El Camino Community College

PROGRAM REVIEW 2018

HEALTH SCIENCE and ATHLETICS

RESPIRATORY CARE

DEAN:
Dr. Rory Natividad

CONTRIBUTORS:
Roy Mekaru
Victoria Robertson

TABLE OF CONTENTS

Contents

SECTION 1 Overview of the Program 3

SECTION 2 Analysis of Research Data 13

SECTION 3 Curriculum 24

SECTION 4 Assessment of Student and Program Learning Outcomes (SLOs & PLOs) 25

SECTION 5 Analysis of Student Feedback 26

(CoARC RESOURCE ASSESSMENT MATRIX) 33

SECTION 6 Facilities and Equipment 35

SECTION 7 Technology and Software 37

SECTION 8 Staffing 41

SECTION 9 Direction and Vision 43

SECTION 10 Prioritized Recommendations 44

Appendix A 45

ALIGNMENT GRIDS 45

Appendix B 55

SLO/PLO TIMELINES 55

Appendix C 59

6-YEAR CURRICULUM COURSE REVIEW TIMELINE 59

APPENDIX D 60

CAREER AND TECHNICAL EDUCATION (CTE) SUPPLEMENTAL QUESTIONS 60

APPENDIX E 71

SUPPLEMENTAL DOCUMENTATION 71

SECTION 1
Overview of the Program

A) Provide a brief narrative description of the current program, including the program's mission statement and the students it serves.

What is a respiratory care practitioner? I cannot tell you how many students really have no idea who they are and what they do, but they want to be one. I like to explain it like this. Picture a medical television show and you see a big, rugged, handsome paramedic rolling a patient into the hospital. The beautiful and brilliant female doctor is running next to patient barking out orders. They are doing CPR on the patient. Just before you find out if the patient has survived, time for a commercial break. When the show comes back, the patient is in the Intensive Care Unit breathing peacefully on a $70, 000 ventilator with tubes everywhere and concerned friend or family member at the bedside.

Did you ever wonder when does the paramedic leave? Did you ever wonder how the patient got to the ICU? Does anyone take care of such an expensive piece of machinery? Well, in the real world, this is how it works. When it is about time for the commercial break is when the paramedic leaves. It is the respiratory care practitioner who takes over for the paramedic. It's the respiratory care practitioner who places the patient on the ventilator and transports the patient to the ICU. It is the respiratory care practitioner that routinely monitors the machine and follows the patient's progress on the breathing machine. It is the respiratory care practitioner who handles emergencies that occur when patients' lives are at stake on these machines.

Let me take it a step farther. Do you know anyone who uses BiPAP at night? Do you any asthmatics that repeatedly have to go to the Emergency Department? Do you know anyone who had a premature baby who ended up on a breathing machine for a while? Who took care of these patients? That's right, the respiratory care practitioner.

The El Camino College Respiratory Care Program Mission is to prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs).

The El Camino College Respiratory Care Program saw its first graduate in 1972. The Program was an Entry Level Program in Respiratory Care Education for many years. This meant the program taught all of the basic skills necessary to practice in the field of respiratory care. The field of respiratory care felt that due to changes in technology and methodology in the medical field, the amount of education necessary to practice needed to be higher. Thus, entry level programs were notified that an upgrade was necessary and the El Camino College Respiratory Care Program upgraded to an advanced level program in 2010. Ten new classes were added and the first advanced level class was admitted into the clinic phase in 2011 and after five semesters graduated in 2012. Time required for completion of the courses in the clinical phase was expanded from five semesters

(including two summer sessions) to six semesters (including two summer sessions) to increase support for students to achieve a more successful completion. Thus, there was not a graduating class in 2013. The second advanced class has just recently graduated in May 2014.

Since the last Program Review in 2014-2015, highlights for the Program include passing a rigorous accreditation by CoARC(Committee for Accreditation of Respiratory Care) inspection and received the highest accreditation award, a ten year period before a CoARC inspection will be required. (The standard award is five years).

Also, within the time period since the Program review of 2014-2015, the Program has readied through staffing and curriculum as a potential bachelors-level program for the community college system.

Furthermore, in the fall of 2011-2012 and fall 2012-2013, African-American students had a 57% success rate. Latino students' success rate was 64% while Asian students had success rate of 63.4% over that time frame. The average from fall of 2014 to fall of 2017 rose to 77% for African-Americans, 93% for Asians, and 93% for Latinos. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

The Program Review statistics used from the Program review from 2014-2015 will mainly focus on the classes of 2011 and 2012 (no graduating class in 2013) the first of the advanced classes that saw an increase in 10 new classes to meet the advanced program requirements.

The Program Review for 2014-2015 showed that for 2011-2012 the Respiratory Care student population was 25% African-American, 26% Asian, and 30% Latino. The college average for these groups was 17% African-American, 16% Asian, and 45% Latino. (See Section2-Analysis of Research Data for exact figures)

The Student population of the program by the Fall of 2017 is comprised mainly of Latino and African-American students. These two groups comprise 74% of the Respiratory Care Program Students (14% African-American and 53% Latino) which is 7% higher than the college enrollment of 67% of these same 2 groups(See Section2-Analysis of Research Data for exact figures)

In the Spring of 2018, the last semester surveyed, the Asian population had risen to now be 13% of the enrollment for the program. The overall Respiratory Care enrollment in Spring 2018 was now comprised of 15% African-American, 13% Asian, and 57% Latino students which reflects virtually the same percentages for the overall college enrollment. (See Section2-Analysis of Research Data for exact figures)

The Program review of 2014-2015 also showed that for 2011-2012 the enrollment was 54 % female which was slightly above the college average. (See Section2-Analysis of Research Data for exact figures)

The Respiratory Care Program Fall enrollment statistics for 2017 show that there is a 63% enrollment of female students (100/159) which is 11% higher than the overall college percentage of female student enrollment of 52%.

By the Spring of 2018, the female population had now risen to (128/190) or 67% of the Program's enrollment 15% higher the college female percent of enrollment of 52%. (See Section2-Analysis of Research Data for exact figures)

According to the CoARC report for 2018, the Program has an 82% employment rate for its 2015, 2016, and 2017 graduates. The Program has received a California Community Colleges' 2018 Strong Workforce Stars recognition for their success in improving student employment and wage outcomes. The program received a bronze star signifying that the program's graduates saw a 72% increase in earnings.
(see APPENDIX E- supplemental Documents)

There are 19 Respiratory Care Schools within 120 mile radius. A straw poll in spring 2018 showed that of the five clinical affiliates associated with the Respiratory Care Program (four of which service the South Bay) 37% of their staff graduated from the El Camino College Respiratory Care Program. This straw poll also showed that the management teams at these facilities were 65% comprised of graduates from the program.

Lastly, in order to maintain the level of success for the next program review period, there are some key needs/recommendations. As identified in the SLO's from 2015-2018, upgrading the technology over the next program review period will be vital to maintaining the success levels. The SLO's revealed that even though the success rates have met the identified thresholds, the students are having more problems meeting the threshold due to the aging technology.

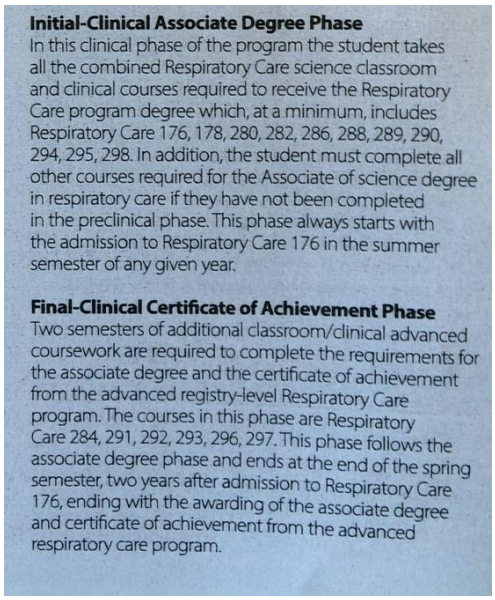
Another key need/recommendation is maintaining staffing levels. With only two full time faculty, the part-time faculty pool is vital to maintaining the training needed to sustyain success levels.

Also, to fulfill the Program long term vision of becoming a bachelor program in the community college system, the classroom and lab space will need to be increased to meet the greater demand of the increased number of students who are attempting to obtain their bachelor's degree in respiratory care.

B) Describe the degrees and/or certificates offered by the program.

The program offers an Associate in Science (A.S.) and a certificate of achievement in Respiratory Care. The Program has two phases, a pre-clinical and clinical phase. Both

phases must be completed to receive an A.S. and certificate of achievement. Units needed to complete A.S. requirements and receive a Certificate of Achievement are as follows.



Initial-Clinical Associate Degree Phase
In this clinical phase of the program the student takes all the combined Respiratory Care science classroom and clinical courses required to receive the Respiratory Care program degree which, at a minimum, includes Respiratory Care 176, 178, 280, 282, 286, 288, 289, 290, 294, 295, 298. In addition, the student must complete all other courses required for the Associate of science degree in respiratory care if they have not been completed in the preclinical phase. This phase always starts with the admission to Respiratory Care 176 in the summer semester of any given year.

Final-Clinical Certificate of Achievement Phase
Two semesters of additional classroom/clinical advanced coursework are required to complete the requirements for the associate degree and the certificate of achievement from the advanced registry-level Respiratory Care program. The courses in this phase are Respiratory Care 284, 291, 292, 293, 296, 297. This phase follows the associate degree phase and ends at the end of the spring semester, two years after admission to Respiratory Care 176, ending with the awarding of the associate degree and certificate of achievement from the advanced respiratory care program.

Eighty units

Twenty six units

Articulation to other educational institutions has improved due to an increase in on-line Bachelor's degrees accepting all of the respiratory courses in the granting of Bachelor's degrees through these various on-line colleges.

C) Explain how the program fulfills the college's mission and aligns with the strategic initiatives.

The mission of El Camino College is to make a positive difference in people's lives by providing a comprehensive educational programs and services that promote student learning and success in collaboration with our diverse communities.

The ECC mission statement reads that "El Camino offers quality, comprehensive educational programs and services to ensure the educational success of students from our diverse community. Much like the overall El Camino Demographics and Enrollment Statistics for the general student population, the program educates a very diverse population. The Program is predominantly comprised of minorities, with a four school year (Fall and Spring) average from Fall of 2014 to Spring of 2018 of success 86% and a retention rate over that same period of time of 93%.
(see section 2-Analysis of Research for numerical statistics-Part A Head Count))

The program has helped ensure educational success such that statistics show that the Program graduates nearly 100% of all students who started the clinical phase of the program. Furthermore, more than 89% of all graduates applied for a license to practice in California with 86% being able to pass the licensing exam and obtain their license.
(see appendix D-Career and technical education (CTE) supplemental questions-part 4 Chart)

Of the 86% who passed the licensing exam, 95% became employed. The 95% that became employed had an increase of earnings by 72%.
(see appendix D-Career and technical education (CTE) supplemental questions-part 5 Chart)

STRATEGIC INITIATIVES

1. Student Learning:

A. Student Learning Support student learning using a variety of effective instructional methods, educational technologies, and college resources. Objectives:
1. Develop a comprehensive professional development plan that ties in with campus plans and initiatives to promote student success.
2. Incorporate instructional approaches that are positively associated with student success and persistence.
3. Provide specific and relevant technology training to support integration of technology with instruction.
4. Provide equipment needed to support faculty use of technology.
5. Institute outcomes-based conference attendance with a required sharing component for broader College benefit, where applicable.

Computer Assisted Instruction is part of every course in the Program. Traditional classroom learning is now enhanced with assignments requiring research on various links on the Web. Software from numerous vendors is used to provide more practice and gaining insight into patient based therapy modalities. Much of the part-time faculty is active in clinical patient care as well as usage of these Human Patient Simulators which helps provide the highest quality educational support to promote student success as they move through the clinical phase of the program. Instructional approaches have been updated to include strategies to help millennials, as well as, generation Z students continue the program's level of success to be consistently higher than the campus average.

2. Student Success and Support:

B. Student Success and Support Strengthen quality educational and support services to promote and empower student learning, success, and self-advocacy. Objectives: 1. Implement programs and services as detailed in the Student Success and Support Program Plan focused on pre-enrollment (access in), post-enrollment (access through), and graduation or transfer (access out). 2. Implement the plans indicated by the Student Equity Plan (SEP), focused on improving successful outcomes for all students. 3. Implement the College Master Plan, focused on carrying out the Strategic Plan through educational and resource planning.

In meeting the College Student Equity Plan which included an increase in student success in groups such as African-American and Latino Students, course completion of African-American students and Latino students has risen from 2014-2015. African-American students success rose from (average fall and spring combined) the 2014-2015 Program review percent of 52.5% to an average in 2018-2019 of 74%. Also, the Latino student success rose from 63% in 2014-2015 to 91% in 2018-2019.

3. Collaboration:

C. Collaboration Advance an effective process of collaboration and collegial consultation conducted with integrity and respect to inform and strengthen decision-making. Objectives: 1. Develop, promote, and implement an employee recognition plan. 2. Conduct annual review of the Making Decisions at El Camino College document which includes member orientation, purpose review, planning, goal-setting, and self-evaluation for all consultation committees. 3. Strengthen collaboration among programs, across disciplines and college areas. 4. Improve publication of the broad input on college processes. 5. Add this initiative to the purpose statement of each collegial consultation committee.

The Program collaborates with the other allied health programs, Nursing and Radiology, in recruiting and participating in patient care scenarios as well as consulting with faculty from each program in curriculum development and teaching strategies. The Program in 8/2018 collaborated with the Nursing Program in offering a joint class funded by the Strong Work Force Department.

4. Community Responsiveness:

D. Community Responsiveness Develop and enhance partnerships with schools, colleges, universities, businesses, and community-based organizations to respond to the educational, workforce training, and economic development needs of the community. Objectives: 1. Develop strategic partnerships that include program advisory committees that address the current and future workforce development needs of the local communities and the region. 2. Develop corporate partnerships that enhance STEM training to prepare our students for STEM programs and careers. 3. Develop inter-segmental programs linking feeder high school districts with El Camino College and regional universities to create strong and clear pathways for students.

The Program has had partnerships with the American Lung Association in delivering asthma education to grade schools. There is still a partnership with the Salvation Army in participating annually in their South Bay Health Fair. The Program has partnered with Medical Centers such as Torrance Memorial Medical Center and Little Company of Mary/Providence Health Care in participating in health fairs throughout the South Bay.

The Program has regularly schedule meetings with an Advisory Committee comprised of Directors from Clinical Affiliates as well as at-large members to help with business feedback. Input from the Advisory Committee continually helps the direct the educational needs to keep our students and graduates as employable as possible

5. Institutional Effectiveness:

E. Institutional Effectiveness Strengthen processes, programs, and services through the effective and efficient use of assessment, program review, planning, and resource allocation. Objectives: 1. Develop an integrated program review and planning tool. 2. Establish benchmarks and aspirational goals for student achievement. 3. On a regular basis, gather current information on our community to ensure that we are responsive to community needs. 4. Strengthen collaboration between programs serving students. 5. Facilitate a strong fiscal position to allow reasoned responses to fiscal threats. 6. Add this initiative to the purpose statement of each committee involved with institutional effectiveness processes

The Program has routinely assessed its curriculum and facilities through surveys of students and graduates to monitor and make any changes needed to insure continued success of our students and graduates. The use of student learning outcomes, program learning outcomes, and institutional learning outcomes has led to the addition of new technology such as an adult Human Patient Simulator and an Infant Human Patient Simulator becoming a routine part of our clinical classes. SLO's also help identify the need for upgrading in ventilators which the Program was able to begin the upgrading process by acquisition of a new BiPAP ventilator.

The student learning outcomes have also led to upgrading of supplemental neonatal equipment (isolettes, radiant warmers, and heart monitors) such that the lab now has a dedicated state of the art neonatal ICU simulation area. Another sub-specialty is Pulmonary Function Testing which is also seeing an upgrade in equipment with a projected dedicated state of the art Pulmonary Function Lab in the future.

6. Modernization:

F. Modernization Modernize infrastructure and technological resources to facilitate a positive learning and working environment. Objectives: 1. Implement the Technology Plan to meet the developing information technology needs of the campus. 2. Continue implementation of the Facilities Master Plan to modernize campus facilities and infrastructure, revising as needed. 3. Implement safety cameras and other technological aspects of campus safety plan.

The Program is able to support student learning using technology such as state of the art ventilators and related equipment such as the Human Patient Simulator. A recent article in the Journal of Nursing Regulation (Volume 5, Issue 2-July 2014) issued a report concerning the effectiveness of two types of educational methods, traditional clinical education and simulation experiences. Usage of both techniques, in conjunction with each other, yielded excellent student learning. The report states that when using simulation experiences "[with] an adequate number of faculty to support student learners, subject matter experts who conduct theory-based debriefing and equipment and supplies to create a realistic environment …excellent student outcomes are achieved." Therefore, integration of proper simulation experiences can produce "comparable end of program educational outcomes and new graduates that are ready for clinical practice."

As previously mentioned in strategic initiative 5, the student learning outcomes have also led to upgrading of supplemental neonatal equipment (isolettes, radiant warmers, and heart monitors) such that the lab now has a dedicated state of the art neonatal ICU simulation area. Another sub-specialty is Pulmonary Function Testing which is also seeing an upgrade in equipment with a projected dedicated state of the art Pulmonary Function Lab in the future.

D) Discuss the status of recommendations from your previous program review.

1. **Recommendation:** Continue to monitor annual enrollment trend and adjust recruitment efforts as indicated. (pg. 7 Program Review 2014-2015)
   Status: Active
   Notes/Comments: Overall enrollment has been steady

Recommendation for 2018: The Program will continue recruitment efforts such as college days and career fairs.

2. Recommendation: Continue to monitor enrollment diversity trends and continue to improve cultural diversity in educational styles. (Pg. 8 Program Review 2014-2015)

Status: Active

Notes/Comments:

The Program Review for 2014-2015 showed that for 2011-2012 the Respiratory Care student population was 25% African-American, 26% Asian, and 30% Latino. The college average for these groups was 17% African-American, 16% Asian, and 45% Latino. (See Section2-Analysis of Research Data for exact figures)

The Student population of the program by the Fall of 2017 is comprised mainly of Latino and African-American students. These two groups comprise 74% of the Respiratory Care Program Students (14% African-American and 53% Latino) which is 7% higher than the college enrollment of 67% of these same 2 groups(See Section2-Analysis of Research Data for exact figures)

In the Spring of 2018, the last semester surveyed, the Asian population had risen to now be 13% of the enrollment for the program. The overall Respiratory Care enrollment in Spring 2018 was now comprised of 15% African-American, 13% Asian, and 57% Latino students which reflects virtually the same percentages for the overall college enrollment.
(See Section2-Analysis of Research Data for exact figures)

The Program review of 2014-2015 also showed that for 2011-2012 the enrollment was 54 % female which was slightly above the college average. (See Section2-Analysis of Research Data for exact figures)

The Respiratory Care Program Fall enrollment statistics for 2017 show that there is a 63% enrollment of female students (100/159) which is 11% higher than the overall college percentage of female student enrollment of 52%.

By the Spring of 2018, the female population had now risen to (128/190) or 67% of the Program's enrollment 15% higher the college female percent of enrollment of 52%.
(See Section2-Analysis of Research Data for exact figures)

Recommendation for 2018: The Program will continue to monitor enrollment diversity trends and continue to improve cultural diversity in educational styles.

3. Recommendation: Continue to monitor statistics and continue to assess and adjust educational styles to maximize educational success of all students in all phases, but especially the pre-clinical phase (Pg. 9 Program Review 2014-2015).

Status: Active

Notes/Comments: RC 170, 172, and RC 174 are pre-clinical courses. These are students who are discovering if they have the attitude, aptitude, and basic learning skills to succeed in Respiratory Care. Consequently, retention and success rates will continually be lower in the pre-clinical phase than in the clinical phase. Students in the

clinical phase are more dedicated to their education in respiratory care hence our retention and success rates are near 100%.

In 2018 grade demographics, the trend continues where retention and success rates are continually lower in the pre-clinical phase than in the clinical phase due to students are discovering if they have the attitude, aptitude, and basic learning skills to succeed in Respiratory Care.

Recommendation for 2018: Continue the monitoring process of diversity statistics and continue to assess and adjust educational styles to maximize educational success of all students in all phases, but especially the pre-clinical phase

2. **Recommendation:** Continue to monitor grade trends under advanced curriculum and continue routine assessment of the curriculum and facilities through surveys of students and graduates to monitor and make any changes needed to insure continued success of our students and graduates (pg 10 Program review 2014-2015).
   Status: Active
   Notes/Comments: In 2018 grade demographics, the trend in the advance curriculum continues where students in the clinical phase are more dedicated to their education in respiratory care hence our retention and success rates are near 100%.

Recommendation for 2018: Continue the monitoring process of grade trends under advanced curriculum and continue routine assessment of the curriculum and facilities through surveys of students and graduates to monitor and make any changes needed to insure continued success of our students and graduates

3. **Recommendation:** Continue to monitor demographic success trends under advanced curriculum and continue routine assessment of the curriculum and facilities through surveys of students and graduates to monitor and make any changes needed to insure continued success of our students and graduates (Pg. 11 Program review 2014-2015).
   Status: Active
   Notes/Comments: The 2018 success demographic shows that African American population has increased success from 2014-2015. The Asian population has increased and is achieving a success rate greater than that of the overall college success rate. The Latino population continues to have a success rate greater than the overall college success rate.
   Routine assessment of the curriculum and facilities through surveys of students and graduates to monitor and changes needed to insure continued success of our students and graduates is continually occurring.

Recommendation for 2018: Continue the monitoring process of demographic success trends under advanced curriculum and continue routine assessment of the curriculum and facilities through surveys of students and graduates to monitor and make any changes needed to insure continued success of our students and graduates

6. Recommendation: The employment rate will be monitored and the class of 2014 surveys will help indicate the amount of assistance still needed in interviewing skills and resume building.

Status: Inactive

Notes/Comments: Some graduates of the class of 2012 alerted the Program of two areas of required attention. First, with the job market on the decline that future class may require more help in resume building and interviewing skills. The employment rate had fallen to under 70% at that time) The Program responded by having the graduating class of 2014 participate in mock interviews with actual personnel involved in the hiring process at local hospitals as well as actual preparation of resumes under the supervision of these same personnel. The class of 2015 will participate in the same process as well as be directed to campus wide resources associated with interviews and resume building. (pg. 30 Program review 2014-2015)

Since the graduating class of 2014, all graduating classes participate in mock interviews with actual personnel involved in the hiring process at local hospitals as well as actual preparation of resumes under the supervision of these same personnel. Also, all graduating classes are directed to campus wide resources associated with interviews and resume building.

The Program has an 82% employment rate for its 2015, 2016, and 2017 graduates.

Recommendation for 2018: Continue to monitor employment rates and continue adjusting any services that will help the graduates become employed. These adjustments can include emphasis on medical terminology for ESL and/or a health communications course.

7. Recommendation: The Program will be requesting support for gaining an authoring license from the Decision Simulation Corporation which specializes in allowing individuals to author branching logic simulations.

Staus: Inactive

Notes/Comments: Decision Simulation changed their corporate model and does not offer authoring in branching logic at this time.

Recommendation for 2018: Continue search for software and seek funding to help students prepare for the branching logic portion of the licensing exam.

SECTION 2
Analysis of Research Data

A) Head count of students in the program

The average enrollment from Spring 2011 to 2012 to Fall 2011 to 2012 per semester was 125. (see charts below from Program review 2014-2015)

Demographic and Enrollment Characteristics
Respiratory Care
Spring

Will show 0.0% if you did not select Program *AND* Term on the Academics Tab

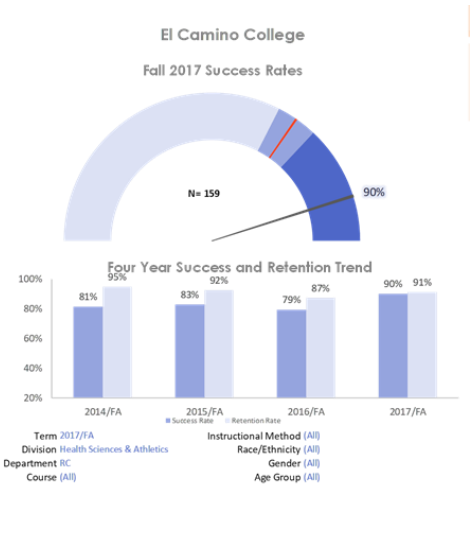
Spring		Term				ECC Student Population	District Boundary Population
		2010	2011	2012	2013	Spring 2013	2010 Census
Term Headcount		105	146	111	94	22,660	556,400
Gender	F	56.2%	50.7%	54.1%	60.6%	52.0%	51.0%
	M	43.8%	49.3%	45.9%	39.4%	48.0%	49.0%
Ethnicity	African-American	23.8%	28.1%	21.6%	19.1%	16.6%	15.1%
	Amer. Ind. or Alask. Native	1.0%	1.4%	0.9%	2.1%	0.2%	0.2%
	Asian	29.5%	22.6%	29.7%	23.4%	16.0%	13.6%
	Latino	21.9%	28.1%	29.7%	40.4%	45.1%	34.5%
	Pacific Islander	0.0%	0.7%	0.0%	0.0%	0.5%	0.5%
	White	14.3%	10.3%	11.7%	10.6%	15.9%	32.8%
	Two or More	1.0%	1.4%	2.7%	4.3%	4.0%	2.9%
	Unknown or Decline	8.6%	7.5%	3.6%	0.0%	1.7%	0.4%

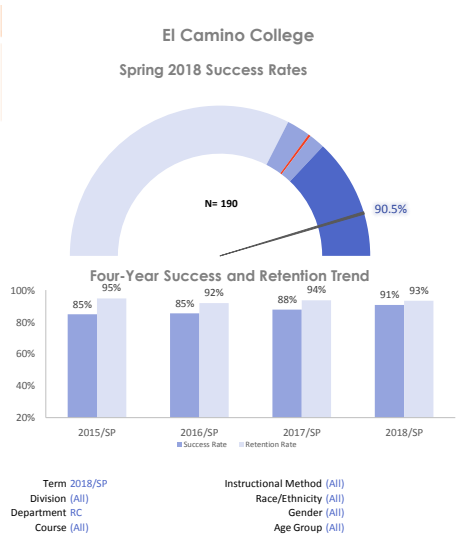
Demographic and Enrollment Characteristics
Respiratory Care
Fall

Will show 0.0% if you did not select Program *AND* Term on the Academics Tab

Fall		Term				ECC Student Population	District Boundary Population
		2009	2010	2011	2012	Fall 2012	2010 Census
Term Headcount		119	118	134	109	23,409	556,400
Gender	F	51.3%	56.8%	59.0%	52.3%	52.5%	51.0%
	M	48.7%	43.2%	41.0%	47.7%	47.5%	49.0%
Ethnicity	African-American	21.8%	24.6%	23.9%	24.8%	17.0%	15.1%
	Amer. Ind. or Alask. Native	1.7%	1.7%	0.7%	1.8%	0.2%	0.2%
	Asian	30.3%	29.7%	26.9%	30.3%	16.1%	13.6%
	Latino	20.2%	23.7%	29.1%	32.1%	44.7%	34.5%
	Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%
	White	15.1%	9.3%	12.7%	10.1%	15.6%	32.8%
	Two or More	0.0%	0.8%	2.2%	0.9%	3.8%	2.9%
	Unknown or Decline	10.9%	10.2%	4.5%	0.0%	2.0%	0.4%

The charts below are for the fall 2017 and spring 2018, the last two semesters surveyed. The average enrollment for each semester is 175.





B) Course grade distribution

Analysis shows that grading from the Fall of 2015 to Spring of 17 has remained consistent from semester to semester. Grades on the second year of the clinical classes, RC 280-298 tend to be more consistent since at this point the students have consistently showed the dedication and work ethic needed to

complete the program. Grades from RC 170-178 are more widespread which can be attributed to students still deciding if they want to dedicate their time and effort towards this profession.

RC sp17

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	1	9	1	-	2	3	-	4	20	55%	80%
			Mizukami, Douglas	1	9	1	-	2	3	-	4	20	55%	80%
		RC-172	Mekaru, Roy	5	12	5	-	-	-	-	3	25	88%	88%
			Mizukami, Douglas	5	12	5	-	-	-	-	3	25	88%	88%
		RC-174	Mekaru, Roy	7	11	2	-	2	1	-	4	27	74%	85%
		RC-280	Mekaru, Roy	4	13	-	-	-	1	-	-	18	94%	100%
			Robertson, Victoria	4	13	-	-	-	1	-	-	18	94%	100%
		RC-282	Mekaru, Roy	-	5	12	-	-	1	-	-	18	94%	100%
			Robertson, Victoria	-	5	12	-	-	1	-	-	18	94%	100%
		RC-286	Mekaru, Roy	4	13	-	-	-	1	-	1	19	89%	95%
			Robertson, Victoria	4	13	-	-	-	1	-	1	19	89%	95%
		RC-290	Mekaru, Roy	7	6	2	-	-	-	-	-	15	100%	100%
		RC-291	Mekaru, Roy	7	6	2	-	-	-	-	-	15	100%	100%
			Robertson, Victoria	7	6	2	-	-	-	-	-	15	100%	100%
		RC-292	Adoc, Raymund	3	6	6	-	-	-	-	-	15	100%	100%
			Mekaru, Roy	3	6	6	-	-	-	-	-	15	100%	100%
		RC-293	Mekaru, Roy	3	6	6	-	-	-	-	-	15	100%	100%
			Robertson, Victoria	3	6	6	-	-	-	-	-	15	100%	100%

RC Su 17

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	10	1	-	-	-	-	-	-	11	100%	100%
		RC-176	Mekaru, Roy	3	8	8	-	-	-	-	1	20	95%	95%
		RC-284	Mekaru, Roy	3	10	4	-	-	-	-	-	17	100%	100%
		RC-294	Adoc, Raymund	8	9	-	-	-	-	-	-	17	100%	100%
			Mekaru, Roy	8	9	-	-	-	-	-	-	17	100%	100%
		RC-295	Mekaru, Roy	1	4	14	-	-	-	-	2	21	90%	90%
			Mizukami, Douglas	1	4	14	-	-	-	-	2	21	90%	90%

RC Fall 17

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention

	RC	RC-170	Mekaru, Roy	4	8	1	-	1	1	-	7	22	59%	68%
			Robertson, Victoria	4	8	1	-	1	1	-	7	22	59%	68%
		RC-172	Mekaru, Roy	11	3	-	-	-	-	-	1	15	93%	93%
			Mizukami, Douglas	11	3	-	-	-	-	-	1	15	93%	93%
		RC-174	Mekaru, Roy	8	4	-	-	-	-	-	3	15	80%	80%
		RC-178	Mekaru, Roy	3	5	10	-	-	-	-	1	19	95%	95%
		RC-288	Adoc, Raymund	1	8	9	-	-	-	-	1	19	95%	95%
			Mekaru, Roy	1	8	9	-	-	-	-	1	19	95%	95%
		RC-289	Mekaru, Roy	11	6	-	-	-	-	-	-	17	100%	100%
			Robertson, Victoria	11	6	-	-	-	-	-	-	17	100%	100%
		RC-296	Mekaru, Roy	5	12	-	-	-	-	-	-	17	100%	100%
			Robertson, Victoria	5	12	-	-	-	-	-	-	17	100%	100%
		RC-297	Mekaru, Roy	3	9	5	-	-	-	-	-	17	100%	100%
			Robertson, Victoria	3	9	5	-	-	-	-	-	17	100%	100%
		RC-298	Mekaru, Roy	5	12	-	-	-	-	-	1	18	94%	94%
			Robertson, Victoria	5	12	-	-	-	-	-	1	18	94%	94%

RC sp16

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	9	7	5	0	0	0	2	7	30	70 %	77 %
			Mizukami, Douglas	9	7	5	0	0	0	2	7	30	70 %	77 %
		RC-172	Mekaru, Roy	9	16	8	0	2	0	1	3	39	85 %	92 %
			Mizukami, Douglas	9	16	8	0	2	0	1	3	39	85 %	92 %
		RC-174	Mekaru, Roy	5	17	4	0	5	0	2	6	39	67 %	85 %
		RC-280	Mekaru, Roy	4	7	4	0	0	0	0	0	15	100 %	100 %
			Robertson, Victoria	4	7	4	0	0	0	0	0	15	100 %	100 %
		RC-282	Mekaru, Roy	6	7	2	0	0	0	0	0	15	100 %	100 %
			Robertson, Victoria	6	7	2	0	0	0	0	0	15	100 %	100 %
		RC-286	Mekaru, Roy	7	8	0	0	0	0	1	0	16	94 %	100 %
			Robertson, Victoria	7	8	0	0	0	0	1	0	16	94 %	100 %
		RC-290	Mekaru, Roy	6	5	0	0	0	0	0	0	11	100 %	100 %
		RC-291	Mekaru, Roy	6	5	0	0	0	0	0	0	11	100 %	100 %
			Robertson, Victoria	6	5	0	0	0	0	0	0	11	100 %	100 %
		RC-292	Adoc, Raymund	11	0	0	0	0	0	0	0	11	100 %	100 %
			Mekaru, Roy	11	0	0	0	0	0	0	0	11	100 %	100 %
		RC-293	Adoc, Raymund	11	0	0	0	0	0	0	0	11	100 %	100 %
			Mekaru, Roy	11	0	0	0	0	0	0	0	11	100 %	100 %

RC Su 16

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	3	4	4	0	0	0	2	0	13	85 %	100 %
		RC-176	Mekaru, Roy	2	11	8	0	0	0	0	1	22	95 %	95 %
		RC-284	Mekaru, Roy	6	5	4	0	0	0	0	0	15	100 %	100 %
		RC-294	Adoc, Raymund	7	8	0	0	0	0	0	0	15	100 %	100 %
			Mekaru, Roy	7	8	0	0	0	0	0	0	15	100 %	100 %
		RC-295	Mekaru, Roy	12	9	0	0	0	0	0	1	22	95 %	95 %
			Mizukami, Douglas	12	9	0	0	0	0	0	1	22	95 %	95 %

RC Fall 16

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	2	5	6	-	4	6	-	8	31	42%	74%
			Robertson, Victoria	2	5	6	-	4	6	-	8	31	42%	74%
		RC-172	Mekaru, Roy	3	5	1	-	-	-	-	7	16	56%	56%
			Mizukami, Douglas	3	5	1	-	-	-	-	7	16	56%	56%
		RC-174	Mekaru, Roy	8	2	-	-	-	1	-	4	15	67%	73%
		RC-178	Mekaru, Roy	4	6	9	-	-	1	-	1	21	90%	95%
		RC-288	Adoc, Raymund	4	8	7	-	-	1	-	1	21	90%	95%
			Mekaru, Roy	4	8	7	-	-	1	-	1	21	90%	95%
		RC-289	Mekaru, Roy	6	3	6	-	-	-	-	-	15	100%	100%
			Robertson, Victoria	6	3	6	-	-	-	-	-	15	100%	100%
		RC-296	Mekaru, Roy	2	7	6	-	-	-	-	-	15	100%	100%
			Robertson, Victoria	2	7	6	-	-	-	-	-	15	100%	100%
		RC-297	Mekaru, Roy	3	5	7	-	-	-	-	-	15	100%	100%
			Robertson, Victoria	3	5	7	-	-	-	-	-	15	100%	100%
		RC-298	Mekaru, Roy	1	6	8	-	-	-	-	-	15	100%	100%
			Robertson, Victoria	1	6	8	-	-	-	-	-	15	100%	100%

RC sp15

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	8	10	9	0	6	0	3	3	39	69 %	92 %
			Robertson, Victoria	8	10	9	0	6	0	3	3	39	69 %	92 %
		RC-172	Mekaru, Roy	1	7	9	0	5	0	1	2	25	68 %	92 %
			Mizukami, Douglas	1	7	9	0	5	0	1	2	25	68 %	92 %
		RC-174	Mekaru, Roy	2	8	4	0	3	0	2	5	24	58 %	79 %
		RC-280	Mekaru, Roy	1	6	5	0	0	0	0	0	12	100 %	100 %
			Robertson, Victoria	1	6	5	0	0	0	0	0	12	100 %	100 %
		RC-282	Mekaru, Roy	0	2	10	0	0	0	0	0	12	100 %	100 %
			Robertson, Victoria	0	2	10	0	0	0	0	0	12	100 %	100 %
		RC-286	Mekaru, Roy	2	10	0	0	0	0	0	0	12	100 %	100 %
			Robertson, Victoria	2	10	0	0	0	0	0	0	12	100 %	100 %
		RC-290	Robertson, Victoria	7	11	0	0	0	0	0	0	18	100 %	100 %
		RC-291	Mekaru, Roy	3	15	0	0	0	0	0	0	18	100 %	100 %
			Robertson, Victoria	3	15	0	0	0	0	0	0	18	100 %	100 %
		RC-292	Mekaru, Roy	10	8	0	0	0	0	0	0	18	100 %	100 %
		RC-293	Mekaru, Roy	8	10	0	0	0	0	0	0	18	100 %	100 %
			Robertson, Victoria	8	10	0	0	0	0	0	0	18	100 %	100 %

RC su15

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	10	2	0	0	0	0	2	3	17	71 %	82 %
		RC-176	Mekaru, Roy	2	7	8	0	0	0	0	0	17	100 %	100 %
		RC-284	Mekaru, Roy	0	5	6	0	0	0	0	0	11	100 %	100 %
		RC-294	Adoc, Raymund	4	5	2	0	0	0	0	0	11	100 %	100 %
			Mekaru, Roy	4	5	2	0	0	0	0	0	11	100 %	100 %
		RC-295	Mekaru, Roy	3	13	1	0	0	0	0	0	17	100 %	100 %
			Mizukami, Douglas	3	13	1	0	0	0	0	0	17	100 %	100 %

RC Fall 15

Division Name	Dept	COURSE	NAME	A	B	C	IPP	D	INP	F	W	Total	Success	Retention
	RC	RC-170	Mekaru, Roy	3	8	2	0	0	0	5	5	23	57 %	78 %
			Robertson, Victoria	3	8	2	0	0	0	5	5	23	57 %	78 %
		RC-172	Mekaru, Roy	8	6	6	0	4	0	1	0	25	80 %	100 %
			Mizukami, Douglas	8	6	6	0	4	0	1	0	25	80 %	100 %
		RC-174	Mekaru, Roy	3	5	3	0	0	0	4	4	19	58 %	79 %
		RC-178	Mekaru, Roy	2	10	4	0	0	0	0	1	17	94 %	94 %
		RC-288	Adoc, Raymund	3	8	5	0	0	0	0	1	17	94 %	94 %
			Mekaru, Roy	3	8	5	0	0	0	0	1	17	94 %	94 %
		RC-289	Mekaru, Roy	0	11	0	0	0	0	0	0	11	100 %	100 %
			Robertson, Victoria	0	11	0	0	0	0	0	0	11	100 %	100 %
		RC-296	Mekaru, Roy	2	9	0	0	0	0	0	0	11	100 %	100 %
			Robertson, Victoria	2	9	0	0	0	0	0	0	11	100 %	100 %
		RC-297	Mekaru, Roy	0	11	0	0	0	0	0	0	11	100 %	100 %
			Robertson, Victoria	0	11	0	0	0	0	0	0	11	100 %	100 %
		RC-298	Mekaru, Roy	2	9	0	0	0	0	0	0	11	100 %	100 %
			Robertson, Victoria	2	9	0	0	0	0	0	0	11	100 %	100 %

C) Success rates (Discuss your program's rates, demographic success characteristics and set a success standard for your program.)

The overall success rates for specific ethnicities and genders has risen since the Program review of 2014-2015.

Success Rate

The success rate is the percentage of students who receive an A, B, C, or Pass as a final course grade out of all students enrolled as of the census date. ECC has an ACCJC Institution Set Standard of 65% and an Institutional Effectiveness (I.E) Outcome goal of 74% by the year 2019-2020.

Success and Retention Rates for Fall Semesters by Ethnicity

In the Fall of 2011-2012 and Fall 2012-2013, African-American students had a 57% success rate. Latino students' success rate was 64% while Asian students had success rate of 63.4% over that time frame. The average from Fall of 2014 to Fall of 2017 rose to 77% for African-Americans, 93% for Asians, and 93% for Latinos. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

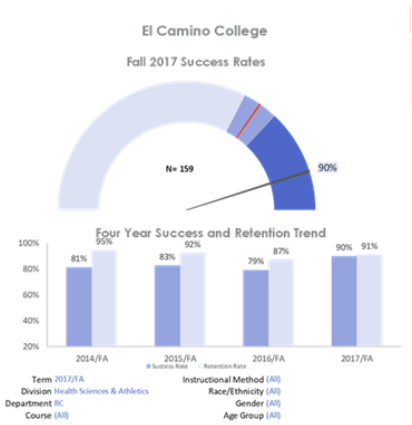
Success and Retention Rates by Gender

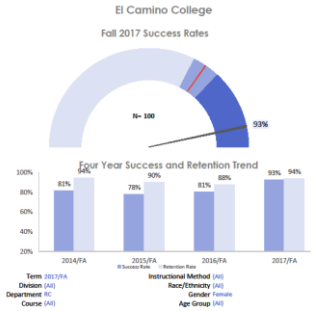
In the Fall of 2011-2012 and Fall 2012-2013, the average female success was at 67% and male 74%. The average from Fall of 2014 to Fall of 2017 rose to 93% for females and 85% for males. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

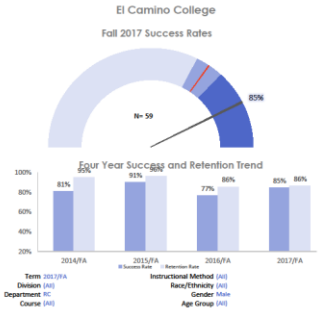
Demographic Success Characteristics
Respiratory Care
Fall: 2009 to 2012

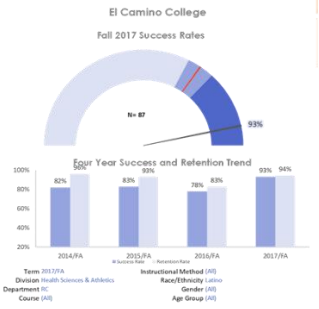
	Fall 2009		Fall 2010		Fall 2011		Fall 2012	
Ethnicity	Success	N	Success	N	Success	N	Success	N
African-American	72.7%	33	62.9%	35	58.3%	48	56.1%	41
Amer. Ind. or Alask. Native	83.3%	X	100.0%	X	0.0%	X	100.0%	X
Asian	73.9%	46	66.0%	50	75.4%	65	83.6%	67
Latino	68.6%	35	52.9%	34	55.8%	52	70.9%	55
Pacific Islander	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Two or More	0.0%	X	0.0%	X	50.0%	X	0.0%	X
Unknown or Decline	72.2%	18	76.5%	17	71.4%	X	0.0%	X
White	84.0%	25	88.2%	17	77.4%	31	88.0%	25
Gender								
M	80.3%	76	75.7%	70	70.5%	88	77.7%	94
F	69.0%	87	58.6%	87	62.5%	120	70.7%	99
X	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Age Groups								
19 or less	90.0%	X	0.0%	X	25.0%	X	60.0%	X
20 to 24	67.5%	40	64.4%	45	51.5%	68	58.7%	46
25 to 49	74.7%	99	70.3%	101	74.6%	130	81.4%	129
Over49	78.6%	14	100.0%	X	66.7%	X	61.5%	13

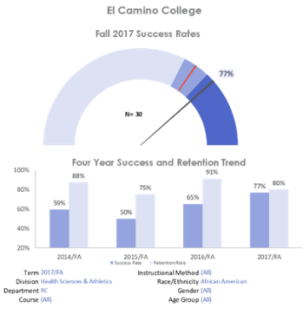
X: Counts are suppressed for groups with less than 10 students.
Shaded regions indicate groups achieving at a rate less than 80% of the reference group, respectively. Reference groups are White, male, and 20 to 24 years old.

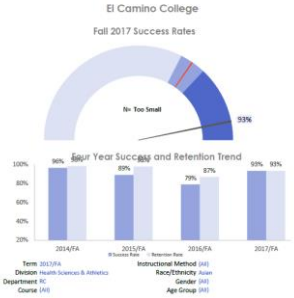












Success and Retention Rates for Spring Semesters by Ethnicity

In the Spring of 2011-2012 and Spring 2012-2013, African-American students had a 48% success rate. Latino students' success rate was 63% while Asian students had success rate of 73% over that time frame. The average from Spring of 2015 to Spring of 2018 rose to 71% for African-Americans, 91% for Asians, and 89% for Latinos. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

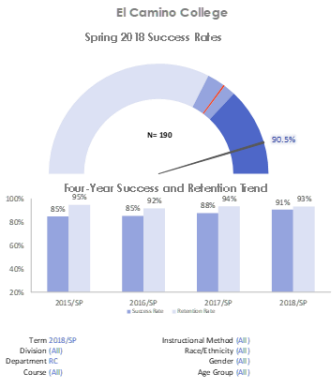
Success and Retention Rates by Gender

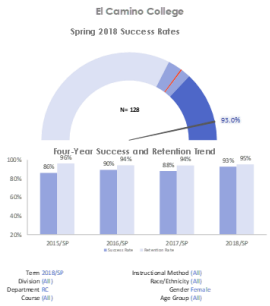
In the Spring of 2011-2012 and Spring 2012-2013, the average female success was at 65% and male 74%. The average from Spring of 2014 to Spring of 2017 rose to 88% for females and 83% for males. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

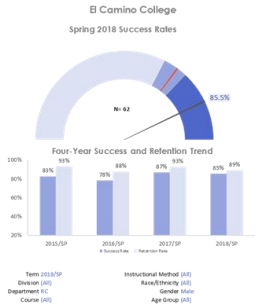
Demographic Success Characteristics
Respiratory Care
Spring: 2010 to 2013

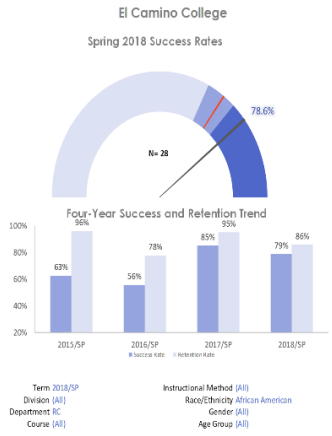
	Spring 2010		Spring 2011		Spring 2012		Spring 2013	
Ethnicity	Success	N	Success	N	Success	N	Success	N
African-American	58.8%	34	39.6%	53	78.8%	52	26.9%	26
Amer. Ind. or Alask. Native	100.0%	X	100.0%	X	100.0%	X	100.0%	X
Asian	72.5%	40	69.6%	46	82.1%	67	65.7%	35
Latino	78.6%	28	47.2%	53	76.6%	47	66.1%	59
Pacific Islander	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Two or More	100.0%	X	100.0%	X	66.7%	X	0.0%	X
Unknown or Decline	63.6%	11	52.9%	17	50.0%	X	0.0%	X
White	81.0%	21	86.4%	22	84.0%	25	70.6%	17
Gender								
M	74.6%	59	53.5%	99	79.8%	94	67.7%	65
F	68.8%	77	59.6%	99	78.2%	110	51.3%	80
X	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Age Groups								
19 or less	37.5%	X	66.7%	X	75.0%	X	18.2%	11
20 to 24	75.0%	32	47.6%	63	60.9%	46	53.7%	41
25 to 49	70.4%	81	61.8%	123	84.8%	145	67.5%	83
Over 49	86.7%	15	33.3%	X	77.8%	X	50.0%	X

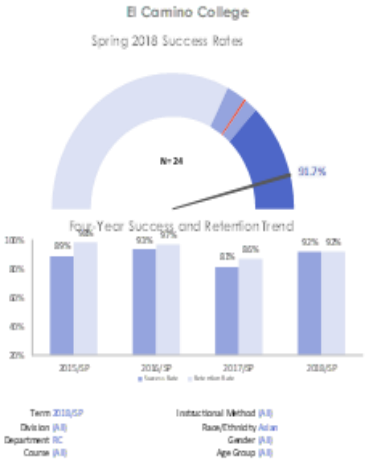
X: Counts are suppressed for groups with less than 10 students.
Shaded regions indicate groups achieving at a rate less than 80% of the reference group, respectively. Reference groups are White, male, and 20 to 24 years old.

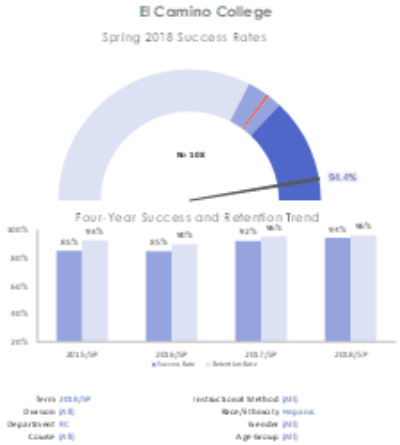












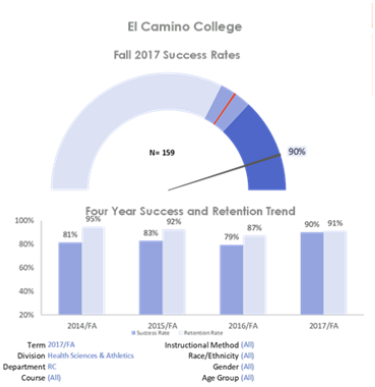
The success rate for all ethnic and gender populations will be the overall success rate for the college which will be 74%.

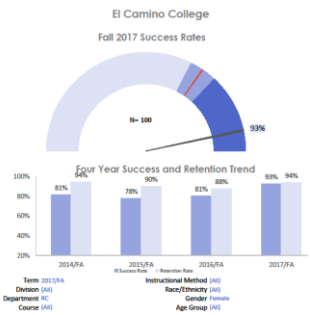
D) Retention rates (if applicable, include retention based on placement method)

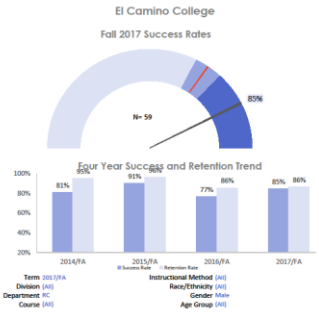
The overall retention rates for specific ethnicities and genders has risen since the Program review of 2014-2015.

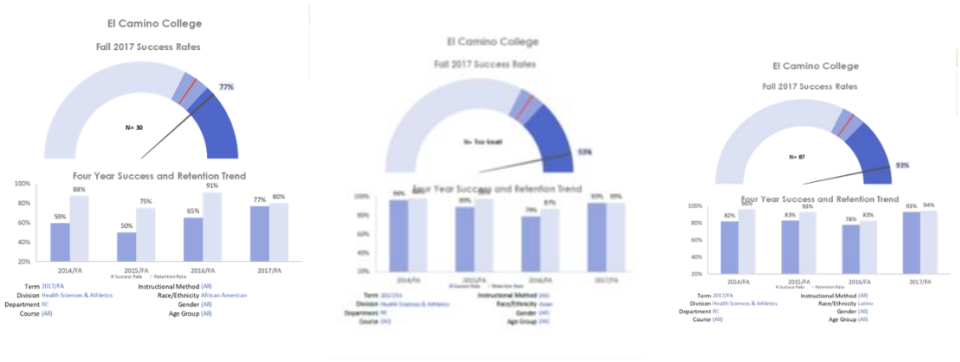
Retention Rate

The retention rate is the percentage of students who remain enrolled through the end of a course out of all students enrolled on census date. In essence, it is the percentage of students who did not drop late or withdraw. ECC does not have an ACCJC Institution-Set Standard or Institutional Effectiveness Outcome goal for retention rate. Career Technical Education (CTE) has the following statistics (see pg.28 Success by Course Type-ECC Annual Fact Book 2016-2017) of a success rate of 77% and a retention rate of 87%. The college average retention rate for female students was 84% while male students had an 83% retention rate (see pg. 30 Retention by Gender- ECC Annual Fact Book). Respiratory Care statistics show that from Fall 2014 to Fall 2017 the average retention rate for females was 92% and males 91% placing the program well over the CTE average.

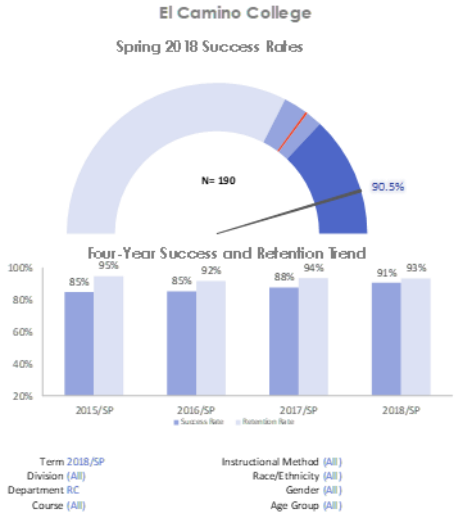


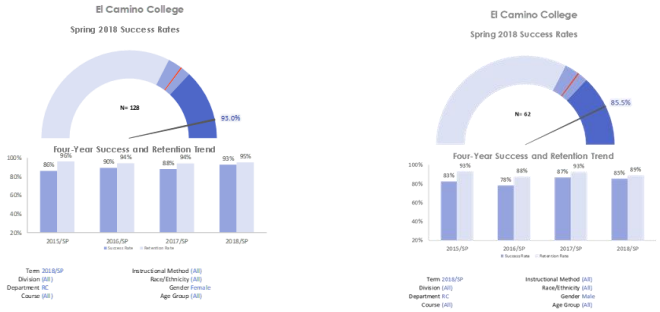


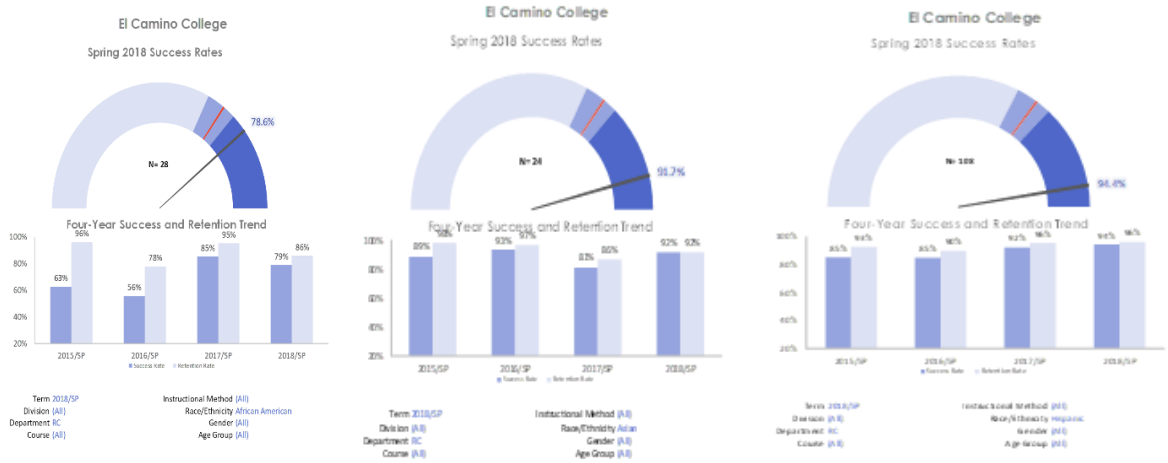




Career Technical Education (CTE) has the following statistics (see pg.28 Success by Course Type-ECC Annual Fact Book 2016-2017) of a success rate of 77% and a retention rate of 87%. The college average retention rate for female students was 84% while male students had an 83% retention rate (see pg. 30 Retention by Gender- ECC Annual Fact Book). Respiratory Care statistics show that from Spring 2015 to Spring 2018 the average retention rate for females was 94% and males 91% placing the program well over the CTE average.







E) Comparison of success and retention rates in face-to-face classes with distance education classes

NOT APPLICABLE SINCE THERE ARE NO DISTANCE EDUATION COURSES OFFRED IN THIS PROGRAM

F) Enrollment statistics with section and seat counts and fill rates

Prior to the re-classification of the program by CoARC from an entry level to an advanced level program the number of seats in the clinical portion was accredited for 25 seats. Upon the change in 2011 the accredited number of seats became 20. Consequently, the fill rate percentage for all clinical classes cannot be 100%. The maximum fill rate % can only be 80%. Also, as the overall college enrollment has dropped, the program's filler classes have also seen dip in enrollment. This would attribute to the program's low fill rate %.

Funding Accounting Method	HSA Sections	Enrolled	Capacity	Fill
2016/FA	**289**	**6,875**	**8,436**	**81%**
Respiratory Therapy	**9**	**164**	**240**	**68%**
2017/FA	**268**	**6,640**	**7,671**	**87%**
Respiratory Therapy	**9**	**159**	**240**	**66%**
2018/FA	**269**	**6,216**	**7,526**	**83%**
Respiratory Therapy	**9**	**144**	**240**	**60%**

G) Scheduling of courses (day vs. night, days offered, and sequence)

NOT APPLICABLE DUE TO ONLY ONE SECTION OF EACH COURSE OFFFERED PER APPLICABLE SEMESTER

H) Improvement Rates (Course success by placement method, if applicable)

COURSE SUCCESS BY PLACEMENT IS NOT APPLICABLE SINCE STUDENTS MUST ENROLL AND ACHIEVE A MINIMUM GARDE OF "C" TO CONTINUE IN THE PROGRAM AS DICTATED BY THE RESPIRATORY CARE BOARD FOR LICENSING TO PRACTICE IN THE STATE OF CALIFORNIA.

SECTION 3
Curriculum

Review and discuss the curriculum work done in the program during the past four years, including the following:

A) Provide the curriculum course review timeline to ensure all courses are reviewed at least once every 6 years.

See appendix C

B) Explain any course additions to current course offerings.

Not applicable because there have been no course additions to the current course offerings.

C) Explain any course deletions and in activations from current course offerings.

Not applicable because there have been no deletions or inactivations from the current course offerings.

D) Describe the courses and number of sections offered in distance education. (Distance education includes hybrid classes.)

Not Applicable because there are distance education offering in this Program

E) Discuss how well the courses, degrees, or certificates meet students' transfer or career training needs.

1. Have all courses that are required for your program's degrees and certificates been offered during the last two years? If not, has the program established a course offering cycle?

All courses that are required for the Respiratory Care Program's degree and certificate of achievement have been offered within the last two years. In order to achieve graduate status with a certificate of achievement, each student must complete all of the classes offered. The courses in the clinical phase are only offered once a year, so the classes must be completed in order.

2. Are there any concerns regarding program courses and their articulation to courses at other educational institutions?

There are no concerns at this time with articulation to other educational institutions due to an increase in on-line Bachelor's degrees accepting all of the respiratory courses in the granting of Bachelor's degrees through these various on-line colleges.

3. How many students earn degrees and/or certificates in your program? Set an attainable, measurable goal related to student completion of the program's degrees/certificates.

GRADUATION YEAR	# of Grads	# degrees/certificates
2017	**15**	**15**
2016	**11**	**11**
2015	**18**	**18**

4. **Are any licensure/certification exams required for program completion or career entry? If so, what is the pass rate among graduates? Set an attainable, measurable goal for pass rates and identify any applicable performance benchmarks set by regulatory agencies.**

GRADUATION YEAR	# attempting/ # of Grads	CRT	RRT	Licensure pass %(CRT)
2017	13/15	12	10	80%
2016	9/11	9	8	82%
2015	17/18	17	17	94%

Stats provided through the NBRC (National Board for Respiratory Care) Annual Report. The NBRC is the official test recording agency used by the CoARC (Committee of Accreditation for Respiratory Care) which is the official accrediting agency for all Respiratory Care Programs.

The performance benchmark determined by CoARC is 80% pass rate on the state licensing exam.

F) List any related recommendations.

Continue to monitor statistics and continue to assess and adjust educational styles to maximize educational success of all graduates attempting to gain a license to practice respiratory care. Millennial and Generation Z student educational learning needs include smaller group work with instant continual positive feedback. Recognition of success has been identified has a key component in these generation's success. Rewards for success need to be tapered specifically to each generation rather than a general reward to cover all age groups. Digital research and creativity in completing assignments also has proven to help with success with these generational groups.

SECTION 4
Assessment of Student and Program Learning Outcomes (SLOs & PLOs)

A) Provide a copy of your alignment grid, which shows how course, program, and institutional learning outcomes are aligned. (This will be Appendix A.)

See Appendix A

B) Provide a timeline for your course and program level SLO assessments. (This will be Appendix B.)

See Appendix B

C) State the percent of course and program SLO statements that have been assessed.

100% of all course SLO's and PLO's have been assessed.

D) Summarize the SLO and PLO assessment results over the past four years and describe how those results led to improved student learning. Analyze and describe those changes. Provide specific examples.

The Program has been able to meet all thresholds in the SLO and PLO surveys. But consistently since 2015-2018 students have commented that technology in the clinical settings has been changing. Even though the students have been successful in meeting the thresholds, the students have expressed concern at being able to maintain this success rate due to the aging technology in the ECC Respiratory Care Multimedia Lab. Funding has been received through the ECC Foundation to fund upgrades. In 2014-2015, an Adult Human Patient Simulator was funded through the ECC Foundation. This simulator is the same as the simulators used in large metropolitan hospitals to train their staff

without jeopardizing patient safety. In 2016-2017, a ventilator upgrade and state of the art Infant Patient Simulator was funded through the ECC Foundation again. The school year of 2017-2018 saw the State of California release funds through the Strong Work Force Program. The Program was able to upgrade the ECC Multimedia Lab with a new infant isolette and new infant radiant warmers, both state of the art. Also, state of the art heart monitors, upgrade another ventilator, and two additional upgraded Human Patient Simulators.

E) Describe how you have improved your SLO/PLO assessment process and engaged in dialogue about assessment results.

In 2014 the long time Program Director passed away unexpectedly. That same year, there was a loss in part-time faculty due to retirement and health issues. As the Program has been able to replace all of this personnel, the newer personnel has been able to take a more active part in the SLO/PLO process. As a result of their more active role in the SLO/PLO process they have been able to have a more meaningful part in in the results and consequently, an active part in identifying the state of the art technology the program needs.

F) List any related recommendations.

Continue to monitor the SLO/PLO process and make adjustments when indicated. Specific recommendations include upgrading ventilator technology used in lab and upgrading computer software to aid in learning process.

SECTION 5
Analysis of Student Feedback

A survey was designed in conjunction with the Institutional Research and Planning Department and was administered to the Class of 2018 and 2019 in December of 2017. Listed below are the results for that survey.

Student Satisfaction with Respiratory Care Program

N=35 **Fall 2017**

Instructors in this program have helped me achieve my academic goals.

Response	Frequency	Percent
Strongly Agree	27	77.14
Agree	6	17.14
Neither Agree nor Disagree	2	5.71
Disagree	0	0.00
Strongly Disagree	0	0.00

Instructors in this program provide opportunities to actively participate in my classes.

Response	Frequency	Percent
Strongly Agree	29	82.86
Agree	6	17.14
Neither Agree nor Disagree	0	0.00
Disagree	0	0.00
Strongly Disagree	0	0.00

I have felt a sense of community within this program.

Response	Frequency	Percent
Strongly Agree	31	88.57
Agree	3	8.57
Neither Agree nor Disagree	1	2.86
Disagree	0	0.00
Strongly Disagree	0	0.00

There is a variety of extracurricular activities related to this program on campus to help with my success in seeking employment.

Response	Frequency	Percent
Strongly Agree	13	37.14
Agree	8	22.86
Neither Agree nor Disagree	9	25.71
Disagree	3	8.57
Strongly Disagree	2	5.71

The library has the resources to help me succeed in this program.

Response	Frequency	Percent
Strongly Agree	14	40.00
Agree	16	45.71
Neither Agree nor Disagree	3	8.57
Disagree	2	5.71
Strongly Disagree	0	0.00

Instructional materials (websites, computer links, textbooks, handouts etc) are sufficient for me to complete my classroom objectives.

Response	Frequency	Percent
Strongly Agree	17	48.57
Agree	17	48.57
Neither Agree nor Disagree	1	2.86
Disagree	0	0.00
Strongly Disagree	0	0.00

I am aware of the course outcomes - what I should be able to learn and what skills I should possess after completing courses in the program.

Response	Frequency	Percent
Strongly Agree	25	71.43
Agree	10	28.57
Neither Agree nor Disagree	0	0.00
Disagree	0	0.00
Strongly Disagree	0	0.00

Each clinical experience is of sufficient quality and duration for me to meet my clinical objectives.

Response	Frequency	Percent
Strongly Agree	27	77.14
Agree	8	22.86
Neither Agree nor Disagree	0	0.00
Disagree	0	0.00
Strongly Disagree	0	0.00

Clinical sites offer a sufficient variety of patient experiences for me to meet my clinical objectives.

Response	Frequency	Percent
Strongly Agree	27	77.14
Agree	6	17.14
Neither Agree nor Disagree	2	5.71
Disagree	0	0.00
Strongly Disagree	0	0.00

The buildings and classrooms used by this program are satisfactory.

Response	Frequency	Percent
Strongly Agree	19	54.29
Agree	16	45.71
Neither Agree nor Disagree	0	0.00
Disagree	0	0.00
Strongly Disagree	0	0.00

I am satisfied with the instructional equipment (projectors, machinery, models, etc.) used in this program.

Response	Frequency	Percent
Strongly Agree	19	54.29
Agree	15	42.86
Neither Agree nor Disagree	1	2.86
Disagree	0	0.00
Strongly Disagree	0	0.00

The amount of equipment is sufficient for me to perform the required laboratory exercises.

Response	Frequency	Percent
Strongly Agree	17	48.57
Agree	14	40.00
Neither Agree nor Disagree	2	5.71
Disagree	2	5.71
Strongly Disagree	0	0.00

A) Describe the results of the student survey in each of the following areas:

1. Student Support

Student support is a crucial part of the respiratory care student population. Library resources, extracurricular activities to assist in future employment, and instructional materials are all key components in providing student support. The Likert Scale was used within the surveys, 5 being assigned the strongest agreement and 1 being assigned the strongest disagreement.

33/35 of the clinical students surveyed rated the library resources at 3 or above on the Likert scale for all domains in this section. The program has a 94% rating which puts it above the 70% threshold for student support adequacy.

30/35 of the clinical students surveyed rated the rate the extra-curricular activities to assist in future employment at 3 or above on the Likert scale for all domains in this section. The program has an 86% rating which puts it above the 70% threshold for student support adequacy.

35/35 of the clinical students surveyed rated the rate the instructional materials at 3 or above on the Likert scale for all domains in this section. The program has a 100% rating which puts it above the 70% threshold for student support adequacy.

2. Curriculum

The El Camino College Respiratory Care Program mission is to prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs). The staff is an integral portion of the curriculum process. The program uses the leading textbook for Respiratory Care Education as well as the most current manuals to assist in preparing the students upon graduation to gain employment. All of this would not be of assistance to the students without the proper staff to help guide and assist them throughout the program. Thus, the staff was the target of survey questions.

35/35 of the clinical students surveyed rated the rate the Staffing at 3 or above on the Likert scale for all domains in this section. The program has a 100% rating which puts it above the 70% threshold for curriculum adequacy.

3. Facilities, Equipment, and technology

35/35 of the clinical students surveyed rated the Facilities and Equipment at 3 or above on the Likert scale for all domains in this section. The program has a 100% rating which puts it above the 70% threshold for facilities, equipment adequacy.

33/35 of the clinical students surveyed rated the rate the Technology and Software at 3 or above on the Likert scale for all domains in this section. The program has a 94% rating which puts it above the 70% threshold for technology and software adequacy.

4. Program Objectives

35/35 of the clinical students surveyed rated the knowledge of Program Objectives at 3 or above on the Likert Scale for all domains in this section. The program has a 100% rating which puts it above the 70% threshold for knowledge of program objectives adequacy.

The El Camino College Respiratory Care Program mission is to prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs). Therefore, a major part of the program objectives is provide actual clinical experience with real patients to prepare for employment upon graduation.

There are three questions on the survey concerning clinical experience. All three questions had 35/35 clinical students surveyed rated their clinical experience at 3 or above on the Likert scale for all domains in this section. Therefore, the program has a 100% rating which puts it above the 70% threshold for program objectives concerning clinical experience.

B) Discuss the implications of the survey results for the program.

The implications of the survey results for the program are all very positive. None of the identified areas of student support, curriculum, facilities (equipment and technology), and program objectives are under the established threshold for success.

Coupled with the results from the graduate and employer surveys in the following section (labeled C) indicate that the program is meeting the college's mission which "is to make a positive difference in people's lives by providing a comprehensive educational programs and services that promote student learning and success in collaboration with our diverse communities."

C) Discuss the results of other relevant surveys.

CoARC accredits degree-granting programs in respiratory care that have undergone a rigorous process of voluntary peer review and have met or exceeded the minimum accreditation Standards as set by the professional association in cooperation with CoARC. These programs are granted accreditation status by CoARC, which provides public recognition of such achievement.

CoARC has each program survey **students, graduates, personnel, and employers** each year to assess all facets of the program from educators to lab resources. A sample of the survey administered to the students and personnel concerning program resources is provided.

Program Review in 2014-2015 stated concerning student employment "as the economy improves, the trend will probably return to about 80% employment rates." Employment rates for Class of 2015, 2016, and 2017 stand at 36/44 (82%) of the graduates employed. These g**raduates and employers** are surveyed yearly concerning employment preparedness.

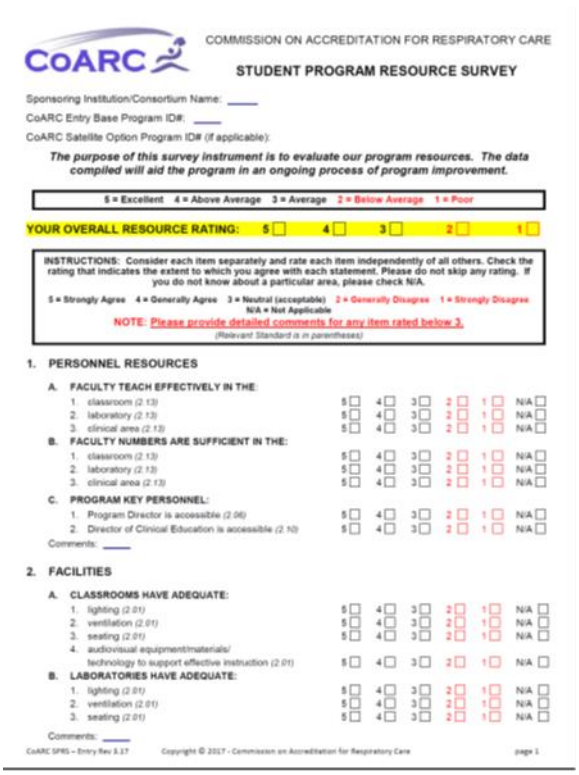
Twenty four graduates from the classes of 2015, 2016, and 2017 have responded this year and fourteen of their employers responded to surveys following up on their experiences post-graduation. 24/24 of the graduates rated their clinical knowledge upon graduation at 3 or above on the Likert scale for all domains in this section. 24/24 rated their satisfaction of their educational preparation for employment at 3 or above on the Likert scale for all domains in this section.

14/14 employers rated their satisfaction of the graduates educational preparation for employment at 3 or above on the Likert scale for all domains in this section.

Therefore, the program has a 100% rating on graduate and employer satisfaction which puts it above the 70% threshold for program objectives concerning educational preparation for employment.

Results from the **student and personnel** surveys from the classes of 2017 and 2018 concerning program resources will be discussed in the sections labeled Facilities and Equipment (section 6), Technology and Software (section 7), and Staffing (section 8)

The chart provided after the sample survey is the latest results (6/17) for the student's assessment of the program's resources.



COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE

STUDENT PROGRAM RESOURCE SURVEY

Sponsoring Institution/Consortium Name: ____

CoARC Entry Base Program ID#: ____

CoARC Satellite Option Program ID# (if applicable):

The purpose of this survey instrument is to evaluate our program resources. The data compiled will aid the program in an ongoing process of program improvement.

5 = Excellent 4 = Above Average 3 = Average 2 = Below Average 1 = Poor

YOUR OVERALL RESOURCE RATING: 5☐ 4☐ 3☐ 2☐ 1☐

INSTRUCTIONS: Consider each item separately and rate each item independently of all others. Check the rating that indicates the extent to which you agree with each statement. Please do not skip any rating. If you do not know about a particular area, please check N/A.

5 = Strongly Agree 4 = Generally Agree 3 = Neutral (acceptable) 2 = Generally Disagree 1 = Strongly Disagree N/A = Not Applicable

NOTE: Please provide detailed comments for any item rated below 3.

(Relevant Standard is in parentheses)

1. PERSONNEL RESOURCES

A. FACULTY TEACH EFFECTIVELY IN THE:

1. classroom *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. laboratory *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. clinical area *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

B. FACULTY NUMBERS ARE SUFFICIENT IN THE:

1. classroom *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. laboratory *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. clinical area *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

C. PROGRAM KEY PERSONNEL:

1. Program Director is accessible *(2.06)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. Director of Clinical Education is accessible *(2.10)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

Comments: ____

2. FACILITIES

A. CLASSROOMS HAVE ADEQUATE:

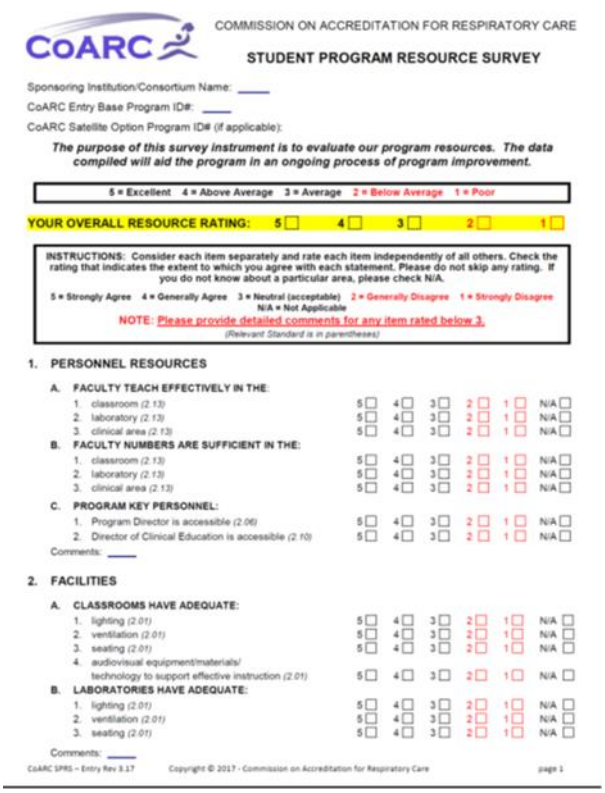
1. lighting *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. ventilation *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. seating *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
4. audiovisual equipment/materials/ technology to support effective instruction *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

B. LABORATORIES HAVE ADEQUATE:

1. lighting *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. ventilation *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. seating *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

Comments: ____

CoARC SPRS – Entry Rev 3.17 Copyright © 2017 - Commission on Accreditation for Respiratory Care page 1



COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE

STUDENT PROGRAM RESOURCE SURVEY

Sponsoring Institution/Consortium Name: ____

CoARC Entry Base Program ID#: ____

CoARC Satellite Option Program ID# (if applicable):

The purpose of this survey instrument is to evaluate our program resources. The data compiled will aid the program in an ongoing process of program improvement.

5 = Excellent 4 = Above Average 3 = Average 2 = Below Average 1 = Poor

YOUR OVERALL RESOURCE RATING: 5☐ 4☐ 3☐ 2☐ 1☐

INSTRUCTIONS: Consider each item separately and rate each item independently of all others. Check the rating that indicates the extent to which you agree with each statement. Please do not skip any rating. If you do not know about a particular area, please check N/A.

5 = Strongly Agree 4 = Generally Agree 3 = Neutral (acceptable) 2 = Generally Disagree 1 = Strongly Disagree N/A = Not Applicable

NOTE: Please provide detailed comments for any item rated below 3.

(Relevant Standard is in parentheses)

1. PERSONNEL RESOURCES

A. FACULTY TEACH EFFECTIVELY IN THE:

1. classroom *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. laboratory *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. clinical area *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

B. FACULTY NUMBERS ARE SUFFICIENT IN THE:

1. classroom *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. laboratory *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. clinical area *(2.13)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

C. PROGRAM KEY PERSONNEL:

1. Program Director is accessible *(2.06)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. Director of Clinical Education is accessible *(2.10)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

Comments: ____

2. FACILITIES

A. CLASSROOMS HAVE ADEQUATE:

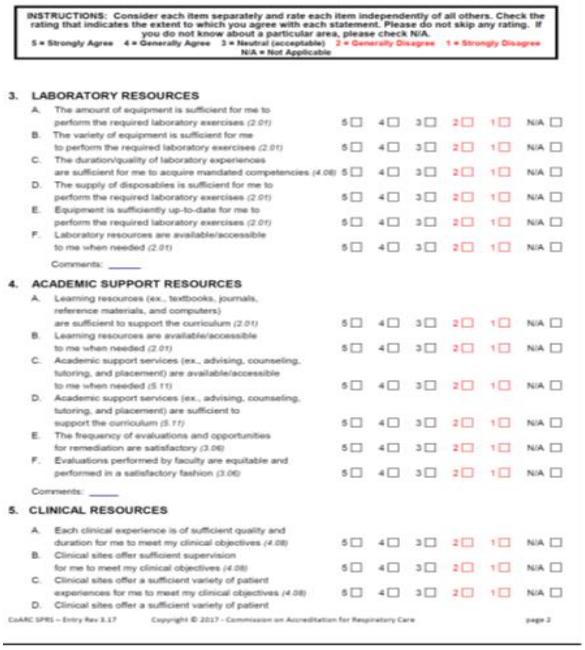
1. lighting *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. ventilation *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. seating *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
4. audiovisual equipment/materials/ technology to support effective instruction *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

B. LABORATORIES HAVE ADEQUATE:

1. lighting *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
2. ventilation *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐
3. seating *(2.01)* 5☐ 4☐ 3☐ 2☐ 1☐ N/A☐

Comments: ____

CoARC SPRS – Entry Rev 3.17 Copyright © 2017 - Commission on Accreditation for Respiratory Care page 1



INSTRUCTIONS: Consider each item separately and rate each item independently of all others. Check the rating that indicates the extent to which you agree with each statement. Please do not skip any rating. If you do not know about a particular area, please check N/A.
5 = Strongly Agree 4 = Generally Agree 3 = Neutral (acceptable) 2 = Generally Disagree 1 = Strongly Disagree
N/A = Not Applicable

3. LABORATORY RESOURCES

A. The amount of equipment is sufficient for me to perform the required laboratory exercises (2.01) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
B. The variety of equipment is sufficient for me to perform the required laboratory exercises (2.01) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
C. The duration/quality of laboratory experiences are sufficient for me to acquire mandated competencies (4.08) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
D. The supply of disposables is sufficient for me to perform the required laboratory exercises (2.01) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
E. Equipment is sufficiently up-to-date for me to perform the required laboratory exercises (2.01) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
F. Laboratory resources are available/accessible to me when needed (2.01) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐

Comments: ____

4. ACADEMIC SUPPORT RESOURCES

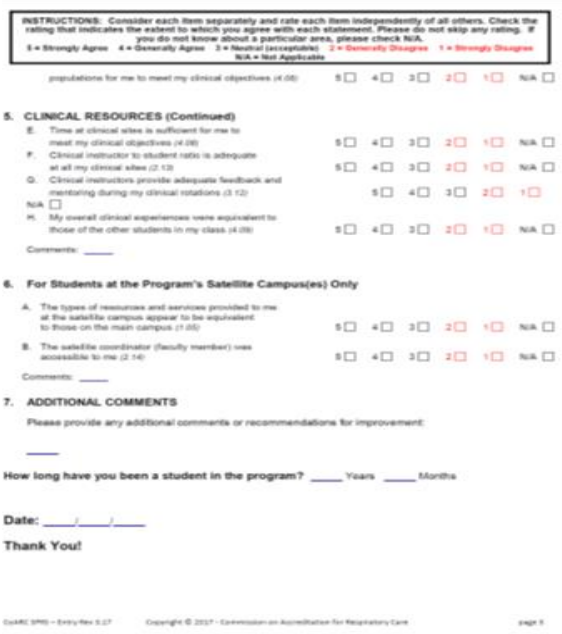
A. Learning resources (ex., textbooks, journals, reference materials, and computers) are sufficient to support the curriculum (2.01) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
B. Learning resources are available/accessible to me when needed (2.01) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
C. Academic support services (ex., advising, counseling, tutoring, and placement) are available/accessible to me when needed (5.11) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
D. Academic support services (ex., advising, counseling, tutoring, and placement) are sufficient to support the curriculum (5.11) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
E. The frequency of evaluations and opportunities for remediation are satisfactory (3.06) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
F. Evaluations performed by faculty are equitable and performed in a satisfactory fashion (3.06) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐

Comments: ____

5. CLINICAL RESOURCES

A. Each clinical experience is of sufficient quality and duration for me to meet my clinical objectives (4.08) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
B. Clinical sites offer sufficient supervision for me to meet my clinical objectives (4.08) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
C. Clinical sites offer a sufficient variety of patient experiences for me to meet my clinical objectives (4.08) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
D. Clinical sites offer a sufficient variety of patient

CoARC SPRS – Entry Rev 3.17 Copyright © 2017 - Commission on Accreditation for Respiratory Care page 2



INSTRUCTIONS: Consider each item separately and rate each item independently of all others. Check the rating that indicates the extent to which you agree with each statement. Please do not skip any rating. If you do not know about a particular area, please check N/A.
5 = Strongly Agree 4 = Generally Agree 3 = Neutral (acceptable) 2 = Generally Disagree 1 = Strongly Disagree
N/A = Not Applicable

populations for me to meet my clinical objectives (4.08) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐

5. CLINICAL RESOURCES (Continued)

E. Time at clinical sites is sufficient for me to meet my clinical objectives (4.08) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
F. Clinical instructor to student ratio is adequate at all my clinical sites (2.13) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
G. Clinical instructors provide adequate feedback and mentoring during my clinical rotations (3.12) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
H. My overall clinical experiences were equivalent to those of the other students in my class (4.09) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐

Comments: ____

6. For Students at the Program's Satellite Campus(es) Only

A. The types of resources and services provided to me at the satellite campus appear to be equivalent to those on the main campus (1.05) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐
B. The satellite coordinator (faculty member) was accessible to me (2.14) 5☐ 4☐ 3☐ 2☐ 1☐ N/A ☐

Comments: ____

7. ADDITIONAL COMMENTS

Please provide any additional comments or recommendations for improvement:

____

How long have you been a student in the program? ____ Years ____ Months

Date: ____/____/____

Thank You!

CoARC SPRS – Entry Rev 3.17 Copyright © 2017 - Commission on Accreditation for Respiratory Care page 3

RESOURCE ASSESSMENT MATRIX (RAM)

Program Name: El Camino Community College **Program #: 200584**

Date RAM submitted: 6/29/2017

#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENTSYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES
1	PERSONNEL RESOURCES	To ensure the program has sufficient number of effective laboratory, classroom, and clinical instructors. (2.06/2.10/2.11/2.13)	1) Student resource surveys 2) Personnel resource surveys	1) 06/2017 2) 06/2017	1) 29/32 surveyed scored our personnel resources 3 or above on the likert scale for all domains. That is 90.6% met the cut score 2) 7/7 surveyed scored our personnel resources 3 or above on the likert scale for all domains. That is 100% met the cut score

2	FACILITIES	To provide adequate classroom, laboratory and accommodations to ensure effective instruction. (2.01)	1) Student resource surveys 2) Personnel resource surveys	1) 06/2017 2) 06/2017	1) 31/32 surveyed scored our facilities 3 or above on the likert scale for all domains. That is 97% met the cut score 2) 7/7surveyed scored our facilities resources 3 or above on the likert scale for all domains. That is 100% met the cut score

#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENTSYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES
3	LABORATORY RESOURCES	To provide students with the equipment and exercises that will adequately prepare them for clinical practice. (2.01/4.08)	1) Student resource surveys 2) Personnel resource surveys	1) 06/2017 2) 06/2017	1) 30/32 surveyed scored our laboratory resources 3 or above on the likert scale for all domains. That is 93.7% met the cut score 2) 7/7 surveyed scored our facilities resources 3 or above on the likert scale for all domains. That is 100% met the cut score
4	ACADEMIC SUPPORT RESOURCES	To support student needs for supplemental reading, electronic and print reference materials, and research and computer resources. (2.01/3.06/2.15/5 .11)	1) Student resource surveys 2) Personnel resource surveys	1) 06/2017 2) 06/2017	1) 27/32 surveyed scored our facilities resources 3 or above on the likert scale for all domains. That is 84.4% met the cut score 2) 7/7 surveyed scored our facilities resources 3 or above on the likert scale all domains. That is 100% met the cut score

5	CLINICAL RESOURCES	To provide a sufficient variety of tasks and procedures for instruction to allow for student mastery of the program's required clinical competencies. (2.13/3.12/4.08/4.09)	1) Student resource surveys 2) Personnel resource surveys	1) 06/2017 2) 06/2017	1) 32/32 surveyed scored our facilities resources 3 or above on the likert scale for all domains. That is 100% met the cut

D) List any related recommendations.

Continue to monitor survey results and continue to assess and adjust educational styles to maximize educational success of all students in meeting program objectives. Millennial and Generation Z student educational learning needs include smaller group work with instant continual positive feedback in the lab setting. Recognition of success has been identified has a key component in these generation's success. Videotaping with instant peer and instructor positive feedback has improved student success. Digital research and creativity in completing assignments also has proven to help with success with these generational groups in the lab setting.

SECTION 6
Facilities and Equipment

A) Describe and assess the existing program facilities and equipment.

The classes of 2017 and 2018 were surveyed using the CoARC survey posted in Section 5 of this report. These CoARC Surveys were distributed to our thirty two clinical students in June 2017 as well as seven surveys to our personnel. The Likert Scale was used within the surveys, 5 being assigned the strongest agreement and 1 being assigned the strongest disagreement. A series of questions was asked about resources associated with the program and the results were used to complete a Resource Assessment Matrix for CoARC with 70% being the cut score which would make whatever was being measured to be considered adequate.

The following is a summary of the Facilities and Equipment questions.

27/32 clinical students surveyed rated the rate the Facilities and Equipment at 3 or above on the Likert scale for all domains in this section. The program rated above the 70% threshold for Facilities and Equipment adequacy.

The Facilities and Equipment section revealed that 7/7 of the personnel surveys rate the Facilities and Equipment at 3 or above on the Likert scale for all domains in this section, placing the program above the 70% threshold facilities and equipment adequacy.

FACILITIES	To provide adequate classroom, laboratory and accommodations to ensure effective instruction. (2.01)	3) Student resource surveys 4) Personnel resource surveys	1) 06/2017 2) 06/2017	3) 31/32 surveyed scored our facilities 3 or above on the likert scale for all domains. That is 97% met the cut score 4) 7/7surveyed scored our facilities resources 3 or above on the likert scale for all domains. That is 100% met the cut score

A follow-up survey was designed here at El Camino College in conjunction with the Institutional Research Department and was administered to the Class of 2018 and 2019 in December of 2017. 35/35 of the clinical students surveyed rated the rate the Facilities and Equipment at 3 or above on the Likert scale for all domains in this section. The program above the 70% threshold for facilities and equipment adequacy.

The buildings and classrooms used by this program are satisfactory.

Response	Frequency	Percent
Strongly Agree	19	54.29
Agree	16	45.71
Neither Agree nor Disagree	0	0.00
Disagree	0	0.00
Strongly Disagree	0	0.00

B) Explain the immediate (1-2 years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

Only routine maintenance is required at this immediate time of the class room and equipment.

C) Explain the long-range (2-4+ years) needs related to facilities and equipment. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

Long range needs will require upgrade of the desktop computers as well as upgrade in Wi-fi and computer applications as the demands change. A projected cost cannot be provided since at this time there is no predicting the expense of these upgrades.

D) List any related recommendations.

Action: The program will continue to monitor, assess program needs in the area of facilities and equipment such that in conjunction with the SLO's and PLO's results, seek funding to continually update as well as, adjust the facilities and equipment to meet industry standards to help train the students for employment upon graduation.

Also, another recommendation is to increase lab and classroom space given the program long term goal is to become a bachelor-level program. With the curriculum already in place, this would be the next need to fulfill this goal.

SECTION 7
Technology and Software

A) Describe and assess the adequacy and currency of the technology and software used by the program.

The classes of 2017 and 2018 were surveyed using the CoARC survey posted in Section 5 of this report. These CoARC Surveys were distributed to our thirty two clinical students in June 2017 as well as seven surveys to our personnel. The Likert Scale was used within the surveys, 5 being assigned the strongest agreement and 1 being assigned the strongest disagreement. A series of questions was asked about resources associated with the program and the results were used to complete a Resource Assessment Matrix for CoARC with 70% being the cut score which would make whatever was being measured to be considered adequate.

The following is a summary of the Technology and Software questions.

27/32 clinical students surveyed rated the rate the Technology and Software at 3 or above on the Likert scale for all domains in this section. The program rated above the 70% threshold for technology and software adequacy.

The Technology and Software section revealed that 7/7 of the personnel surveys rate the technology and software at 3 or above on the Likert scale for all domains in this section, placing the program above the 70% threshold technology and software adequacy.

The NBRC administers nationally standardized tests and collects licensing data from all states. . The NBRC reported that the average number of graduates passing the branching logic portion of the exam is 55% on the first try. Compared to the NBRC report showing that the written respiratory test portion of their Registered Respiratory Therapist exam success rate of 81% on the first attempt, this supported the information from the surveys. Addressing this identified need the Program attempted to gain funding to purchase software from Decision Simulation Company to assist in producing the Program's own branching logic drills and exams. (See pg. 30 Program review 2014-2015) Before the Program could obtain the funds the Decision Simulation Company change its corporate model and this software was no longer available. The program is now seeking funds to purchase software that is pre-made to assist in the education and preparation of the students for branching logic portion of the exam. The program will continue seeking software that will allow the program faculty to author their own branching logic exams so that it can be tailored to the programs educational delivery.

#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENTSYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES
3	LABORATORY RESOURCES	To provide students with the equipment and exercises that will adequately prepare them for clinical practice. (2.01/4.08)	3) Student resource surveys 4) Personnel resource surveys	1) 06/2017 2) 06/2017	3) 30/32 surveyed scored our laboratory resources 3 or above on the likert scale for all domains. That is 93.7% met the cut score 4) 7/7 surveyed scored our facilities resources 3 or above on the likert scale for all domains. That is 100% met the cut score

4	ACADEMIC SUPPORT RESOURCES	To support student needs for supplemental reading, electronic and print reference materials, and research and computer resources. (2.01/3.06/2.15/5.11)	3) Student resource surveys 4) Personnel resource surveys	1) 06/2017 2) 06/2017	3) 27/32 surveyed scored our Academic Support resources 3 or above on the likert scale for all domains. That is 84.4% met the cut score 4) 7/7 surveyed scored our Academic Support resources 3 or above on the likert scale all domains. That is 100% met the cut score

A follow-up survey was designed here at El Camino College in conjunction with the Institutional Research Department and was administered to the Class of 2018 and 2019 in December of 2017. 33/35 of the clinical students surveyed rated the rate the Technology and Software at 3 or above on the Likert scale for all domains in this section. The program above the 70% threshold for Technology and Software adequacy.

The library has the resources to help me succeed in this program.

Response	Frequency	Percent
Strongly Agree	14	40.00
Agree	16	45.71
Neither Agree nor Disagree	3	8.57
Disagree	2	5.71
Strongly Disagree	0	0.00

Instructional materials (websites, computer links, textbooks, handouts etc) are sufficient for me to complete my classroom objectives.

Response	Frequency	Percent
Strongly Agree	17	48.57
Agree	17	48.57
Neither Agree nor Disagree	1	2.86
Disagree	0	0.00
Strongly Disagree	0	0.00

I am satisfied with the instructional equipment (projectors, machinery, models, etc.) used in this program.

Response	Frequency	Percent
Strongly Agree	19	54.29
Agree	15	42.86
Neither Agree nor Disagree	1	2.86
Disagree	0	0.00
Strongly Disagree	0	0.00

The amount of equipment is sufficient for me to perform the required laboratory exercises.

Response	Frequency	Percent
Strongly Agree	17	48.57
Agree	14	40.00
Neither Agree nor Disagree	2	5.71
Disagree	2	5.71
Strongly Disagree	0	0.00

B) Explain the immediate (1-2 years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

In 2017 the Program was awarded funds through the Strong Work Force Department to purchase another upgraded ventilator along with another upgraded adult and infant simulator. This totaled $168,000. As seen by success statistics in section 2, with the addition of the adult simulator in 2014, then an infant simulator in 2015 both through the ECC foundation, the success rate climbed within the different student populations as much 20%. By upgrading our ventilator and simulators the Program plans to maintain this increased level of success.

The Program is seeking $5000 to purchase pre-made branching logic exams to help the graduates pass the branching logic portion of their exam at the same pass rate over the didactic portion of the exam. Also, the program is seeking $10,000 be able to author simulations specific to the program's educational needs that can be downloaded into the simulators associated with the program.

C) Explain the long-range (2-4+ years) needs related to technology and software. Provide a cost estimate for each need and explain how it will help the program better meet its goals.

Having upgraded two of the program's 5 ventilators, the program goal is to seek funding to upgrade the last three ventilators. Estimated cost is about $300,000. Also, as previously mentioned, software to assist graduates pass the branching logic portion of their exam at the same pass rate over the didactic portion of the exam. The program cannot estimate the cost at this time since it is still searching for the appropriate software to assist the program is writing its own branching logic exams.

D) List any related recommendations.

Action: The program will continue to monitor, assess program needs in the area of technology and software and in conjunction with the SLO's and PLO's results, seek funding to continually update the 5 ventilators in the lab. Also seek funding for software to assist graduates pass the branching logic portion of their exam at the same pass rate over the didactic portion of the exam.

SECTION 8
Staffing

A) Describe the program's current staffing, including faculty, administration, and classified staff.

CoARC dictates that there must be a Program Director and Director of Clinical Education. The Program has two full time faculty. One is assigned as Faculty Coordinator/Program Director and the other is assigned as the Director of Clinical Education. There is adjunct faculty assigned various classes and lab assignments that round out the program faculty.

Analysis reveals the following. The classes of 2017 and 2018 were surveyed. CoARC Surveys were distributed to our thirty two clinical students in June 2017 as well as seven surveys to our personnel. The Likert Scale was used within the surveys, 5 being assigned the strongest agreement and 1 being assigned the strongest disagreement. A series of questions was asked about resources associated with the program and the results were used to complete a Resource Assessment Matrix for CoARC with 70% being the cut score which would make whatever was being measured to be considered adequate. The following is a summary of the Staffing questions.

The Staffing section revealed that 7/7of the personnel surveys rate the staffing at 3 or above on the Likert scale for all domains in this section, placing the program above the 70% threshold for staffing adequacy.

Also, 29/32 clinical students surveyed rated the rate the Staffing at 3 or above on the Likert scale for all domains in this section. The program above the 70% threshold for staffing adequacy.

#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENTSYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES
1	PERSONNEL RESOURCES	To ensure the program has sufficient number of effective laboratory, classroom, and clinical instructors. (2.06/2.10/2.11/2.13)	3) Student resource surveys 4) Personnel resource surveys	1) 06/2017 2) 06/2017	3) 29/32 surveyed scored our personnel resources 3 or above on the likert scale for all domains. That is 90.6% met the cut score 4) 7/7 surveyed scored our personnel resources 3 or above on the likert scale for all domains. That is 100% met the cut score

A follow-up survey was designed here at El Camino College in conjunction with the Institutional Research Department and was administered to the Class of 2018 and 2019 in December of 2017. 35/35 of the clinical students surveyed rated the rate the Staffing at 3 or above on the Likert scale for all domains in this section. The program above the 70% threshold for staffing adequacy.

Student Satisfaction with Respiratory Care Program

N=35 **Fall 2017**

Instructors in this program have helped me achieve my academic goals.

Response	Frequency	Percent
Strongly Agree	27	77.14
Agree	6	17.14
Neither Agree nor Disagree	2	5.71
Disagree	0	0.00
Strongly Disagree	0	0.00

Instructors in this program provide opportunities to actively participate in my classes.

Response	Frequency	Percent
Strongly Agree	29	82.86
Agree	6	17.14
Neither Agree nor Disagree	0	0.00
Disagree	0	0.00
Strongly Disagree	0	0.00

I have felt a sense of community within this program.

Response	Frequency	Percent
Strongly Agree	31	88.57
Agree	3	8.57
Neither Agree nor Disagree	1	2.86
Disagree	0	0.00
Strongly Disagree	0	0.00

There is a variety of extracurricular activities related to this program on campus to help with my success in seeking employment.

Response	Frequency	Percent
Strongly Agree	13	37.14
Agree	8	22.86
Neither Agree nor Disagree	9	25.71
Disagree	3	8.57
Strongly Disagree	2	5.71

B) Explain and justify the program's staffing needs in the immediate (1-2 years) and long-term (2-4+ years). Provide cost estimates and explain how the position/s will help the program better meet its goals.

Surveys have revealed that the Program staffing is well above adequate at the time of the surveys. Since then the Program Faculty has been reduced due to one leaving and 2 others reducing the amount of availability in the Summer of 2018. The program will need to adjust the pool of part-timers to maintain the positive feedback from the students.

C) List any related recommendations.

Action: The program will continue to monitor, assess program needs in the area of staffing and in conjunction with the SLO's and PLO's results. Since then the Program Faculty has been reduced due to one leaving and 2 others reducing the amount of availability in the Summer of 2018. The program will need to adjust the pool of part-timers to maintain the positive feedback from the students.

SECTION 9
Direction and Vision

A) Describe relevant changes within the academic field/industry. How will these changes impact the program in the next four years?

The entry level of education in 2010 was increased to advance level programs from entry level programs. Now, there is a movement in the Respiratory Care Education to increase the entry level of education to a Bachelor's degree.

The State of California is running a pilot program to allow certain community colleges to award Bachelor's degrees in certain fields, one of which is Respiratory Care.

B) Explain the direction and vision of the program and how you plan to achieve it.

The Program has all of the necessary assets to become a Bachelor's Program. It has enough Faculty and staff to make a transition with little change necessary. The program has the necessary respiratory care classes such that no new classes in respiratory care would be needed. Also, with all of the upgrades in technology and software the program can offer stat of the art education that is already in place. Plans to achieve this vision are simply waiting for State of California to complete the pilot program and approve Community College granting of a Bachelor's degree in Respiratory Care.

C) List any related recommendations.

Continue to upgrade technology and software in the ECC Respiratory Care Multimedia Lab. Also, seek from CoARC and increase in accredited enrollment to accommodate the anticipated increase in enrollment for the Respiratory Care Program.

SECTION 10
Prioritized Recommendations

A) Provide a single, prioritized list of recommendations and needs for your program/ department (drawn from your recommendations in sections 2-8). Include cost estimates and list the college strategic initiative that supports each recommendation. Use the following chart format to organize your recommendations.

	Recommendations	Cost Estimate	Strategic Initiatives
1.	Upgrade three remaining ventilators	300,000	1, 2, 5, 6
2.	Funding for simulation creation	10,000	1, 6
3.	Funding for branching logic software	(unknown at this time)	1, 6
4.	Pulmonary Function Software	25, 000	1, 6
5.	Upgrade human patient simulators as they age or break	150, 000	1,2,5,6
6.	Replace part-time faculty vacancies	Unknown at this time	1, 2, 5, 6
7.	Funding for teaching seminars concerning Millennial and Generation Z students	Unknown at this time	1, 2, 5, 6
8.	Increase lab and classroom space	Unknown at this time	1, 2, 5, 6
9.			
10.			

B) Explain why the list is prioritized in this way.

Highest priority is funding for ventilators upgrade due to changing technology in the ICU's can cause the students/graduates do not fall behind in training for employment post-graduation.

Appendix A
ALIGNMENT GRIDS

HEALTH SCIENCES AND ATHLETICS
Institutional (ILO), Program (PLO), and Course (SLO) Alignment

Program: **Respiratory Care**	**Number of Courses:** 20	**Date Updated:** 09.15.2014	**Submitted by:** R. Serr, ext. 3811

ILOs	**1. Critical Thinking** *Students apply critical, creative and analytical skills to identify and solve problems, analyze information, synthesize and evaluate ideas, and transform existing ideas into new forms.*	**2. Communication** *Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.*	**3. Community and Personal Development** *Students are productive and engaged members of society, demonstrating personal responsibility, and community and social awareness through their engagement in campus programs and services.*	**4. Information Literacy** *Students determine an information need and use various media and formats to develop a research strategy and locate, evaluate, document, and use information to accomplish a specific purpose. Students demonstrate an understanding of the legal, social, and ethical aspects related to information use.*

SLO-PLO-ILO ALIGNMENT NOTES:

Mark boxes with an 'X' if: SLO/PLO is a major focus or an important part of the course/program; direct instruction or some direct instruction is provided; students are evaluated multiple times (and possibly in various ways) throughout the course or are evaluated on the concepts once or twice within the course.

DO NOT mark with an 'X' if: SLO/PLO is a minor focus of the course/program and some instruction is given in the area but students are not formally evaluated on the concepts; or if the SLO/PLO is minimally or not at all part of the course/program.

PLOs	**PLO to ILO Alignment** *(Mark with an X)*			
	1	**2**	**3**	**4**
PLO #1 State Licensing Exam Graduates will be able to pass the state license exam to practice respiratory care with 6 months of graduation from the program a least an 80% success rate.	X			
PLO #2 Respiratory Care Procedures Graduates will be able to perform the respiratory care procedures required of a graduate respiratory therapist working in an acute care health care setting.	X			
PLO #3 Caring and Competent Care Graduates will demonstrate the attitude needed to practice caring competent respiratory care.			X	
PLO #4 Demonstrating and Comparing Competencies During classes, students will demonstrate and explain appropriate respiratory care competencies such as monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.	X			

SLOs	SLO to PLO Alignment *(Mark with an X)*				COURSE to ILO Alignment *(Mark with an X)*			
	P1	P2	P3	P4	1	2	3	4
RC 170 Introduction to Respiratory Care Sciences and the Profession: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 170 Introduction to Respiratory Care Sciences and the Profession: SLO #2 Range of Respiratory Competency During classes, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.				X	X			
RC 170 Introduction to Respiratory Care Sciences and the Profession: SLO #3 Comprehensive Final Exam on RC & Profession Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							
RC 172 Fundamentals of Cardiopulmonary Physiology and Pharmacology in Respiratory Care: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 172 Fundamentals of Cardiopulmonary Physiology and Pharmacology in Respiratory Care: SLO #2 Demonstrate RC Competencies During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.				X	X			
RC 172 Fundamentals of Cardiopulmonary Physiology and Pharmacology in Respiratory Care: SLO #3 Comprehensive Final Exam on Physiology & Pharmacology Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							

SLOs	SLO to PLO Alignment *(Mark with an X)*				COURSE to ILO Alignment *(Mark with an X)*			
	P1	P2	P3	P4	1	2	3	4
RC 174 Introduction to Respiratory Care Equipment and Patient Care Procedures: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 174 Introduction to Respiratory Care Equipment and Patient Care Procedures: SLO #2 Explain RC Equipment Function During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.				X	X			
RC 174 Introduction to Respiratory Care Equipment and Patient Care Procedures: SLO #3 Comprehensive Final Exam on RC Equipment Operation Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							
RC 176 Introduction to Respiratory Care of the Non-Critically Ill Patient: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 176 Introduction to Respiratory Care of the Non-Critically Ill Patient: SLO #2 Demonstrate RC procedures in Non-Critical Patients Demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.		X	X		X		X	
RC 176 Introduction to Respiratory Care of the Non-Critically Ill Patient: SLO #3 Comprehensive Final Exam on RC Procedures for Non-critical Patients Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							

SLOs	SLO to PLO Alignment *(Mark with an X)*				COURSE to ILO Alignment *(Mark with an X)*			
	P1	P2	P3	P4	1	2	3	4
RC 178 Respiratory Care of the Critically Ill Patient I: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 178 Respiratory Care of the Critically Ill Patient I: SLO #2 Demo ICU RC Procedures During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.		X	X		X		X	
RC 178 Respiratory Care of the Critically Ill Patient I: SLO #3 Comprehensive Final Exam on RC Procedures for ICU RC Patients Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							
RC 280 Respiratory Care of the Critically Ill Patient II: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 280 Respiratory Care of the Critically Ill Patient II: SLO #2 Explain Ventilator & Life Support Procedures During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.		X	X		X		X	
RC 280 Respiratory Care of the Critically Ill Patient II: SLO #3 Comprehensive Final Exam on RC Life Support & Rehab for RC Patients Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							
RC 282 Fundamentals of Perinatal and Pediatric Respiratory Care: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 282 Fundamentals of Perinatal and Pediatric Respiratory Care: SLO #2 Explain Peds/Neo RC Differences During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.		X	X		X		X	
RC 282 Fundamentals of Perinatal and Pediatric Respiratory Care: SLO #3 Comprehensive Final Exam on RC Perinatal & Peds Care Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							

SLOs	SLO to PLO Alignment *(Mark with an X)*				COURSE to ILO Alignment *(Mark with an X)*			
	P1	P2	P3	P4	1	2	3	4
RC 284 Respiratory Care of the Critically Ill Patient III: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 284 Respiratory Care of the Critically Ill Patient III: SLO #2 Explain Diseases & Therapies for RC Patients During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.		X	X		X		X	
RC 284 Respiratory Care of the Critically Ill Patient III: SLO #3 Comprehensive Final Exam on Diseases & Therapies for RC Patients Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							
RC 286 Fundamentals of Pulmonary Rehabilitation and Home Respiratory Care: SLO #1 Appropriate and Competent FI02 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FI02 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.				X				
RC 286 Fundamentals of Pulmonary Rehabilitation and Home Respiratory Care: SLO #2 Demo or Explain RC pulmonary Rehab Procedures During classes & labs, students will demonstrate and explain appropriate respiratory care competencies such as FIO2 monitoring and managing patients receiving prolonged artificial ventilation, pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.		X	X		X		X	
RC 286 Fundamentals of Pulmonary Rehabilitation and Home Respiratory Care: SLO #3 Comprehensive Final Exam on Pulmonary Rehabilitation & Home Respiratory Care Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination and 80% will obtain a grade of 70% or better.	X							
RC 288 Fundamentals of Pulmonary Function Testing: SLO #1 Appropriate and Competent PFT Administration Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent clinical competencies for performing basic bedside Pulmonary Function Testing found in the section of the Data Arc system for clinical practice.				X				
RC 288 Fundamentals of Pulmonary Function Testing: SLO #2 Expain RC PFT Administration During classes & labs, students will demonstrate and explain appropriate respiratory care Pulmonary Function Testing competencies such as performing a FEV1, FVC and the calculations to convert to FEV1%.		X	X		X		X	
RC 288 Fundamentals of Pulmonary Function Testing: SLO #3 Comprehensive Final Exam on Pulmonary Function Testing Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on Pulmonary Function Testing and 80% will obtain a grade of 70% or better.	X							

SLOs	SLO to PLO Alignment *(Mark with an X)*				COURSE to ILO Alignment *(Mark with an X)*			
	P1	P2	P3	P4	1	2	3	4
RC 289 Advanced Respiratory Care of the Asthmatic Patient: SLO #1 Explain Acute vs Chronic Asthma Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to manage patients with acute and chronic asthma.				X				
RC 289 Advanced Respiratory Care of the Asthmatic Patient: SLO #2 Demonstrate Cognitive Knowledge of Asthma Control Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on Asthma management & control and 80% will obtain a grade of 70% or better.		X	X		X		X	
RC 289 Advanced Respiratory Care of the Asthmatic Patient: SLO #3 Demonstrate Asthma Patient Education During classes & labs, students will demonstrate and explain appropriate respiratory care patient education techniques for pulmonary rehabilitation, MDI use, and Asthma control by the patient.	X							
RC 290 Advanced Specialty Respiratory Gases: SLO #1 Specialty Gases Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to manage patients receiving specialty gases for various pulmonary disorders.				X				
RC 290 Advanced Specialty Respiratory Gases: SLO #2 Administration of Specialty Gases During classes & labs, students will demonstrate and explain appropriate respiratory care techniques and competencies to deliver specialty gases safely and effectively to the patient		X	X		X		X	
RC 290 Advanced Specialty Respiratory Gases: SLO #3 Demonstrate Cognitive Knowledge of RC Specialty Gases Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on use and administration of RC specialty gases and 80% will obtain a grade of 70% or better.	X							
RC 291 Advanced Specialty Ventilators and Specialized Oxygen Delivery Devices: SLO #1 Competent Specialty Gas Administration Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to manage advanced ventilators and specialized oxygen administration devices to patients for various pulmonary disorders.				X				
RC 291 Advanced Specialty Ventilators and Specialized Oxygen Delivery Devices: SLO #2 Explain or Demo Waveform Interpretation During classes & labs, students will demonstrate and explain appropriate respiratory care ventilatory management techniques and competencies including the ability to interpret ventilatory waveforms and correctly monitor the patient receiving PAV.		X	X		X		X	
RC 291 Advanced Specialty Ventilators and Specialized Oxygen Delivery Devices: SLO #3 Demonstrate Cognitive Knowledge of RC Specialty Ventilators & Gases Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on use and monitoring of prolonged artificial ventilation oxygen delivery devices and 80% will obtain a grade of 70% or better.	X							

SLOs	SLO to PLO Alignment (Mark with an X)				COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	P4	1	2	3	4
RC 292 Advanced Clinical Application and Interpretation of Blood Gases: SLO #1 Interpret Arterial Blood Gas Results Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to interpret arterial blood gas results on patients receiving all types of respiratory care for various pulmonary disorders.				X	X		X	
RC 292 Advanced Clinical Application and Interpretation of Blood Gases: SLO #2 Solve ABG Problems During classes students will demonstrate and explain arterial blood gas problems and ways to insure accuracy of reported blood gas results using the latest ABG equipment available for patient care.		X	X					
RC 292 Advanced Clinical Application and Interpretation of Blood Gases: SLO #3 Demonstrate Cognitive Knowledge of Arterial Blood Gases Analysis and Interpretation Students who stay in the course untill the end of semester will take a comprehensive final multiple choice examination on obtaining, analyzing and interpreting arterial blood gases and 80% will obtain a grade of 70% or better.	X							
RC 293 Cardiac Monitrng in Advanced Respiratory Care: SLO #1 Explain Advanced Cardiac Monitoring Techniques Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to manage patients using advanced cardiac monitoring techniques in patients suffering from various pulmonary disorders.				X	X		X	
RC 293 Cardiac Monitrng in Advanced Respiratory Care: SLO #2 Respond appropriately to Cardiac Monitoring Data During classes & labs, students will demonstrate the ability to interpret cardiac monitor data and take or recommend the appropriate action according to AHA ACLS protocols.		X	X					
RC 293 Cardiac Monitrng in Advanced Respiratory Care: SLO #3 Demonstrate Cognitive Knowledge of Cardiac Monitoring Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on analyzing and interpreting cardiac monitoring data and 80% will obtain a grade of 70% or better.	X							

SLOs	SLO to PLO Alignment (Mark with an X)				COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	P4	1	2	3	4
RC 294 Pulmonary Function Testing in Advanced Respiratory Care: SLO #1 Demonstrate or Explain How to Perform Advanced PFTs Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to conduct advanced pulmonary function testing on patients with various pulmonary disorders.				X				
RC 294 Pulmonary Function Testing in Advanced Respiratory Care: SLO #2 Demo Use of PFT Devices & Problems During classes & labs, students will demonstrate and explain bedside and laboratory Pulmonary Function Testing competencies such as performing a ERV,IRV, IC, FVC, FRC, esophageal pressures and RV .		X	X		X		X	
RC 294 Pulmonary Function Testing in Advanced Respiratory Care: SLO #3 Demonstrate Cognitive Knowledge of Advanced PFT in RC Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on conducting, using and interpreting Advanced PFT in RC and 80% will obtain a grade of 70% or better.	X							
RC 295 Pharmacology in Advanced Respiratory Care: SLO #1 Explain & Demo Delivery of Respiratory Care Medications Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to deliver all respiratory care medications used on patients with various pulmonary disorders.				X				
RC 295 Pharmacology in Advanced Respiratory Care: SLO #2 Demonstrate Cognitive Knowledge of Advanced Pharmacology in RC Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on conducting, using and interpreting Advanced PFT in RC and 80% will obtain a grade of 70% or better.		X	X		X		X	
RC 295 Pharmacology in Advanced Respiratory Care: SLO #3 Explain How to Apply Pharmacology Knowledge During classes students will be able to participate in Pharmacology mini simulations applying their knowledge of different RC drugs to patients with various pulmonary conditions requiring medication.	X							

SLOs	SLO to PLO Alignment *(Mark with an X)*				COURSE to ILO Alignment *(Mark with an X)*			
	P1	P2	P3	P4	1	2	3	4
RC 296 Physical Examination in Advanced Respiratory Care: SLO #1 Demonstrate or Explain Pulmonary Physical Exam Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to conduct a complete pulmonary physical exam on patients with various pulmonary disorders.				X				
RC 296 Physical Examination in Advanced Respiratory Care: SLO #2 Show How to Apply Physical Exam Knowledge to Patients During classes & labs, students will be able to participate in physical exam of the chest VP and HPS mini simulations applying their knowledge of physical exam to patients and identifying various pulmonary conditions.		X	X		X		X	
RC 296 Physical Examination in Advanced Respiratory Care: SLO #3 Demonstrate Cognitive Knowledge of Physical Exam of the Chest in RC Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on conducting, performing and interpreting Physical exam of the chest and 80% will obtain a grade of 70% or better.	X							
RC 297 Perinatal and Pediatric Care in Advanced Respiratory Care: SLO #1 Demo Competent Management of Perinatal and Pediatric Patients Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to manage perinatal and pediatric patients receiving all forms of respiratory care for various pulmonary disorders.				X				
RC 297 Perinatal and Pediatric Care in Advanced Respiratory Care: SLO #2 Contrast Neonatal & Pediatric care During classes & labs, students will be able to contrast and take appropriate action when given mini simulations involving neonatal vs pediatric patients requiring respiratory care.		X	X		X		X	
RC 297 Perinatal and Pediatric Care in Advanced Respiratory Care: SLO #3 Demonstrate Cognitive Knowledge of Perinatal and Pediatric Respiratory Care Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination on the differences in respiratory care for neonatal, pediatric and adult patients requiring RC and 80% will obtain a grade of 70% or better.	X							

SLOs	SLO to PLO Alignment (Mark with an X)				COURSE to ILO Alignment (Mark with an X)			
	P1	P2	P3	P4	1	2	3	4
RC 298 Advanced Emergency Management: SLO #1 Functioning as a Rapid Response Team Students will be able to answer written questions, oral questions and perform procedures that demonstrate knowledge and ability to manage widespread emergency disaster plan and function as part of the team performing respiratory procedures and therapy on patients with various pulmonary disorders.				X				
RC 298 Advanced Emergency Management: SLO #2 Explain & Demo Use of Emergency Management Procedures & Equipment During classes & labs, students will be able to apply emergency management procedures when given mini simulations involving natural, accidental and terrorists-based emergencies requiring respiratory care and coordination of resources.		X	X		X		X	
RC 298 Advanced Emergency Management: SLO #3 Demonstrate Cognitive Knowledge of Emergency Management in Respiratory Care Students who stay in the course till the end of semester will take a comprehensive final multiple choice examination applying the principals and procedures of emergency management in RC and 80% will obtain a grade of 70% or better.	X							

Appendix B
SLO/PLO TIMELINES

SLO Timeline *Worksheet*
(2018 - 2022)

Division: **Health Sciences & Athletics** Program: **Respiratory Care** **Program Review Date:**

Directions: *Use this worksheet to enter the existing assessment timelines for 2016 and distribute assessments for each SLO/PLO statement over the next four-year timeline (2017-2020). Type an **X** in the cells below to indicate the semester in which the SLOs/PLOs are being assessed. This worksheet should be emailed to the division facilitator by Prof. Roy Mekaru. Facilitators are responsible for making sure the information is complete and e-mailing an electronic copy of this Timeline Worksheet document (in Word or PDF format) to ipena@elcamino.edu by _____. Once received by the SLO Administrative Assistant, this information will be input into TracDat.*

Course and SLO #	Note if offered only in FA/SU/SP	SP 2021	SU 2021	FA 2021	SP 2022	SU 2022	FA 2022	SP 2018	SU 2018	FA 2018	SP 2019	SU 2019	FA 2019	SP 2020	SU 2020	FA 2020
PLO #1							X									
PLO #2							X									
PLO #3							X									
PLO #4						X										
RC 170 - SLO #1							X									X
RC 170 - SLO #2								X								
RC 170 - SLO #3				X									X			
RC 172 - SLO #1					X									X		
RC 172 - SLO #2								X								
RC 172 - SLO #3		X									X					
RC 174 - SLO #1							X									X
RC 174 - SLO #2										X						
RC 174 - SLO #3				X							X					
RC 176 - SLO #1						X									X	
RC 176 - SLO #2									X							
RC 176 - SLO #3			X									X				

Course and SLO #	Note if offered only in FA/SU/SP	SP 2021	SU 2021	FA 2021	SP 2022	SU 2022	FA 2022	SP 2018	SU 2018	FA 2018	SP 2019	SU 2019	FA 2019	SP 2020	SU 2020	FA 2020
RC 178 - SLO #1							X									X
RC 178 - SLO #2										X						
RC 178 - SLO #3				X									X			
RC 280 - SLO #1					X									X		
RC 280 - SLO #2								X								
RC 280 - SLO #3		X									X					
RC 282 - SLO #1					X									X		
RC 282 - SLO #2								X								
RC 282 - SLO #3		X									X					
RC 284 - SLO #1						X									X	
RC 284 - SLO #2									X							
RC 284 - SLO #3			X									X				
RC 286 - SLO #1					X									X		
RC 286 - SLO #2								X								
RC 286 - SLO #3		X									X					
RC 288 - SLO #1							X									X
RC 288 - SLO #2										X						
RC 288 - SLO #3				X									X			
RC 289 - SLO #1							X									X
RC 289 - SLO #2										X						
RC 289 - SLO #3				X									X			
RC 290 - SLO #1					X									X		
RC 290 - SLO #2								X								
RC 290 - SLO #3		X									X					
RC 291 - SLO #1					X									X		
RC 291 - SLO #2								X								
RC 291 - SLO #3		X									X					

Course and SLO #	Note if offered only in FA/SU/SP	SP 2021	SU 2021	FA 2021	SP 2022	SU 2022	FA 2022	SP 2018	SU 2018	FA 2018	SP 2019	SU 2019	FA 2019	SP 2020	SU 2020	FA 2020
RC 292 - SLO #1					X									X		
RC 292 - SLO #2								X								
RC 292 - SLO #3		X									X					
RC 293 - SLO #1					X									X		
RC 293 - SLO #2								X								
RC 293 - SLO #3		X									X					
RC 294 - SLO #1						X									X	
RC 294 - SLO #2									X							
RC 294 - SLO #3			X									X				
RC 295 - SLO #1						X									X	
RC 295 - SLO #2									X							
RC 295 - SLO #3			X									X				
RC 296 - SLO #1							X									X
RC 296 - SLO #2										X						
RC 296 - SLO #3				X									X			
RC 297 - SLO #1							X									X
RC 297 - SLO #2										X						
RC 297 - SLO #3				X									X			
RC 298 - SLO #1							X									X
RC 298 - SLO #2										X						
RC 298 - SLO #3				X									X			

Appendix C
6-YEAR CURRICULUM COURSE REVIEW TIMELINE

Respiratory Care
Six Year Course Review Cycle

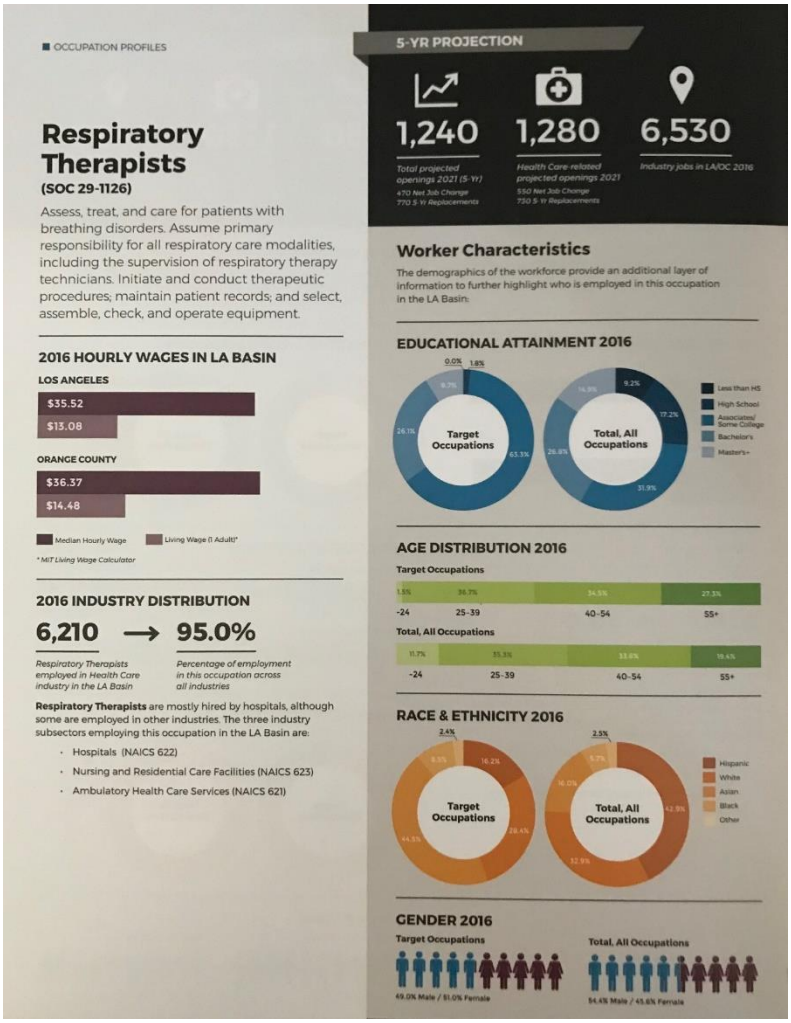
Course	Last Review	Last Review	Last Review	Last Review	Next Review	Next Review	Next Review	Next Review
	Spring 15	Fall 15	Spring 16	Fall 16	Spring 21	Fall 21	Spring 22	Fall 22
170	X				X			
172	X				X			
174	X				X			
176	X				X			
178	X				X			
280		X				X		
282		X				X		
284		X				X		
286		X				X		
288		X				X		
289			X				X	
290			X				X	
291			X				X	
292			X				X	
293			X				X	
294				X				X
295				X				X
296				X				X
297				X				X
298				X				X

APPENDIX D
CAREER AND TECHNICAL EDUCATION (CTE) SUPPLEMENTAL QUESTIONS

CTE programs must conduct a full program review every 4 years. The comprehensive program review includes responses to the CTE supplemental questions below. Every two years (once between full program reviews) these supplemental questions must be answered and submitted to Academic Affairs for posting on the College website.

Use labor market data, advisory committee input/feedback, and institutional and program-level data to respond to the following questions:

1. **How strong is the occupational demand for the program?** In your response, describe any changes in demand over the past 5 years and discuss the occupational outlook for next 5 years. Provide applicable labor market data (e.g., US Bureau of Labor Statistics, Employment Development Department) that address state and local needs.



Statistics provided by Center for a Competitive Workforce in the publication HealthCare Services in the Los Angeles basin May 2018. This publication was issued through the Strong

Workforce Office at El Camino College in conjunction with the Strong Workforce Initiative of California.

The statistics show an expected increase in job demand over the next 5 years. This is due to an aging baby boomer population, high retirement figures at clinical facilities due to baby boomers mostly comprised the early employment positions, and increasing English as a second language population requiring more RCP's with minority backgrounds to deal with this diversity issue.

2. **How does the program address needs that are not met by similar programs in the region?** In your response, identify any distinctive components of the program (e.g., curriculum, facilities, resources) and/or describe any unique contributions the program or its students/graduates make to the community served.

A distinctive component of the program is its offering of 3 courses dedicated to Neonatal and Pediatrics Respiratory Care. There are also 3 other courses that support these courses. In addition, the program now has a dedicated lab area in the ECC Respiratory Care Multimedia Lab simulating a neonatal ICU bay with 2 state-of-the-art infant beds, heart monitors, and ventilators and 1 (thanks to strong work force monies soon to be 2) Infant Patient Simulator like the ones used in the major medical centers.

Another distinctive component of the program is its offering of 3 courses dedicated to Pulmonary Function Testing. A dedicated pulmonary function lab is now under construction with funding from the Strong Work Force Initiative which would be equipped with all state-of-the-art software and equipment.

Also a distinctive component of the program is its usage of one (soon to be 2, again thanks to strong work force monies) Adult Human Patient Simulators to help with adult ICU training.

3. **What are the completion, success, and employment rates for students in the program?** In your response, identify the standards set by the program and discuss any factors that may impact completion, success, and employment rates among students in the program. Describe the status of any action plans for maintaining/improving rates relative to such benchmarks.

Employment Rate

The Program has an 82% employment rate for its 2015, 2016, and 2017 graduates. The Program has received a California Community Colleges' 2018 Strong Workforce Stars recognition for their success in improving student employment and wage outcomes. The program received a bronze star signifying that the program's graduates saw a 72% increase in earnings.
(see APPENDIX E- supplemental Documents)

There are 19 Respiratory Care Schools within 120 mile radius. A straw poll in spring 2018 showed that of the five clinical affiliates associated with the Respiratory Care Program (four of which service the South Bay) 37% of their staff graduated from the El Camino College Respiratory Care Program. This straw poll also showed that the management teams at these facilities were 65% comprised of graduates from the program.

Success Rate

The success rate is the percentage of students who receive an A, B, C, or Pass as a final course grade out of all students enrolled as of the census date. ECC has an ACCJC Institution Set Standard of 65% and an Institutional Effectiveness (I.E) Outcome goal of 74% by the year 2019-2020.

Success and Retention Rates for Fall Semesters by Ethnicity

In the Fall of 2011-2012 and Fall 2012-2013, African-American students had a 57% success rate. Latino students' success rate was 64% while Asian students had success rate of 63.4% over that time frame. The average from Fall of 2014 to Fall of 2017 rose to 77% for African-Americans, 93% for Asians, and 93% for Latinos. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

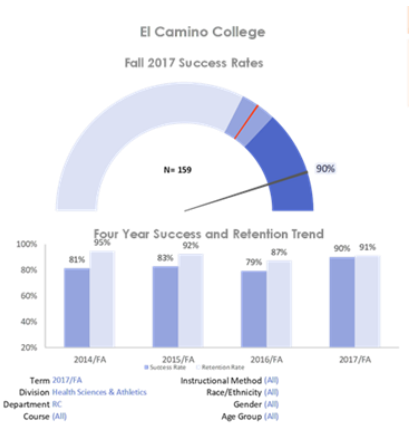
Success and Retention Rates by Gender

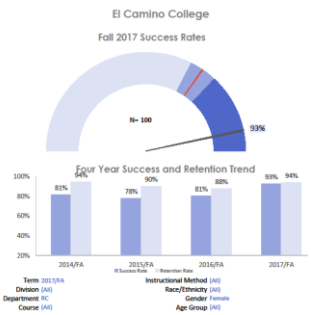
In the Fall of 2011-2012 and Fall 2012-2013, the average female success was at 67% and male 74%. The average from Fall of 2014 to Fall of 2017 rose to 93% for females and 85% for males. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

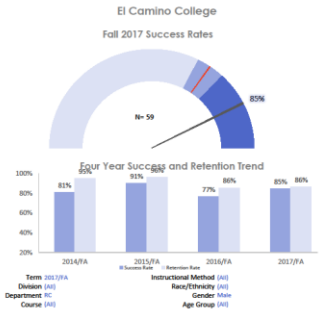
Demographic Success Characteristics
Respiratory Care
Fall: 2009 to 2012

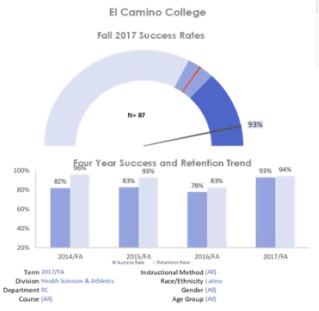
	Fall 2009		Fall 2010		Fall 2011		Fall 2012	
Ethnicity	Success	N	Success	N	Success	N	Success	N
African-American	72.7%	33	62.9%	35	58.3%	48	56.1%	41
Amer. Ind. or Alask. Native	83.3%	X	100.0%	X	0.0%	X	100.0%	X
Asian	73.9%	46	66.0%	50	75.4%	65	83.6%	67
Latino	68.6%	35	52.9%	34	55.8%	52	70.9%	55
Pacific Islander	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Two or More	0.0%	X	0.0%	X	50.0%	X	0.0%	X
Unknown or Decline	72.2%	18	76.5%	17	71.4%	X	0.0%	X
White	84.0%	25	88.2%	17	77.4%	31	88.0%	25
Gender								
M	80.3%	76	75.7%	70	70.5%	88	77.7%	94
F	69.0%	87	58.6%	87	62.5%	120	70.7%	99
X	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Age Groups								
19 or less	90.0%	X	0.0%	X	25.0%	X	60.0%	X
20 to 24	67.5%	40	64.4%	45	51.5%	68	58.7%	46
25 to 49	74.7%	99	70.3%	101	74.6%	130	81.4%	129
Over 49	78.6%	14	100.0%	X	66.7%	X	61.5%	13

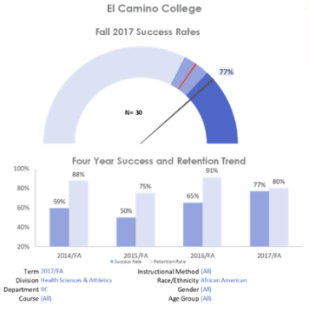
X: Counts are suppressed for groups with less than 10 students.
Shaded regions indicate groups achieving at a rate less than 80% of the reference group, respectively. Reference groups are White, male, and 20 to 24 years old.

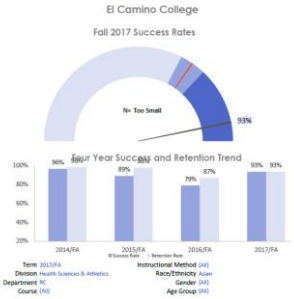












Success and Retention Rates for Spring Semesters by Ethnicity

In the Spring of 2011-2012 and Spring 2012-2013, African-American students had a 48% success rate. Latino students' success rate was 63% while Asian students had success rate of 73% over that time frame. The average from Spring of 2015 to Spring of 2018 rose to 71% for African-Americans, 91% for Asians, and 89% for Latinos. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

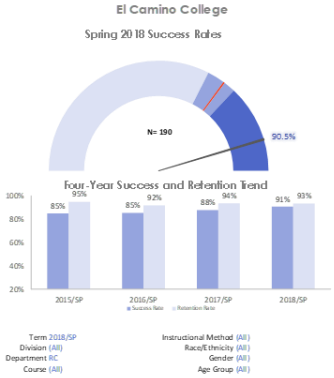
Success and Retention Rates by Gender

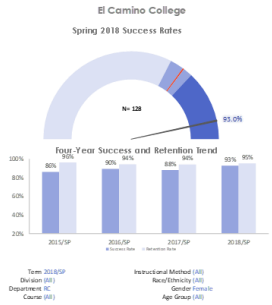
In the Spring of 2011-2012 and Spring 2012-2013, the average female success was at 65% and male 74%. The average from Spring of 2014 to Spring of 2017 rose to 88% for females and 83% for males. This rise in success can be attributed to changes in instructional methods and the introduction of more current technology and software.

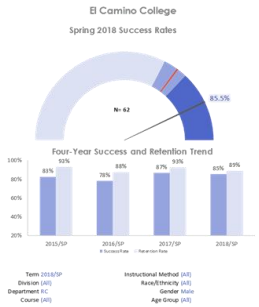
Demographic Success Characteristics
Respiratory Care
Spring: 2010 to 2013

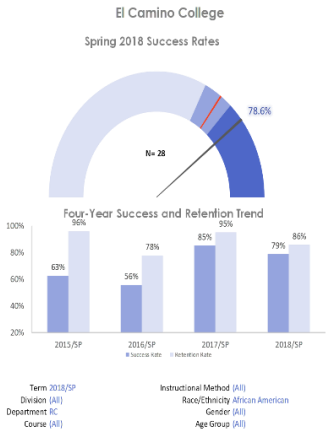
	Spring 2010		Spring 2011		Spring 2012		Spring 2013	
Ethnicity	Success	N	Success	N	Success	N	Success	N
African-American	58.8%	34	39.6%	53	78.8%	52	26.9%	26
Amer. Ind. or Alask. Native	100.0%	X	100.0%	X	100.0%	X	100.0%	X
Asian	72.5%	40	69.6%	46	82.1%	67	65.7%	35
Latino	78.6%	28	47.2%	53	76.6%	47	66.1%	59
Pacific Islander	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Two or More	100.0%	X	100.0%	X	66.7%	X	0.0%	X
Unknown or Decline	63.6%	11	52.9%	17	50.0%	X	0.0%	X
White	81.0%	21	86.4%	22	84.0%	25	70.6%	17
Gender								
M	74.6%	59	53.5%	99	79.8%	94	67.7%	65
F	68.8%	77	59.6%	99	78.2%	110	51.3%	80
X	0.0%	X	0.0%	X	0.0%	X	0.0%	X
Age Groups								
19 or less	37.5%	X	66.7%	X	75.0%	X	18.2%	11
20 to 24	75.0%	32	47.6%	63	60.9%	46	53.7%	41
25 to 49	70.4%	81	61.8%	123	84.8%	145	67.5%	83
Over 49	86.7%	15	33.3%	X	77.8%	X	50.0%	X

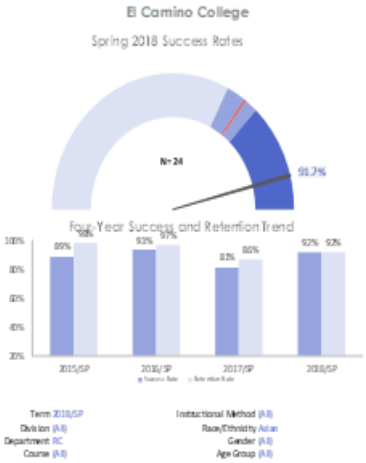
X: Counts are suppressed for groups with less than 10 students.
Shaded regions indicate groups achieving at a rate less than 80% of the reference group, respectively. Reference groups are White, male, and 20 to 24 years old.

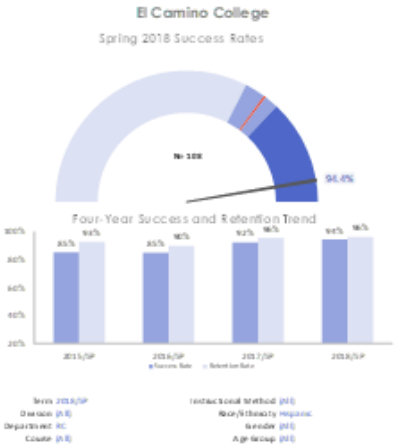












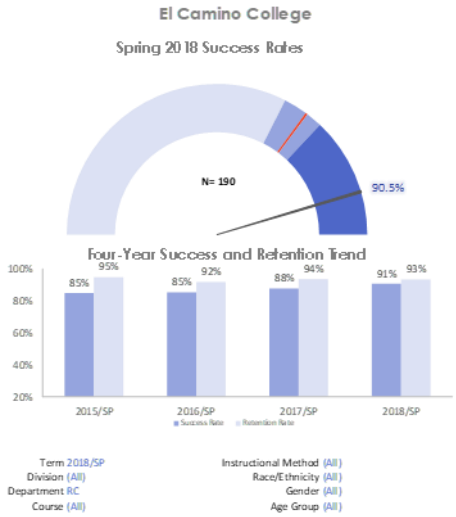
The success rate for all ethnic and gender populations will be the overall success rate for the college which will be 74%.

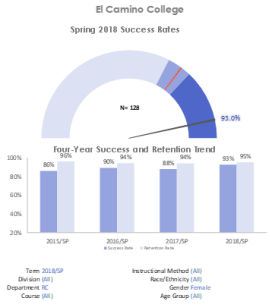
E) Retention rates (if applicable, include retention based on placement method)

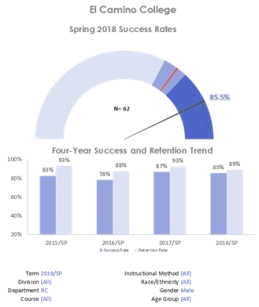
Retention Rate

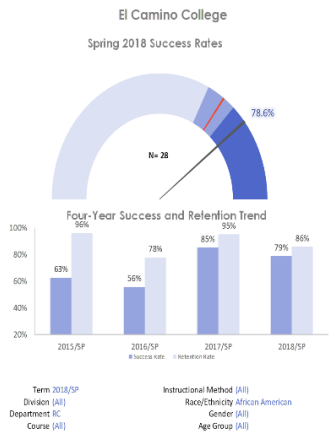
The retention rate is the percentage of students who remain enrolled through the end of a course out of all students enrolled on census date. In essence, it is the percentage of students who did not drop late or withdraw. ECC does not have an ACCJC Institution-Set Standard or Institutional Effectiveness Outcome goal for retention rate. Career Technical Education (CTE) has the following statistics (see pg.28 Success by Course Type-ECC Annual Fact Book 2016-2017) of a success rate of 77% and a retention rate of 87%. The college average retention rate for female students was 84% while male students had an 83% retention rate (see pg. 30 Retention by Gender- ECC Annual Fact Book). Respiratory Care statistics show that from Fall 2014 to Fall 2017 the average retention rate for females was 92% and males 91% placing the program well over the CTE average.

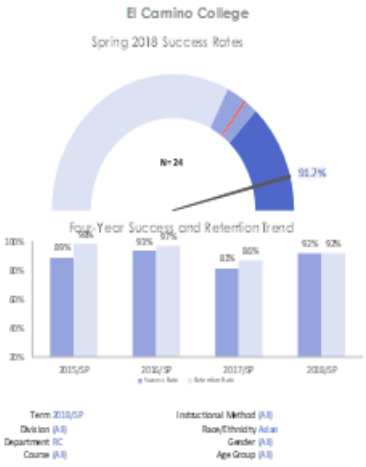
Career Technical Education (CTE) has the following statistics (see pg.28 Success by Course Type-ECC Annual Fact Book 2016-2017) of a success rate of 77% and a retention rate of 87%. The college average retention rate for female students was 84% while male students had an 83% retention rate (see pg. 30 Retention by Gender- ECC Annual Fact Book). Respiratory Care statistics show that from Spring 2015 to Spring 2018 the average retention rate for females was 94% and males 91% placing the program well over the CTE average.

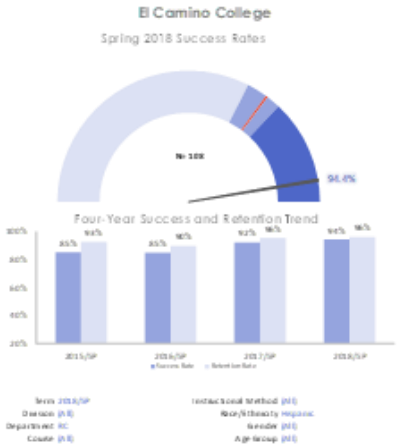












4. List any licensure/certification exam(s) required for entry into the workforce in the field of study and report the most recent pass rate(s) among program graduates. In your response, identify any applicable performance benchmarks set by regulatory agencies and

describe the status of any action plans for maintaining/improving pass rates relative to such benchmarks.

GRADUATION YEAR	# attempting/ # of Grads	CRT	RRT	Licensure pass %(CRT)
2017	**13/15**	**12**	**10**	**80%**
2016	**9/11**	**9**	**8**	**82%**
2015	**17/18**	**17**	**17**	**94%**

Stats provided through the NBRC (National Board for Respiratory Care) Annual Report. The NBRC is the official test recording agency used by the CoARC (Committee of Accreditation for Respiratory Care) which is the official accrediting agency for all Respiratory Care Programs.

5. **Are the students satisfied with their preparation for employment? Are the employers in the field satisfied with the level of preparation of program graduates?** Use data from student surveys, employer surveys, and other sources of employment feedback to justify your response.

CoARC accredits degree-granting programs in respiratory care that have undergone a rigorous process of voluntary peer review and have met or exceeded the minimum accreditation Standards as set by the professional association in cooperation with CoARC. These programs are granted accreditation status by CoARC, which provides public recognition of such achievement.

CoARC has each program survey students, graduates, personnel, and employers each year to assess all facets of the program from educators to lab resources.

Program Review in 2014-2015 stated concerning student employment "as the economy improves, the trend will probably return to about 80% employment rates." Employment rates for Class of 2015, 2016, and 2017 stand at 36/44 (82%) of the graduates employed. These graduates and employers are surveyed yearly concerning employment preparedness.

Twenty four graduates from the classes of 2015, 2016, and 2017 have responded this year and fourteen of their employers responded to surveys following up on their experiences post-graduation. 24/24 of the graduates rated their clinical knowledge upon graduation at 3 or above on the Likert scale for all domains in this section. 24/24 rated their satisfaction of their educational preparation for employment at 3 or above on the Likert scale for all domains in this section.

14/14 employers rated their satisfaction of the graduates educational preparation for employment at 3 or above on the Likert scale for all domains in this section.

Therefore, the program has a 100% rating on graduate and employer satisfaction which puts it above the 70% threshold for program objectives concerning educational preparation for employment. Employment for Classes of 2015, 2016, and 2017 for total number of graduates is 82%. Three graduates have not taken and/or not passed the Licensing examination. Therefore our employment numbers are as follows:

Class	Graduates	Attempted	Passed	No attempt	Employed

		Licensing Exam		or did not pass	
2017	15	13	12	3	11
2016	11	9	9	2	9
2015	18	17	17	1	16
Total	44	39	38	6	36
% employed Graduates	44	---	-----	-----	36/44=82%
% employed Licensed	----	----	38	----	36/38=95%

6. **Is the advisory committee satisfied with the level of preparation of program graduates? How has advisory committee input and feedback been used in the past two years to ensure employer needs are met by the program?** Describe the status and impact of any advisory committee recommendations.

The Program has regularly scheduled meetings with an Advisory Committee comprised of Directors from Clinical Affiliates as well as at-large members to help with business feedback. Input from the Advisory Committee continually helps the direct the educational needs to keep our students and graduates as employable as possible.

Examples of input from the committee has led to changes in program preparation of graduates include at the 3/21/15 Advisory committee meeting it was identified from hospital directors that graduates had weak interviewing skills. Corrective measures by the Program included seminars and mock interviews by Directors on ECC staff as well as directing students to on-campus workshops on job interviewing offered by the college.

Another example of input from the committee has led to changes in program preparation of graduates include at the 5/17/17 Advisory committee meeting it was identified that the hospital needed training form the program on transport ventilators. At that time, the program did not have any transport ventilators, but since then the program has recently received a donation of 2 transport ventilators from another facility in November 2018, and will begin training on those machines in early 2019.

These are just two examples of the advisory committee working with the program to help meet employer needs.

California Education Code 78016 requires that the review process for CTE programs includes the review and comments of a program's advisory committee.
Provide the following information:

a. Advisory committee membership list and credentials.

Program Advisory Committee
Representatives of (minimum):
Students- Nicole Lee (Class 2018)
Graduates-Steven Farrah (Class of 2010)
Faculty-Wanda Morris (Nursing Director)

Sponsor Administration
Rory Natividad-Dean HSA
Employers (Department Heads)
Pamela Michaels TMMC
Kathy Benson HUCLA
Nachi Odewenze LCOM
Denise Anderson MHG
Ed Guerrero CHLA

Physicians-Dr. Michael Mellman
Public- Julie Meredith

b. Meeting minutes or other documentation to demonstrate that the CTE program review process has met the above Education Code requirement.

2018 –Meeting in May-minutes pending approval from attendees

HEALTH SCIENCES AND ATHLETICS Date: May 17, 2017

Respiratory Care
Annual Advisory Committee
Minutes

In Attendance
Kathy Benson – Clinical Educator, Harbor UCLA Medical Center
Jason Carroll – Student Representative
Onyedinachi Ikonte – Clinical Educator, Providence Little Company of Mary
Roy Mekaru – Respiratory Care Director
Julie Meredith – HSA Division Clerical Support
Pam Michaels – Clinical Educator, Torrance Memorial
Rory Natividad – HSA Division Dean
Victoria Robertson – Respiratory Care Clinical Director

Meeting Commencement
11:00 am

Roy Mekaru – Director
Welcome and Introductions

Rory Natividad – HSA Division Dean
Rory talks about enrollment and the Enrollment Management Plan to address the declining enrollment in the area. We are trying to combat this with long term planning. We tend to get students who are already here working on their under graduate degree. We are also working on a big technology plan to make it easier for students. We are working on new construction projects all through campus. Respiratory Care accreditation visit is coming up in the fall. Rory talks about budgets and ways we get capital money for the Respiratory Program. In addition to the instructional budget, the college has an integrated planning process. Through student learning outcomes and program review we build our annual plan. When the college gets an allotment of money, they fund projects in the annual plan.

There is also a lot of money through Strong Workforce Development and CTEA. The college will be funding tutors, which will be graduated students that will be paid to come back and tutor. Rory would like the advisory committee to please let him know if there is anything that he can do or provide to make our program better.

Roy Mekaru – Director

Enrollment in the program has not declined. Even though it has declined across campus, the program has not been affected. We still have a large pool of applicants to select from. Overall, when we get the pass rates from the NBRC the pass rates are in the 90 percentile. In the last few years, employment rates are more than 70 percent employed. We are working on the last advisory meeting suggestions. Some of the things we have been working on are things to help students with employment. We have stepped up our interviewing and resume skills. The campus has also stepped up their effort by offering workshops in these same areas. Roy lets the committee know that he takes it to heart when they suggest changes. State of California is going to start tracking employment of graduates.

Roy Mekaru shows the committee the Respiratory Lab. Hal from Gaumard is a full simulator. They also have an infant simulator now and a giraffe. We are continually trying to stay as current as we can. We have put in for a Servo U because we want to make sure the students understand dual ventilation when they come to you. Research shows that when you train students on simulators with appropriate equipment and appropriate instruction is considered to be good although not as good as a live patient. When Vickie goes to the clinical sites and checks out the equipment it is because we want to stay up on all the current equipment that the sites are using. If you think of something your hospitals are using and want them trained on please let us know.

The hospital directors asked about teaching transport ventilators. Roy lets the committee know that we currently do not have the equipment to teach it. They are not high capital pieces of equipment under $10,000.

We have two dedicated Neo-natal classes. We hope that when the students get to your training classes they will move quicker through and they will be more useful to you.

Pam Michaels from Torrance Memorial Medical Center offers some hours to students in the sleep lab. The students can be the second person in the lab. Space is limited. They can learn the monitoring system.

Clinical sites – we are looking to expand to offer more clinical sites. Trying to find facilities that offer something different to the students.

Inspection will be in September of 2017. It will be a two-day visit. We do not know who is on the team and not sure if they will want to come to the clinical sites or if they want you to meet with them here. As soon as we know, we will contact you.

Thursday, June 8th is Graduation luncheon. The Advisory committee is invited. It is the 45th

Class of Respiratory Care.

RM;jm

Minutes from Faculty Meeting Date—7/27/2016
Meeting called to order at 1200pm
Attendees-Roy Mekaru PD
Victoria Robertson-DCE
Taryn Parker-Part-time faculty
Raymund Adoc-absent
Doug Mizukami-Part-time faculty
Agenda- Roy requiring emergency surgery
CSR filing
Advisory Committee meeting
1. Roy reported emergency surgery for torn Achilles tendon. Victoria would be temporarily
handling any issues until Roy's return in late September.
2. CSR was filed on time. All thresholds had been met so program goals had been achieved.
3. The Advisory Committee meeting would be on hold until Roy can return. Next faculty meeting would not be until January 2017.

Meeting adjourned-1230pm

Minutes from Faculty Meeting Date—6/15/2016
Meeting called to order at 1200pm
Attendees-Roy Mekaru PD
Victoria Robertson-DCE
Taryn Parker-Part-time faculty
Raymund Adoc-late
Doug Mizukami-Part-time faculty
Agenda- Filing of LSSR for 2016
Advisory meeting reschedule
Progress in updating didactic curriculum
Discuss changes in Floor/ lab training for clinical
1. Roy reported LSSR will be filed on time.
2. Advisory Committee could not agree on a date so will try to schedule for September.
3. All of the classes appear to be updated and will discuss again in January.
4. The group reviewed the floor/lab training and discussed change in grouping of competencies, assisting students in improving time management in the lab. Also, discussed inter-rater reliability review before grading students this summer. Victoria and I will be working with everyone in the next week.

Meeting adjourned-1230pm

Minutes from Faculty Meeting Date—1/13/2016

Meeting called to order at 1200pm
Attendees-Roy Mekaru PD
Victoria Robertson-DCE
Taryn Parker-Part-time faculty
Raymund Adoc-late
Doug Mizukami-Part-time faculty
Agenda- Report on graduate employment and CRT scores
Progress in updating didactic curriculum
Schedule Advisory Committee meeting

1. Roy reported graduates had surpassed the threshold for employment and reported that they felt well prepared with materials covered in classes and there were no surprises when taking their CRT exam.
2. The group addressed the issue of updating didactic portion of the curriculum. Suggestions were made and current medical ideas discussed on ways to be placed into Fall and Spring classes.
3. The group agreed to try and schedule Advisory Board meeting in March

Meeting adjourned-1240pm

ECC RESPIRATORY CARE ADVISORY COMMITTEE MEETING		
Date: 3/21/15	Time: 1100am	Location: Nursing Conference Room
Facilitator-Prof Roy Mekaru….Program Director		
Note taker-Prof Victoria Robertson-Director of Clinical Education*(see below)		

Attendees: Dean of Health Sciences-Rory Natividad	Present
Director of Pulmonary Services Torrance Memorial Medical Center-Pamela Michaels	Present
Director of Pulmonary Services Harbor-UCLA Medical Center-Kathy Benson	Present
Director of Pulmonary Services Children Hospital of Los Angeles-Ed Guerrero/Taryn Parker	**see below
Director of Pulmonary Services Memorial Hospital of Gardena-Denise Anderson	absent
Director of Pulmonary Services Providence Health Care LCOM-Nachi Odewenchi	Absent
Community member-Julie Meredith	
Faculty at-large- Program Director of Radiology Program Dawn Charman	Present
Graduate Representative-Steven Farrah(* represented by Victoria Robertson)	Absent
*Steven Farrah represented by Victoria Robertson	Absent
**Ed Guerrero was represented by Taryn Parker	

Agenda Topic: State of the Program

1. Dean Natividad welcomed all attendees. He went on to reaffirm the support of the college of the program in all areas.

2. Prof Roy Mekaru reported that CoARC inspection would probably be in 2017. Minor corrections that had been pointed out in last accreditation visit had been corrected such as changes in mission statement and reporting of data. The only area that still needed addressing was area of preceptor training, which the program will be addressing in early 2017.

Discussion: Directors of Pulmonary Services, Pam Michael and Kathy Benson offered any assistance they could offer in the accreditation process. Prof Mekaru thanked them and commented he would be in touch when he knew more.

Agenda Topic: Graduate Employment

1. Prof Mekaru reported that employment of the class of 2014 and 2015 was under 50% and asked if there was anything the Program could do to strengthen our applicants. Both Director Michaels and Benson stated that employment opportunities were slow over the past two years and that there may be a slight upward trend as the year progressed. They also commented our graduates had only average interviewing skills and some improvement would be helpful to the students. Prof Mekaru stated the program would be working with students/graduates in this area by giving lectures as well as steering students/graduates to all campus wide workshops on interviewing and obtaining employment.

No further discussion and meeting closed at 1145am.

Minutes from Faculty Meeting Date—7/28/2014
Meeting called to order at 1000am
Attendees-Roy Mekaru PD
Victoria Robertson-New DCE
Taryn Parker-Part-time faculty
Raymund Adoc-absent
Doug Mizukami-Part-time faculty
Agenda- Introducing Victoria Robertson as new DCE
Status of CoARC issue and filing of yearly RCS
1. Roy introduced Victoria Robertson as new full-time hire and new DCE.
2. Roy explained he would be assisting Victoria in her duties while she transitioned into her
new position. Therefore, he would still be partially supervising the part-timers as well as assist
in the scheduling of students.
3. Roy spoke on progress of addressing issue of non-compliance in section 3 of CoARC

standards concerning the following:

a. employment below threshold-explained that employment down due to economy and no local hospitals were hiring at this time

b. CRT test results below threshold-attempted to contact graduates on why not taking the exam in a timely fashion. Two unable to contact, and others stated family issues.

c. Enrollment exceeding number allowed for enrollment-The school had required us to empty the pool before switching to advanced program. Dr. Sinopoli in a letter explained to the college we would be in violation, but was told to do it anyway.

4. Roy reported filing of the RCS and the program met some goals but not employment and test score goals. The group felt updating the curriculum and reviewing clinical training procedures would be the path to improving test scores. Also, the group agreed helping students with interviewing skills and resume building could help with employment for the graduates. Also faculty would steer students to College-wide workshops on the those topics would help.

Meeting adjourned-1100am

Minutes from Faculty Meeting Date—1/9/2014

Meeting called to order at 300pm

Attendees-Roy Mekaru PD
Patrick Moore Acting DCE
Taryn Parker-Part-time faculty
Raymund Adoc-Part-time faculty
Doug Mizukami-Part-time faculty

Agenda- Proceeding forward from loss of Dr. Sinopoli

1. Part-timers Taryn, Raymund, and Doug all volunteered to take more hours during this unexpected loss.

2. Roy Mekaru explained that Dr. Sinopoli had been prepping him since Dr. Sinopoli had been planning his retirement in 2 more years. Therefore, Roy would be addressing the CoARC issue of non-compliance in section 3 of CoARC standards concerning the following:

a. employment below threshold

b. CRT test results below threshold

c. Enrollment exceeding number allowed for enrollment

3. Roy introduced Patrick Moore as the emergency hire and acting DCE.

Meeting adjourned-400pm

APPENDIX E- SUPPLEMENTAL DOCUMENTS

El Camino College Programs Named Strong Workforce Stars

An impressive 17 ECC programs were recognized for success in advancing economic

and social mobility for students

Multiple programs at El Camino College recently earned California Community Colleges' 2018 Strong Workforce Stars recognition for their success in improving student employment and wage outcomes.

The El Camino College registered nursing program received "Gold Star" status. Silver and bronze awards were also given to 16 other programs that helped students attain one or more of the following thresholds for economic mobility:

- An increase in earnings by 50 percent or more
- Attainment of the regional living wage by 70 percent or more
- 90 percent or more students are employed in a job similar to their field of study

The ECC registered nursing program reached threshold outcomes on all three metrics. The program recorded a 92 percent increase in earnings, 80 percent of students attained the regional living wage, and all students (100 percent) are employed in a job similar to their field of study.

"Our exemplary registered nursing program and all other programs honored with this prestigious recognition are helping our students achieve their academic goals, while finding success in the workplace," said El Camino College President Dena P. Maloney. "We are proud to be 'Strong Workforce Stars,' and equally proud of the students, faculty and staff members who are committed to our career and technical programs."

Other ECC accolades include:

Silver Stars (attained threshold outcomes on two metrics)

- Welding: 96% increase in earnings and 100% of students are employed in a job similar to their field of study
- Nursing: 95% increase in earnings and 80% of students attained the regional living wage
- Paramedical Technician: 55% increase in earnings and 95% of students attained the regional living wage
- Early Childhood Education: 79% increase in earnings and 100% of students are employed in a job similar to their field of study
- Fire Academy: 98% increase in earnings and 100% of students are employed in a job similar to their field of study
- Cosmetology: 50% increase in earnings and 100% of students are employed in a job similar to their field of study

Bronze Stars (attained threshold outcomes on one metric)

- Machining and Machine Tool Technology: 77% of students attained the regional living wage
- Automotive Technology: 196% increase in earnings

- Horticulture: 73% of students attained the regional living wage
- Environmental Control Technology: 72% of students attained the regional living wage
- Mill and Cabinet Work: 77% of students attained the regional living wage
- Drafting Technology: 71% of students attained the regional living wage
- Respiratory Care-Therapy: 72% increase in earnings
- Administration of Justice: 79% increase in earnings
- Fire Technology: 85% increase in earnings
- Child Development-Early Care and Education: 84% increase in earnings

Strong Workforce Stars is an output of the Strong Workforce Program, an annual recurring investment of $200 million toward career education in California Community Colleges, the nation's largest workforce development system, with 114 colleges. The Strong Workforce Program is a step California took in 2016 to create 1 million more middle-skilled workers, thereby producing a job-ready workforce for employers and helping low-wage workers move into living-wage jobs.

For more information about El Camino College Career & Technical Education (CTE) programs, view: http://www.elcamino.edu/academics/cte/.