75.0%
	Annual Yr Sum		**4**	**130**	**68**	**57**	**17**	**1**	**4.2**	**0.5**	**7.9**	**85.1%**	**73.1%**
2011-2012	201230	Spring 2012	1	59	18	17	18	8	0.6	0.3	2.1	94.4%	94.4%
	201170	Fall 2011	1	59	21	20	21	17	1.4	0.1	10.6	95.2%	85.7%
	201150	Summer 2011	1	57	26	15	26	5	1.7	0.1	13.1	57.7%	50.0%
	Annual Yr Sum		**3**	**175**	**65**	**52**	**22**	**30**	**3.7**	**0.5**	**7.0**	**80.0%**	**73.8%**
2010-2011	201130	Spring 2011	3	81	54	52	18	0	3.8	0.4	9.6	94.5%	89.1%
	201070	Fall 2010	3	106	56	45	19	14	3.6	0.4	9.1	80.4%	66.1%
	201050	Summer 2010	1	56	36	30	36	2	2.4	0.1	18.1	81.1%	75.7%
	Annual Yr Sum		**7**	**243**	**146**	**127**	**21**	**16**	**9.9**	**0.9**	**10.6**	**85.8%**	**77.0%**
2014-2015	201530	Spring 2015	4	149	97	85	24	1	5.2	0.5	9.8	87.6%	74.2%

	201470	Fall 2014	5	174	109	95	22	2	7.4	0.7	10.6	88.0%	75.0%
	201450	Summer 2014	3	93	63	49	21	0	4.3	0.4	10.7	84.2%	71.9%
	Annual Yr Sum		**12**	**416**	**269**	**229**	**22**	**3**	**16.9**	**1.6**	**10.4**	**87.0%**	**74.0%**
2013-2014	201430	Spring 2014	3	110	72	65	24	21	5.0	0.5	9.3	82.3%	75.9%
	201370	Fall 2013	4	137	89	76	22	19	6.1	0.5	11.5	85.4%	71.9%
	201350	Summer 2013	3	99	67	54	22	8	4.6	0.4	11.4	80.6%	71.6%
	Annual Yr Sum		**10**	**346**	**228**	**195**	**23**	**48**	**15.6**	**1.5**	**10.7**	**83.0%**	**73.2%**
2012-2013	201330	Spring 2013	3	109	78	73	26	14	5.4	0.4	13.5	93.6%	83.3%
	201270	Fall 2012	3	102	65	57	22	19	4.5	0.4	11.4	89.1%	76.6%
	201250	Summer 2012	2	56	42	37	21	1	2.8	0.3	10.6	94.9%	76.9%
	Annual Yr Sum		**8**	**267**	**185**	**167**	**23**	**34**	**12.8**	**1.1**	**12.0**	**92.3%**	**79.6%**
2011-2012	201230	Spring 2012	3	107	89	71	30	16	6.2	0.5	11.7	78.9%	61.1%
	201170	Fall 2011	4	150	120	85	30	26	8.1	0.5	15.3	70.8%	60.8%
	201150	Summer 2011	2	54	49	37	25	6	3.4	0.3	12.8	77.1%	64.6%
	Annual Yr Sum		**9**	**311**	**258**	**193**	**29**	**48**	**17.7**	**1.3**	**13.3**	**74.8%**	**61.6%**
2010-2011	201130	Spring 2011	5	151	124	107	25	0	8.6	0.7	13.0	85.6%	76.0%
	201070	Fall 2010	5	153	120	98	24	17	8.3	0.7	12.5	79.7%	70.7%
	201050	Summer 2010	1	24	24	20	24	0	1.7	0.1	12.6	83.3%	54.2%
	Annual Yr Sum		**11**	**328**	**268**	**225**	**24**	**17**	**18.6**	**1.5**	**12.7**	**82.7%**	**71.7%**

Student Demographics Business Office Technology AS Degree

	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015	
	#	%	#	%	#	%	#	%	#	%
Female	174	76%	113	78%	123	77%	80	74%	181	79%
Male	54	24%	32	22%	37	23%	28	26%	4	21%
Unk	0	0%	0	0%	0	0%	0	0%	0	0%
Sum	228	100%	145	100%	160	100%	108	100%	185	100%

	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015	
	#	%	#	%	#	%	#	%	#	%
19 & Younger	40	18%	24	17%	15	9%	7	6%	24	10%
20-29	70	31%	55	38%	50	31%	48	44%	91	40%
30-39	49	21%	27	19%	44	28%	25	23%	60	26%
40 and older	69	30%	39	27%	51	32%	28	26%	55	24%
Sum										
Sum										

	2010-2011		2011-2012		2012-2013		2013-2014		2014-2015	
	#	%	#	%	#	%	#	%	#	%
Africian Amer	16	7%	9	6%	9	6%	10	9%	15	7%
Amer Indian	37	16%	10	7%	24	15%	5	5%	9	4%
Asian/Filipino/PacIslander	5	2%	6	4%	4	3%	3	3%	3	1%
Hispanic	44	19%	36	25%	47	29%	44	40%	80	35%
White	115	52%	73	50%	69	42%	42	39%	113	49%
Two or more races	10	4%	10	7%	6	4%	4	4%	10	4%
unknown	1	0%	1	1%	1	1%	0	0%	0	0%
Sum	228	100%	145	100%	160	100%	108	100%	230	100%

Business Office Technology

Awards (5 years)

	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Total
Business Office Technology AS	6	2	1	4	3	16
Business Office Technology Cert	1	0	5	1	1	8
Office Assistant I	1	1	n/a	n/a	n/a	2
Administrative Office Assistant Cert	n/a	n/a	5	0	2	7
Office Clerk Certificate	1	0	7	1	6	15
Total Awards	9	3	18	6	12	48

Student Learning Outcomes

BSAD C070 Business

Course: BSAD C070 Business Mathematics
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome: Perform basic ten-key touch operations using an electronic calculator
Target of Performance: 85%
Learning Outcome: Perform basic ten-key touch operations using an electronic calculator
Assessment Tool/Scoring Method: an exam
Changes Made Since Last Assessment: Not applicable. This is the first assessment to be recorded in Curricunet. However, the course was assessed the previous fall and after faculty reflection the choice was made to move to a new textbook that enabled better use of technology for recording of assignments and tests to allow faster and more plentiful feedback to the students on their ability to correctly answer business math questions. Prior to Fall 2011, all key assignments were graded manually by the instructor and all chapter assignments were self-checked by the student from answer keys. Students have always been required to send in their paper tapes.
Assessment Plan: All exams in the course require use of a ten-key calculator. Students are required to send the physical paper tapes to the faculty for all assignments and exams in the course, both in the middle and near the end of the course.
Assessment Results:
Results: 100% of students completing the course, even those who did not succeed with the course, were at least able to achieve this outcome. Some rather creative means of rolling, folding, and packaging were evidenced by the receipt of paper tapes from all students in the course.
Analysis and Plan for Improvement and Reassessment: The strategy for creating a learning environment for students to achieve this outcome are good and will not be changed. Students learn how to use a ten-key desktop printing calculator and send paper tapes in as one form of evidence. Students will continue to be required to submit paper tapes as evidence.
Participants: Karen O'Connor
Attachments:
Calculate discounts, markups, percents and prorate
Basic Information:
Course: BSAD C070 Business Mathematics
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active

Learning Outcome:
Target of Performance: 80%
Learning Outcome: Calculate discounts, markups, percents and prorate
Assessment Tool/Scoring Method: an exam

Assessment Plan:
Changes Made Since Last Assessment: not applicable
Assessment Plan: Exam questions from chapters six, seven, and eight, on the topics of discounts, markups, percentages, and pro-rating are used to determine success with this outcome.
Assessment Results:
Results: 24 out of 29 students (82%) completing the course were able to meet outcomes for this section but six students did not complete all elements of this assessment. Six further students did not earn a C overall and did not complete the assessed sections of the course.
Analysis and Plan for Improvement and Reassessment: This outcome is planned for reassessment in four years. A master rubric of all outcomes and questions in the course that can be used to measure the entire list of outcomes will be prepared to facilitate future assessment.
Participants: Karen O'Connor

Basic Information:
Course: BSAD C070 Business Mathematics
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome: Perform banking, depreciation, and payroll calculations
Target of Performance: 90%
Learning Outcome: Perform banking, depreciation, and payroll calculations
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: The payroll portion of this assessment takes place in the test for Chapter 9 CengageNow Contemporary Mathematics for Business.
The Banking portion of this assessment takes place in Chapter 4 CengageNow Contemporary Mathematics for Business.
The depreciation portion of this assessment takes place in Chapter 15 of the CengageNow ContemporaryMathematics for Business.
Assessment Results:
Results: 96% (28/29) successfully completed the Banking outcome from Chapter 4.
90% (26/20) successfully completed the Payroll outcome assessment from Chapter 9.
23/29 (80%) successfully completed the Depreciation outcome from Chapter 15. The six who did not complete the question are the same six who did not succeed with the outcome.
All students who completed the question were successful.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time, but the course will be assessed in two years anyway because the outcomes may be updated by that time.
Participants: Karen O'Connor

Basic Information:
Course: BSAD C070 Business Mathematics
College: Cerro Coso College

Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Calculate and explain mortgage types, installment payments and amortization
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This assessment is measured in Chapter 13 and 14 of Contemporary Mathematics for business. Questions on the final test for this section measure summative success with the outcome. 25/29 (86%) students succeeded with this outcome. Four of the 29 never attempted the questions and only one of the 29 attempted the questions but did not complete in a satisfactory manner. 24 of 25 (96%) completed in a satisfactory manner indicating that this outcome was met.
Assessment Results:
Results: This assessment is measured in Chapter 13 and 14 of Contemporary Mathematics for business. Questions on the final test for this section measure summative success with the outcome. 25/29 (86%) students succeeded with this outcome. Four of the 29 never attempted the questions and only one of the 29 attempted the questions but did not complete in a satisfactory manner. 24 of 25 (96%) completed in a satisfactory manner indicating that this outcome was met
Analysis and Plan for Improvement and Reassessment: This outcome will be measured again in the fall of 2014.
Participants: Karen O'Connor

Basic Information:
Course: BSAD C070 Business Mathematics
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Calculate cost of inventory using different methods
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This section is measured in Job 9 of the Calculators Printing and Display text Question 47 - 50 and in Chapter 16 of the Contemporary Mathematics text.
Assessment Results:
Results: 96% of students completing the questions measuring this outcome were successful.
Analysis and Plan for Improvement and Reassessment: This outcome will be assessed again in two years.
Participants: Karen O'Connor
Attachments:
Define corporate investment, shares of stock, shareholders, dividends, and stock exchange

Basic Information:
Course: BSAD C070 Business Mathematics
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Define corporate investment, shares of stock, shareholders, dividends, and stock exchange
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This outcome is measured in Job 24 of the Calculators Printing and Display text.
Assessment Results:
Results: 96% of students completing this measurement met the outcome.
Analysis and Plan for Improvement and Reassessment: This assessment will be measured again in two years because an alternate form of measurement will be used from chapter 20 of the Contemporary Math for Business Text.
Participants: Karen O'Connor
Attachments:
Explain and calculate simple, compound, true interest,

Basic Information:
Course: BSAD C070 Business Mathematics
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Explain and calculate simple, compound, true interest,
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This outcome is measured in Chapter 10 of the Contemporary Mathematics for Business text using CengageNow and the test for Chapter 10.
Assessment Results:
Results: 22 of 26 students enrolled in the course took the test measuring this outcome. 20 of 22 (91%) succeeded in meeting this outcome.
Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed in two years.
Participants: Karen O'Connor
Identify and Convert between International System of Measurement Units (SI) and units of the U.S. Customary System (USCS)

Basic Information:
Course: BSAD C070 Business Mathematics
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 85%
Learning Outcome: Identify and Convert between International System of Measurement Units (SI) and units of the U.S. Customary System (USCS)
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This outcome is measured in Job 18 of the Calculators Printing and Display text. Students send the paper tape of their test results.
Assessment Results:
Results: 100% of students completing the assessment were successful.
Analysis and Plan for Improvement and Reassessment: When this outcome is measured again in two years, the CengageNow technology will be used.
Participants: Karen O'Connor

BSAD C072 Introduction to Accounting
Explain, identify and record, increases and decreases in General Ledger accounts.
Basic Information:
Course: BSAD C072 Introduction to Accounting
College: Cerro Coso College
Assessment Term: Spring, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Explain, identify and record, increases and decreases in General Ledger accounts.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a
This assessment has always been measured by a comprehensive project and at least 90% of the class is successful.
Assessment Plan: This outcome is measured in a summative way in the comprehensive project at the end of Chapter 6 in the Heintz and Parry Accounting text using Cengage Now.
Assessment Results:
Results: Seven out of Eight students were successful on the first try during the measurement of this outcome during completion of the comprehensive mid-term period one and two.
Analysis and Plan for Improvement and Reassessment: This outcome is measured in many ways but the best way is through completion of the accounting process in the comprehensive mid-term.
Participants: Karen O'Connor

Attachments:
Accurately prepare documents in the "Accounting Cycle".

Basic Information:
Course: BSAD C072 Introduction to Accounting
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Accurately prepare documents in the "Accounting Cycle".
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: This outcome is always measured through a comprehensive project.
Assessment Plan: This outcome is measured in a summative way in the comprehensive project at the end of Chapter 6 in the Heintz and Parry Accounting text using Cengage Now.
Assessment Results:
Results: 88% of students were successful in meeting this outcome.
Analysis and Plan for Improvement and Reassessment: This outcome will be repeated in three years. The model used to lead students to success with this outcome is very good and allows for repetition and remediation if the outcome is not met at the first comprehensive project attempt. The outcome is measured at the mid-point of the course to allow time for remediation with any students who require additional help.
Participants: Karen O'Connor
Attachments:
Accurately process source documents.

Basic Information:
Course: BSAD C072 Introduction to Accounting
College: Cerro Coso College
Assessment Term: Spring, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Accurately process source documents.
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This outcome is measured in a summative way in the comprehensive project at the end of Chapter 6 in the Heintz and Parry Accounting text using Cengage Now.
Assessment Results:

Results: 100% of students completing the comprehensive project were able to succeed with this outcome. The class during semester this is measured was a small class so this outcome will be measured again in three years.

Analysis and Plan for Improvement and Reassessment: The class was small and there was 100% success so the outcome will be measured again in three years.

Participants: Karen O'Connor

Attachments:

Prepare and record information.

Basic Information:

Course: BSAD C072 Introduction to Accounting

College: Cerro Coso College

Assessment Term: Fall, 2012

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 90%

Learning Outcome: Prepare and record information.

Assessment Tool/Scoring Method: an exam

Assessment Plan:

Changes Made Since Last Assessment: n/a

Assessment Plan: This assessment will be re-written because it is ambiguous but the outcome is measured in many ways during the comprehensive mid-term.

Assessment Results:

Results: 100% of students completing the Comprehensive project were able to meet this outcome successfully.

Analysis and Plan for Improvement and Reassessment: This outcome will be re-written to remove ambiguity and will be reassessed in three years.

Participants: Karen O'Connor

Attachments:

Analyze and accurately record closing transactions.

Basic Information:

Course: BSAD C072 Introduction to Accounting

College: Cerro Coso College

Assessment Term: Spring, 2012

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 90%

Learning Outcome: Analyze and accurately record closing transactions.

Assessment Tool/Scoring Method: an exam

Assessment Plan:

Changes Made Since Last Assessment: n/a

Assessment Plan: This outcome is measured during comprehensive projects in the course. 88% of the students were successful in meeting this outcome on the first comprehensive project. Since there were only eight students taking the class at this time, the one student who did not succeed the first time was given extra help and eventually did meet the outcome.

Assessment Results:

Results: This outcome is measured during comprehensive projects in the course. 88% of the students were successful in meeting this outcome on the first comprehensive project. Since there were only eight students taking the class at this time, the one student who did not succeed the first time was given extra help and eventually did meet the outcome.

Analysis and Plan for Improvement and Reassessment: This assessment will be repeated in three years because spring 2012 was a small class. The method of measurement is very good so the actual measurement does not need to be revised.

Participants: Karen O'Connor

BSAD C145 Business Communication

Basic Information:

Course: BSAD C145 Business Communication

College: Cerro Coso College

Assessment Term: Spring, 2011

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 75%

Learning Outcome: Explain and apply the principles, techniques, and strategies of effective business communication and how to apply those principles at work, in teams, and in a multi-cultural business environment.

Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: n/a

Assessment Plan: This outcome is assessed in the test for Unit 5 in Essentials of Business Communication Guffy 8e.

Assessment Results:

Results: 75% of students were successful with meeting this outcome.

Analysis and Plan for Improvement and Reassessment: Although the success was reasonable, this course is part of the Business Office Technology program which has since been revised to include an introductory course BSOT C100, part of which will include an introduction to Business English by use of the How12 text. This introduction of the importance of writing skills at an early stage in the program will mean that students will have a greater success with Business Communication. For this reason, this outcome will be reassessed in Spring 2013 for those who first take BSOT C100 in the fall of 2012.

Participants: Karen O'Connor

Basic Information:

Course: BSAD C145 Business Communication

College: Cerro Coso College

Assessment Term: Fall, 2012

Status: Active

Co-contributors:
Learning Outcome:
Target of Performance: 85%
Learning Outcome: Prepare business communication including letters, reports, presentations, and other messages that are clear, concise, courteous, complete and grammatically correct.
Assessment Tool/Scoring Method: Other(Written assignments)
Assessment Plan:
Changes Made Since Last Assessment: Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business.
Assessment Plan: These elements will be measured through projects assigned. Students write a good news letter, a bad news letter, a complaint letter, an informal report, an outline for a formal report, and create a presentation.
Assessment Results:
Results: 70% of students completing the projects were able to successfully meet this outcome. (26/37) However, nine of the 26 were only minimally able to meet this outcome with a C.
Analysis and Plan for Improvement and Reassessment: Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the next spring offering of the course and should include some students who will have taken the preparatory class BSOT C100.
Participants: Karen O'Connor

Basic Information:
Course: BSAD C145 Business Communication
College: Cerro Coso College
Assessment Term: Spring, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 85%
Learning Outcome: Critique oral communication skills to determine effective techniques.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a

Assessment Plan: Students complete an oral presentation outline and explain why elements are chosen. This is part of

Chapter 12 assignments from the Essentials of Business Communication Guffy Text 8e.

Assessment Results:

Results: 70% of students completing the projects were able to successfully meet this outcome. (26/37) However, nine of the 26 were only minimally able to meet this outcome with a C.

Analysis and Plan for Improvement and Reassessment: Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the next spring offering of the course and should include some students who will have taken the preparatory class BSOT C100.

Participants: Karen O'Connor

Basic Information:

Course: BSAD C145 Business Communication

College: Cerro Coso College

Assessment Term: Spring, 2011

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 85%

Learning Outcome: Plan and produce visual aids using presentation software.

Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: n/a

Assessment Plan: Students complete a PowerPoint presentation.

Assessment Results:

Results: 70% of students completing the projects were able to successfully meet this outcome. (26/37) However, nine of the 26 were only minimally able to meet this outcome with a C.

Analysis and Plan for Improvement and Reassessment: Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the next spring offering of the course and should include some students who will have taken the preparatory class BSOT C100.

Participants: Karen O'Connor

Basic Information:

Course: BSAD C145 Business Communication
College: Cerro Coso College
Assessment Term: Spring, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 85%
Learning Outcome: Identify appropriate strategies for resume writing including use of electronic media.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Although measurement of this outcome has not previously been recorded in Curricunet, success with the outcome has been observed to be lower than desired during past offerings of the course. Students with low written English skills have a very difficult time succeeding with this outcome. Since the course is in the BSAD discipline, there was an advisory, not a pre-requisite, of level one writing skills. It appears students often ignored this advisory. Additionally, the new BSOT C100 Intro to Business Office Technology will now introduce pre-requisite skills and the importance of good writing skills in business. This outcome will be reassessed during the next spring offering of the course and should include some students who will have taken the preparatory class BSOT C100.
Assessment Plan: Students create a resume.
Assessment Results:
Results: 70% of students completing the assignment were able to successfully meet this outcome. (26/37) However, nine of the 26 were only minimally able to meet this outcome.
Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed in Spring 2013.
Participants: Karen O'Connor

Course: BSAD C145 Business Communication
College: Cerro Coso College
Assessment Term: Spring, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 85%
Learning Outcome: Practice effective business communication techniques in independent and group projects.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This outcome is measured throughout the course for independent writing projects and in unit five for the group component. See section 11.11 for Improving telephone role playing assignment completed with a small group.
Assessment Results:
Results: 70% of students completing the projects were able to successfully meet this outcome. (26/37) However, nine of the 26 were only minimally able to meet this outcome with a C for these projects.
Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed two years after the original assessment in Spring 2013. **Participants:** Karen O'Connor

BSAD C100 Introduction to Business Office Technology

Describe the skills, knowledge, attitudes, and traits employers expect in an entry level office clerk or administrative assistant as presented in the Business Office Technology certificates and degree.

Basic Information:

Course: BSOT C100 Introduction to Business Office Technology

College: Cerro Coso College

Assessment Term: Fall, 2012

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 95%

Learning Outcome: Describe the skills, knowledge, attitudes, and traits employers expect in an entry level office clerk or administrative assistant as presented in the Business Office Technology certificates and degree.

Assessment Tool/Scoring Method: an exam, scored by rubric

Assessment Plan: Students are assessed through chapter quizzes.

Changes Made Since Last Assessment:

Assessment Plan: Elements described in this outcome will be assessed by an exam.

Assessment Results: 95% succeeded with this outcome.

Results: To be assessed during the next assessment cycle.

Analysis and Plan for Improvement and Reassessment: N/A

Participants: Karen O'Connor

Course: BSOT C100 Introduction to Business Office Technology

College: Cerro Coso College

Assessment Term: Fall, 2012

Status: Active

Co-contributors: April Browne,

Learning Outcome:

Target of Performance: 90%

Learning Outcome: Demonstrate appropriate use of reference resources and problem solving skills for effective completion of office tasks requiring preparation of documents.

Assessment Tool/Scoring Method: an exam, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment:

Assessment Plan: Students are assessed through chapter assignments.

Assessment Results: 95% of students succeeded with this outcome.

Results:

Analysis and Plan for Improvement and Reassessment: This outcome will be assessed in the next assessment cycle.

Participants: Karen O'Connor

Attachments:

Apply essential business English conventions, including punctuation, parts of speech, and grammar skills, to effective written office communication.

Basic Information:
Course: BSOT C100 Introduction to Business Office Technology
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors: Matthew W. Hightower,
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Apply essential business English conventions, including punctuation, parts of speech, and grammar skills, to effective written office communication.
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This is assessed through assignments and a final exam.
Assessment Results: 90% succeeded with this outcome.
Analysis and Plan for Improvement and Reassessment: This outcome will be assessed in the next assessment cycle.
Participants: Karen O'Connor

CSCI C121 Beginning Word
Basic Information:
Course: CSCI C121 Beginning Word
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Apply basic word processing formatting features to create, edit, merge, and print documents including business and cover letters, multiple page reports, newsletters.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.
Assessment Plan: Students prepare Word documents that are scored by rubrics including: letters, reports, newsletters, merged documents, multiple page reports.
Assessment Results:
Results: 100% of students completing the projects were successful with meeting this outcome. 85% of students enrolled in the course (12 of 14) completed the required projects.
Analysis and Plan for Improvement and Reassessment: No improvement is required for students who complete the measurement.

Sixteen projects are graded, and four of the advanced project rubrics are attached, one for each level of the materials.
Participants: Karen O'Connor

Basic Information:
Course: CSCI C121 Beginning Word
College: Cerro Coso College
Assessment Term: Spring, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Manage files and folders for efficient saving and retrieval of word processing documents.
Assessment Tool/Scoring Method: an observation, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: not applicable
Assessment Plan: Students must be able to download a zipped file and unzip it to a folder. Students must be able to save the course files in the folders named something like "My Word Class Spring 2012" and then in the folders named Tutorial One, Tutorial Two, Tutorial Three, Tutorial Four (for example).
Assessment Results:
Results: Although 100% of students can manage files and folders some of the time and with direction, not all students can manage files and folders to the degree desired all of the time. Measurement of this outcome is an ongoing project.
Analysis and Plan for Improvement and Reassessment: Faculty plan to share a written set of instructions that enable students to learn file management skills that are included in the advisory but ignored by many.
Participants: Karen O'Connor
Heather Freeman

Basic Information:
Course: CSCI C121 Beginning Word
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors: Heather D. Freeman,
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Apply basic features of working with images, graphics, Smart Art, and Word Art in documents including inserting, cropping, drawing, and resizing,
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.

Assessment Plan: A project includes creation and insertion of graphics including cropping and resizing. The project is repeated three times. A rubric showing the assessment for the final instance is attached.
Assessment Results:
Results: 20 of 25 students enrolled in an online class and 12 of 14 students enrolled in an on campus class met this outcome.
All students who attempted this project were successful, both online and on campus.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time.
Participants: Karen O'Connor
Heather Freeman

Basic Information:
Course: CSCI C121 Beginning Word
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors: Heather D. Freeman,
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of basic documents using Microsoft Office.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment:
Assessment Plan: Students are required to write critical thinking reports to describe a problem that is encountered, four times in the course. Elements include: Problem, Resources used, and Solution.
Assessment Results:
Results: 20 of 25 students in the online class and 12 of 14 students in the on campus class were successful with meeting this outcome. All students who attempted the outcome were successful.
Analysis and Plan for Improvement and Reassessment: Although students have good success with this outcome, it sometimes takes a while to catch on. Therefore, more examples are being created and a rubric will be further developed to let the students know what is expected.
Participants: Karen O'Connor
Heather Freeman

CSCI C123 Beginning Excel
Plan, create, edit, and print Excel spreadsheet files using basic spreadsheet features for cells, worksheets, and workbooks.
Basic Information:
Course: CSCI C123 Beginning Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:

Target of Performance: 95%
Learning Outcome: Plan, create, edit, and print Excel spreadsheet files using basic spreadsheet features for cells, worksheets, and workbooks.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.
Assessment Plan: Students complete Excel documents that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered on campus at KRV (12), on campus at IWV (13) and online (30). 49 of 56 (88%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need to improve the method of assessment at this time.
Participants: Karen O'Connor
Kathy Bultman
Jackie Krause

Basic Information:
Course: CSCI C123 Beginning Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95
Learning Outcome: Work with formulas and functions in an Excel spreadsheet.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Excel 2003 to Excel 2007 to Excel 2010.
Assessment Plan: Students complete Excel documents that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered on campus at KRV (12), on campus at IWV (13) and online (30). 49 of 56 (88%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need to modify this assessment tool.
Participants: Karen O'Connor
Kathy Bultman
Jackie Krause

Basic Information:
Course: CSCI C123 Beginning Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95% will meet the outcome.
Learning Outcome: Work with a variety of charts and graphs to represent data in an Excel spreadsheet.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Excel 2003 to Excel 2007 to Excel 2010.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered on campus at KRV (12), on campus at IWV (13) and online (30). 49 of 56 (88%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need for improvement of this assessment tool.
Participants: Karen O'Connor
Kathy Bultman
Jackie Krause
Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of basic documents using Microsoft Excel.
Basic Information:
Course: CSCI C123 Beginning Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95% will meet this outcome.
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of basic documents using Microsoft Excel.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least two years.
Assessment Plan: Students are required to complete Critical Thinking Reports four times during the course, usually once after each of the four tutorials. These reports are submitted in memorandum format using Word. Elements include: Problem, Resources Used, and Solution. Students are required to use complete sentences and are graded on content, grammar, and spelling.

Assessment Results:

Results: This course was offered on campus at KRV (12), on campus at IWV (13) and online (30). 49 of 56 (88%) students met success with this outcome. The students who did not succeed with this outcome did not complete the Critical Thinking report. 100% of students attempting the report were successful.

Analysis and Plan for Improvement and Reassessment: There is no need to revise the tool used for assessment of this outcome.

Participants: Karen O'Connor

Kathy Bultman

Jackie Krause

CSCI C125 Beginning Access

Apply a basic understanding of relational database concepts and structure to create a new database and define relationships between tables.

Basic Information:

Course: CSCI C125 Beginning Access

College: Cerro Coso College

Assessment Term: Summer, 2011

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 95%

Learning Outcome: Apply a basic understanding of relational database concepts and structure to create a new database and define relationships between tables.

Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Access 2003 to Access 2007 to Access 2010.

Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This outcome is introduced in Tutorial One and mastered in Tutorial Two.

Assessment Results:

Results: 100% of the students completing this course were able to succeed with this outcome. This is extremely typical for students who complete the projects used for this measurement tool.

Analysis and Plan for Improvement and Reassessment: There is no need for assessment at this time.

Participants: Karen O'Connor

Basic Information:

Course: CSCI C125 Beginning Access

College: Cerro Coso College

Assessment Term: Fall, 2011

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 95% will succeed with this outcome.

Learning Outcome: Manage a database including backup, compacting, and converting.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This outcome is mastered in Tutorial One.
Assessment Results:
Results: This course was offered online and 100% of students succeeded with this outcome. This is highly typical of students who attempt the project used to measure this outcome.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor

Course: CSCI C125 Beginning Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Plan, design, build, modify, and print basic database tables, forms, queries, and reports.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This outcome is measured in four Tutorials in the course. The rubrics are attached.
Assessment Results:
Results: 100% of the students completing the course met this outcome. This is highly typical of students who attempt the projects used to measure this outcome.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor

Course: CSCI C125 Beginning Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Apply guidelines for designing databases and tables and for field properties including primary key.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:

Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This outcome is measured during Tutorial One.
Assessment Results:
Results: 100% of the students completing the project used to measure this outcome were successful. This is highly typical in online and on campus classes alike.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time.
Participants: Karen O'Connor

Basic Information:
Course: CSCI C125 Beginning Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of enhanced database objects using Microsoft Access.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students are required to complete Critical Thinking Reports four times during the course, usually one after each of the four tutorials. These reports are posted to forums and are submitted in memorandum format using Word. Elements include: Problem, Resources Used, and Solution. Students are required to use complete sentences and are graded on content, grammar, and spelling.
Assessment Results:
Results: 100% of students completing this report were successful, but the writing level could be improved. 100% of the students completing the course were successful with this outcome.
Analysis and Plan for Improvement and Reassessment: This outcome includes writing, so it will be reassessed in two years.
Participants: Karen O'Connor
Attachments:

CSCI C127 MS Power Point
Use the basic features of Microsoft PowerPoint including slide show creation, editing, and a variety of formatting tools.
Basic Information:
Course: BSOT C127 MS PowerPoint
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active

Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Use the basic features of Microsoft PowerPoint including slide show creation, editing, and a variety of formatting tools.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable since this is the first assessment to be recorded in Curricunet.
Assessment Plan: Students show ability to use skills by creating a unique PowerPoint presentation. This is done as a mid-term project and is revised for the final project.
Assessment Results:
Results: 100% of students completing this project were able to succeed with this outcome. 95% of students completing the course were successful. The usual offering is for one section of this course is taught online in any given semester.
Analysis and Plan for Improvement and Reassessment: The strategy for presenting techniques for skills as named in this outcome works very well and does not need to be altered. Prior to this assessment, the mid-term was changed from a canned project to a unique project and this has added an element of creativity and interest to the assessment. This wasn't done in any particular response to measuring an outcome. Instead, the change was based on reflection by the faculty teaching the course.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C127 MS PowerPoint
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Use other basic features including table creation, graphic insertion, printing and file management.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: This is not applicable as there was no prior assessment recorded in Curricunet. The results are consistent with all prior unrecorded assessments.
Assessment Plan: Students complete a project that includes table creation, graphics, printing and file management, and this project is graded by a rubric and then upload files to the Moodle server.
The project takes place near the end of the course.
Assessment Results:
Results: 100% of students completing the assessment were able to meet this outcome with a C or better.
Analysis and Plan for Improvement and Reassessment: The strategy for presentation of the learning environment in which the students can achieve success with this outcome is very successful. Students learn the skills in a tutorial that is supported by lecture notes, presentations, and discussion forums.

Success with learned skills is then reinforced in a Review and then the assessment is measured during a Case Project that resembles a real world application. There is no need to redesign the process or assessment at this time.

Participants: Karen O'Connor
(Previously Kathy Bultman used the same strategy and assessment tools).

Basic Information:
Course: BSOT C127 MS PowerPoint
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of PowerPoints using Microsoft Office.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: This is not applicable as there was no prior record of assessment in Curricunet. However, this assessment has been built into all applications course over the past two to three years, based on reflection by the faculty that students need to have positive tangible reinforcement of focus on problem solving skills and also the value of writing skills in the workplace.
Assessment Plan: Students are required to submit Critical Thinking Reports four times during the course. These reports are presented in memorandum format and contain sections on Problem, Resources, and Solution, in the body. A minimum of 50 words is required to describe the problem and the solution and complete sentences are required throughout. This exercise honors the trouble shooting and problem solving skills required while using computer application programs in the workplace. Writing skills are also emphasized for their value in the workplace. The target is high at 90% and the only thing keeping the target from being higher is the writing skills element. All students do problem solve in the course even though all students may not be able to articulate the event in words as well as is desired.
Assessment Results:
Results: 95% of students completing the course in Spring 2012 were able to succeed with this outcome at least one and up to four times during the course. The assessment is presented four times during the course.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess, but the grading rubric for assessment of this outcome will be revised to show a memorandum format with expected criteria to be shown in a one page sample for students to review. This will speed up the learning of what is expected for this assignment and reduce the need for lengthy feedback on the format and content.
Participants: Karen O'Connor

CSCI C127 MS Outlook
Basic Information:
Course: CSCI C129 Microsoft Outlook
College: Cerro Coso College
Assessment Term: Spring, 2012

Status: Launched
Co-contributors: Thomas F. McGovern,
Learning Outcome:
Target of Performance: 80%
Learning Outcome: Compose, edit, attach, send, reply, and print electronic mail. This will be measured by an exam.
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: No changes have been made since the last assessment.
Assessment Plan: This outcome will be measured in the chapter one quiz.
Assessment Results:
Results: This outcome was measured by the chapter one quiz that resulted in a 92.76 average grade for 32 students with four students failing to obtain a passing grade (70%), three of whom did not attempt the exam.
Analysis and Plan for Improvement and Reassessment: There is no need for revision of assessment for this outcome.
Participants: Tom McGovern

Basic Information:
Course: CSCI C129 Microsoft Outlook
College: Cerro Coso College
Assessment Term: Spring, 2012
Status: Launched
Co-contributors: Thomas F. McGovern,
Learning Outcome:
Target of Performance: 85%
Learning Outcome: Customize files, folders, and various areas of Outlook for efficient saving and retrieval. This will be assessed through a final project, as evaluated by a rubric.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: No changes have been made since the last assessment of this outcome.
Assessment Plan: This outcome was measured by two projects including 64 tasks from Chapter One.
Assessment Results:
Results: This outcome was measured by two projects for 64 total assignments from chapter one that resulted in an average grade of 95.32 with four assignments not submitted. Every student submitting assignments obtained a passing grade (70%).
Analysis and Plan for Improvement and Reassessment: There is no need to improve on the means of assessing this outcome at this time.
This outcome will be reassessed in three years.
Participants: Tom McGovern

Basic Information:
Course: CSCI C129 Microsoft Outlook
College: Cerro Coso College

Assessment Term: Spring, 2012
Status: Launched
Co-contributors: Thomas F. McGovern,
Learning Outcome:
Target of Performance: 85% will succeed with this outcome.
Learning Outcome: Create and modify contacts, electronic business cards, distribution lists, and secondary address books. This will be assessed through a final project, as evaluated by a rubric.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: No changes have been made since the last assessment.
Assessment Plan: This outcome will be assessed by two projects including 64 tasks presented in Chapter One.
Assessment Results:
Results: This outcome was measured by two projects for 64 total assignments from chapter one that resulted in an average grade of 92.19 with five assignments not submitted. Every student submitting assignments obtained a passing grade (70%).
Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed in three years.
Participants: Tom McGovern

Basic Information:
Course: CSCI C129 Microsoft Outlook
College: Cerro Coso College
Assessment Term: Spring, 2012
Status: Launched
Co-contributors: Thomas F. McGovern,
Learning Outcome:
Target of Performance: 85% will succeed with this outcome.
Learning Outcome: Develop and Manage appointments, meetings, events, tasks, and shared calendars. This will be assessed through a final project, as evaluated by a rubric.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: No changes have been made since the last assessment.
Assessment Plan: This outcome was assessed through 32 tasks from Chapter Two of the current text.
Assessment Results:
Results: This outcome was measured by a project for 32 total assignments from chapter two that resulted in an average grade of 81.25 with six assignments not submitted. Every student submitting assignments obtained a passing grade (70%).
Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed in three years.
Participants: Tom McGovern

Basic Information:
Course: CSCI C129 Microsoft Outlook
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Launched

Co-contributors: Thomas F. McGovern,
Learning Outcome:
Target of Performance: 85% of students will succeed with this outcome.
Learning Outcome: Apply appropriate problem solving techniques using the Help, Find, and Rule functions. This will be assessed through a final project, as evaluated by a rubric.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: No changes have been made since the last assessment.
Assessment Plan: This outcome will be assessed through a project in chapter two.
Assessment Results:
Results: This outcome was measured by a project for 32 total assignments from chapter two that resulted in an average grade of 93.75 with two assignments not submitted. Every student submitting assignments obtained a passing grade (70%).
Analysis and Plan for Improvement and Reassessment: This outcome will be assessed again in three years.
Participants: Tom McGovern

Basic Information:
Course: CSCI C129 Microsoft Outlook
College: Cerro Coso College
Assessment Term: Spring, 2012
Status: Launched
Co-contributors: Thomas F. McGovern,
Learning Outcome:
Target of Performance: 85 % of students will succeed with this outcome.
Learning Outcome: Demonstrate preparedness for the Microsoft Outlook certification exam. This will be measured by an exam.
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: No changes have been made since the last assessment.
Assessment Plan: This outcome will be measured by the chapter two quiz. This is not a complete preparation for the certification
Assessment Results:
Results: This outcome was partially measured by the chapter two quiz that resulted in a 90.00 average grade with seven students failing to obtain a passing grade (70%), four of whom did not attempt the exam. This, however, was not a complete preparation for the certification exam but that has been rectified for follow-on classes with a newer, more comprehensive text.
Analysis and Plan for Improvement and Reassessment: The text is being changed so we can better assess this outcome. The outcome will be reassessed the next time the course is offered.
Participants: Tom McGovern

BSOT 131 Basic Computer Keyboarding
Key straight-copy alphanumeric material including symbols and punctuation using correct touch techniques at a minimum rate of 15 words per minute (wpm) with 4 or few errors on a 2-minute timing.
Basic Information:

Course: BSOT C131 Basic Computer Keyboarding
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors: Heather D. Freeman, Matthew W. Hightower,
Learning Outcome:
Target of Performance: 98% of students will be able to meet this outcome.
Learning Outcome: Key straight-copy alphanumeric material including symbols and punctuation using correct touch techniques at a minimum rate of 15 words per minute (wpm) with 4 or few errors on a 2-minute timing.
Assessment Tool/Scoring Method: a demonstration, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment:
Assessment Plan: Students demonstrate proficiency with speed and accuracy to the level required in the outcome by completing two-minute timed writings in the software program Keyboarding Pro Deluxe.
Assessment Results:
Results: 100% of the class met the required outcome on three or more two-minute timed writings.
Analysis and Plan for Improvement and Reassessment: Faculty will continue to monitor student progress by reviewing the data submitted to the Keyboarding Pro Deluxe server throughout the time BSOT C131 is offered both online and on campus when available.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C131 Basic Computer Keyboarding
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors: Heather D. Freeman,
Learning Outcome:
Target of Performance: 96
Learning Outcome: Identify and perform correct ergonomics for body position at a workstation.
Assessment Tool/Scoring Method: a demonstration, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment:
Assessment Plan: The students demonstrate correct chair height and placement of the body at the keyboard including correct use of home row fingering.
Assessment Results:
Results: Based on results of the two-minute timed writings 100% of students were able to demonstrate correct ergonomics at the keyboard by the end of the course.
Analysis and Plan for Improvement and Reassessment: Assessment of this outcome would be assisted by observation in the on ground environment and a survey in the online environment.
Participants: Karen O'Connor

BSOT 132 Basic Computer Keyboarding

Key straight-copy alphanumeric material using correct touch techniques at a minimum rate of 30 words per minute (wpm) with 5 or few errors on a 3-minute timing.

Basic Information:

Course: BSOT C132 Inter Computer Keyboarding

College: Cerro Coso College

Assessment Term: Fall, 2011

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 96%

Learning Outcome: Key straight-copy alphanumeric material using correct touch techniques at a minimum rate of 30 words per minute (wpm) with 5 or few errors on a 3-minute timing.

Assessment Tool/Scoring Method: a demonstration, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: first assessment n/a

Assessment Plan: Students complete three-minute timed writings using the software Keyboarding Pro Deluxe, which sends all results to a server that the faculty can observe for feedback and assessment. Students are observed over the period of the course and the best three timed writings are considered to determine whether this outcome is met.

Assessment Results:

Results: 100% of the students in Fall 2011 were able to demonstrate that this outcome was acheived.

Analysis and Plan for Improvement and Reassessment: Faculty will continue to monitor this outcome in every offering of the class.

Participants: Karen O'Connor

Basic Information:

Course: BSOT C132 Inter Computer Keyboarding

College: Cerro Coso College

Assessment Term: Fall, 2011

Status: Active

Co-contributors:

Learning Outcome:

Target of Performance: 96%

Learning Outcome: Key numeric copy using correct touch typing techniques on the 10-key numeric keypad with increased speed and accuracy.

Assessment Tool/Scoring Method: a demonstration, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: Not applicable - first assessment.

Assessment Plan: A lesson on the 10-key is included in the Keyboarding Pro Deluxe program. The results are sent to the server and observed by the faculty teaching the course.

Assessment Results:

Results: 100% of the students were able to meet this outcome.

Analysis and Plan for Improvement and Reassessment: The assessment of this outcome is measured by performance on drills scattered throughout the lessons over the course. This outcome will be

reviewed in the next update of the course because it is also covered in BSAD C070 Business Mathematics and is duplicated here.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C132 Inter Computer Keyboarding
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 100%
Learning Outcome: Identify and perform correct ergonomics for body position at the workstation.
Assessment Tool/Scoring Method: an observation, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable as this is the first assessment.
Assessment Plan: Students complete three-minute timed writings using the software Keyboarding Pro Deluxe, which sends all results to a server that the faculty can observe for feedback and assessment. Students are observed over the period of the course and the best three timed writings are considered to determine whether this outcome is met. Students are observed in the on ground classroom and in the online environment this can be measured by a survey.
Assessment Results:
Results: 100% of students were able to meet this outcome.
Analysis and Plan for Improvement and Reassessment: To facilitate evidence of this outcome in the online environment, a survey may be prepared. At this time, evidence of speed and accuracy achievement is used to determine that correct ergonomics are being observed. In the classroom, evidence is observed by the faculty.
Correct ergonomic procedures are demonstrated in the videos included in each lesson. THese lessons can be observed as completed through submission to the KBP Deluxe server.
Participants: Karen O'Connor

BSOT 133 Advanced Computer Keyboarding
Basic Information:
Course: BSOT C133 Advanced Computer Keyboarding
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 70%
Learning Outcome: Keyboard with speed and accuracy to a minimum of 45 net words per minute on a 5 minute timed writing.
Assessment Tool/Scoring Method: a demonstration, scored by rubric
Assessment Plan:

Changes Made Since Last Assessment: Not applicable as this is the first assessment recorded in Curricunet.

Assessment Plan: The student completes five-minute timed writings using the software Keyboarding Pro Deluxe. Results are observed throughout the lessons and drills that comprise the course. Since this course was offered online and as a stacked section, the results from both Summer 2011 and Fall 2011 have been joined for this assessment. The target performance is lower in this highest level for expected outcomes course.

Assessment Results:

Results: 70% of students completing the class were successful meeting this outcome.

Analysis and Plan for Improvement and Reassessment: The students who did not achieve the outcome also did not complete the drills and lessons. When students are prepared at the outset of the course, with book and software, and when they practice regularly, the outcome is almost always met. The only way to increase speed and accuracy is to practice regularly. Students who do not meet this outcome are advised to practice regularly the next time they take the course. Keyboarding accounts are left open so students may practice ongoing.

Participants: Karen O'Connor

Basic Information:
Course: BSOT C133 Advanced Computer Keyboarding
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 80%
Learning Outcome: Accurately and efficiently prepare block and modified block letters, standard memos, simple reports references, title pages and e-mail.
Assessment Tool/Scoring Method: a demonstration, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable as this is the first assessment recorded in this manner.

Assessment Plan: The named documents are completed in lessons of the course. Results can be observed in the following lessons: Block and Modified Block Letters Lessons 32, 33, 34. Memorandums Lesson 31. Reports Lesson 38 through 44. Email Lesson 31. Title pages lesson 39. Successful completion of these documents are observed through the Keyboarding Pro Deluxe server.

Assessment Results:

Results: 100% of students successfully completing this course were able to meet this outcome.

Analysis and Plan for Improvement and Reassessment: Keyboarding Pro Deluxe does a good job of tracking the creation of these documents. There is also a backup assignment right in the Moodle course where these documents are submitted for evidence of successful completion. The assessment model works really well at this time so no further plans are in the works for improvements. It IS possible that more types of documents will be added the next time the course is revised.

Participants: Karen O'Connor

CSCI 135 Beginning Adobe Acrobat

Demonstrate an ability to perform basic file manipulation functions. This will be measured by project, scored with a rubric.

Basic Information:

Course: CSCI C135 Beginning Adobe Acrobat

College: Cerro Coso College

Assessment Term: Spring, 2012

Status: Launched

Co-contributors: Thomas F. McGovern,

Learning Outcome:

Target of Performance: 90% of students will succeed with this outcome.

Learning Outcome: Demonstrate an ability to perform basic file manipulation functions. This will be measured by project, scored with a rubric.

Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: There have been no changes since the last assessment.

Assessment Plan: This outcome was measured by a multi-part project including 148 tasks throughout chapters three and five of the text Adobe Acrobat 10 Classroom in a Book.

Assessment Results:

Results: This outcome was measured by a multi-part project for 148 total assignments from chapters three and five that resulted in an average grade of 83.11 with 25 assignments not submitted. Every student submitting assignments obtained a passing grade (70%).

Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed in three years.

Participants: Tom McGovern

Basic Information:

Course: CSCI C135 Beginning Adobe Acrobat

College: Cerro Coso College

Assessment Term: Spring, 2012

Status: Launched

Co-contributors: Thomas F. McGovern,

Learning Outcome:

Target of Performance: 85% of students will succeed with this outcome.

Learning Outcome: Identify appropriate techniques for generating and validating PDF files for prepress use. This will be measured by project, scored with a rubric.

Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: No changes have been made since the last assessment.

Assessment Plan: This outcome will be measured by project including 111 assignments from chapters 12 and thirteen of the Adobe Acrobat Classroom 10 in a Book.

Assessment Results:

Results: This outcome was measured by a multi-part project for 111 total assignments from chapters twelve and thirteen that resulted in an average grade of 72.97 with 30 assignments not submitted. Every student submitting assignments obtained a passing grade (70%).

Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed in three years.

Participants: Tom McGovern

Basic Information:
Course: CSCI C135 Beginning Adobe Acrobat
College: Cerro Coso College
Assessment Term: Spring, 2012
Status: Launched
Co-contributors: Thomas F. McGovern,
Learning Outcome:
Target of Performance: 85% of students will succeed.
Learning Outcome: Create interactive PDF forms and develop a PDF file distribution and management system. This will be measured by project, scored with a rubric.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: No changes have been made since the last assessment.
Assessment Plan: This outcome will be measured by a multi-part project including 148 assignments from chapters four and seven of Adobe Acrobat Classroom in a Book.
Assessment Results:
Results: This outcome was measured by a multi-part project for 148 total assignments from chapters four and seven that resulted in an average grade of 85.14 with 22 assignments not submitted. Every student submitting assignments obtained a passing grade (70%).
Analysis and Plan for Improvement and Reassessment: This outcome will be reassessed in three years.
Participants: Tom McGovern

CSCI 151 Intermediate Word

Basic Information:
Course: CSCI C151 Intermediate Word
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors: Heather D. Freeman, Thomas F. McGovern,
Learning Outcome:
Target of Performance: 85%
Learning Outcome: Apply intermediate word processing formatting features to create styles, outlines, templates, table of contents, as well as advanced merge functions for form letters and mailing labels.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.
Assessment Plan: Students complete projects including reports and mail merges that are graded with rubrics (attached).
Assessment Results:

Results: Intermediate Word is often taught as a stacked class with other levels of Word. In fall 2011 results total 100% success for students attempting the project and 78% for students enrolled in the course.

4 out of 4 on campus students were 100% successful. 14 out of 19 online students were successful but four of the five who were not successful did not attempt the project.

Analysis and Plan for Improvement and Reassessment: There is no need to change the assessment plan at this time but due to the changing nature of technology, this assessment will be repeated in three years.

Participants: Karen O'Connor

Heather Freeman

Tom McGovern

Basic Information:

Course: CSCI C151 Intermediate Word

College: Cerro Coso College

Assessment Term: Fall, 2011

Status: Active

Co-contributors: Heather D. Freeman, Thomas F. McGovern,

Learning Outcome:

Target of Performance: 90%

Learning Outcome: Work effectively with documents in a collaborative setting by using features of tracking and comments, as well as compare and combine.

Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:

Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.

Assessment Plan: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010. Students complete a report that encompasses the elements in the outcome.

Assessment Results:

Results: Intermediate Word is often taught as a stacked class with other levels of Word. In fall 2011 results total 100% success for students attempting the project and 78% for students enrolled in the course. 4 out of 4 on campus students were 100% successful. 14 out of 19 online students were successful but four of the five who were not successful did not attempt the project.

Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.

Participants: Karen O'Connor

Heather Freeman

Tom McGovern

Basic Information:

Course: CSCI C151 Intermediate Word

College: Cerro Coso College

Assessment Term: Fall, 2011

Status: Active

Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Integrate elements of office products such as Microsoft Excel spreadsheets with word processing documents.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.
Assessment Plan: Students complete a project that includes integration of Excel as described in the outcome and the project is graded with a rubric.
Assessment Results:
Results: Intermediate Word is often taught as a stacked class with other levels of Word. In fall 2011 results total 100% success for students attempting the project and 78% for students enrolled in the course. 4 out of 4 on campus students were 100% successful. 14 out of 19 online students were successful but four of the five who were not successful did not attempt the project.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor
Heather Freeman
Tom McGovern

Basic Information:
Course: CSCI C151 Intermediate Word
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Modify documents for online distribution.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: not applicable
Assessment Plan: Students complete a project that includes elements described in the outcome and success is graded using a rubric.
Assessment Results:
Results: Intermediate Word is often taught as a stacked class with other levels of Word. In fall 2011 results total 100% success for students attempting the project and 78% for students enrolled in the course. 4 out of 4 on campus students were 100% successful. 14 out of 19 online students were successful but four of the five who were not successful did not attempt the project.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time.
Participants: Karen O'Connor
Tom McGovern
Heather Freeman

Attachments:

Basic Information:
Course: CSCI C151 Intermediate Word
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Determine and apply problem solving techniques using Help and reference material for successful creation of intermediate level business documents using Microsoft Office products.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: This form of assessment was added to the course a few years ago.
Assessment Plan: Students are required to complete critical thinking reports at least three times during the course. The reports describe a problem that was encountered, the resources used to find the solution, and the solution.
Assessment Results:
Results: Intermediate Word is often taught as a stacked class with other levels of Word. In fall 2011 results total 100% success for students attempting the problem solving assignment and 78% for students enrolled in the course. Four out of four on campus students were 100% successful. 14 out of 19 online students were successful but four of the five who were not successful did not attempt the Critical Thinking Report.
Analysis and Plan for Improvement and Reassessment: Although this outcome is successfully met by all students completing the course, it isn't always met effectively on all three tries. Faculty will work together to create good examples and collaborate on expectations. Therefore, this outcome will be reassessed in one year.
Participants: Karen O'Connor
Tom McGovern
Heather Freeman

CSCI 153 Intermediate Excel
Analyze data using list management features such as sort and autofilter.
Basic Information:
Course: CSCI C153 Intermediate Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Analyze data using list management features such as sort and autofilter.
Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Excel 2003 to Excel 2007 to Excel 2010.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered in stacked classes with other levels of Excel on campus on campus at IWV (2) and online (16). 17 of 18 (94%) students met success with this outcome. The student who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Intermediate level students are almost 100% successful every semester when attempting this skills based project.
Analysis and Plan for Improvement and Reassessment: There is no need to revise the tool used to assess this outcome.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:
Course: CSCI C153 Intermediate Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Work with multiple worksheets and workbooks.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Excel 2003 to Excel 2007 to Excel 2010.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered in stacked classes with other levels of Excel on campus on campus at IWV (2) and online (16). 17 of 18 (94%) students met success with this outcome. The student who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Intermediate level students are almost 100% successful every semester when attempting this skills based project.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:
Course: CSCI C153 Intermediate Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Collaborate on a workbook and a web page.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Excel 2003 to Excel 2007 to Excel 2010.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered on campus on campus at IWV (13) and online (30). 49 of 56 (88%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:
Course: CSCI C153 Intermediate Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Develop intermediate spreadsheet applications.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Excel 2003 to Excel 2007 to Excel 2010.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:

Results: This course was offered on campus on campus at IWV (13) and online (30). 49 of 56 (88%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:
Course: CSCI C153 Intermediate Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of intermediate level documents using Microsoft Excel.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable
Assessment Plan: Students are required to complete Critical Thinking Reports four times during the course, usually one after each of the four tutorials. These reports are submitted in memorandum format using Word. Elements include: Problem, Resources Used, and Solution. Students are required to use complete sentences and are graded on content, grammar, and spelling.
Assessment Results:
Results: This course was offered in stacked classes with other levels of Excel on campus on campus at IWV (2) and online (16). 17 of 18 (94%) students met success with this outcome. The student who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: This outcome is being met successfully but because writing is important across the curriculum, this will be assessed again in two years for further effectiveness.
Participants: Karen O'Connor
Kathy Bultman

BSOT 154 Office Personnel Seminar

Describe the roles and responsibilities of the administrative professional in the workplace including collaboration, teamwork, leadership skills, and management characteristics. This will be assessed by a project and scored with a rubric.
Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring 2011
Status: Active

Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Describe the roles and responsibilities of the administrative professional in the workplace including collaboration, teamwork, leadership skills, and management characteristics. This will be assessed by a project and scored with a rubric.
Assessment Tool/Scoring Method: Other(Short answer questions and forum postings)
Assessment Plan:
Changes Made Since Last Assessment: Although a formal assessment of this course has not been recorded in Curricunet, the course is under revision at this time based on faculty reflection on student success and the changing needs of the graduate to be successful in the intended workplace. This capstone course had too much material to cover, and some of the material is better presented to the student at the outset of the program. Therefore, the BSOT C100 Introduction to Business Office Technology has been created and is on the schedule for Fall 2012. BSOT C154 will then be revised and reassessed after the first offering of the revision in Spring 2013.
Assessment Plan: This outcome is measured in multiple assignments throughout the course. Students are required to complete essay questions, and respond to presented scenarios that simulate the roles and responsibilities of an administrative professional in the office environment.
Assessment Results:
Results: 62% of the students completing this course were able to succeed with this outcome.
Analysis and Plan for Improvement and Reassessment: The course content is being revised with fewer topics and better coverage of remaining topics. Most significantly, BSOT C100 Introduction to Business Office Technology is created and scheduled to allow students to focus on introductory skills (including business English) at the outset of their program of study in the Business Office Technology program. Additionally, because of the former strict discipline requirement for course pre-requisites, too many students were able to enroll in BSOT C154 as if it were the introduction to the program or a survey course instead of being the capstone. Now that BSOT C100 has been created as a gateway introductory course for the BSOT program, BSOT C154 can have an appropriate pre-requisite. Students will be introduced to business English and other elements at the outset of the study of Business Office Technology. This will mean that the students enrolled in the course have met the appropriate course of study prior to enrollment and should increase the success for students achieving success with all outcomes.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Recognize and display proficiency with various workplace technologies. This will be assessed by exam.
Assessment Tool/Scoring Method: a project, scored by rubric

Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: This outcome is measured in multiple assignments throughout the course. Students are required to complete essay questions, and respond to presented scenarios that simulate the roles and responsibilities of an administrative professional in the office environment.
Assessment Results:
Results: 62% of students completing the course were able to demonstrate success with this outcome.
Analysis and Plan for Improvement and Reassessment: The course content is being revised with fewer topics and better coverage of remaining topics. Most significantly, BSOT C100 Introduction to Business Office Technology is created and scheduled to allow students to focus on introductory skills (including business English) at the outset of their program of study in the Business Office Technology program. Additionally, because of the former strict discipline requirement for course pre-requisites, too many students were able to enroll in BSOT C154 as if it were the introduction to the program or a survey course instead of being the capstone. Now that BSOT C100 has been created as a gateway introductory course for the BSOT program, BSOT C154 can have an appropriate pre-requisite. Students will be introduced to business English and other elements at the outset of the study of Business Office Technology. This will mean that the students enrolled in the course have met the appropriate course of study prior to enrollment and should increase the ability for students to achieve all outcomes.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Demonstrate effective business communication. This will be assessed by a writing project and scored with a rubric.
Assessment Tool/Scoring Method: Other(Business Writing Projects)
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Students complete several business writing projects during the course including written communication for customer service responses, a cover letter, and a resume. They also complete a report on office ethics. Skill building elements for business English are presented weekly.
Assessment Results:
Results: 62% of students completing the course were successful with this outcome.
Analysis and Plan for Improvement and Reassessment: The course content is being revised with fewer topics and better coverage of remaining topics. Most significantly, BSOT C100 Introduction to Business Office Technology is created and scheduled to allow students to focus on introductory skills (including business English) at the outset of their program of study in the Business Office Technology program. Additionally, because of the former strict discipline requirement for course pre-requisites, too many students were able to enroll in BSOT C154 as if it were the introduction to the program or a survey course instead of being the capstone. Many of these students are not at all proficient enough in writing

skills to meet the advisory for this course. Now that BSOT C100 has been created as a gateway introductory course for the BSOT program, BSOT C154 can have an appropriate pre-requisite. Students will be introduced to business English and other elements at the outset of the study of Business Office Technology. This will mean that the students enrolled in the course have met the appropriate course of study prior to enrollment and should increase the success for students achieving success with all outcomes.

Participants: Karen O'Connor

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 90%
Learning Outcome: Demonstrate elements of an effective records management system. This will be assessed by exam.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Two filing assignments that require the student to show proficiency with alphabetic, numeric, and geographic filing systems are presented. See Chapter 11 assignment "Build Workplace Skills" Records Management Page 214 and 215
Assessment Results:
Results: 92% of students completing this assignment were successful with this outcome.
Analysis and Plan for Improvement and Reassessment: Although students had a high level of achievement with this outcome, the outcome will be reassessed in the new format of the course to be offered spring 2013.
Participants: Karen O'Connor
Attachments:
Differentiate between various forms of effective customer service. This will be assessed by exam.
Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Differentiate between various forms of effective customer service. This will be assessed by exam.
Assessment Tool/Scoring Method: Other(Assignment questions answered in memorandum format)
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.

Assessment Plan: Assignments from the text The Administrative Professional 14 e Technology and Procedures are used.
Build Workplace Skills Question 1 and 2 Report page 99.
Assessment Results:
Results: 100% of students completing this assignment were successful in meeting the outcome.
Analysis and Plan for Improvement and Reassessment: This outcome was met successfully but the course is being revised so all outcomes will be re-assessed in May of 2013.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Prepare job search related documents and practice effective job search strategies. This will be assessed by a project and scored with a rubric.
Assessment Tool/Scoring Method: Other(Letter and Resume Project)
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students prepare a cover letter and resume and discuss job search strategies.
Assessment Results:
Results: 100% of the students completing this assignment were successful with meeting this outcome. 62% of the students completing the course were successful with this outcome. 38% of the students in the course on census day did not complete course elements to this point. This content is presented at the end of the course.
Analysis and Plan for Improvement and Reassessment: The strategy for presenting the material related to this topic is appropriate, so the actual assessment does not need to be improved or altered.
The course content is being revised with fewer topics and better coverage of remaining topics. Most significantly, BSOT C100 Introduction to Business Office Technology is created and scheduled to allow students to focus on introductory skills (including business English) at the outset of their program of study in the Business Office Technology program.
Additionally, because of the former strict discipline requirement for course pre-requisites, too many students were able to enroll in BSOT C154 as if it were the introduction to the program or a survey course instead of being the capstone. Now that BSOT C100 has been created as a gateway introductory course for the BSOT program, BSOT C154 can have an appropriate pre-requisite. By program sequencing, and the Career Pathway as a guide, students will be introduced to business English and other elements at the outset of the study of Business Office Technology. This will mean that the students enrolled in the course have met the appropriate course of study prior to enrollment and should increase the success for students achieving success with all outcomes.
Participants: Karen O'Connor

BSOT 154 Office Personnel Seminar 2

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2015
Status: Pending
Co-contributors: Matthew W. Hightower, Frank Timpone,
Learning Outcome:
Target of Performance: 95% will be successful with this outcome
Learning Outcome: Compare and demonstrate proficiency with various workplace technologies and procedures including workplace equipment, office postal services, and office telecommunications.
Assessment Tool/Scoring Method: Other(Assignments)
Assessment Plan:
Changes Made Since Last Assessment: The course has been revised to require appropriate pre-requisites.
Assessment Plan: This outcome will be assessed by a series of administrative assignments. Development of success with this outcome is made through discussions and quizzes.
Assessment Results:
Results: 100% of the students achieved success with this outcome.
Analysis and Plan for Improvement and Reassessment: The Video quizzes at Cengage Now, coupled with administrative professional assignments in Moodle are appropriate for measurement of this outcome.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2015
Status: Pending
Co-contributors: Matthew W. Hightower, Frank Timpone,
Learning Outcome:
Target of Performance: 95% will be successful with this outcome
Learning Outcome: Demonstrate correct expression and professionalism in oral and written business communication.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Since the last assessment, this course was revised to include several appropriate pre-requisites from the BSOT program.
Assessment Plan: Written communication is a factor that is graded in all Administrative Professional Chapter Assignments and in Discussion postings. Memorandums and letters are required to be prepared throughout these assignments. A passing grade in the eight AP chapter assignments indicates that this outcome has been met.
Assessment Results:
Results: 100% of the students taking this course did succeed with this outcome.
Analysis and Plan for Improvement and Reassessment: There is not need for reassessment at this time.

Participants: Karen O'Connor
Attachments:
Describe supplies, equipment, media, and procedures for filing electronic and physical records and select appropriate filing classifications for alphabetic and numeric filing systems.
Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2015
Status: Pending
Co-contributors: Matthew W. Hightower, Frank Timpone,
Learning Outcome:
Target of Performance: 95% will be successful with this outcome
Learning Outcome: Describe supplies, equipment, media, and procedures for filing electronic and physical records and select appropriate filing classifications for alphabetic and numeric filing systems.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Since the last time this outcome was assessed, appropriate pre-requisites in the BSOT program have been added to this course.
Assessment Plan: This outcome is covered in weeks five through eight and chapters 11 and 12 covering Managing Records and Handling Mail and Retaining Records respectively.
Students complete two assignments and two discussions directly related to this outcome.
Assessment Results:
Results: 100 of the students achieved success with this outcome through two assignments and two discussions.
Analysis and Plan for Improvement and Reassessment: None is required.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2015
Status: Pending
Co-contributors:
Learning Outcome:
Target of Performance: 95% will be successful with this outcome
Learning Outcome: Demonstrate understanding of administrative duties such as researching and making travel arrangements and arranging meetings or conferences.
Assessment Tool/Scoring Method: Other(An Assignment)
Assessment Plan:
Changes Made Since Last Assessment:
Assessment Plan: Students complete a travel itinerary as if for a supervisor. Students also complete assignments that simulate issues with arranging meetings and conferences.
Assessment Results:
Results:
Analysis and Plan for Improvement and Reassessment:

Participants:
Attachments:
Prepare job search related documents and compare effective job search strategies while demonstrating an awareness of superior interviewing techniques when applying for employment.
Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2015
Status: Pending
Co-contributors: Matthew W. Hightower, Frank Timpone,
Learning Outcome:
Target of Performance: 95% will be successful with this outcome
Learning Outcome: Prepare job search related documents and compare effective job search strategies while demonstrating an awareness of superior interviewing techniques when applying for employment.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Since the last time this outcome was assessed, the course has been revised to include appropriate pre-requisites from the BSOT program.
This has drastically increased success.
Assessment Plan: Students complete assignments involving job search and strategies and create job search related documents.
Assessment Results:
Results: 100% of students achieved success with this outcome.
Analysis and Plan for Improvement and Reassessment: No plan for improvement is required. The outcome will be reassessed in three years maximum.
Participants: Karen O'Connor

Basic Information:
Course: BSOT C154 Office Personnel Seminar
College: Cerro Coso College
Assessment Term: Spring, 2015
Status: Pending
Co-contributors: Matthew W. Hightower, Frank Timpone,
Learning Outcome:
Target of Performance: 95% will be successful with this outcome
Learning Outcome: Analyze the difference between leadership and management and describe major leadership and management theories.
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: Since the last time this outcome was assessed, this course has been revised to require appropriate BSOT pre-requisite courses. This has drastically increased success with all BSOT C154 outcomes.
Assessment Plan: Students complete a video quiz at Course Mate covering leadership and management theories.
Assessment Results:

Results: 100% of the students achieved success with this outcome.
Analysis and Plan for Improvement and Reassessment: No plan for improvement is required. The premium video quiz at Course Mate is an appropriate means to assess this outcome.
Participants: Karen O'Connor

CSCI 155 Intermediate Access
Enhance table design and create advanced queries.
Basic Information:
Course: CSCI C155 Intermediate Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Enhance table design and create advanced queries.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This outcome is primarily assessed during Tutorial 5 projects and can be measured in the Case Problem 2.
Assessment Results:
Results: 100% of students completing the project for this outcome were successful. This is highly typical.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time.
Participants: Karen O'Connor

Basic Information:
Course: CSCI C155 Intermediate Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Apply general form design guidelines to plan a custom form with a sub form.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This is covered in Tutorial Six and measured with the Case Problem 2.
Assessment Results:
Results: 100% of the students completing the project and the course were successful with this outcome. This is highly typical.

Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor

Basic Information:
Course: CSCI C155 Intermediate Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Expand form data management with use of Filter functions.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This outcome is assessed in the Tutorial Six review and case project.
Assessment Results:
Results: 100% of students completing this project and this course were successful with this outcome. This is highly typical.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor

Basic Information:
Course: CSCI C155 Intermediate Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95% will succeed with this outcome.
Learning Outcome: Customize and modify reports and subreports using report design guidelines.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This is measured during the Tutorial 7 Case problem and Review projects.
Assessment Results:
Results: 100% of the students completing the project and this course were successful with this outcome.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time. It is highly typical of students completing this project to be successful with this outcome.
Participants: Karen O'Connor

Basic Information:
Course: CSCI C155 Intermediate Access
College: Cerro Coso College
Assessment Term: Summer, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Integrate Access with the Web and other programs.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students create Access databases and database objects that require the elements named in the outcome and are scored with rubrics.
Assessment Results:
Results: 100% of the students completing this project and the course were successful with this outcome.
Analysis and Plan for Improvement and Reassessment: It is highly typical for students to be successful with this outcome when completing the project in Tutorial 8. There is no need to reassess at this time.
Participants: Karen O'Connor
Attachments:

Basic Information:
Course: CSCI C155 Intermediate Access
College: Cerro Coso College
Assessment Term: Spring, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of enhanced database objects using Microsoft Access.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students are required to complete Critical Thinking Reports four times during the course, usually one after each of the four tutorials. These reports are posted to a forum and submitted in memorandum format using Word. Elements include: Problem, Resources Used, and Solution. Students are required to use complete sentences and are graded on content, grammar, and spelling.
Assessment Results:
Results: 50% of the students completing the course also completed the critical thinking reports. 100% of the students completing the reports were successful meeting this outcome.
Analysis and Plan for Improvement and Reassessment: Further explanation of expectations for this report will be created so that a higher number of students will complete the report. This outcome includes writing and will be reassessed in one to two years.

Participants: Karen O'Connor

CSCI 161 Advanced Word

Apply advanced word processing formatting features to customize word processing documents, create on-screen forms using advanced table techniques, and manage long documents.
Basic Information:
Course: CSCI C161 Advanced Word
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Apply advanced word processing formatting features to customize word processing documents, create on-screen forms using advanced table techniques, and manage long documents.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.
Assessment Plan: Students complete the creation of Word documents including those features named in this outcome and are graded by rubrics that have been attached to this assessment.
Assessment Results:
Results: 3 of 3 on campus students successfully met this outcome.
11 of 15 online students successfully met this outcome. The four who did not succeed also did not attempt the project.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor
Tom McGovern

Basic Information:
Course: CSCI C161 Advanced Word
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Employ a basic understanding of Visual Basic for Applications (VBA) when creating macros in Word.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Word 2003 to Word 2007 to Word 2010.

Assessment Plan: Students complete a project involving VBA in a Word document in the form of a Macro.
Assessment Results:
Results: Advanced Word is always taught as a stacked class with other levels of Word so this can result in small classes. In fall 2011 results total 100% success for students attempting the project on campus and 79% for students enrolled in the course online. Three out of three on campus students were 100% successful. Eleven out of fifteen online students were successful but four who were not successful did not attempt the project.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor
Tom McGovern

Basic Information:
Course: CSCI C161 Advanced Word
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Determine and apply problem solving techniques using Help and reference material for successful creation of complex business documents using Microsoft Office applications.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students complete Critical Thinking Reports in memorandum format and submit a minimum of three times during the course. Elements include Problem, Solution, and Resources Used. Students must use complete sentences to earn full marks and are graded on spelling, grammar, and content.
Assessment Results:
Results: Advanced Word is always taught as a stacked class with other levels of Word so this can result in small classes. In fall 2011 results total 100% success for students attempting the project on campus and 79% for students enrolled in the course online. Three out of three on campus students were 100% successful. Eleven out of fifteen online students were successful but four who were not successful did not attempt the project.
Analysis and Plan for Improvement and Reassessment: There is no need to revise the assessment method.
Participants: Karen O'Connor
Tom McGovern

CSCI 163 Advanced Excel
Develop financial analysis using advanced Excel functions
Basic Information:
Course: CSCI C163 Advanced Excel
College: Cerro Coso College

Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95% will succeed with this outcome.
Learning Outcome: Develop financial analysis using advanced Excel functions
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered on campus on campus at IWV (2) and online (10). 9 of 12 (75%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:
Course: CSCI C163 Advanced Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Perform What-If analyses to predict financial scenarios for business
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: The same method of assessment has been used (if not explicitly recorded in this format) for at least seven years. The rubrics were updated when the course moved from Excel 2003 to Excel 2007 to Excel 2010.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment.
Assessment Results:
Results: This course was offered in stacked classes with other levels of Excel on campus on campus at IWV (2) and online (16). 17 of 18 (94%) students met success with this outcome. The student who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need to reassess at this time.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:

Course: CSCI C163 Advanced Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Integrate Excel date through Import and Export
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. For this outcome, Tutorial 9 and 10 are used primarily.
Assessment Results:
Results: This course was offered on campus on campus at IWV (2) and online (10). 9 of 12 (75%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:
Course: CSCI C163 Advanced Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Demonstrate a fundamental understanding of expanding Excel with Visual Basic for Applications
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students complete Excel spreadsheets that require the elements named in the outcome and are scored with rubrics that are attached to this assessment. This outcome is measured during Tutorial 12 and is reinforced in the Review and Case problem.
Assessment Results:
Results: This course was offered on campus on campus at IWV (2) and online (10). 9 of 12 (75%) students met success with this outcome. The students who did not succeed with this outcome did not complete the project. 100% of students attempting the projects were successful.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment at this time.
Participants: Karen O'Connor
Kathy Bultman

Basic Information:
Course: CSCI C163 Advanced Excel
College: Cerro Coso College
Assessment Term: Fall, 2011
Status: Active
Co-contributors:
Learning Outcome:
Target of Performance: 95%
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of advanced level documents using Microsoft Excel.
Assessment Tool/Scoring Method: a paper, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: Not applicable.
Assessment Plan: Students are required to complete Critical Thinking Reports four times during the course, usually one after each of the four tutorials. These reports are submitted in memorandum format using Word. Elements include: Problem, Resources Used, and Solution. Students are required to use complete sentences and are graded on content, grammar, and spelling.
Assessment Results:
Results: This course was offered on campus on campus at IWV (2) and online (10). 9 of 12 (75%) students met success with this outcome. The students who did not succeed with this outcome did not complete the critical thinking reports. 100% of students attempting the reports were successful.
Analysis and Plan for Improvement and Reassessment: There is no need for reassessment immediately but because this outcome includes writing skills we will reassess in two years.
Participants: Karen O'Connor
Kathy Bultman

CSCI C165 Advanced Access
Basic Information:
Course: CSCI C165 Advanced Access
College: Cerro Coso College
Assessment Term: Fall, 2013
Status: Pending
Co-contributors:
Learning Outcome:
Target of Performance: 70% will score 70% or higher.
Learning Outcome: Identify and employ application of one-to-many, many-to-many, and one-to-one table relationships and apply inner-join, outer-join, and self-join principles to query design.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Students completed work using Microsoft Access.
Assessment Results:

Results: In the Fall of 2012, 6 students were enrolled in the course. Of those, 5 students participated in the assignment. 3 of those students (60%) scored 70% or higher on the assignment.

Analysis and Plan for Improvement and Reassessment: Two of the five students turned the assignment in late for .60 credit. If they had turned the assignment in on time, 100% of the students would have scored 70% or higher.

Participants: Matthew Hightower

Basic Information:
Course: CSCI C165 Advanced Access
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Pending
Co-contributors:
Learning Outcome:
Target of Performance: 70% will score 70% or higher.
Learning Outcome: Create action queries, including make-table, append, delete, and update, and Automate tasks and switchboard creation using macros.
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Students took an exam using SAM to demonstrate their understanding of the topic.
Assessment Results:
Results: In the Fall of 2012, 6 students were enrolled in the course. Of those, 3 students participated in the assignment. 2 of those students (67%) scored 70% or higher on the assignment.

Analysis and Plan for Improvement and Reassessment: One of the three students turned the assignment in late for 60% credit. If they had turned the assignment in on time, 100% of the students would have scored 70% or higher.

Participants: Matthew Hightower

Basic Information:
Course: CSCI C165 Advanced Access
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Pending
Co-contributors:
Learning Outcome:
Target of Performance: 70% will score 70% or higher.
Learning Outcome: Create custom forms using SQL statement in a query to retrieve database information and execute, view, and modify and create a procedure using Visual Basic for Applications (VBA).
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Students completed work using Microsoft Access.
Assessment Results:

Results: In the Fall of 2012, 6 students were enrolled in the course. Of those, 4 students participated in the assignment. 4 of those students (100%) scored 70% or higher on the assignment.
Analysis and Plan for Improvement and Reassessment: None, the target objective was met.
Participants: Matthew Hightower

Basic Information:
Course: CSCI C165 Advanced Access
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Pending
Co-contributors:
Learning Outcome:
Target of Performance: 70% will score 70% or higher.
Learning Outcome: Analyze database performance using the Performance Analyzer, and manage database distribution with replication, synchronization or splitting.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Students completed work using Microsoft Access.
Assessment Results:
Results: In the Fall of 2012, 6 students were enrolled in the course. Of those, 3 students participated in the assignment. 3 of those students (100%) scored 70% or higher on the assignment.
Analysis and Plan for Improvement and Reassessment: None, the target objective was met.
Participants: Matthew Hightower

Basic Information:
Course: CSCI C165 Advanced Access
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Pending
Co-contributors:
Learning Outcome:
Target of Performance: 70% will score 70% or higher.
Learning Outcome: Implement Access security features such as passwords, encryption, and permissions to protect a database from unauthorized use.
Assessment Tool/Scoring Method: an exam
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Students completed an exam using the SAM software to demonstrate understanding and implementation of the topic.
Assessment Results:
Results: In the Fall of 2012, 6 students were enrolled in the course. Of those, 3 students participated in the assignment. 3 of those students (100%) scored 70% or higher on the assignment.
Analysis and Plan for Improvement and Reassessment: None, the target objective was met.
Participants: Matthew Hightower

Basic Information:
Course: CSCI C165 Advanced Access
College: Cerro Coso College
Assessment Term: Fall, 2012
Status: Pending
Co-contributors:
Learning Outcome:
Target of Performance: 70% will score 70% or higher.
Learning Outcome: Determine and apply appropriate problem solving techniques using Help and reference material off and online for successful creation of enhanced database objects using Microsoft Access.
Assessment Tool/Scoring Method: a project, scored by rubric
Assessment Plan:
Changes Made Since Last Assessment: n/a
Assessment Plan: Students completed work using Microsoft Access.
Assessment Results:
Results: In the Fall of 2012, 6 students were enrolled in the course. Of those, 2 students participated in the assignment. 2 of those students (100%) scored 70% or higher on the assignment.
Analysis and Plan for Improvement and Reassessment: None, the target objective was met.
Participants: Matthew Hightower

Labor Market Data

Parameters

Occupations

Code	Description
13-1000	Business Operations Specialists
43-1000	Supervisors of Office and Administrative Support Workers
43-9000	Other Office and Administrative Support Workers

Regions

Code	Description
6027	Inyo County, CA
6029	Kern County, CA
6051	Mono County, CA

Timeframe

2015 - 2020

Datarun

2016.1 – QCEW Employees

Business Office Technology in 3 Counties

Occupation Summary for Business Office Technology

18,368	8.4%	$23.57/hr
Jobs (2015)	**% Change (2015-2020)**	**Median Hourly Earnings**
21% below National average	Nation: 4.5%	Nation: $23.55/hr

Growth

18,368	19,910	1,542	8.4%
2015 Jobs	**2020 Jobs**	**Change (2015-2020)**	**% Change (2015-2020)**

Occupation	2015 Jobs	2020 Jobs	Change	% Change
Agents and Business Managers of Artists, Performers, and Athletes (13-1011)	6	7	1	17%
Buyers and Purchasing Agents, Farm Products (13-1021)	42	45	3	7%
Wholesale and Retail Buyers, Except Farm Products (13-1022)	257	283	26	10%
Purchasing Agents, Except Wholesale, Retail, and Farm Products (13-1023)	489	534	45	9%

Claims Adjusters, Examiners, and Investigators (13-1031)	810	873	63	8%
Insurance Appraisers, Auto Damage (13-1032)	15	18	3	20%
Compliance Officers (13-1041)	391	419	28	7%
Cost Estimators (13-1051)	557	646	89	16%
Human Resources Specialists (13-1071)	670	726	56	8%
Farm Labor Contractors (13-1074)	78	93	15	19%
Labor Relations Specialists (13-1075)	98	89	-9	-9%
Logisticians (13-1081)	266	309	43	16%
Management Analysts (13-1111)	720	840	120	17%
Meeting, Convention, and Event Planners (13-1121)	85	99	14	16%
Fundraisers (13-1131)	30	31	1	3%
Compensation, Benefits, and Job Analysis Specialists (13-1141)	74	84	10	14%
Training and Development Specialists (13-1151)	246	286	40	16%

Market Research Analysts and Marketing Specialists (13-1161)	572	700	128	22%
Business Operations Specialists, All Other (13-1199)	2,331	2,463	132	6%
First-Line Supervisors of Office and Administrative Support Workers (43-1011)	2,568	2,838	270	11%
Computer Operators (43-9011)	54	56	2	4%
Data Entry Keyers (43-9021)	289	276	-13	-4%
Word Processors and Typists (43-9022)	1,064	971	-93	-9%
Desktop Publishers (43-9031)	5	5	0	0%
Insurance Claims and Policy Processing Clerks (43-9041)	997	1,146	149	15%
Mail Clerks and Mail Machine Operators, Except Postal Service (43-9051)	51	53	2	4%
Office Clerks, General (43-9061)	4,532	4,908	376	8%
Office Machine Operators, Except Computer (43-9071)	126	128	2	2%

Proofreaders and Copy Markers (43-9081)	4	4	0	0%
Statistical Assistants (43-9111)	8	10	2	25%
Office and Administrative Support Workers, All Other (43-9199)	933	969	36	4%

Percentile Earnings

$18.44/hr	$23.57/hr	$29.68/hr
25th Percentile Earnings	Median Earnings	75th Percentile Earnings

Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Business Operations Specialists (13-1000)	$24.41	$32.45	$42.03
Supervisors of Office and Administrative Support Workers (43-1000)	$18.68	$23.20	$29.14
Other Office and Administrative Support Workers (43-9000)	$12.66	$15.20	$18.07

Regional Trends

	Region	2015 Jobs	2020 Jobs	Change	% Change
●	Region	18,368	19,910	1,542	8.4%
●	State	1,285,830	1,350,186	64,356	5.0%
●	Nation	9,861,705	10,310,299	448,594	4.5%

Regional Breakdown

County	2020 Jobs
Kern County, CA	19,229
Inyo County, CA	409
Mono County, CA	271

Job Postings Summary

427	3 : 1
Unique Postings (Jan 2016)	**Posting Intensity (Jan 2016)**
1,203 Total Postings	Regional Average: 4 : 1

There were **1,203** total job postings for 3 Occupations in January 2016, of which **427** were unique. These numbers give us a Posting Intensity of **3-to-1**, meaning that for every 3 postings there is 1 unique job posting. This is lower than the Posting Intensity for all other occupations and companies in the region (4-to-1), indicating that companies may not be trying as hard to hire this position.

Occupation Gender Breakdown

	Gender	2015 Jobs	2015 Percent
●	Males	5,606	30.5%
●	Females	12,762	69.5%

Occupation Age Breakdown

	Age	2015 Jobs	2015 Percent
●	14-18	135	0.7%
●	19-24	1,576	8.6%
●	25-34	4,034	22.0%
●	35-44	3,911	21.3%
●	45-54	4,276	23.3%
●	55-64	3,280	17.9%
●	65+	1,156	6.3%

Occupation Race/Ethnicity Breakdown

	Race/Ethnicity	2015 Jobs	2015 Percent
●	White	9,853	53.6%
●	Hispanic or Latino	5,090	27.7%
●	Asian	1,740	9.5%
●	Black or African American	1,250	6.8%
●	Two or More Races	282	1.5%
●	American Indian or Alaska Native	101	0.5%
●	Native Hawaiian or Other Pacific Islander	52	0.3%

Occupational Programs

14	635	443
Programs (2014)	**Completions (2014)**	**Openings (2014)**

CIP Code	Program	Completions (2014)
52.0201	Business Administration and Management, General	469
52.0302	Accounting Technology/Technician and Bookkeeping	69
52.0101	Business/Commerce, General	62
52.0207	Customer Service Management	11
52.1801	Sales, Distribution, and Marketing Operations, General	9

Industries Employing Business Office Technology

Industry	Occupation Group Jobs in Industry (2015)	% of Occupation Group in Industry (2015)	% of Total Jobs in Industry (2015)
Federal Government, Civilian, Excluding Postal Service	2,082	11.3%	22.5%
Local Government, Excluding Education and Hospitals	1,302	7.1%	8.8%
State Government, Excluding Education and Hospitals	886	4.8%	12.0%
Elementary and Secondary Schools (Local Government)	816	4.4%	3.2%
Direct Property and Casualty Insurance Carriers	774	4.2%	62.5%

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

EMSI occupation employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry.

Completers Data

The completers data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.

Industry Data

EMSI industry data have various sources depending on the class of worker. (1) For QCEW Employees, EMSI primarily uses the QCEW (Quarterly Census of Employment and Wages), with supplemental estimates from County Business Patterns and Current Employment Statistics. (2) Non-QCEW employees data are based on a number of sources including QCEW, Current Employment Statistics, County Business Patterns, BEA State and Local Personal Income reports, the National Industry-Occupation Employment Matrix (NIOEM), the American Community Survey, and Railroad Retirement Board statistics. (3) Self-Employed and Extended Proprietor classes of worker data are primarily based on the American Community Survey, Nonemployer Statistics, and BEA State and Local Personal Income Reports. Projections for QCEW and Non-QCEW Employees are informed by NIOEM and long-term industry projections published by individual states.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

State Data Sources

This report uses state data from the following agencies: California Labor Market Information Department

Percentile Earnings

$12.83/hr	$15.65/hr	$18.55/hr
25th Percentile Earnings	**Median Earnings**	**75th Percentile Earnings**

Occupation	25th Percentile Earnings	Median Earnings	75th Percentile Earnings
Procurement Clerks (43-3061)	$15.72	$19.24	$25.27
Correspondence Clerks (43-4021)	$12.88	$15.12	$17.61
Court, Municipal, and License Clerks (43-4031)	$17.25	$20.02	$22.83
File Clerks (43-4071)	$10.66	$14.07	$19.69
Order Clerks (43-4151)	$11.79	$15.30	$18.11
Human Resources Assistants, Except Payroll and Timekeeping (43-4161)	$15.11	$19.71	$23.62
Receptionists and Information Clerks (43-4171)	$9.95	$11.77	$14.02
Information and Record Clerks, All Other (43-4199)	$16.46	$20.04	$23.36
Cargo and Freight Agents (43-5011)	$16.84	$21.57	$26.53
Postal Service Clerks (43-5051)	$15.28	$26.72	$26.73
Postal Service Mail Carriers (43-5052)	$24.33	$27.49	$27.50
Postal Service Mail Sorters, Processors, and Processing Machine Operators (43-5053)	$22.71	$25.79	$26.20
Shipping,	$11.21	$15.56	$19.42

Receiving, and Traffic Clerks (43-5071)			
Weighers, Measurers, Checkers, and Samplers, Recordkeeping (43-5111)	$9.49	$11.27	$15.55
Word Processors and Typists (43-9022)	$16.29	$17.57	$19.58
Insurance Claims and Policy Processing Clerks (43-9041)	$16.07	$19.05	$22.33
Mail Clerks and Mail Machine Operators, Except Postal Service (43-9051)	$14.50	$16.30	$17.75
Office Clerks, General (43-9061)	$10.96	$13.47	$16.68
Office Machine Operators, Except Computer (43-9071)	$9.77	$12.39	$14.92
Office and Administrative Support Workers, All Other (43-9199)	$13.14	$16.60	$18.35

Schedule of Applications Classes

	Applications Class Offerings for Business Office Technology Courses							
	Fall semester One		**Spring Semester One**		**Fall Semester Two**		**Spring Semester Two**	
	1st Eight Week	2nd Eight Weeks	1st Eight Weeks	2nd Eight Weeks	1st Eight Weeks	2nd Eight Weeks	1st Eight Weeks	2nd Eight Weeks
Word		BSOT C121 Beginning Word	BSOT C151 Intermediate Word		**BSOT C121 Beginning Word** BSOT C161 Advanced Word			
Excel			BSOT C123 Beginning Excel			NOTE: BSOT C123 could ALSO be offered here	BSOT C153 Intermediate Excel	BSOT C163 Advanced Excel
Access				BSOT C125	BSOT C155	BSOT C165		

			Beginning Access	Intermediate Access	Advanced Access		
Keyboarding	BSOT C131 Basic Keyboarding	BSOT C132 Intermediate Keyboarding					BSOT C133 Advanced Keyboarding
PowerPoint		BSOT C127 PowerPoint					
Outlook			BSOT C129 Outlook				
Adobe Acrobat					BSOT C135 Adobe Acrobat		

Current Advisory Committee Members

- Margaret Porter – Naval Air Warfare Center, Weapons Division (NAWCWD)
- Donna Singleton – Naval Air Warfare Center, Weapons Division (NAWCWD)
- Debby Ireland – Chief Financial Officer AWL, (NAWCWD)
- Ashlin Mattios – Job Specialist

Additional new members are actively being sought for the spring 2016 advisory meeting.

Business Office Technology Advisory Meeting
November 4, 2015
11:30 – 1:00 (no Host, at Grape Leaf)

1. **Attendees:**
   - Frank Timpone - Cerro Coso Community College, Business faculty
   - Karen O'Connor – Cerro Coso Community College, Chair and Business Office Technology Program Lead
   - Margaret Porter – Naval Air Warfare Center, Weapons Division (NAWCWD)
   - Donna Singleton – Naval Air Warfare Center, Weapons Division (NAWCWD)
   - Debby Ireland – Chief Financial Officer AWL, (NAWCWD)
   - Ashlin Mattios – Job Specialist

2. **Introductions and Sign In.** Karen O'Connor provided a welcome for attendees. Introductions were made, and each attendee spoke a bit about their background and the companies they represent.

3. **Purpose and Charge of Advisory Committees**. Karen outlined the purpose and charge of the Advisory Committee, highlighting the committee's influence upon curriculum, career guidance, and job shadowing/internship opportunities.

4. **Business Office Technology Curriculum and Industry Input**

   a. Karen discussed the three certificates, which represent varied levels of competence: Office Clerk Certificate, Administrative Assistant Certificate, and Business Office Technology Certificate. She explained to the committee that the Business Office Technology Associate Degree is consists of the latter certificate with general education requirements. The BSOT Certificate includes courses from both lower certificates, but the two lower certificates do not share courses. The rationale is that students who pursue the Administrative Assistant Certificate may already be employed and have the basic skills that are included in the Office Clerk Certificate.

   b. The program review for BSOT is being developed this 2015-2016 year and will be circulated among the committee for feedback when it reaches draft form.

   c. Karen oriented the group to the "Business Information Worker" state model in the making and the C-ID meeting that had just transpired in Anaheim. Cerro Coso Community College's Excel curriculum

(all three units) were used as a start for the model curriculum for Excel. The BIW program is inspired by feedback from business and industry, who believe all workers need this level of skills going into any job. This is equivalent to our current Office Clerk Certificate of Achievement. The second or third levels of BIW may involve SharePoint. The group felt that SharePoint, while not enough content to fill an entire class, might well be fit into an existing class, perhaps BSOT C100 and then reviewed in BSOT C154.

d. Donna suggested that we evolve a method of keeping track of various places where students may apply for jobs locally, and also develop some training for sites like USAJOBS.gov. and others. She also asked about internships for students. New member Debby Ireland said she is interested in working with Ashlin to create internships for our students.

e. Karen discussed the contents of the gateway course BSOT C100 Introduction to Business Office Technology, and the capstone class BSOT C154. The Administrative Professional textbook was passed around for review as well as a potential book for use in the capstone, Administrative Managements. Everyone thought the content was good, particularly comments were made by Margaret, Debby, and Donna, regarding the usefulness of the material. There is some overlap in certain areas, between the Business Communication course material and the Business Office Technology Seminar capstone class. The interview piece in the BSOT C154 is geared more for entry level, while the Business Communication content regarding interviewing is a bit higher level.

f. There was further discussion about the use of Skills Assessment Manager (SAM), a Cengage publisher companion site for the textbook, in many courses in the program. The purchase of a SAM code is version specific and lasts indefinitely. However, if curriculum upgrades to a new version, new codes must be purchased. A single SAM account covers all of the key Microsoft Office applications and is usable for multiple courses in the programs.

5. **Adjournment.** Karen thanked the attendees for their valuable input, and expressed the appreciation of the program and the college for the group members' time and expertise. The meeting was adjourned at 1:00 p.m.

Business Office Technology Advisory Meeting

April 11, 2014

I. Attendees:

- Suzie Ama – Cerro Coso Community College, Web Professional Program Lead (CCCC)
- Frank Timpone - Cerro Coso Community College, Business faculty
- Karen O'Connor – Cerro Coso Community College, Chair and Business Office Technology Program Lead
- Ian Patin – Scientific Applications International Corporation (SAIC)
- Margaret Porter – Naval Air Warfare Center, Weapons Division (NAWCWD)
- Donna Singleton – Naval Air Warfare Center, Weapons Division (NAWCWD)
- Valerie Karnes – Dean Career Technical Education CCCC

6. **Introductions and Sign In.** Karen O'Connor provided a welcome for attendees. Introductions were made, and each attendee spoke a bit about their background and the companies they represent.

7. **Purpose and Charge of Advisory Committees**. Karen outlined the purpose and charge of the Advisory Committee, highlighting the committee's influence upon curriculum, career guidance, and job shadowing opportunities.

8. **Business Office Technology Curriculum and Industry Input**

   a. Karen discussed the 3 certificates, which represent varied levels of competence: Office Clerk Certificate, Administrative Assistant Certificate, and Business Office Technology Certificate. She explained to the committee that the Business Office Technology Associate Degree is consists of the latter certificate with general education requirements. The BSOT Certificate includes courses from both lower certificates, but the two lower certificates do not share courses. The rationale is that students who pursue the Administrative Assistant Certificate may already be employed and have the basic skills that are included in the Office Clerk Certificate.

   b. Potential bachelor's degree achievement was discussed as something that the college may be able to do in the future, for one program. Ian asked about the nursing lottery, as he knows individuals who are concerned it may take years to get into the program.

   c. Karen asked for input about the curriculum of the applications classes, and pre-requisites were discussed. Often people gain from taking the beginning courses, even when they have used the program already. Donna took the CSCI C121 Beginning Word class with her daughter and learned a lot, even though she had used Word previously.

   d. Tests are being set up for testing out of courses. It might be good to have pre-requisites instead of advisories and then allowing testing out. The new text for Word was passed around as an example of the books we use and SAM (Skills Assessment Management) was discussed and how it is used for skills measurement, training, testing, and projects.

   e.   Donna suggested that we evolve a method of keeping track of various places where students may apply for jobs locally, and also develop some training for sites like USAJOBS.gov. and others.

   f.   Karen discussed the contents of the gateway course BSOT C100 Introduction to Business Office Technology, and the capstone class BSOT C154. The Administrative Professional textbook was passed around for review as well as a potential book for use in the capstone, Administrative Managements. Everyone thought the content was good, particularly comments were made by Margaret and Donna, regarding the usefulness of the material. There is some overlap in certain areas, between the Business Communication course material and the Business Office Technology Seminar capstone class. The interview piece in the BSOT C154 is geared more for entry level, while the Business Communication content regarding interviewing is a bit higher level.

   g.   There was further discussion about the use of Skills Assessment Manager (SAM), a Cengage publisher companion site for the textbook, in many courses in the program. The purchase of a SAM code is version specific and lasts indefinitely. However, if curriculum upgrades to a new version, new codes must be purchased. A single SAM account covers all of the key Microsoft Office applications and is usable for multiple courses in the programs.

9. **Adjournment.** Karen thanked the attendees for their valuable input, and expressed the appreciation of the program and the college for the group members' time and expertise. The meeting was adjourned at 1:10 p.m.

Business Office Technology Advisory Meeting

November 12, 2013

II. Attendees:
- Suzie Ama – Cerro Coso Community College, Business and Information Department Faculty Chair
- Karen O'Connor – Cerro Coso Community College, Business Office Technology Program Lead
- Joanie Hanson – Owens Valley Career Development Center (OVCDC)
- Ian Patin – Scientific Applications International Corporation (SAIC)
- Margaret Porter – Naval Air Warfare Center, Weapons Division (NAWCWD)
- Donna Singleton – Naval Air Warfare Center, Weapons Division (NAWCWD)

Note: NAWCWD attendees' comments only represent their professional opinion, and do not represent NAWCWD in any official capacity.

10. **Introductions and Sign In.** Karen O'Connor provided a welcome for attendees. Introductions were made, and each attendee spoke a bit about their background and the companies they represent.

11. **Purpose and Charge of Advisory Committees**. Karen outlined the purpose and charge of the Advisory Committee, highlighting the committee's influence upon curriculum, career guidance, and job shadowing opportunities.

12. **Business Office Technology Curriculum and Industry Input**

   a. Karen discussed the 3 certificates, which represent varied levels of competence: Office Clerk Certificate, Administrative Assistant Certificate, and Business Office Technology Certificate. She explained to the committee that the Business Office Technology Associate Degree is consists of the latter certificate with general education requirements. The BSOT Certificate includes courses from both lower certificates, but the two lower certificates do not share courses. The rationale is that students who pursue the Administrative Assistant Certificate may already be employed and have the basic skills that are included in the Office Clerk Certificate.

   b. Karen asked for input about the curriculum and learning outcomes, and Donna indicated that a typing speed of 45 words per minute is an appropriate goal in preparing for students for Base employment. Donna also said that NAWCWD does not currently have a clerical pool.

   c. Joanie informed the committee that OVCDC did not get a grant renewed that was paying for students' tuition and books. However, the Tribal Town may have funds available to continue to offer scholarships. The advantage of this development is the previous grant limited funding to 6 specific programs. The new funding source will not have that restriction and students can pursue other degrees or certificates. Joanie noted that it has been difficult to obtain full enrollment for courses.

Business Office Technology

d. Ian asked if graduates were being tracked for job placement. Karen said that we track them as much as possible, as we remain in contact with them. She stated that the college's newly hired Job Development Specialist will be an immense help with this. Using LinkedIn was also discussed. It was mentioned that the information that is posted in LinkedIn is not always accurate. Suzie offered that at the very least, it is a means of being able to contact graduates for more information about their post-graduation career. Email addresses often degrade, so an active contact venue is valuable.

e. Karen discussed how program pathways are used to guide students in the scheduling of courses. She also shared the HOW13 book, which is a handbook for office workers. She is using this book in her courses.

f. There was some discussion about the use of Skills Assessment Manager (SAM), a Cengage publisher companion site for the textbook, in many courses in the program. Joanie inquired whether SAM expires after 1 year. Karen clarified that the purchase of a SAM code is version specific and lasts indefinitely. However, if curriculum upgrades to a new version, new codes must be purchased. A single SAM account covers all of the key Microsoft Office applications and is usable for multiple courses in the programs. Joanie shared that because SAM assessments track mouse actions on a screen, there is no tolerance for errant clicks, and students who know the material pretty well are getting lots of errors. This is frustrating students. It was discussed that students should spend more time with the training exercises before taking the assessments. They should also fully understand that the assessment will not allow "poking around" to find a function. The training sections of SAM can be accessed as many times as the students choose to train. The projects may be completed up to three times and can be reset if there is a compelling reason to do so. Exams are allowed only one try.

g. Ian discussed that a degree alone is not enough to make students employable. They need work experience. He shared that he and Jill Board are working on a Memorandum of Understanding that would establish a mentoring program. An obstacle to mentoring and internships on the Base is the need for security clearance. Margaret said that she understood that a clearance is required of everyone who works on Base. Some alternatives that were suggested included having professionals come to the college to meet with and talk to students. Karen also suggested using professional experts as embedded content in courses.

h. There was discussion about the importance of soft skills and self-efficacy development. Joanie said that OVCDC has a required orientation, which helps students learn to track their academic progress and take responsibility for their success. Ian commented that while work experience is helpful in developing soft skills, these can and should be taught in the classroom, as well.

i. Joanie inquired about the status of a computer literacy assessment. Suzie had created an assessment that was used at the Easter Sierra College Center several years ago. Shortly after that, the college beta tested SmarterMeasure, which included self-efficacy assessments, in addition to technical computer competence. Suzie said she understood that the college did not pursue a full implementation of SmarterMeasure, but did not know why. She said she would follow up to find out. Karen suggested using SAM for the college's computer literacy assessment. If a student does not already have a SAM license, a "SAM Challenge" license can be purchased for $15. Karen said she is unclear about next steps, but would like to pursue this as a solution.

13. **Adjournment.** Karen thanked the attendees for their valuable input, and expressed the appreciation of the program and the college for the group members' time and expertise. The meeting was adjourned at 1:40 p.m.

MINUTES OF ADVISORY BOARD MEETING
BUSINESS OFFICE TECHNOLOGY
APRIL 30, 2013 – 11:00 – 1:00
The Grape Leaf, Ridgecrest, CA

1. Introductions

ATTENDEES: Karen O'Connor faculty chair; Frank Timpone business faculty; Ian Patin SAIC; Donna Singleton Office Manager; Rene Mitchell SAS; Cheri Plett Alta One; Patricia Keith BSOT student; Valerie Karnes Dean CTE; Laura Hickle SSUSD.

2. Committee Purpose and Overview

Discussion: The purpose of CTE Advisory Meeting was discussed including but not limited to:

- Discussion of program, outcomes, courses, outcomes, prerequisites etc .
- partnerships with the business community
- job shadowing and internship opportunities for our students.

3. Committee Expectations

- Advisory committee membership and participation was discussed.

4. Business Office Technology programs, pathways, and outcomes

    a. Business Office Technology Degree
    b. Business Office Technology Certificate
    c. Administrative Assistant Certificate of Achievement
    d. Office Clerk Certificate of Achievement

Discussion included:

- The committee discussed the degree and certificates along with program outcomes.
- Skills students are able to perform once they complete our programs.
- Career Pathways were discussed for each certificate and the degree.
- Course content was discussed:

- o Keyboarding: There are three course levels. Employers require at least 45-55 wpm.
- o Intro to BSOT 100: stresses grammar and writing skills and informs students about the rest of the program as well as provides training in essential entry level office skills. The HOW Handbook for Office Workers is introduced in this course and used throughout the program to provide grammatical, document formatting, and writing skills refreshers appropriate for the workplace.
- o Office Personnel Seminar is a capstone class that covers everything needed to meet program outcomes that isn't already included in all the other program's classes.
- o Business Mathematics is applied mathematics that covers basic concepts, such as, percentages, markup, markdown, pro-rating, payroll, bank reconciliations, petty cash, etc. while learning how to use and touch key on a desktop printing calculator with a 10 key keypad.
- o Computer Literacy includes file management and an introduction to Word, Excel, and PowerPoint programs, plus email, attachments etc.
- o Microsoft Word is delivered in three course levels, Beginning, Intermediate and Advanced. Courses are available online. Evening classes are desirable for those upgrading skills while working on the base or other day jobs.
- o Microsoft Excel is delivered in three course levels. Advanced is very important and could be moved to required list from elective list.   Maybe we should add QuickBooks as an elective?
- o We need to have a Work Experience class revised and added to electives
- o Add more electives that are more focused and maybe weed out Intro to the Internet.
- o Microsoft Access is delivered in three course levels. Advanced level is an elective. There are differing opinions on how much Access is used on base. Businesses like Alta One use Access extensively. Access skills are transferrable to other database systems.
- o Intro To Accounting is an entry level accounting course that covers up to year-end balance sheets and income statements.
- o Microsoft PowerPoint is offered in one level, but perhaps class should be broken up into two classes to allow more content to be covered as well as actual presentation. PowerPoint is widely used everywhere.
- o Microsoft Outlook is still very important and widely used. If people haven't taken a class they tend not to use all the features fully.
- o Critical Thinking reports are required in many of these classes. They cover how to use resources to solve real world problems.
- o Consider adding QuickBooks as an elective. Quickbooks is widely used in the community and by small business.
- o We need to have a Work Experience class revised and added to electives.

o   We will possibly add more electives that are focused on specific skills and maybe weed out Intro to the Internet as a course of its own since the Internet is discussed and used in many classes already.
o   Soft skills rank high as usual with employers.

5. Observations and Recommendations

Discussion: Laura Hickel brought forward the topic of bringing back the Business Regional Occupational Program to the local High School. BSAD C070 Business Mathematics 3 units (54 hours), BSAD C072 Introduction to Accounting 3 units (90 hours), and CSCI C070 Computer Literacy 1 unit (36 hours) are great courses for the first year. The department will determine and appoint Cerro Coso faculty who can teach these classes at the high school under the dual enrollment program. The college supports startup for fall 2013.   With these three foundation courses, students will have credits towards the Business Office Technology program and/or an advantage for starting the Business, Management, Business Administration, or Computer Information Systems certificates and degrees.   Classes will be taught in one hour blocks five days a week on the high school term schedule. Karen will send course outlines of record to Laura. These can be found at www.curricunet.com/kccd for all users who may log in as guest.

Discussion: Are our grads getting jobs in the fields they have been trained in? We are working on increased tracking tools to know what happens to our students after they leave Cerro Coso but it is tough to get data because of privacy issues.

Discussion: Certificates and degrees are not awarded automatically. We need to continue to advise students regarding what they need to graduate and to apply for their certificates. They must apply to get their certificates once they have completed the required courses.

Discussion: California Wage Determination Schedule is a document that has 300-500 job categories listed and the prevailing wages for jobs according to location. This is used in this community a lot because of the base. This tool might be helpful to help align career paths.

6. Next meeting date:

The Tuesday lunch works for all. At the next meeting, Karen will bring course outcomes.

7. Adjournment

Business Office Technology

Business and Information Technology Advisory Committee Meeting

Meeting Date November 30, 2012
Meeting Location IWV Room 722
Bishop ITV room
Meeting time 12:00-2:00

Minutes

III.   Attendees:

Business Office Technology group:

Present at IWV:
- Michelle Lemke HR Administrator Ridgecrest Regional Hospital michelle.lemke@rrh.org
- Patricia Keith, BSOT student
- Jan Moline, Counseling chair

Present at Bishop:
- Gina Jones OVCDC
- Joanie Hanson OVCDC
- Karen O'Connor BSOT Faculty and chair

Absent:
- Carter Pope, HR Alta One (Also for Business and CIS)
- Patricia Gresham, Navy patrica.gresham@navy.mil
- Nicole Osborne: Executive Office Manager, China Lake Nicole.osborne@navy.mil
- S Kennedy, Sierra Sands School District
- Margaret Porter
- Sean Callahan: Jacobs Industries (Also for Business, CIS, and DMA)

IV.   Meeting Overview: This was led by department chair, Karen O'Connor. Discussion followed in the following areas as orientation to assist small group breakouts.
    a. Program areas: Career Pathways for Degrees and Certificates
    b. Course Outlines of Record: What they are and why we need to review.
    c. Outcomes Assessments:
    d. Program Reviews (2 and 6 year)

V.   Matt Hightower led a discussion on Employable Graduates/ Internships and job shadowing/job placements and tracking.

VI.   Breakouts for Program Areas: *Discussion followed on the following general topics:* 30 minutes

a. The Business Office Technology area discussed the following:
   i. Program Outcomes were reviewed and found to be excellent. **All** existing outcomes are deemed to be of great value, with particular emphasis on the first outcome related to professionalism and the last outcome related to listening.
   ii. The hospital representative said that when they call our admissions and records to verify whether students really have the degrees and certificates stated on resumes, they never get a call back in a timely manner. This is detrimental to hiring Cerro Coso grads. This came up when the group discussed hospital hiring procedures and the kinds of office jobs that come available.
   iii. Although the hospital does have customized hospital software for use in some of the offices, they expect their hires to know how to use MS Office and those programs, Excel, Word, PowerPoint, Outlook, and Access are all either used or have great value in areas for skill transferability.
   iv. Certificates and the degree were discussed, as well as course content and areas of emphasis.
   v. The importance of good writing skills was reflected and confirmed by advisory members.

b. The ESCC group discussed the following:

   i. Our session was lively and more general in nature. We talked about the gap between education and business; how we as instructors tend to nurture our students along which might not actually be the best way to prepare them for the fast pace of the business world but unfortunately is often the way to keep them in the class and help them complete the class. We talked about online classes and keeping students. Joanie Hanson attended a conference in Vegas last week that addressed creating community in online classrooms - and recommended hybrid classes as the most successful. Evidently establishing a F2F connection between the instructor and other students is hard to replace. She did say if hybrid classes are not an option, then video instruction by the instructor (and by extension I think our Connect sessions) where the students can see the instructor is next best.

ii. The OVCDC tried an informal internship placement program this past summer. They only had two students take internships and one dropped out midway.

iii. We talked about motivation - none of us had any epiphany on new and effective ways to motivate and all of us agreed that it is so frustrating when students just disappear mid-semester, especially when there had been no sign that he or she was struggling.

iv. We discussed learning outcomes and measuring success. How do you create learning outcomes that encompass the abstract thinking that Billy Gogesch brought up and how do you measure it?

v. We brainstormed on ways each class might incorporate independent and create problem-solving and how to avoid students learning "steps" instead of concepts. Like teaching a technique using Photoshop and then asking the students to achieve a similar result using alternate software (like GIMP). I thought that would be great for our classes - to help students understand the underlying image editing concepts and then be able to figure out a similar but not mirror process (does that make sense?).

vi. We talked about internships and how business groups (like Rotary and Kiwanis) might be able to help with them. I'll bring it up at Bishop Sunrise and see what the reaction is.

vii. Billy Gogesch is still interested in talking to Suzie and /or Elaine about a Mammoth Chamber website intern (and perhaps other projects).

Business Office Technology Advisory Meeting

February 15, 2011 Karen O'Connor, Gina Jones, Joanie Hansen, Owens Valley Career Development Center, 11:15 - 12:30 by phone

Scheduling:

CSCI C070 Computer Literacy will be offered in the Summer 2011 on Tuesdays and Thursdays and CSCI C123 Beginning Excel will be offered on Mondays and Fridays.   David is only available Mondays and Fridays and the students are fine with a Friday class. Having the classes in the afternoon allows students to attend basic skills math and English classes in the mornings. We are offering C070 in the summer to allow Industrial Technology students to take this required course. We'll offer it again during the second half of the fall semester to catch new BSOT and INDT students.   We'll skip Word for summer and offer it again in the fall for BSOT and INDT students.

For Fall 2011, Access will be taught the first eight weeks of the semester and Computer Literacy the second eight weeks of the semester on M and F.   12:00 to 2:05.

Keyboarding (stacked) will be taught on Tuesdays all semester (16 weeks) and Word will be taught on Thursdays all semester (16 weeks) in Fall 2011.

Two courses total at OVCDC for Summer 2011 and four courses total at OVCDC for Fall 2011 are planned.IT help can be scheduled so that the support is not at lunch when the 12:00 classes begin.

Courses: Gina says that proctors can be arranged for BSAD C070 Business Math students if needed (or for any course).   Not so many students needed PowerPoint for completions (Spring 2011), but employers such as the wind industry do value the ability to present and use PowerPoint as a valuable asset in employees.

Update on Completions: Mallory Barlow and Tisha McKellip finished the Office Clerk Certificate of Proficiency in Fall 2010. OVCDC may be having a ceremony to honor grads in June sometime.

There are five students from OVCDC in the BSOT C154 class spring 2011. Christina B, Alex D, Hillary F., Ann M. and Alex D. Cristina B and Hillary F are likely to complete this spring 2011. That will make four certificate of proficiency completers for grad in spring 2011.

The true Intro to BSOT class should be available within a year and will replace BSOT C154 as the course required for the Certificate of Proficiency. This will make BSOT C154 a true capstone class.

ESCC's "Boot Camp" Internships: Integration of Knowledge with Experience
August 2, 2012

In an effort to address community demand for a workforce trained in basic office skills, Cerro Coso's Eastern Sierra College Center partnered with the Owens Valley Career Development Center, local non-profit organizations and Eastern Sierra businesses, to develop the Business Office Boot Camp program. Business Office Boot Camp was a 10-week summer program which included six entry level business office technology courses, plus the opportunity for students to participate in internships with local businesses one day per week.

Internships provided by the Eastern Sierra Land Trust (ESLT), the Owens Valley Career Development Center (OVCDC), Mammoth Lakes Tourism and the Bishop Indian Education Center allowed students to apply their knowledge outside the classroom walls, and put theory into practice.

"Gina is a passionate and hard worker. She jumps easily into each task," said Serena Dennis of the Eastern Sierra Land Trust. Gina Carlson, one of Cerro Coso's students, enjoyed her experience immensely. In ESLT's fun and productive office environment, Gina actually got use her new business office skills to assist in planning the organization's annual fundraiser, Lands & Legacy, an event that included a bike ride and gala dinner. The money raised helped preserve working farms and ranches, wildlife habitats and scenic resources in the Eastern Sierra.

Garrett Bryan, another student intern, was very pleased with his co-workers and job duties at the Owens Valley Career Development Center, an organization that focuses on improving quality of life by focusing on education and self-sufficiency for Native American People. As soon as his internship began, Garrett was immediately tasked with using Microsoft Publisher to create promotional materials for OVCDC events. "I got the hang of it right away! Thanks again for the opportunity," he said to the staff Cerro Coso.

The Mammoth Lakes Tourism internship was particularly special for intern Nestor Granados, because his mentor, Interactive Marketing Manager, Christie Osborne, is an ESCC graduate herself. A self-proclaimed high school drop-out, Christie decided to re-embark on an educational journey when she injured herself snowboarding. After graduating from Cerro Coso, Christie went on to get her Master's degree. She later moved back to Mammoth, where she was thrilled to be able to give back to her community as a manager at Mammoth Lakes Tourism. She commented that Nestor was a "tremendous help. He has remained flexible, upbeat and professional. Nestor also has a keen eye for detail, has made several timely suggestions, and can self-motivate." But this internship success went even further than that. Nestor reported back to Cerro Coso at the end of the summer semester, "I have been offered a job here! I will be joining the team on August 6th." His exceptional work ethic earned him a paid position with a core business here in the Eastern Sierra.

Congratulations, Nestor. You make us very proud. In fact, you all do. This pilot program was rewarding for everyone involved: Cerro Coso Community College, the student interns, and our local business sponsors. We learned first-hand that carefully conceived, academically informed internships provide much added value to classroom study. Those students who took advantage of the program got an exceptional return on the investment of their energy, initiative and time. They will no doubt be just as successful as they transition into the workforce.

Vocational Nurse Program Review

Allied Health

Cerro Coso Community College

Annette Hodgins

February 9, 2016

Executive Summary

The Vocational Nursing (VN) program is one of the first programs approved for Cerro Coso Community College. The Vocational Nursing program is a state approved program through the Board of Vocational Nursing and Psychiatric Technicians (BVNPT). The program provides education that allows students to become entry-level licensed nurses after five semesters of fulltime education, which includes two semesters of prerequisites and three semesters in the vocational nursing program. After completing the program, students may take the state boards for licensure. Cerro Coso's VN program has a long history of providing competent and professional Licensed Vocational Nursing (LVN) for local communities. Those completing a VN certificate enter AA/AS programs in health careers. Many students use the VN program to attend LVN to Registered Nurse (RN) bridge programs to further their careers. The majority of completers enter the job market in areas such as home care, long-term care, dialysis, emergency room, and outpatient care. Many students have gone on to hold managerial positons in the community.

This program review reaffirms the continued need within our communities for fully prepared "job ready" Licensed Vocational Nurses. Advisory members continue to promote enrollment, actively support clinical experience, provide disposable supply when it becomes available, and allow the program access to clinical facilities for practical application training. Although this is a rigorous program (expecting students to attend class almost forty hours a week), there is consistent retention and successful National Council Licensure Examination (NCLEX–PN) first time pass rates of 78.39%. The California state NCLEX-PN is 76%. In addition, the VN program has outreach to surrounding areas such as Kern River Valley via interactive television (iTV) to meet the nursing needs of rural areas.

Part 1 - Relevance

1. Catalog Description

This course of study is an intensive program totaling 1,662 hours approved by the Board of Vocational Nursing and Psychiatric Technicians. The hours include anatomy and physiology, psychology, certified nurse aide (CNA), nursing theory, and supervised clinical nursing experiences. Concepts integrated throughout the first semester of the program include fundamentals of nursing, geriatrics, nutrition, and pharmacology. Nursing care of clients with various adult medical-surgical conditions is integrated throughout three semesters of the program. Course content also includes concepts of growth and development, normal obstetrics and pediatrics. After successful completion of the program, the student is eligible to take the licensure examination provided by the National Council Licensure Examination (NCLEX-PN).

The course description is a generalization of the overall program. Since the program encompasses many different aspects of nursing at the entry level, the description cannot reasonably cover all aspects of the nursing program.

2. Program Learning Outcomes

Vocational Nursing Program Learning Outcomes:

> 1 . Identify the etiology, pathophysiology and signs and symptoms of disorders of all body systems and stages of development. *Assessment:* This will be assessed by scoring a passing mark on the NCLEX-PN Boards.
> 2 . Demonstrate an understanding of the nursing process. *Assessment:* This will be assessed by scoring a passing mark on the NCLEX-PN Boards.
> 3 . Take a leadership role in both the profession of Vocational Nursing and in the community. *Assessment:* This will be assessed by successful job placement in the field
> 4 . Successfully pass the State Mandated NCLEX-PN Boards. *Assessment:* This will be assessed by scoring a passing mark on the NCLEX-PN Boards.

The program learning outcomes (PLOs) are basic compared to the requirements of this program. They provide a cover statement for the multiple program objectives, which are required by the Board of Vocational Nursing and Psychiatric Technicians (BVNPT). The PLO statements #1 and #2 are accurate and demonstrate the overall objectives of the program. The PLO statements #3 and #4 do not adequately describe the program outcome goals. In PLO #3, acquiring a job does not necessarily indicate taking a leadership role in the community. The Licensed Vocational Nurse is considered an entry-level job in the nursing field; therefore, taking a leadership role as a new graduate would be beyond the expectations of this program. PLO #4 is stating the obvious. The end result is for the students to take and pass the NCLEX-PN Boards; however, this does not measure the quality of the program and students' ability to perform as excellent nurses. The director and faculty will update the program PLOs to reflect the true goals of the Vocational Nursing program. The proposed plan to assess the PLOs in the next review cycle is to implement cumulative testing each semester and upon completion of the program. The cumulative testing will be generated based on NCLEX-PN style of questions.

Proposed Vocational Nursing Program Learning Outcomes:

> 1. Identify the etiology, pathophysiology, and signs and symptoms of disorders of all body systems and stages of development. *Assessment:* This will be assessed by a cumulative test after each semester and upon completion of the program.
> 2. Evaluate the role of the nursing process in patient care. *Assessment:* This will be assessed by a cumulative test upon completion of the program.
> 3. Employ patient centered care for patients at all stages of development. *Assessment:* This will be assessed by a cumulative test after each semester and upon completion of the program.
> 4. Assess the leadership role of the vocational nurse in the health care system. *Assessment:* This will be assessed by a cumulative test upon completion of the program.

This program has both a Job Certification and an Associate Degree. The Associate Degree will assist students who wish to pursue an Associate Degree as a Registered Nurse through a LVN to RN Bridge program.

3. Courses/Program Matrix

The course curriculum and objectives are outlined by the BVNPT. Each course is designed to complement and advance students' critical thinking and knowledge. The courses build upon each other in such a way that students can apply knowledge in the clinical setting. The courses for clinical application help students build self-efficacy and self-confidence in caring for real patients. The elective courses help students advance their knowledge in specific areas of care, making the students more employable.

PROGRAM COURSES BY SEMESTER	
SEMESTER I	
Complete all of the following courses:	Units
HCRS C100 Fundamentals of Nursing	3
HCRS C103 Medical Surgical Nursing	3
HCRS C107 Basic Pharmacology Vocational Nursing	2
HCRS C113 Vocational Nursing Lab I	6
HCRS C070 CPR for the Healthcare Provider	0.5
or	
EMTC C070 CPR for the Healthcare Provider	0.5
TOTAL UNITS	**14.5**
SEMESTER II	
Complete all of the following courses:	Units
HCRS C204 Medical Surgical Nursing II	9
HCRS C214 Clinical Nursing II	6
TOTAL UNITS	**15**

SEMESTER III	
Complete all of the following courses:	Units
HCRS C205 Medical Surgical Nursing III	3.5
HCRS C206 Maternal/Child Nursing	3
HCRS C207 Advanced Pharmacology	1
HCRS C208 Critical Thinking and Leadership	1.5
HCRS C216 Clinical Nursing III	6
TOTAL UNITS	**15**
Elective Courses	
Complete one of the following courses:	Units
HCRS C230 Pharmacology for Health Prof.	3
or	
HCRS C240 Nutrition/Diet Therapy	3
or	
HCRS C250 Cultural Diversity in Health Care	3
or	
HCRS C255 Basic Cardiac Rhythm Interpretation	3
or	
HCRS C260 Ethics for the Health Professional	3
TOTAL UNITS	**3**
TOTAL PROGRAM UNITS	**47.5**

PROGRAM MATRIX	*PROGRAM LEARNING OUTCOMES*			
COURSES	1	2	3	4
EMTC C070 or HCRS C070 CPR	X	X		
HCRS C100 Fundamentals of Nursing		X		X
HCRS C103 Medical Surgical Nursing	X	X		X
HCRS C107 Basic Pharmacology Vocational Nursing		X		X
HCRS C113 Vocational Nursing Lab I	X		X	X
HCRS C204 Medical Surgical Nursing II	X			X
HCRS C205 Medical Surgical Nursing III	X	X	X	X
HCRS C206 Maternal/Child Nursing	X	X		X
HCRS C207 Advanced Pharmacology		X		X
HCRS C208 Critical Thinking and Leadership		X	X	X
HCRS C214 Clinical Nursing II	X		X	X
HCRS C216 Clinical Nursing III	X		X	X

Course				
HCRS C230 Pharmacology for Health Prof.		X		
HCRS C240 Nutrition/Diet Therapy	X			
HCRS C250 Cultural Diversity in Health Care		X	X	
HCRS C255 Basic Cardiac Rhythm Interpretation		X		
HCRS C260 Ethics for the Health Professional			X	

4. Program Pathway

The program is offered as a block cohort with each student cohort meeting at the same time and days. The program was changed to a three semester, 12 month program, which allows students to complete prerequisites and the Vocational Nursing Program in two years. These courses are offered on ground or by ITV only. The program is offered at the IWV campus yearly and at Kern River Valley and Bishop Campuses every other year per BVNPT approval. The other campus programs are offered via iTV. A Moodle shell is used to maintain consistency and program reliability from site to site for all courses. All the students attend theory courses at the same time with the same instructor. The clinical courses are provided at the local health care facilities and are tailored to enhance the theory courses.

The BVNPT and the department determine the program pathway. The following courses are required by the BVNPT to be held in the first semester: Fundamentals, Medical-Surgical Nursing, Basic Pharmacology, CPR, and Vocational Lab I. These courses provide a basic understanding of the skills and role of the VN. The rest of the program was built to increase the students' knowledge of anatomy, physiology, and nursing care as it relates to the profession. The courses include the role of the Vocational Nurse in each specialty and provide the students with clinical experience to improve task and non-task oriented skills.

4. Conditions of Enrollment

The BVNPT requires that students have the Certified Nursing Aid, Survey of Anatomy and Physiology, Psychology, and Medical Terminology prior to entering a Vocational Nursing Program. The Department requires students to take a general computer literacy course to help them navigate the health care technology used in the nursing field such as the electronic health record and purchasing order system.

Prerequisites	Units
HCRS C055 Certified Nursing Assistant	5
CSCI C070 Computer Literacy	1
PSYC C101 General Psychology or PSYC C101H General Psychology Honors	3
HCRS C150 Medical Terminology	3
BIOL C125 Survey of Anatomy and Physiology	4

OR	
BIOL C251 Human Anatomy AND	
BIOL C255 Human Physiology	8
Total Required Units	**16-20**

Part 2 – Appropriateness

1. Connection to College Mission

This job skill certificate provides market ready completers directly aligning with the college mission to provide certificates in career technical education leading to entry into the workforce. This certificate provides job skill training for individuals that may enter the job market, pursue additional medical degrees and certificated programs, and provide care to their respective communities. Standardized curriculum is provided for each cohort based on the BVNPT requirements. The theory and clinical objectives are assessed through standardized tests, simulated scenarios, and practical skills teaching and testing. Each required objective is assessed each module of the course. Students are given both cognitive and practical skills cumulative exams prior to completion of the program. The students' NCLEX-PN success rates are assessed quarterly compared to California and National Standards.

The BVNPT assures compliance through annual reporting and live assessment BVNPT consultant visits. The Vocational Nursing Program Director and course instructors evaluate the program effectiveness at the end of each course or semester. The faculty and Director evaluate course materials, partnership facilities, and instruction through student and faculty surveys. Each program cohort has different challenges for improvement in student retention, completion, and overall success. The Allied Health Department continues to focus on reaching underserved student populations and communities. An underserved student population includes but is not limited to minorities, male population, and single parents. The Allied department is involved in outreach to men because the nursing field is a female dominated profession.

2. Determination of Student Needs

The students' learning needs are met through various opportunities including hands on skills practice, simulated scenarios, and embedded remediation. Students are provided with the opportunity to retake any quiz a second time after remediation. Video recording during skills practice provides the students with instant feedback from peers on mistakes and successes made during the process. Students are guided through the assessment process in an effort to build self-efficacy and self-confidence in their own abilities both task and non-task oriented.

Advisory meetings each semester in addition to open communications and support from our advisory group member organizations and their employees provide regular evaluation of the needs within the communities and surrounding areas. Mandates established by the BVNPT dictate updates in required curriculum, clinical hours, and practical training.

Regular evaluation of student objectives and the pathways leading to meet the course objective are used throughout the course to strengthen student success. Twice a semester the program instructors and director meet to discuss program success, facility availability, updates to new standards of care, the latest research within the industry, teaching techniques, and how we incorporate all of these into the program. Success of our program is also measured by first time students pass rates on the NCLEX-PN. Currently, Cerro Coso Community College Vocational Nursing Program has an annual 78.39% first time pass rate. These results are better that the overall California pass rates of 76% and less than the National pass rates of 81%.

There are no current employment rates available. Previous rates do not reflect those students who chose to return to school to obtain their Associate Degree in Nursing (ADN) RN degree through the LVN to RN bridge program offered at Bakersfield College.

3. Place of Program in Curriculum/Similar Programs

This program is not available in our service area by any other college. The closest available program is outside of our service area. Students attending these programs have to drive at least two hours to attend theory courses and clinical lab.

The Vocational Nursing skills certificate and AS degree transfers to an ADN LVN-RN bridge degree program. Completion of the job skill certificate or AS degree allows for the applicant to take the national exam to become a Licensed Vocational Nurse.

4. Majors and Completers

The Vocational Nursing Program has a Job Certificate and an Associate Degree. The success rates for both the certificate and the AS degree are provided for the period of Fall 2010 to Spring 2015. The Vocational Nursing (VN) program is a block cohort program. Some of the data presented is not consistent and complete. Therefore, the data is skewed course by course. Cerro Coso Community College was able to change the Vocational Nursing Program from a 18-month program (starting in January, Spring, Fall, Spring) to a 12 month program (starting in January, Spring, Summer, Fall), which accounts for missing or incomplete data . The data available encompasses two or three years since the program change in 2013. There have been three cohorts with 78 students admitted to the VN program with two cohorts completed and one in progress. The first two years had a total of 61 students admitted to the VN program with 52 completers. This is an 85.2% program completion rate with a 78.39% first time NCLEX-PN pass rate. Students are not required to receive an AS degree or Job certificate to take the NCLEX-PN. The program director hands out the graduation forms during the third semester in an effort to capture VN program completers.

Community needs, employment opportunities, staff available, and facility availability in service area dictate VN cohort size. Facility availability is the major driving forces for cohort size. The BVNPT requires 15 students to 1 instructor ratio for the clinical setting. VN theory is taught via iTV to mitigate some of the financial burden that is incurred in providing VN cohorts to the satellite campuses.

5. Summary of Student Demand Data

This program was updated in 2013. All the courses where change to meet the current program changes. There have been three cohort completions since the Vocational Nursing program was change to meet state guidelines to increase access, promote continuity, and decrease time spent in completing the program. The program was changed to a 12-month program instead of a 18-month program where the students attend college during the summer. The program has been changed from 16-week semesters to 15-week semesters. The courses were aligned with other community colleges in the central valley. Along with the program changes, the program was offered at a new site at Kern River valley to meet the needs of the community for Vocational Nurses in local facilities. The college partners for Allied health were requesting an increase in offerings for Vocational Nurses to meet the need for licensed nurses in the area. The size of each cohort remains 12-15 students. This is driven by the BVNPT and by limited access to health care facilities in and around our service areas. The department is looking to expand the Vocational Nursing program to other service areas such as Tehachapi and Mammoth in the future. The BVNPT requires no more than 15 students to one instructor. The VN program currently has two full-time employees. The rest of the instructors are adjuncts. The FTES has remained consistent or improved over the last five years.

6. Labor Market Information and Analysis *(CTE Programs Only)*

According to the Department of Health and Human Services (HRSA), there will be an increased need for Vocational Nurses by 25% by 2022 nationally. The Allied Health Department service partners are requesting an increase in Vocational Nursing Graduates to meet the current need for new licensed nurses.

The Executive Management Services, Inc. (EMSI) demonstrated a 0.9% need in vocational nurses in the college's service area from 2014 to 2015. In October 2015, there were 383 job listings for the area. These numbers will change based on how each community implements the Affordable Care Act. In addition, the need for Vocational Nurses will change based on an aging population and on attrition since the nursing workforce is reaching retirement age. 47.8 % of the current Licensed Vocational Nurses are 45 years of age or older. HRSA recommends training nurses in an effort to prevent a nursing shortage. (See attached data)

7. Explanation of Employer Relationship *(CTE Programs Only)*

The service area has several different facilities that provide a training arena for the VN program. The health care hospitals and facilities allow students to follow licensed nurses, provide care to patients, and

participate in community health care services. Companies, facilities and agencies are encouraged to participate in advisory meetings to collaborate with our facility, network with other providers and increase Cerro Coso's understanding of the needs within our operating and surrounding areas. Cerro Coso graduates work in local hospitals, schools, and doctors' offices. The graduating class of 2015 had nine of the fifteen students hire before graduation.

8. Advisory Committee *(CTE Programs Only)*

The advisory committees represent some of the facility partnerships and local service providers at each campus site. The advisory committees meet once each semester. The advisory committees include the Nursing Directors, Nurses, and facility owners.

IWV Advisory Members:

James Suver, CEO Ridgecrest Regional Hospital

Sandy Gilliam, DON Ridgecrest regional Hospital

Cindy Schonhoff, Employee health

Jenny Hugho, Nurse Manager Ridgecrest regional Hospital

Julie Muldoon, Heather Stone Medical

Shantell Utley, Clinical Educator

Cheryl Pullen, DSD Bella Sera

Sharon Aleo, DON Bella Sera

KRV Advisory Members:

Mark Gordon, CNO KVHD

Tim McGlew, CEO KVHD

Lisa Stephens, Director Cerro Coso Community

Jeanine Olsen, KVHD

Edith Cecil, DON KVHD

Ana Hernadezs, Clinica Sierra Vista

Dr. Gross, Sienna Wellness

ESCC Advisory Members:

Katherine Alo, DON Mammoth Hospital

Kathey Decker, DON NIH

Reggie Webster, CEO BCC

Pat West, RN Pioneer Home Health

Ruby Allen, RN Pioneer Home Health

Rick Frey, Toiyabe Indian Health Project

Analysis: Advisory boards with membership from multiple industries utilizing job skill certificate completers meet at the KRV, IWV and ESCC campus areas. The advisory board meets one a semester. The service partners participate in numerous individual meetings throughout the year. Clinical instructors meet with service partners once a month. The advisory members are encouraged to participate in curriculum and student learning outcome review. The members provide ongoing information about student success in the workplace. The service partners provide clinical experience for students at their organizations.

9. Current Cost of the Program to Students

The VN program is a 12-month, three-semester 47.5 unit certificate, which upon completion students can take the NCLEX-PN test for licensure as a nurse. The average wage is $23 dollars an hour. The program is intensive and fulltime. Students take 14.5 to 15 units each semester. They also spend 21.6 hours in a clinical setting each semester. The cost per semester is $650-690 dollars for tuition. The materials, uniforms, and textbooks cost approximately $1000 for all three semesters. The program director is seeking ways to decrease costs by using library resources and grants to provide extra resources for the students. Upon graduation, students pay for a LiveScan and BVNPT application fee of $150 dollars. The total cost of the VN program is approximately $3500 dollars for the year. There are multiple opportunities to receive scholarships through the finical aid department and the Pink Ladies Foundation. Students who live in the Mammoth-Bishop area have access to scholarships through the community.

Textbooks and uniforms are the most expensive items required. The BVNPT does not allow for open resource books. Students are encouraged to rent books or buy e-books. There are no material fees. Students are required to get drug screens, health checks, and background checks prior to entering a clinical setting, which is an added cost for the program. A private college charges $28,000 for the VN program.

Part 3 – Currency
1. Staffing

There are two full-time faculty and eight adjuncts. One faculty member acts as Director of the Vocational Nursing Program and Health Careers and manages the skills labs. The VN program has permission to hire one full-time employee. There is hardly enough faculty to be effective in improving and expanding the program. It will be difficult to expand the program without more faculty and supporting staff to manage the skills lab and simulation equipment.

2. Professional Development

Program Full-time Faculty/Program Director attends CTE conferences, Flex Days, Career Fairs and continuing education credits in health care. All faculty are licensed nurses. By state law, all nurses must have 30 units of continuing education to maintain their license.

Analysis: The faculty maintains their own license through continuing education. The faculty participates in faculty development to stay current in health care and nursing trends. In addition, nurses have to maintain competencies as required by service partners.

3. Facilities and Physical Resources

Equipment used for the program includes disposable and non-disposable supplies that are mandated to be available at all sites. At this time the budget does not meet the level necessary to replace disposable supplies. The non-disposable supplies have been replaced by grants. A replacement schedule is being developed to incorporate in the annual unit planning and budget. Additional teaching materials become a requirement as research concludes and standards change during budget years causing unanticipated needs. Some service partners assist in providing supplies by donating outdated supply items that may be used in class.

Facilities are insufficient at this time since other health careers courses overlap with the VN program and the shared space for skills lab is limited. The available equipment is serviceable and there are plenty of supplies for each site. The department is working on scheduling programs so there is no overlap of course offerings.

Analysis: The facilities are safe. The skills labs are being schedule to allow full use of the facilities by each program so that student experience is not impacted by the limit space. There is sufficient equipment to support and assure the integrity and quality of the program. The equipment is modern and functional with minimal exception and works well for facilitation of teaching.

4. Technology

A learning site such as Moodle is used to provide student information, testing, and course materials/ links. Simulation equipment is used to provide a safe environment for students to practice nursing skills and competencies. iPads are used to record the students' performance for testing and self-evaluation. Students, peers, and instructors review the recordings to improve technical and nontechnical skills.

Analysis: The technology resources are sufficient enough to assure the integrity and quality of the program. Student needs and success drive the decisions on technology. Student remediation has decreased since the induction of iPads in the classroom.

5. Marketing

CTE information banners are used on campuses, community functions and other special events. The VN program certificate and department information is available on the Cerro Coso Community College website, at each campus in an information flier and provided at community events. Faculty actively participate in career day, health career ROP course talks, and local fairs to provide the public and perspective students information for all medical offerings at Cerro Coso.

Analysis: The information on the informational flier is clear and accurate. The production of program brochures would further promote the job skill certificate. Radio and other advertisements could be used to announce the start of the application process for each new cohort.

Part 4 – Student Achievement
1. Course-Level Student Performance Data

Student retention and success in the VN program is consistently between 86-100% for the last three cohorts. The student success rate for first time pass on the NCLEX-PN is 78.28%, which is higher than the California average of 76% and less than the national average of 81%. The goal for first time pass rates for Cerro coso Community College VN program is 80%. Though the NCLEX-PN is not an indicator of quality, it does show the student's abiltiy to successfully applied theoretical knowledge since the test is based on concept application.

Analysis: Students tend to drop during the first semester. The stress of the long course hours coupled with limited family time takes a toll on the students' coping mechanisms. Economic status also plays a part in the stress of attending an intensive fulltime program such as vocational nursing. Students with health care issues, family trouble, or drug/ alcohol problems tend to have an even harder time than other students. In addition, students who are 'English as a second language' tend to be less successful on the NCLEX-PN. The Director has implemented a live NCLEX-PN review at the end of the program. The BVNPT is requiring a pre-admission testing to evaluate the students' readiness for attending a VN program. This testing will be required for the 2017 cohort. The test will be paid by the Allied Health Department and has been added to the departments' Annual Unit Plan. Site monitors have been added to eacn iTV room to facilitate a positive learning environment and asking questions. In the future, the program curriculum and design will be resubmitted to the BVNPT to allow individual instructors at each site.

2. Employment Data *(CTE Programs Only)*

The data collection for VN employment is not directly collected. The collection process is through word of mouth by VN self-reporting. Graduating VN students can work in a variety of areas including long-term care, acute care, doctors' offices, schools, and dialysis centers. From self-reporting 28/39 students received jobs after graduating for a 72% employment success rate. The 2015 cohort of 15 students had a 9/15, which is 60% hire rate before finishing the program. According to the service providers, the VN program is not graduating students fast enough to fulfil the growing need for licensed nurses in the community. This is the first program review for the current VN program, which was updated, approved, and curriculum rewritten in 2013. Finally, many of the graduating VN students are planning on moving forward with their career and do not take jobs so they can apply to a LVN to RN bridge program.

3. Achievement of Program Learning Outcomes

PLO 1:	*Identify the etiology, pathophysiology and signs and symptoms of disorders of all body systems and stages of development. Assessment: This will be assessed by scoring a passing mark on the NCLEX-PN Boards.*
Target:	80%
Assessment Method:	Passing mark on NCLEX-PN
Assessment Date:	Fall, 2015
Recent Results:	2014-2015 NCLEX-PN pass rates 78.38%
PLO 2:	*Demonstrate an understanding of the nursing process. Assessment: This will be assessed by scoring a passing mark on the NCLEX-PN Boards.*
Target:	80%
Assessment Method:	Passing mark on NCLEX-PN
Assessment Date:	Fall, 2015
Recent Results:	2014-2015 NCLEX-PN pass rates 78.38%
PLO 3:	*Take a leadership role in both the profession of Vocational Nursing and in the community. Assessment: This will be assessed by successful job placement in the field.*
Target:	80%
Assessment Method:	Successful job placement
Assessment Date:	Fall, 2015
Recent Results:	28/39 students self-reported hired after graudation 2014 cohort & 9/15 students self-report hired before graduation 2015 cohort
PLO 4:	*Successfully pass the State Mandated NCLEX-PN Boards. Assessment: This will be assessed by scoring a passing mark on the NCLEX-PN Boards.*
Target:	80%
Assessment Method:	Passing mark on NCLEX-PN
Assessment Date:	January 2017
Recent Results:	2014-2015 NCLEX-PN pass rates 78.38%

		Assessment History Summary			
PLO #	**Target**	**Semester**	**Met?**	**Semester**	**Met?**
PLO 1	80%	SRG13	Program Changed	FA15	No – 78.38% pass rate
PLO 2	80%	SRG13	Program Changed	FA15	No - 78.38% pass rate
PLO 3	80%	SRG13	Program Changed	FA15	No – 68.8% hire rate
PLO 4	80%	SRG13	Program Changed	FA15	No - 78.38% pass rate

a. Gaps and Improvements Made

There are many factors that cause decrease in first time NCLEX-PN success rates.
1. Students taking NCLEX-PN after 3 months of graduation
2. Students studing for NCLEX-PN before taking test
3. Program alignment with NCLEX-PN assessment
4. Lack of site managers (iTV)
5. Student prep prior to graduation
6. Student readiness to be successful in program
7. English as a second language

The VN program is under constant change. Every semester the program director reviews the quarterly NCLEX-PN pass rates for CCCC sites. While there is little the program can do about students studing or the BVNPT application return rates, the students can be set up for success by:
1. Aligning the program with current testing methods and concept based testing
2. Providing cumulative assessment testing prior to graduation
3. Testing students for readiness to be in a vocational nursing program (new BVNPT requirement)
4. Providing a systematic individualized method of study during and after graduation
5. Providing continuing education on professional conduct
6. Changing program focus to application of theory

The VN program director and assistant direcotr has implemented several changes to meet the needs of the students and to improve NCLEX-PN success rates. These include:
1. Implementation of live NCLEx-PN review prior to graduation

2. Implement a learning program (HESI) that tests, provides individualized remediation, and provides a individualized study plan through out the program including ESL learners
3. Implement concept maps to direct student learning to theory application
4. Implement site managers for iTV rooms
5. Continue embedded remediation
6. Implement cumulative testing at the end of every course and at the end of the program

The intervention provided above are new to the VN program so an evaluation of the interventions has not been completed. Target date for reassessment is fall/spring 2016-2017, after the NCLEX-PN annual reports will be published and current cohort will have completed the program.

b. Summary of Program Learning Outcome Achievement

The Vocational Nursing (VN) Program has had two cohorts by BVNPT students must pass each of the courses with a 78%. Each student must complete the course objectives and pass the course to go forward in the VN program; therefore, there is an embedded remediation plan approved by the BVNPT. Students who do not pass the exams are given one chance to improve their grade below 78% after remediation case studies and assignments. For clinical courses, the students have to have 80% overall for every course to continue in the program. Remediation is required for any students who do not reach the 80% benchmark. Complete of the full program assures completion of the program outcomes.

4. Achievement of Course Student Learning Outcomes

Course	SLO #	Target	5-Year Assessment History					
			Semester	Met?	Semester	Met?	Semester	Met?
HCRS C055	SLO 1	80%	FA15	Yes	Not available			
	SLO 2	80%	FA15	Yes	Not available			
	SLO 3	80%	FA 15	Yes	Not available			
	SLO 4	80%	FA 15	Yes	Not available			
	SLO 5	80%	FA 15	Yes	Not available			
HCRS C150	SLO 1	80%	FA15	Yes	Not available			
	SLO 2	80%	FA 15	Yes	Not available			
	SLO 3	80%	FA 15	Yes	Not available			

	SLO 4	80%	FA 15	Yes	Not available		
	SLO 5	80%	FA15	Yes	Not available		
	SLO 6	80%	FA15	Yes	Not available		
	SLO 7	80%	FA 15	Yes	Not available		
	SLO 8	80%	FA 15	Yes	Not available		
HCRS C100	SLO 1	80%	FA15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 6	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C103	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 6	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C107	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C113	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C204	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 6	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 7	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 8	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C205	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	

	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 6	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 7	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 8	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 9	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 10	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 11	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C206	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 6	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 7	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 8	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 9	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 10	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 11	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 12	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C207	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C208	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C214	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 6	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C216	SLO 1	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 2	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 3	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 4	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 5	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 6	80%	FA 15	Yes	SPRG 2013	New Course	
	SLO 7	80%	FA 15	Yes	SPRG 2013	New Course	

	SLO 8	80%	FA 15	Yes	SPRG 2013	New Course	
HCRS C230	SLO 1	80%	FA 15	Pending		Pending	
	SLO 2	80%	FA 15	Pending			
	SLO 3	80%	FA 15	Pending			
	SLO 4	80%	FA 15	Pending			
	SLO 5	80%	FA 15	Pending			
	SLO 6	80%	FA 15	Pending			
	SLO 7	80%	FA 15	Pending			
HCRS C240	SLO 1	80%	FA 15	Pending			
	SLO 2	80%	FA 15	Pending			
	SLO 3	80%	FA 15	Pending			
	SLO 4	80%	FA 15	Pending			
	SLO 5	80%	FA 15	Pending			
	SLO 6	80%	FA 15	Pending			
	SLO 7	80%	FA 15	Pending			
HCRS C250	SLO 1	80%	FA 14	Yes	Not available		
	SLO 2	80%	FA 14	Yes	Not available		
	SLO 3	80%	FA 14	Yes	Not available		
	SLO 4	80%	FA 14	Yes	Not available		
	SLO 5	80%	FA 14	No	Not available		
HCRS C255	SLO 1	Not Assessed					
	SLO 2	Not Assessed					
	SLO 3	Not Assessed					
	SLO 4	Not Assessed					
	SLO 5	Not Assessed					
	SLO 6	Not Assessed					
HCRS C260	SLO 1	80%	FA 15	Pending			
	SLO 2	80%	FA 15	Pending			
	SLO 3	80%	FA 15	Pending			
	SLO 4	80%	FA 15	Pending			
	SLO 5	80%	FA 15	Pending			

a. Gaps and Improvements Made

HCRS C250 Cultural Diversity: The reason for the gap in this assessment is the need for students to complete a paper reqarding culutral diversity. Five students did not turn in this assignment. The assignment is due near the eand of the semester. I am guessing that the students who did not turn in the assignment were behind in their assignments or the students are not comfortable completing the

assignment. The paper assignment could be address by breaking the assignment up into shorter assignments with due dates through out the course. In addition, the librarian could be used by having a library assignment attached to the course.

Questions: Differentiate between the beliefs and values of specific populations or cultural groups.	Total Online 19 students
This will be assessed through a term paper, evaluated by a rubric.	71% *No submissions for 5 students

b. Summary of Student Learning Outcome Achievement

The students are achieving the learning outcomes as required by the BVNPT. The students who do not reach the benchmark of 78% for theory and 80% for clinical are given remediation so each studnets meets the required BVNPT approved objectives. Remediation includes case sceanrios, written assignments, discussions, simulated case scenarios, time in skills lab, and extra time in the clinical setting. Students are assessed by rubric every five weeks in the clinical setting. Students are assessed in the theory setting with quizzes and tests. At the eand of every course, students are given a cumulative test. At the end of the semester, students will be given and NCLEX-PN cumulative test by HESI. The students will have remediation available that is tailored to their individual needs.

Part 5 – Action Plans

1. Analysis of Current Program Strengths

The VN program is a consistent program. The program meets the needs of the service areas and service partners are hiring the students before they even graduate. The BVNPT provides NCLEX-PN first time success rates every quarter, which allows the program director to assess the needs of the program often. The director and assistant director have included concept maps, case scenarios, simulation, and other technology into the program so students will be more successful. The VN program has an outreach program to distance education through iTV to meet the needs of outlining areas.

2. Analysis of Improvements Needed

The students' first time pass rates on the NCLEX-PN is higher than the overall pass rates in the state of California. The national pass rates are better than this VN program. The set benchmark for the VN program is 80%. Several issues have already been addressed. However, there is an increasing need for fulltime faculty and support staff. Currently, there are only two fulltime faculty and no support staff to manage the simulation equipment and skills labs. Support staff would include skills laboratory technicians and clerical staff. The fulltime staff works an average of 4.0 load in any given academic year. There is little time to improve the program and run effective simulations for all sites. The adjunct staff are required to run simulations without assistance. It is recommended that a support person be provided to manage the skills labs, monitor simulation equipment, and maintain skills lab supplies.

3. Three-Year Program Strategies

A. Support staff to support simulation, case studies, and maintain three to four skills labs:
   a. Maintain supplies in skills labs
   b. Order supplies for pending courses
   c. Maintain and manage simulation equipment for each site
   d. Expected hiring process for 2017
   e. Request has been added to the Annual Unit Plan
B. Expand the distance education services to Mammoth and Tehachapi areas
   a. Every other year offering
   b. On ground theory teachers instead of site iTV managers
   c. Expand clinical facilities to outlining areas
   d. Start with Mammoth for 2018 cohort
C. RN feasibility study by 2018
   a. Review community need
   b. Assess facility availability to meet RN clinical needs
D. Request hiring of faculty to meet the growing needs of the program
   a. Hire three fulltime master prepared RNs
   b. Teach VN curriculum/ theory
   c. Prep for ADN RN program

4. Six-Year Program Strategies

A. Start an RN program to meet the needs of outlining service areas
   a. Meet the growing need for acute care nurses in local facilities
   b. Fulltime RN director would need to be hired prior to starting a program
B. Contract with college that has a LVN to BSN program
   a. Meet the growing need for acute care nurses in local facilities
   b. 17 States already only allow BSN nurses to work in acute care
   c. Fulltime RN director would need to be hired prior to starting a program
   d. Contract with a university like National by 2020-2022

Part 6 – Supporting Documentation

1. Section Level data by *course* (5 year aggregate broken out online, onsite, combined) (See Below)

Sent as Attachments:

1. SLO Reports for all courses within the program(s) (from CurricUNET)
2. PLO Report for each program (from CurricUNET)
3. Advisory Committee Meeting minutes *(CTE Only)*
4. Others, as appropriate, such as department minutes, employer surveys, marketing brochures

Vocational Nursing Program

APPENDIX A

Major and Completer Data

REASONS STATED BY STUDENT FOR DROP/ STUDENT DISMISSAL	
2013 16 Students 13 Completers	1-Didn't want to be nurse 1-Family issues 1-Drug Addiction Issues One student admitted in second semester
2014 46 Students 39 completers	5-Financial 2-Drug Addiction Issues
2015 18 Students Cohort in progress	1-Financial 1-Family issues 1-Behavioral Issues One student admitted in second semester

COMPLETION DATA PROVIDED BY COURSE					Section	Enrolled	Census Enrolled	End Enrolled	Student /Section	FTES	FTEF	FTES/ FTEF
EMTCC070	CPR for the Health care Provider	2014-2015	201530	Spring 2015	5	64	64	51	13	0.9	0.1	9.4
			201470	Fall 2014	5	93	92	64	18	1.2	0.2	6.5
			Annual Yr Sum		**10**	**157**	**156**	**115**	**16**	**2.1**	**0.3**	**7.5**
		2013-2014	201430	Spring 2014	3	38	37	25	12	0.5	0.1	4.3
			201370	Fall 2013	5	113	102	75	20	1.3	0.2	7.2
			Annual Yr Sum		**8**	**151**	**139**	**100**	**17**	**1.8**	**0.3**	**6.1**
		2012-2013	201330	Spring 2013	3	62	62	51	21	1.0	0.1	8.8
			201270	Fall 2012	3	49	47	29	16	0.6	0.1	5.0

			201250	Summer 2012	2	24	24	24	12	0.5	0.1	6.2
			Annual Yr. Sum		**8**	**135**	**133**	**104**	**17**	**2.0**	**0.3**	**6.7**
		2011-2012	201230	Spring 2012	3	67	62	56	21	1.1	0.1	9.6
			201170	Fall 2011	5	84	75	61	15	1.2	0.2	6.3
			Annual Yr. Sum		**8**	**151**	**137**	**117**	**17**	**2.2**	**0.3**	**7.5**
		2010-2011	201130	Spring 2011	4	76	68	72	17	1.4	0.1	9.3
			201070	Fall 2010	4	75	68	57	17	1.1	0.1	7.3
			Annual Yr. Sum		**8**	**151**	**136**	**129**	**17**	**2.5**	**0.3**	**8.3**
HCRSC070	CPR for the Health care Provider	2014-2015	201530	Spring 2015	5	52	47	50	9	1.0	0.1	10.2
			Annual Yr. Sum		**5**	**52**	**47**	**50**	**9**	**1.0**	**0.1**	**10.2**
		2013-2014	201430	Spring 2014	3	70	69	62	23	1.1	0.1	9.7
			Annual Yr. Sum		**3**	**70**	**69**	**62**	**23**	**1.1**	**0.1**	**9.7**
		2012-2013	201330	Spring 2013	1	22	22	16	22	0.3	0.0	7.4
			201270	Fall 2012	2	34	34	37	17	0.6	0.1	8.8
			Annual Yr. Sum		**3**	**56**	**56**	**53**	**19**	**0.9**	**0.1**	**8.3**
		2011-2012	201230	Spring 2012	2	37	37	31	19	0.6	0.1	8.0
			201170	Fall 2011	2	41	3	41	2	0.1	0.1	1.0
			201150	Summer 2011	2	26	24	17	12	0.2	0.1	2.3
			Annual Yr. Sum		**6**	**104**	**64**	**89**	**11**	**0.8**	**0.2**	**3.8**
		2010-2011	201130	Spring 2011	1	20	20	16	20	0.3	0.0	8.2
			201070	Fall 2010	2	1	0	49	0	0.0	0.1	0.0
			201050	Summer 2010	1	14	14	14	14	0.1	0.0	3.6
			Annual Yr. Sum		**4**	**35**	**34**	**79**	**9**	**0.4**	**0.1**	**3.0**
HCRSC100	Fund of Nursing	2014-2015	201530	Spring 2015	1	17	17	17	17	1.8	0.2	9.1
			Annual Yr. Sum		**1**	**17**	**17**	**17**	**17**	**1.8**	**0.2**	**9.1**
		2013-2014	201430	Spring 2014	4	46	45	44	11	4.8	0.2	23.8

			Annual Yr. Sum			**4**	**46**	**45**	**44**	**11**	**4.8**	**0.2**	**23.8**
		2012-2013	201330	Spring 2013	1	15	15	13	15	1.6	0.2	8.0
			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**1.6**	**0.2**	**8.0**
HCRSC103	Medical Surgical Nursing	**2014-2015**	201530	Spring 2015	1	15	15	15	15	1.5	0.2	7.7
			Annual Yr. Sum		**1**	**15**	**15**	**15**	**15**	**1.5**	**0.2**	**7.7**
		2013-2014	201430	Spring 2014	4	44	44	43	11	4.6	0.2	23.2
			Annual Yr. Sum		**4**	**44**	**44**	**43**	**11**	**4.6**	**0.2**	**23.2**
		2012-2013	201330	Spring 2013	1	15	15	13	15	1.5	0.0	2,571.4
			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**1.5**	**0.0**	**2,571.4**
HCRSC107	Basic Pharm	**2014-2015**	201530	Spring 2015	1	17	17	15	17	1.3	0.1	9.5
			Annual Yr. Sum		**1**	**17**	**17**	**15**	**17**	**1.3**	**0.1**	**9.5**
		2013-2014	201430	Spring 2014	4	45	45	44	11	3.1	0.1	23.2
			Annual Yr. Sum		**4**	**45**	**45**	**44**	**11**	**3.1**	**0.1**	**23.2**
		2012-2013	201330	Spring 2013	1	15	15	13	15	1.0	0.3	3.1
			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**1.0**	**0.3**	**3.1**
HCRSC113	Vocational Nursing Laboratory I	**2014-2015**	201530	Spring 2015	2	17	17	15	9	10.6	2.0	5.3
			Annual Yr. Sum		**2**	**17**	**17**	**15**	**9**	**10.6**	**2.0**	**5.3**
		2013-2014	201430	Spring 2014	4	45	45	44	11	27.8	2.0	13.9
			Annual Yr. Sum		**4**	**45**	**45**	**44**	**11**	**27.8**	**2.0**	**13.9**
		2012-2013	201330	Spring 2013	1	15	15	13	15	8.0	1.0	8.1

			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**8.0**	**1.0**	**8.1**
HCRSC204	Medical Surgical Nursing II	2014-2015	201450	Summer 2014	4	44	43	39	11	12.1	0.5	24.6
			Annual Yr. Sum		**4**	**44**	**43**	**39**	**11**	**12.1**	**0.5**	**24.6**
		2013-2014	201350	Summer 2013	1	14	13	13	13	4.0	0.6	6.7
			Annual Yr. Sum		**1**	**14**	**13**	**13**	**13**	**4.0**	**0.6**	**6.7**
HCRSC205	Medical Surgical Nursing III	2014-2015	201470	Fall 2014	4	39	39	39	10	4.7	0.4	11.5
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**	**4.7**	**0.4**	**11.5**
		2013-2014	201370	Fall 2013	1	13	13	13	13	1.6	0.2	6.8
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**1.6**	**0.2**	**6.8**
HCRSC206	Maternal Child Nursing	2014-2015	201470	Fall 2014	4	39	39	39	10	4.0	0.4	10.7
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**	**4.0**	**0.4**	**10.7**
		2013-2014	201370	Fall 2013	1	13	13	13	13	1.4	0.2	6.8
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**1.4**	**0.2**	**6.8**
HCRSC207	Advanced Pharm	2014-2015	201470	Fall 2014	4	39	39	39	10	1.3	0.1	19.7
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**	**1.3**	**0.1**	**19.7**
		2013-2014	201370	Fall 2013	1	13	13	13	13	0.4	0.1	6.7
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**0.4**	**0.1**	**6.7**
HCRSC208	Critical Thinking and Leadership	2014-2015	201470	Fall 2014	4	39	39	39	10	2.0	0.1	20.2
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**	**2.0**	**0.1**	**20.2**
		2013-2014	201370	Fall 2013	1	13	13	13	13	0.7	0.1	6.7

			Annual Yr. Sum		1	13	13	13	13	0.7	0.1	6.7
HCRSC214	Clinical Nursing II	2014-2015	201450	Summer 2014	4	44	42	39	11	24.1	3.0	8.0
			Annual Yr. Sum		4	44	42	39	11	24.1	3.0	8.0
		2013-2014	201350	Summer 2013	1	14	14	13	14	8.5	1.0	8.5
			Annual Yr. Sum		1	14	14	13	14	8.5	1.0	8.5
HCRSC216	Clinical Nursing III	2014-2015	201470	Fall 2014	4	39	39	39	10	24.1	2.0	12.0
			Annual Yr. Sum		4	39	39	39	10	24.1	2.0	12.0
		2013-2014	201370	Fall 2013	1	13	13	13	13	8.0	1.0	8.0
			Annual Yr. Sum		1	13	13	13	13	8.0	1.0	8.0
HCRSC230	Pharm for Health Professional	2014-2015	201470	Fall 2014	1	45	36	23	36	3.4	0.2	16.8
			Annual Yr. Sum		1	45	36	23	36	3.4	0.2	16.8
		2013-2014	201370	Fall 2013	1	48	29	25	29	2.7	0.2	13.5
			201350	Summer 2013	1	46	41	34	41	3.8	0.2	19.1
			Annual Yr. Sum		2	94	70	59	35	6.5	0.4	16.3
		2012-2013	201250	Summer 2012	1	52	30	15	30	2.8	0.2	14.0
			Annual Yr. Sum		1	52	30	15	30	2.8	0.2	14.0
		2011-2012	201230	Spring 2012	1	48	30	29	30	2.8	0.2	14.0
			201170	Fall 2011	1	54	45	29	45	4.2	0.2	21.0
			201150	Summer 2011	1	52	41	36	41	3.8	0.2	19.1
			Annual Yr. Sum		3	154	116	94	39	10.8	0.6	18.0
		2010-2011	201130	Spring 2011	1	48	40	30	40	3.7	0.2	18.6
			201070	Fall 2010	1	54	35	20	35	3.3	0.2	16.3
			201050	Summer 2010	1	51	40	30	40	3.7	0.2	18.6
			Annual Yr. Sum		3	153	115	80	38	10.7	0.6	17.9

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		Year	Code	Term								
HCRSC240	Nutrition and Diet Therapy	2013-2014	201430	Spring 2014	1	45	38	31	38	3.5	0.2	17.7
			Annual Yr. Sum		**1**	**45**	**38**	**31**	**38**	**3.5**	**0.2**	**17.7**
		2012-2013	201270	Fall 2012	1	46	31	21	31	2.9	0.2	14.4
			Annual Yr. Sum		**1**	**46**	**31**	**21**	**31**	**2.9**	**0.2**	**14.4**
		2011-2012	201230	Spring 2012	1	47	30	18	30	2.8	0.2	14.0
			201170	Fall 2011	1	50	29	24	29	2.7	0.2	13.5
			Annual Yr. Sum		**2**	**97**	**59**	**42**	**30**	**5.5**	**0.4**	**13.7**
		2010-2011	201130	Spring 2011	1	46	33	20	33	3.1	0.2	15.4
			201070	Fall 2010	1	48	35	25	35	3.3	0.2	16.3
			Annual Yr. Sum		**2**	**94**	**68**	**45**	**34**	**6.3**	**0.4**	**15.8**
HCRSC250	Cultural Diversity in Health Care	2014-2015	201470	Fall 2014	1	40	35	19	35	3.3	0.2	16.3
			Annual Yr. Sum		**1**	**40**	**35**	**19**	**35**	**3.3**	**0.2**	**16.3**
		2013-2014	201370	Fall 2013	1	31	25	19	25	2.3	0.2	11.6
			Annual Yr. Sum		**1**	**31**	**25**	**19**	**25**	**2.3**	**0.2**	**11.6**
		2012-2013	201270	Fall 2012	1	47	30	24	30	2.8	0.2	14.0
			Annual Yr. Sum		**1**	**47**	**30**	**24**	**30**	**2.8**	**0.2**	**14.0**
		2010-2011	201070	Fall 2010	1	46	36	27	36	3.4	0.2	16.8
			Annual Yr. Sum		**1**	**46**	**36**	**27**	**36**	**3.4**	**0.2**	**16.8**
HCRSC260	Ethics for the Health Professional	2014-2015	201530	Spring 2015	1	18	13	11	13	1.2	0.2	6.1
			Annual Yr. Sum		**1**	**18**	**13**	**11**	**13**	**1.2**	**0.2**	**6.1**
		2012-2013	201330	Spring 2013	1	41	30	23	30	2.8	0.2	14.0
			Annual Yr. Sum		**1**	**41**	**30**	**23**	**30**	**2.8**	**0.2**	**14.0**
		2011-2012	201230	Spring 2012	1	32	24	24	24	2.2	0.2	11.2
			201170	Fall 2011	1	47	33	29	33	3.1	0.2	15.4
			Annual Yr. Sum		**2**	**79**	**57**	**53**	**29**	**5.3**	**0.4**	**13.3**
		2010-2011	201130	Spring 2011	1	41	37	33	37	3.4	0.2	17.2
			201070	Fall 2010	1	39	33	18	33	3.1	0.2	15.4
			Annual Yr. Sum		**2**	**80**	**70**	**51**	**35**	**6.5**	**0.4**	**16.3**

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HCRSC100	Fund of Nursing	2014-2015	201530	Spring 2015	1	17	17	17	17	0	1.8	0.2	9.1	100.0%	94.1%
			Annual Yr. Sum		**1**	**17**	**17**	**17**	**17**	**0**	**1.8**	**0.2**	**9.1**	**100.0%**	**94.1%**
		2013-2014	201430	Spring 2014	4	46	45	44	11	0	4.8	0.2	23.8	97.8%	97.8%
			Annual Yr. Sum		**4**	**46**	**45**	**44**	**11**	**0**	**4.8**	**0.2**	**23.8**	**97.8%**	**97.8%**
		2012-2013	201330	Spring 2013	1	15	15	13	15	0	1.6	0.2	8.0	86.7%	86.7%
			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**0**	**1.6**	**0.2**	**8.0**	**86.7%**	**86.7%**
HCRSC103	Med Surgical Nurse	2014-2015	201530	Spring 2015	1	15	15	15	15		1.5	0.2	7.7	100.0%	100.0%
			Annual Yr. Sum		**1**	**15**	**15**	**15**	**15**		**1.5**	**0.2**	**7.7**	**100.0%**	**100.0%**
		2013-2014	201430	Spring 2014	4	44	44	43	11	0	4.6	0.2	23.2	97.7%	97.7%
			Annual Yr. Sum		**4**	**44**	**44**	**43**	**11**	**0**	**4.6**	**0.2**	**23.2**	**97.7%**	**97.7%**
		2012-2013	201330	Spring 2013	1	15	15	13	15	0	1.5	0.0	2,571.4	86.7%	86.7%
			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**0**	**1.5**	**0.0**	**2,571.4**	**86.7%**	**86.7%**
HCRSC107	Basic Pharmacology	2014-2015	201530	Spring 2015	1	17	17	15	17	0	1.3	0.1	9.5	88.2%	88.2%
			Annual Yr. Sum		**1**	**17**	**17**	**15**	**17**	**0**	**1.3**	**0.1**	**9.5**	**88.2%**	**88.2%**
		2013-2014	201430	Spring 2014	4	45	45	44	11	0	3.1	0.1	23.2	97.8%	95.6%
			Annual Yr. Sum		**4**	**45**	**45**	**44**	**11**	**0**	**3.1**	**0.1**	**23.2**	**97.8%**	**95.6%**
		2012-2013	201330	Spring 2013	1	15	15	13	15	0	1.0	0.3	3.1	86.7%	86.7%

Course	Title	Year	Term	Term Name	Sec	Enr									
			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**0**	**1.0**	**0.3**	**3.1**	**86.7%**	**86.7%**
HCRSC113	Vocational Nursing Laboratory	2014-2015	201530	Spring 2015	2	17	17	15	9	0	10.6	2.0	5.3	88.2%	88.2%
			Annual Yr. Sum		**2**	**17**	**17**	**15**	**9**	**0**	**10.6**	**2.0**	**5.3**	**88.2%**	**88.2%**
		2013-2014	201430	Spring 2014	4	45	45	44	11	0	27.8	2.0	13.9	97.8%	95.6%
			Annual Yr. Sum		**4**	**45**	**45**	**44**	**11**	**0**	**27.8**	**2.0**	**13.9**	**97.8%**	**95.6%**
		2012-2013	201330	Spring 2013	1	15	15	13	15	0	8.0	1.0	8.1	86.7%	86.7%
			Annual Yr. Sum		**1**	**15**	**15**	**13**	**15**	**0**	**8.0**	**1.0**	**8.1**	**86.7%**	**86.7%**
HCRSC150	Med. Terminology for Health	2014-2015	201530	Spring 2015	3	149	119	110	40	13	11.1	0.6	18.5	92.4%	81.5%
			201470	Fall 2014	4	144	118	103	30	7	11.5	0.8	14.4	88.0%	76.1%
			201450	Summer 2014	2	80	60	56	30	0	5.6	0.4	14.0	93.3%	71.7%
			Annual Yr. Sum		**9**	**373**	**297**	**269**	**33**	**20**	**28.2**	**1.8**	**15.7**	**90.9%**	**77.4%**
		2013-2014	201430	Spring 2014	3	118	97	81	32	13	9.2	0.6	15.3	83.5%	70.1%
			201370	Fall 2013	4	182	122	114	31	2	11.9	0.8	14.9	93.4%	76.2%
			201350	Summer 2013	2	98	64	61	32	7	6.0	0.4	14.9	95.3%	85.9%
			Annual Yr. Sum		**9**	**398**	**283**	**256**	**31**	**22**	**27.0**	**1.8**	**15.0**	**90.5%**	**76.3%**
		2012-2013	201330	Spring 2013	4	170	135	104	34	7	13.1	0.8	16.3	78.2%	67.7%
			201270	Fall 2012	5	217	140	127	28	4	13.7	1.0	13.7	90.1%	78.0%
			201250	Summer 2012	1	59	35	34	35	14	3.3	0.2	16.3	97.1%	85.7%
			Annual Yr. Sum		**10**	**446**	**310**	**265**	**31**	**25**	**30.0**	**2.0**	**15.0**	**85.8%**	**74.4%**
		2011-2012	201230	Spring 2012	5	204	170	154	34	22	16.5	1.0	16.5	89.5%	71.3%

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			201170	Fall 2011	4	201	127	121	32	46	12.3	0.8	15.3	93.1%	73.8%
			201150	Summer 2011	2	137	99	73	50	14	9.2	0.4	23.1	73.0%	54.0%
			Annual Yr. Sum		**11**	**542**	**396**	**348**	**36**	**82**	**38.0**	**2.2**	**17.3**	**86.5%**	**67.8%**
		2010-2011	201130	Spring 2011	5	206	174	127	35	1	16.4	1.0	16.4	74.4%	48.8%
			201070	Fall 2010	5	222	167	146	33	0	15.9	1.0	15.9	86.9%	69.6%
			201050	Summer 2010	2	87	81	74	41	0	7.6	0.4	19.1	90.2%	69.5%
			Annual Yr. Sum		**12**	**515**	**422**	**347**	**35**	**1**	**39.9**	**2.4**	**16.6**	**82.5%**	**61.1%**
HCRSC204	Medical Surgical Nursing II	2014-2015	201450	Summer 2014	4	44	43	39	11	0	12.1	0.5	24.6	92.9%	92.9%
			Annual Yr. Sum		**4**	**44**	**43**	**39**	**11**	**0**	**12.1**	**0.5**	**24.6**	**92.9%**	**92.9%**
		2013-2014	201350	Summer 2013	1	14	13	13	13	0	4.0	0.6	6.7	100.0%	100.0%
			Annual Yr. Sum		**1**	**14**	**13**	**13**	**13**	**0**	**4.0**	**0.6**	**6.7**	**100.0%**	**100.0%**
HCRSC205	Medical Surgical Nursing III	2014-2015	201470	Fall 2014	4	39	39	39	10		4.7	0.4	11.5	100.0%	100.0%
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**		**4.7**	**0.4**	**11.5**	**100.0%**	**100.0%**
		2013-2014	201370	Fall 2013	1	13	13	13	13	0	1.6	0.2	6.8	100.0%	100.0%
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**0**	**1.6**	**0.2**	**6.8**	**100.0%**	**100.0%**
HCRSC206	Maternal/Child Nursing	2014-2015	201470	Fall 2014	4	39	39	39	10		4.0	0.4	10.7	100.0%	100.0%
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**		**4.0**	**0.4**	**10.7**	**100.0%**	**100.0%**
		2013-2014	201370	Fall 2013	1	13	13	13	13	0	1.4	0.2	6.8	100.0%	100.0%
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**0**	**1.4**	**0.2**	**6.8**	**100.0%**	**100.0%**

Course	Title	Year	Section	Term												
HCRSC207	Advanced Pharmacology	2014-2015	201470	Fall 2014	4	39	39	39	10			1.3	0.1	19.7	100.0%	100.0%
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**			**1.3**	**0.1**	**19.7**	**100.0%**	**100.0%**
		2013-2014	201370	Fall 2013	1	13	13	13	13	0		0.4	0.1	6.7	100.0%	100.0%
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**0**		**0.4**	**0.1**	**6.7**	**100.0%**	**100.0%**
HCRSC208	Critical Thinking/Leadership	2014-2015	201470	Fall 2014	4	39	39	39	10			2.0	0.1	20.2	100.0%	100.0%
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**			**2.0**	**0.1**	**20.2**	**100.0%**	**100.0%**
		2013-2014	201370	Fall 2013	1	13	13	13	13	0		0.7	0.1	6.7	100.0%	100.0%
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**0**		**0.7**	**0.1**	**6.7**	**100.0%**	**100.0%**
HCRSC214	Clinical Nursing II	2014-2015	201450	Summer 2014	4	44	42	39	11	0		24.1	3.0	8.0	92.9%	92.9%
			Annual Yr. Sum		**4**	**44**	**42**	**39**	**11**	**0**		**24.1**	**3.0**	**8.0**	**92.9%**	**92.9%**
		2013-2014	201350	Summer 2013	1	14	14	13	14	0		8.5	1.0	8.5	92.9%	92.9%
			Annual Yr. Sum		**1**	**14**	**14**	**13**	**14**	**0**		**8.5**	**1.0**	**8.5**	**92.9%**	**92.9%**
HCRSC216	Clinical Nursing III	2014-2015	201470	Fall 2014	4	39	39	39	10			24.1	2.0	12.0	100.0%	100.0%
			Annual Yr. Sum		**4**	**39**	**39**	**39**	**10**			**24.1**	**2.0**	**12.0**	**100.0%**	**100.0%**
		2013-2014	201370	Fall 2013	1	13	13	13	13	0		8.0	1.0	8.0	100.0%	100.0%
			Annual Yr. Sum		**1**	**13**	**13**	**13**	**13**	**0**		**8.0**	**1.0**	**8.0**	**100.0%**	**100.0%**
HCRSC230	Pharmacology for Health Prof.	2014-2015	201470	Fall 2014	1	45	36	23	36	0		3.4	0.2	16.8	69.7%	57.6%

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Course	Course Name	Year	Term Code	Term											
				Annual Yr. Sum	1	45	36	23	36	0	3.4	0.2	16.8	69.7%	57.6%
		2013-2014	201370	Fall 2013	1	48	29	25	29	2	2.7	0.2	13.5	86.2%	72.4%
			201350	Summer 2013	1	46	41	34	41	8	3.8	0.2	19.1	81.0%	59.5%
				Annual Yr. Sum	2	94	70	59	35	10	6.5	0.4	16.3	83.1%	64.8%
		2012-2013	201250	Summer 2012	1	52	30	15	30	10	2.8	0.2	14.0	50.0%	33.3%
				Annual Yr. Sum	1	52	30	15	30	10	2.8	0.2	14.0	50.0%	33.3%
		2011-2012	201230	Spring 2012	1	48	30	29	30	3	2.8	0.2	14.0	96.7%	86.7%
			201170	Fall 2011	1	54	45	29	45	11	4.2	0.2	21.0	64.4%	51.1%
			201150	Summer 2011	1	52	41	36	41	6	3.8	0.2	19.1	87.8%	73.2%
				Annual Yr. Sum	3	154	116	94	39	20	10.8	0.6	18.0	81.0%	68.1%
		2010-2011	201130	Spring 2011	1	48	40	30	40	0	3.7	0.2	18.6	76.9%	41.0%
			201070	Fall 2010	1	54	35	20	35	11	3.3	0.2	16.3	57.1%	42.9%
			201050	Summer 2010	1	51	40	30	40	3	3.7	0.2	18.6	73.2%	63.4%
				Annual Yr. Sum	3	153	115	80	38	14	10.7	0.6	17.9	69.6%	49.6%
HCRSC240	Nutrition/Diet Therapy	2013-2014	201430	Spring 2014	1	45	38	31	38	0	3.5	0.2	17.7	81.6%	65.8%
				Annual Yr. Sum	1	45	38	31	38	0	3.5	0.2	17.7	81.6%	65.8%
		2012-2013	201270	Fall 2012	1	46	31	21	31	3	2.9	0.2	14.4	67.7%	22.6%
				Annual Yr. Sum	1	46	31	21	31	3	2.9	0.2	14.4	67.7%	22.6%
		2011-2012	201230	Spring 2012	1	47	30	18	30	0	2.8	0.2	14.0	60.0%	23.3%
			201170	Fall 2011	1	50	29	24	29	7	2.7	0.2	13.5	77.4%	22.6%
				Annual Yr. Sum	2	97	59	42	30	7	5.5	0.4	13.7	68.9%	23.0%
		2010-2011	201130	Spring 2011	1	46	33	20	33	0	3.1	0.2	15.4	60.6%	39.4%
			201070	Fall 2010	1	48	35	25	35	1	3.3	0.2	16.3	71.4%	37.1%

Course	Title	Year	Term Code	Term											
			Annual Yr. Sum		2	94	68	45	34	1	6.3	0.4	15.8	66.2%	38.2%
HCRSC250	Cultural Diversity/Health Care	2014-2015	201470	Fall 2014	1	40	35	19	35	0	3.3	0.2	16.3	55.9%	38.2%
			Annual Yr. Sum		1	40	35	19	35	0	3.3	0.2	16.3	55.9%	38.2%
		2013-2014	201370	Fall 2013	1	31	25	19	25	0	2.3	0.2	11.6	76.0%	60.0%
			Annual Yr. Sum		1	31	25	19	25	0	2.3	0.2	11.6	76.0%	60.0%
		2012-2013	201270	Fall 2012	1	47	30	24	30	0	2.8	0.2	14.0	80.0%	46.7%
			Annual Yr. Sum		1	47	30	24	30	0	2.8	0.2	14.0	80.0%	46.7%
		2010-2011	201070	Fall 2010	1	46	36	27	36	0	3.4	0.2	16.8	75.0%	30.6%
			Annual Yr. Sum		1	46	36	27	36	0	3.4	0.2	16.8	75.0%	30.6%
HCRSC260	Ethics for the Health Profession	2014-2015	201530	Spring 2015	1	18	13	11	13	0	1.2	0.2	6.1	84.6%	76.9%
			Annual Yr. Sum		1	18	13	11	13	0	1.2	0.2	6.1	84.6%	76.9%
		2012-2013	201330	Spring 2013	1	41	30	23	30	0	2.8	0.2	14.0	76.7%	63.3%
			Annual Yr. Sum		1	41	30	23	30	0	2.8	0.2	14.0	76.7%	63.3%
		2011-2012	201230	Spring 2012	1	32	24	24	24	0	2.2	0.2	11.2	100.0%	87.5%
			201170	Fall 2011	1	47	33	29	33	1	3.1	0.2	15.4	87.9%	60.6%
			Annual Yr. Sum		2	79	57	53	29	1	5.3	0.4	13.3	93.0%	71.9%
		2010-2011	201130	Spring 2011	1	41	37	33	37	0	3.4	0.2	17.2	89.2%	59.5%
			201070	Fall 2010	1	39	33	18	33	0	3.1	0.2	15.4	54.5%	39.4%
			Annual Yr. Sum		2	80	70	51	35	0	6.5	0.4	16.3	72.9%	50.0%

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Course	Name	Year	Term	Term Name											
PSYCC101	General Psychology	2014-2015	201530	Spring 2015	5	187	123	92	25	9	11.8	1.0	11.8	74.8%	56.9%
			201470	Fall 2014	7	246	173	126	25	36	17.6	1.4	12.5	74.1%	64.7%
			201450	Summer 2014	4	165	107	88	27	0	10.2	0.8	12.8	86.3%	70.6%
				Annual Yr. Sum	**16**	**598**	**403**	**306**	**25**	**45**	**39.6**	**3.2**	**12.4**	**77.5%**	**63.8%**
		2013-2014	201430	Spring 2014	9	331	243	191	27	8	24.3	1.8	13.5	78.6%	63.0%
			201370	Fall 2013	8	274	199	152	25	52	19.8	1.4	14.1	76.4%	60.3%
			201350	Summer 2013	3	135	98	83	33	25	9.4	0.6	15.7	80.6%	73.8%
				Annual Yr. Sum	**20**	**740**	**540**	**426**	**27**	**85**	**53.5**	**3.8**	**14.1**	**78.2%**	**64.0%**
		2012-2013	201330	Spring 2013	8	298	214	169	27	32	21.5	1.6	13.4	79.0%	65.0%
			201270	Fall 2012	3	78	66	55	22	3	6.5	0.6	10.8	83.3%	69.7%
			201250	Summer 2012	2	95	75	74	38	0	7.0	0.4	17.5	98.7%	97.3%
				Annual Yr. Sum	**13**	**471**	**355**	**298**	**27**	**35**	**35.0**	**2.6**	**13.5**	**83.9%**	**72.7%**
		2011-2012	201230	Spring 2012	9	366	281	232	31	74	27.5	1.8	15.3	82.6%	52.0%
			201170	Fall 2011	12	493	407	325	34	118	40.4	2.4	16.8	79.5%	57.5%
			201150	Summer 2011	3	141	120	90	40	50	11.6	0.6	19.3	73.8%	55.7%
				Annual Yr. Sum	**24**	**1,000**	**808**	**647**	**34**	**242**	**79.4**	**4.8**	**16.6**	**79.7%**	**55.3%**
		2010-2011	201130	Spring 2011	8	347	253	187	32	84	24.6	1.6	15.4	73.6%	48.0%
			201070	Fall 2010	14	614	429	359	31	115	43.1	2.8	15.4	83.3%	60.8%
			201050	Summer 2010	3	148	98	68	33	37	9.5	0.6	15.8	70.1%	58.8%
				Annual Yr. Sum	**25**	**1,109**	**780**	**614**	**31**	**236**	**77.2**	**5.0**	**15.4**	**78.5%**	**56.4%**
PSYCC101H	General Psychology - Honors	2014-2015	201470	Fall 2014	1	0	4	4	4	0	0.6	0.1	8.7	100.0%	75.0%

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			Annual Yr. Sum		1	0	4	4	4	0	0.6	0.1	8.7	100.0%	75.0%
		2013-2014	201370	Fall 2013	3	1	14	14	5	0	2.0	0.1	30.7	100.0%	100.0%
			Annual Yr. Sum		3	1	14	14	5	0	2.0	0.1	30.7	100.0%	100.0%
		2012-2013	201330	Spring 2013	1	2	2	2	2	0	0.3	0.1	4.1	100.0%	100.0%
			Annual Yr. Sum		1	2	2	2	2	0	0.3	0.1	4.1	100.0%	100.0%
		2011-2012	201230	Spring 2012	1	0	3	3	3	0	0.4	0.0		100.0%	100.0%
			Annual Yr. Sum		1	0	3	3	3	0	0.4	0.0		100.0%	100.0%
		2010-2011	201130	Spring 2011	3	0	7	7	2	0	1.0	0.1	15.2	100.0%	100.0%
			Annual Yr. Sum		3	0	7	7	2	0	1.0	0.1	15.2	100.0%	100.0%