

RESPIRATORY CARE PROGRAM

PROGRAM REVIEW-2014

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Section 1- Overview of the Program

a) 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 \$50, 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 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 is the only health care professional licensed to take care of these machines and perform adjustments to the machines as needed by these critically ill patients.

There is a growing demand for RCP's in California. There were more than 14,000 licensed respiratory care practitioners in the state of California according to The California Health Care Almanac in 2012. There were only 9000 in 2001, which translates into a 64.4% growth in eleven years.

The Bureau of Labor Statistics website (<http://www.bls.gov/ooh/healthcare/respiratory-therapists.htm#tab-6>) reveals that employment of respiratory therapists is projected to grow 19 percent from 2012 to 2022 nationwide, faster than the average for all occupations. Growth in the middle-aged and elderly population will lead to an increased incidence of respiratory conditions such as emphysema, chronic bronchitis, pneumonia, and other disorders that can permanently damage the lungs or restrict lung function. These factors will in turn lead to an increased demand for respiratory therapy services and treatments, mostly in hospitals and nursing homes. In addition, advances in preventing and detecting disease, improved medications, and more sophisticated treatments will increase the demand for respiratory therapists. Other conditions affecting the general population, such as smoking, air pollution, and respiratory emergencies, will continue to create demand for respiratory therapists.

US World News and Money (<http://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs?page=4>) ranks Respiratory Care as the #32 in the top 100 jobs in the U.S. That's higher than a speech-language pathologist, financial manager, or even a lawyer. The report goes on to mention that if

“you really want the best compensation (pay), job hunt in California. The top-paying metropolitan areas are all in the Golden State.” The median pay according to salary.com for the Torrance area for Respiratory Therapists is about \$67,000 annually or about \$35.00 per hour.

The goal of the program is to help meet this growing demand. The El Camino College Respiratory Care Program mission as stated its mission statement is to prepare fifteen to twenty two graduates yearly 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 Program through the years has striven to meet this goal and as recently as the last two graduating classes been able to continue our record of excellence of achievement by achieving this stated goal.

b) The program offers an Associate in Science (A.S.) and a certificate of achievement in Respiratory Care.

El Camino College Catalog 2014-2015

RESPIRATORY CARE

A.S. Degree and Certificate of Achievement

Health Sciences and Athletics Division
www.elcamino.edu/academics/healthsciences

The degree and certificate in respiratory care are awarded after successful completion of the advanced registry-level respiratory care program. The program is designed for students planning to become California licensed respiratory care practitioners and registered respiratory care practitioners. Completion of the requirements also allows students to apply for all state and national advanced specialty credentialing examinations. Students will acquire the skills to provide a wide range of high technology and high-touch therapeutic interventions to patients in acute and chronic care settings. Competencies are assessed through the use of classroom, laboratory, and clinical performance evaluations in simulated and actual patient care situations. Program success is determined through examining attrition rates, employment rates and licensure exam pass rates.

Program Prerequisites
Anatomy 30, Computer Information Systems 13, English 1A, Psychology 5, Respiratory Care 172, 174
Total Units: 20

Major Requirements
Respiratory Care 176, 178, 280, 282, 286, 288, 289, 290, 294, 295, 298
Total Units: 48

Certificate of Achievement
To be eligible for the Certificate of Achievement, the student must have an Associate of Science Degree in Respiratory Care from El Camino College. A Certificate of Achievement will be granted upon completion of the following course requirements.

Respiratory Care 284, 291, 292, 293, 296, 297
Total Units: 26

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.

Eighty units

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.

Twenty six units

c) 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 predominantly comprised of minorities, including a 67% female enrollment from 2009 to 2013. 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 90% of all graduates who applied for a license to practice in California were able to pass the licensing exam and obtain their license.

El Camino College has seven strategic initiatives and the Program is able to align itself with many of these. Strategic initiative A is to enhance teaching to support student learning using a variety of instructional methods and services. 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.

Strategic initiative C is foster a positive learning environment and sense of community and cooperation through an effective process of collaboration and collegial consultation. 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.

Strategic initiative D is develop and enhance partnerships with schools, colleges, universities, businesses, and community based organizations to respond to the workforce training and economic development needs of the community. 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 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.

Strategic initiative E is improve processes, programs, and services through the effective use of assessment, program review, planning, and resource allocation. 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 a Human Patient Simulator becoming a routine part of our clinical classes.

Strategic initiative F is support facility and technology improvements to meet the needs of students, employees, and the community. 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.”d) Recently, changes in the educational standards caused a major change in the curriculum within the program. The El Camino College Respiratory Care 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. This was the status of the program since its inception in the early 1970’s. 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.

This upgrade to an Advanced Program has made recommendations on continuing to review the program as an entry level program obsolete. Therefore, this program review being the first program review, there are no previous recommendations to follow at this time.

Section 2 Analysis of Institutional Research and Planning Data

A. Head Count(see chart below)

Enrollment has always been a reflection of the state economy. When the economy is at its best, our section fill rate is about 80%. The last four years have been no different. Years 2010 and 2011 reflect the poorness of the economy as the section fill rates were close to peak capacity. As the economy improves, the trend will probably return to about 80% fill rates.

Action: Continue to monitor trend and adjust recruitment efforts as indicated.

Demographic and Enrollment Characteristics Respiratory Care Spring							Demographic and Enrollment Characteristics Respiratory Care Fall								
Will show 0.0% if you did not select Program AND Term on the Academics Tab							Will show 0.0% if you did not select Program AND Term on the Academics Tab								
Spring					ECC Student Population	District Boundary Population	Fall					ECC Student Population	District Boundary Population		
Term							Term								
					Spring 2013	2010 Census						Fall 2012	2010 Census		
Term Headcount					105	556,400	Term Headcount					119	556,400		
Gender	F	56.2%	50.7%	54.1%	60.6%	52.0%	51.0%	Gender	F	51.3%	56.8%	59.0%	52.3%	52.5%	51.0%
	M	43.8%	49.3%	45.9%	39.4%	48.0%	49.0%		M	48.7%	43.2%	41.0%	47.7%	47.5%	49.0%
Ethnicity	African-American	23.8%	28.1%	21.6%	19.1%	16.6%	15.1%	Ethnicity	African-American	21.8%	24.6%	23.9%	24.8%	17.0%	15.1%
	Amer. Ind. or Alask. Native	1.0%	1.4%	0.9%	2.1%	0.2%	0.2%		Amer. Ind. or Alask. Native	1.7%	1.7%	0.7%	1.8%	0.2%	0.2%
	Asian	29.5%	22.6%	29.7%	23.4%	16.0%	13.6%		Asian	30.3%	29.7%	26.9%	30.3%	16.1%	13.6%
	Latino	21.9%	28.1%	29.7%	40.4%	45.1%	34.5%		Latino	20.2%	23.7%	29.1%	32.1%	44.7%	34.5%
	Pacific Islander	0.0%	0.7%	0.0%	0.0%	0.5%	0.5%		Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%
	White	14.3%	10.3%	11.7%	10.6%	15.9%	32.8%		White	15.1%	9.3%	12.7%	10.1%	15.6%	32.8%
	Two or More	1.0%	1.4%	2.7%	4.3%	4.0%	2.9%		Two or More	0.0%	0.8%	2.2%	0.9%	3.8%	2.9%
Unknown or Decline	8.6%	7.5%	3.6%	0.0%	1.7%	0.4%	Unknown or Decline	10.9%	10.2%	4.5%	0.0%	2.0%	0.4%		
Age / Age Group	<17	0.0%	0.0%	0.0%	0.0%	0.2%	24.2%	<17	0.0%	0.0%	0.7%	0.0%	0.8%	24.2%	
	17	0.0%	0.0%	0.9%	0.0%	0.6%		17	0.8%	0.0%	0.0%	0.0%	2.0%		
	18	1.9%	0.7%	1.8%	6.4%	9.8%	2.5%	18	4.2%	2.5%	0.7%	0.0%	11.6%	2.5%	
	19	3.8%	2.7%	0.9%	5.3%	14.8%		19	4.2%	4.2%	1.5%	4.6%	14.7%		
	20	5.7%	5.5%	5.4%	4.3%	13.6%	1.2%	20	5.9%	5.9%	9.7%	1.8%	13.1%	1.2%	
	21	7.6%	7.5%	7.2%	3.2%	10.4%	1.2%	21	4.2%	5.9%	8.2%	6.4%	9.5%	1.2%	
	22	1.9%	9.6%	2.7%	10.6%	8.0%		22	5.0%	6.8%	4.5%	6.4%	7.3%		
	23	1.9%	4.8%	7.2%	5.3%	6.0%	3.9%	23	4.2%	5.9%	7.5%	6.4%	5.6%	3.9%	
	24	7.6%	6.2%	8.1%	6.4%	4.7%		24	6.7%	4.2%	9.7%	8.3%	4.6%		
	25-29	24.8%	24.0%	34.2%	21.3%	13.4%	7.4%	25-29	18.5%	25.4%	28.4%	26.6%	12.7%	7.4%	
	30-39	22.9%	25.3%	18.9%	25.5%	9.4%	14.9%	30-39	18.5%	25.4%	17.9%	22.0%	9.0%	14.9%	
	40-49	12.4%	10.3%	9.0%	4.3%	4.4%	15.9%	40-49	19.3%	10.2%	9.0%	10.1%	4.7%	15.9%	
	50-64	8.6%	3.4%	3.6%	7.4%	3.7%	18.1%	50-64	8.4%	2.5%	2.2%	7.3%	3.5%	18.1%	
	65+	1.0%	0.0%	0.0%	0.0%	0.9%	10.6%	65+	0.0%	0.8%	0.0%	0.0%	0.8%	10.6%	
	Class Load	Full-time	29.5%	22.6%	37.8%	35.1%	26.7%		Class Load	Full-time	29.4%	22.0%	30.6%	23.9%	29.8%
Part-time		70.5%	77.4%	62.2%	64.9%	69.0%		Part-time	70.6%	78.0%	69.4%	76.1%	69.2%		
Academic Level	College degree	21.9%	21.2%	26.1%	23.4%	12.3%		Academic Level	College degree	24.4%	21.2%	26.1%	32.1%	12.3%	
	HS Grad	77.1%	76.7%	71.2%	71.3%	83.8%		HS Grad	73.1%	75.4%	73.1%	64.2%	83.2%		
	Not a HS Grad	1.0%	0.0%	0.0%	0.0%	0.5%		Not a HS Grad	0.8%	2.5%	0.0%	0.9%	1.4%		
	K-12 Special Admit	0.0%	0.0%	0.0%	0.0%	0.6%		K-12 Special Admit	0.0%	0.0%	0.0%	0.0%	1.1%		
	Unknown	0.0%	2.1%	2.7%	5.3%	2.9%		Unknown	1.7%	0.8%	0.7%	2.8%	1.9%		
Educational Goal	Intend to Transfer	34.3%	33.6%	35.1%	26.6%	31.0%		Educational Goal	Intend to Transfer	29.4%	30.5%	38.1%	32.1%	31.4%	
	Degree/Certificate Only	16.2%	11.0%	10.8%	8.5%	3.9%		Degree/Certificate Only	11.8%	11.0%	7.5%	6.4%	3.9%		
	Retrain/recertif.	11.4%	9.6%	9.9%	4.3%	3.6%		Retrain/recertif.	12.6%	5.9%	7.5%	4.6%	3.8%		
	Basic Skills/GED	1.0%	3.4%	0.0%	5.3%	5.6%		Basic Skills/GED	1.7%	3.4%	2.2%	3.7%	5.3%		
	Enrichment	4.8%	2.7%	1.8%	3.2%	4.2%		Enrichment	5.9%	1.7%	0.7%	0.9%	4.1%		
	Undecided	16.2%	16.4%	18.9%	18.1%	16.2%		Undecided	15.1%	20.3%	17.9%	21.1%	16.7%		
	Unstated	16.2%	23.3%	23.4%	34.0%	35.5%		Unstated	23.5%	27.1%	26.1%	31.2%	35.0%		

Analysis of Demographic and Enrollment Characteristics(see chart below):

The data reflects the program enrollment is highest in the Asian population and a rise in Latino that appears to coincide with increase in overall rise in number of Latino students in general at ECC. Approximately 60% of the program students are in the 24-49 year old groups. This is in keeping with straw poll results showing most of the students having returned to school due to a desire to change careers. Also, the program has at least twice the percentage of college grads compared to the ECC student population. Again, straw poll results show lack of employment in chosen fields or dissatisfaction with careers associated with their degrees has students returning looking for fulfillment in the medical profession. Hence, the statistics for degree/certificate only are nearly twice the campus average. Otherwise, program statistics generally follow the averages campus wide.

Action: Continue to monitor trends and continue to improve cultural diversity in educational styles.

Demographic and Enrollment Characteristics Respiratory Care Spring							Demographic and Enrollment Characteristics Respiratory Care Fall						
Will show 0.0% if you did not select Program AND Term on the Academics Tab							Will show 0.0% if you did not select Program AND Term on the Academics Tab						
Spring					ECC Student Population	District Boundary Population	Fall					ECC Student Population	District Boundary Population
Term					Spring 2013	2010 Census	Term					Fall 2012	2010 Census
	2010	2011	2012	2013				2009	2010	2011	2012		
Term Headcount					22,660	556,400	Term Headcount					23,409	556,400
Gender	F	56.2%	50.7%	54.1%	60.6%	52.0%	F	51.3%	56.8%	59.0%	52.3%	52.5%	51.0%
	M	43.8%	49.3%	45.9%	39.4%	48.0%	M	48.7%	43.2%	41.0%	47.7%	47.5%	49.0%
Ethnicity	African-American	23.8%	28.1%	21.6%	19.1%	16.6%	African-American	21.8%	24.6%	23.9%	24.8%	17.0%	15.1%
	Amer. Ind. or Alask. Native	1.0%	1.4%	0.9%	2.1%	0.2%	Amer. Ind. or Alask. Native	1.7%	1.7%	0.7%	1.8%	0.2%	0.2%
	Asian	29.5%	22.6%	29.7%	23.4%	16.0%	Asian	30.3%	29.7%	26.9%	30.3%	16.1%	13.6%
	Latino	21.9%	28.1%	29.7%	40.4%	45.1%	Latino	20.2%	23.7%	29.1%	32.1%	44.7%	34.5%
	Pacific Islander	0.0%	0.7%	0.0%	0.0%	0.5%	Pacific Islander	0.0%	0.0%	0.0%	0.0%	0.5%	0.5%
	White	14.3%	10.3%	11.7%	10.6%	15.9%	White	15.1%	9.3%	12.7%	10.1%	15.6%	32.8%
	Two or More	1.0%	1.4%	2.7%	4.3%	4.0%	Two or More	0.0%	0.8%	2.2%	0.9%	3.8%	2.9%
Unknown or Decline					8.6%	7.5%	Unknown or Decline					10.9%	10.2%
Age/ Age Group	<17	0.0%	0.0%	0.0%	0.0%	0.2%	<17	0.0%	0.0%	0.0%	0.7%	0.0%	0.8%
	17	0.0%	0.0%	0.9%	0.0%	0.6%	17	0.8%	0.0%	0.0%	0.0%	2.0%	24.2%
	18	1.9%	0.7%	1.8%	6.4%	9.8%	18	4.2%	2.5%	0.7%	0.0%	11.6%	2.5%
	19	3.8%	2.7%	0.9%	5.3%	14.8%	19	4.2%	4.2%	1.5%	4.6%	14.7%	1.2%
	20	5.7%	5.5%	5.4%	4.3%	13.6%	20	5.9%	5.9%	9.7%	1.8%	13.1%	1.2%
	21	7.6%	7.5%	7.2%	3.2%	10.4%	21	4.2%	5.9%	8.2%	6.4%	9.5%	1.2%
	22	1.9%	9.6%	2.7%	10.6%	8.0%	22	5.0%	6.8%	4.5%	6.4%	7.3%	3.9%
	23	1.9%	4.8%	7.2%	5.3%	6.0%	23	4.2%	5.9%	7.5%	6.4%	5.6%	4.7%
	24	7.6%	6.2%	8.1%	6.4%	4.7%	24	6.7%	4.2%	9.7%	8.3%	4.6%	18.1%
	25-29	24.8%	24.0%	34.2%	21.3%	13.4%	25-29	18.5%	25.4%	28.4%	26.6%	12.7%	7.4%
	30-39	22.9%	25.3%	18.9%	25.5%	9.4%	30-39	18.5%	25.4%	17.9%	22.0%	9.0%	14.9%
	40-49	12.4%	10.3%	9.0%	4.3%	4.4%	40-49	19.3%	10.2%	9.0%	10.1%	4.7%	15.9%
	50-64	8.6%	3.4%	3.6%	7.4%	3.7%	50-64	8.4%	2.5%	2.2%	7.3%	3.5%	18.1%
	65+	1.0%	0.0%	0.0%	0.0%	0.9%	65+	0.0%	0.8%	0.0%	0.0%	0.8%	10.6%
Class Load	Full-time	29.5%	22.6%	37.8%	35.1%	26.7%	Full-time	29.4%	22.0%	30.6%	23.9%	29.8%	
	Part-time	70.5%	77.4%	62.2%	64.9%	69.0%	Part-time	70.6%	78.0%	69.4%	76.1%	69.2%	
Academic Level	College degree	21.9%	21.2%	26.1%	23.4%	12.3%	College degree	24.4%	21.2%	26.1%	32.1%	12.3%	
	HS Grad	77.1%	76.7%	71.2%	71.3%	83.8%	HS Grad	73.1%	75.4%	73.1%	64.2%	83.2%	
	Not a HS Grad	1.0%	0.0%	0.0%	0.0%	0.5%	Not a HS Grad	0.8%	2.5%	0.0%	0.9%	1.4%	
	K-12 Special Admit	0.0%	0.0%	0.0%	0.0%	0.6%	K-12 Special Admit	0.0%	0.0%	0.0%	0.0%	1.1%	
	Unknown	0.0%	2.1%	2.7%	5.3%	2.9%	Unknown	1.7%	0.8%	0.7%	2.8%	1.9%	
Educational Goal	Intend to Transfer	34.3%	33.6%	35.1%	26.6%	32.0%	Intend to Transfer	29.4%	30.5%	38.1%	32.1%	31.4%	
	Degree/Certificate Only	16.2%	11.0%	10.8%	8.5%	3.9%	Degree/Certificate Only	11.8%	11.0%	7.5%	6.4%	3.9%	
	Retrain/recertif.	11.4%	9.6%	9.9%	4.3%	3.6%	Retrain/recertif.	12.6%	5.9%	7.5%	4.6%	3.8%	
	Basic Skills/GED	1.0%	3.4%	0.0%	5.3%	5.6%	Basic Skills/GED	1.7%	3.4%	2.2%	3.7%	5.3%	
	Enrichment	4.8%	2.7%	1.8%	3.2%	4.2%	Enrichment	5.9%	1.7%	0.7%	0.9%	4.1%	
	Undecided	16.2%	16.4%	18.9%	18.1%	16.2%	Undecided	15.1%	20.3%	17.9%	21.1%	16.7%	
	Unstated	16.2%	23.3%	23.4%	34.0%	35.5%	Unstated	23.5%	27.1%	26.1%	31.2%	35.0%	

B. Grade Distribution

Beginning in 2010 the Program began admitting students under the advanced degree curriculum. Ten new courses are now reflected from 2010 to 2012. Also, the existing curriculum had undergone course reviews and appropriate adjustments were made and approved by the College Curriculum Committee. Therefore, grades starting in the fall of 2010 reflect grades achieved under advanced curriculum.

Action: 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.

Grade Distribution, Success, and Retention

Respiratory Care

Fall

Program: Respiratory Care	Preliminary Success Standard	70.40%
Session: Fall	5 year Success Average	74.70%
Do Not select more than one term or Program.	5 year Success Minimum	66.00%

Year	COURSE	Method	Weeks	Grade Distribution											Total	Succ.	Reten.
				'A'	'B'	'C'	'P'	'D'	'F'	'NP'	Inc P	Inc NP	'DR'	'W'			
2010	RC-170	Lecture	16	3	9	17	-	4	11	-	-	-	2	4	50	58.00%	88.00%
	RC-172	Lecture	14	1	7	7	-	5	5	-	-	-	1	13	39	38.50%	64.10%
	RC-174	Lecture	16	4	10	8	-	6	2	-	-	-	2	3	35	62.90%	85.70%
	RC-280	Lecture	16	4	9	6	-	-	-	-	-	-	-	-	19	100.00%	100.00%
	RC-282	Lecture	16	5	9	5	-	-	-	-	-	-	-	-	19	100.00%	100.00%
2010 Total				17	44	43	-	15	18	-	-	-	5	20	162	64.20%	84.60%
2011	RC-170	Lecture	16	3	9	6	-	4	7	-	-	-	3	11	43	41.90%	67.40%
	RC-172	Lecture	14	3	1	4	-	7	10	-	-	-	2	12	39	20.50%	64.10%
	RC-174	Lecture	16	1	5	7	-	9	5	-	-	-	1	6	34	38.20%	79.40%
	RC-178	Lecture	16	2	13	1	-	-	-	-	-	-	-	-	16	100.00%	100.00%
	RC-280	Lecture	16	3	9	5	-	-	-	-	-	-	-	-	17	100.00%	100.00%
	RC-282	Lecture	16	16	17	-	-	-	-	-	-	-	-	-	33	100.00%	100.00%
	RC-288	Lecture	16	5	8	3	-	-	-	-	-	-	-	-	16	100.00%	100.00%
	RC-298	Lecture	16	15	1	-	-	-	-	-	-	-	-	-	16	100.00%	100.00%
2011 Total				48	63	26	-	20	22	-	-	-	6	29	214	64.00%	83.60%
2012	RC-170	Lecture	16	3	8	6	-	5	7	-	-	-	-	5	34	50.00%	85.30%
	RC-172	Lecture	16	1	2	3	-	9	7	-	-	-	-	7	29	20.70%	75.90%
	RC-174	Lecture	16	-	8	3	-	2	2	-	-	-	-	5	20	55.00%	75.00%
	RC-178	Lecture	16	13	2	2	-	-	-	-	-	-	-	-	17	100.00%	100.00%
	RC-288	Lecture	16	1	7	9	-	-	-	-	-	-	-	-	17	100.00%	100.00%
	RC-291	Lecture	16	10	5	-	-	-	-	-	-	-	-	-	15	100.00%	100.00%
	RC-292	Lecture	16	2	8	5	-	1	-	-	-	-	-	-	16	93.80%	100.00%
	RC-293	Lecture	16	12	3	-	-	-	-	-	-	-	-	-	15	100.00%	100.00%
	RC-296	Lecture	14	11	4	-	-	-	-	-	-	-	-	-	15	100.00%	100.00%
	RC-297	Lecture	14	4	6	5	-	-	-	-	-	-	-	-	15	100.00%	100.00%
2012 Total				57	53	33	-	16	17	-	-	-	-	17	193	74.10%	91.20%

Grade Distribution, Success, and Retention

Respiratory Care

Spring

Program: Respiratory Care	Preliminary Success Standard	70.40%
Session: Spring	5 year Success Average	74.70%
Do Not select more than one term or Program.	5 year Success Minimum	66.00%

Year	COURSE	Method	Weeks	Grade Distribution											Total	Succ.	Reten.
				'A'	'B'	'C'	'P'	'D'	'F'	'NP'	Inc P	Inc NP	'DR'	'W'			
2011	RC-170	Lecture	16	9	7	8	-	3	14	-	-	-	4	8	53	45.30%	77.40%
	RC-172	Lecture	16	-	5	8	-	6	14	-	-	-	-	19	52	25.00%	63.50%
	RC-174	Lecture	16	4	6	10	-	8	4	-	-	-	-	10	42	47.60%	76.20%
	RC-176	Lecture	16	3	9	5	-	-	-	-	-	-	-	-	17	100.00%	100.00%
	RC-284	Lecture	16	9	10	-	-	-	-	-	-	-	-	-	19	100.00%	100.00%
	RC-286	Lecture	16	14	3	2	-	-	-	-	-	-	-	-	19	100.00%	100.00%
2011 Total				39	40	33	-	17	32	-	-	-	4	37	202	55.40%	79.70%
2012	RC-170	Lecture	16	4	5	5	-	2	3	-	-	-	2	3	24	58.30%	79.20%
	RC-172	Lecture	16	2	3	8	-	6	8	-	-	-	3	14	44	29.50%	61.40%
	RC-174	Lecture	16	4	14	5	-	2	3	-	-	-	2	2	32	71.90%	87.50%
	RC-280	Lecture	16	10	5	-	-	-	-	-	-	-	-	-	15	100.00%	100.00%
	RC-284	Lecture	16	11	6	-	-	-	-	-	-	-	-	-	17	100.00%	100.00%
	RC-286	Lecture	16	17	14	1	-	-	-	-	-	-	-	-	32	100.00%	100.00%
	RC-288	Lecture	16	7	20	5	-	-	-	-	-	-	-	-	32	100.00%	100.00%
	RC-290	Lecture	16	4	8	3	-	-	-	-	-	-	-	-	15	100.00%	100.00%
2012 Total				59	75	27	-	10	14	-	-	-	7	19	211	76.30%	87.70%
2013	RC-170	Lecture	16	1	7	8	-	9	8	-	-	-	-	6	39	41.00%	84.60%
	RC-172	Lecture	16	2	1	6	-	2	5	-	-	-	-	10	26	34.60%	61.50%
	RC-174	Lecture	16	3	3	3	-	2	5	-	-	-	-	13	29	31.00%	55.20%
	RC-280	Lecture	16	10	7	-	-	-	-	-	-	-	-	-	17	100.00%	100.00%
	RC-282	Lecture	14	2	4	11	-	-	-	-	-	-	-	-	17	100.00%	100.00%
	RC-286	Lecture	16	1	3	13	-	-	-	-	-	-	-	-	17	100.00%	100.00%
2013 Total				19	25	41	-	13	18	-	-	-	-	29	145	58.60%	80.00%

Action: 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 which would have 70% success rate.

C. Analysis of Demographic Success Characteristics (see chart below)

There has been lower performance in African-American students

Action: 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.

This lower performance by the African-American students is part of the general college trends and will be addressed by the college equity plan.

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.									

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.									

D. Retention (see chart below)

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%

Grade Distribution, Success, and Retention																	Grade Distribution, Success, and Retention																		
Respiratory Care Fall																	Respiratory Care Spring																		
Program Respiratory Care Term: Fall				Preliminary Success Standard 68.2% 5 year Success Average 70.6% 5 year Success Minimum 65.9%				Do Not select more than one term or Program.									Program Respiratory Care Term: Spring				Preliminary Success Standard 68.2% 5 year Success Average 70.6% 5 year Success Minimum 65.9%				Do Not select more than one term or Program.										
Grade I																	Grade I																		
Year	COURSE	Method	W	A	B	C	D	F	NP	Inc P	Inc NP	DR	W	Total	Success	Reten.	Year	COURSE	Method	W	A	B	C	D	F	NP	Inc P	Inc NP	DR	W	Total	Success	Reten.		
2009	RC-170	Lecture	16	5	19	10	-	1	8	-	-	-	2	1	46	73.9%	93.5%	2010	RC-172	Lecture	16	3	5	8	-	3	4	-	-	1	18	42	38.1%	54.8%	
	RC-172	Lecture	16	4	8	11	-	6	6	-	-	-	1	11	47	48.9%	74.5%		RC-174	Lecture	16	4	13	5	-	4	1	-	-	-	8	35	62.9%	77.1%	
	RC-174	Lecture	16	4	14	8	-	-	3	-	-	-	1	6	36	72.2%	80.6%		RC-176	Lecture	16	12	5	2	-	-	-	-	-	-	1	20	95.0%	95.0%	
	RC-280	Lecture	16	2	11	7	-	-	-	-	-	-	-	20	100.0%	100.0%		RC-284	Lecture	16	12	8	-	-	-	-	-	-	-	-	20	100.0%	100.0%		
	RC-282	Lecture	16	2	8	10	-	-	-	-	-	-	-	20	100.0%	100.0%		RC-286	Lecture	16	2	6	12	-	-	-	-	-	-	-	20	100.0%	100.0%		
2009 Total				17	60	46	-	7	17	-	-	-	4	18	169	72.8%	87.0%	2010 Total				33	37	27	-	7	5	-	-	1	27	137	70.8%	79.6%	
2010	RC-170	Lecture	16	3	9	17	-	4	11	-	-	-	2	4	50	58.0%	88.0%	2011	RC-170	Lecture	16	9	7	8	-	3	14	-	-	-	4	8	53	45.3%	77.4%
	RC-172	Lecture	14	1	7	7	-	5	5	-	-	-	1	13	39	38.3%	64.1%		RC-172	Lecture	16	-	5	8	-	6	14	-	-	-	-	19	52	25.0%	63.5%
	RC-174	Lecture	16	4	10	8	-	6	2	-	-	-	2	3	35	62.9%	85.7%		RC-174	Lecture	16	4	6	10	-	8	4	-	-	-	-	10	42	47.6%	76.2%
	RC-280	Lecture	16	4	9	6	-	-	-	-	-	-	-	19	100.0%	100.0%		RC-176	Lecture	16	3	9	5	-	-	-	-	-	-	-	17	100.0%	100.0%		
	RC-282	Lecture	16	5	9	5	-	-	-	-	-	-	-	19	100.0%	100.0%		RC-284	Lecture	16	9	10	-	-	-	-	-	-	-	-	19	100.0%	100.0%		
2010 Total				17	44	43	-	15	18	-	-	-	5	20	162	64.2%	84.6%		RC-286	Lecture	16	14	3	2	-	-	-	-	-	-	-	19	100.0%	100.0%	
2011	RC-170	Lecture	16	3	9	6	-	4	7	-	-	-	3	11	43	41.9%	67.4%	2011 Total				39	40	33	-	17	32	-	-	4	37	202	55.4%	79.7%	
	RC-172	Lecture	14	3	1	4	-	7	10	-	-	-	2	12	39	28.5%	64.1%	2012	RC-170	Lecture	16	4	5	5	-	2	3	-	-	-	2	3	24	58.3%	79.2%
	RC-174	Lecture	16	1	5	7	-	9	5	-	-	-	1	6	34	38.2%	79.4%		RC-172	Lecture	16	2	3	8	-	6	8	-	-	-	3	14	44	29.5%	61.4%
	RC-178	Lecture	16	2	13	1	-	-	-	-	-	-	-	16	100.0%	100.0%		RC-174	Lecture	16	4	14	5	-	2	3	-	-	-	2	2	32	71.9%	87.5%	
	RC-280	Lecture	16	3	9	5	-	-	-	-	-	-	-	17	100.0%	100.0%		RC-280	Lecture	16	10	5	-	-	-	-	-	-	-	-	15	100.0%	100.0%		
	RC-282	Lecture	16	16	17	-	-	-	-	-	-	-	-	33	100.0%	100.0%		RC-284	Lecture	16	11	6	-	-	-	-	-	-	-	-	17	100.0%	100.0%		
	RC-289	Lecture	16	5	8	3	-	-	-	-	-	-	-	16	100.0%	100.0%		RC-286	Lecture	16	17	14	1	-	-	-	-	-	-	-	32	100.0%	100.0%		
	RC-288	Lecture	16	15	1	-	-	-	-	-	-	-	-	16	100.0%	100.0%		RC-288	Lecture	16	7	20	5	-	-	-	-	-	-	-	32	100.0%	100.0%		
2011 Total				48	63	26	-	20	22	-	-	-	6	29	214	64.0%	83.6%		RC-290	Lecture	16	4	8	3	-	-	-	-	-	-	-	15	100.0%	100.0%	
2012	RC-170	Lecture	16	3	8	6	-	5	7	-	-	-	5	34	58.8%	85.3%	2012 Total				59	75	27	-	10	14	-	-	7	19	211	76.3%	87.7%		
	RC-172	Lecture	16	1	2	3	-	9	7	-	-	-	7	29	36.2%	75.9%		RC-170	Lecture	16	1	7	8	-	9	8	-	-	-	-	6	39	41.0%	84.6%	
	RC-174	Lecture	16	-	8	3	-	2	2	-	-	-	5	20	55.0%	75.0%		RC-172	Lecture	16	2	1	6	-	2	5	-	-	-	-	10	26	34.6%	61.5%	
	RC-178	Lecture	16	13	2	2	-	-	-	-	-	-	-	17	100.0%	100.0%		RC-174	Lecture	16	3	3	3	-	2	5	-	-	-	-	13	29	31.0%	55.2%	
	RC-288	Lecture	16	1	7	9	-	-	-	-	-	-	-	17	100.0%	100.0%		RC-280	Lecture	16	10	7	-	-	-	-	-	-	-	-	17	100.0%	100.0%		
	RC-291	Lecture	16	10	5	-	-	-	-	-	-	-	-	15	100.0%	100.0%		RC-282	Lecture	14	2	4	11	-	-	-	-	-	-	-	17	100.0%	100.0%		
	RC-292	Lecture	16	2	8	5	-	-	1	-	-	-	-	16	95.0%	100.0%		RC-286	Lecture	16	1	3	13	-	-	-	-	-	-	-	17	100.0%	100.0%		
	RC-293	Lecture	16	12	3	-	-	-	-	-	-	-	-	15	100.0%	100.0%	2013 Total				19	25	41	-	13	18	-	-	-	29	145	58.0%	80.0%		
	RC-296	Lecture	14	11	4	-	-	-	-	-	-	-	-	15	100.0%	100.0%																			
	RC-297	Lecture	14	4	6	5	-	-	-	-	-	-	-	15	100.0%	100.0%																			
2012 Total				57	53	33	-	16	17	-	-	-	17	193	74.1%	91.2%																			

E. Distance education comparison- N/A

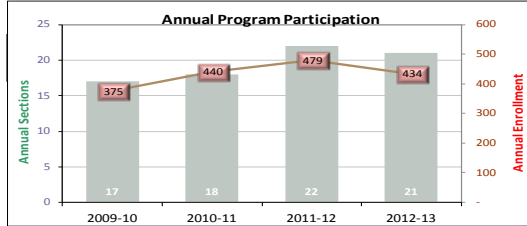
F. Fall to Spring Section Fill Rates(see chart below)

Spring section fill rates are generally higher than fall due to applications are accepted for the clinical phase in the spring. Applicants do not like to complete classes in the fall and have to wait six months to continue their education due to retention of content and many have financial aid issues when not pursuing their majors.

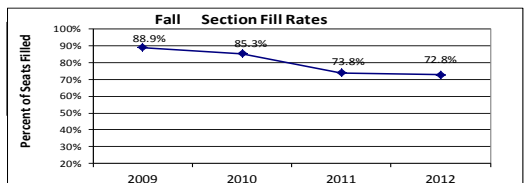
Action: Continue to monitor trend and adjust recruitment efforts as indicated.

Program Participation (4-year Trend)
Respiratory Care
Years: 2009-10 to 2012-13

	2009-10	2010-11	2011-12	2012-13	4 Yr Average
Annual Enrollment	375	440	479	434	432



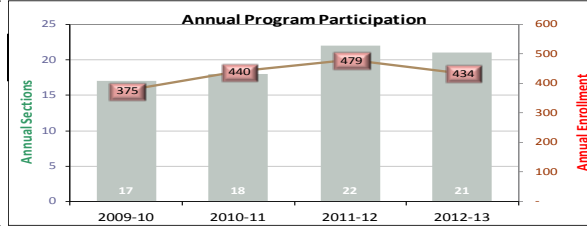
	2009-10	2010-11	2011-12	2012-13
Students	180	221	175	178
Enrollments/Student	2.08	1.99	2.74	2.44



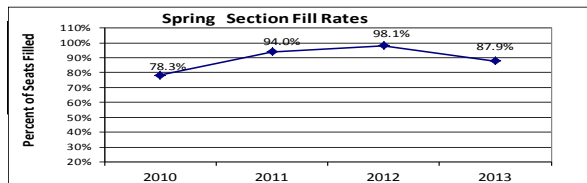
Enrollment by Time of Day				
Fall Term	2009	2010	2011	2012
Day	76.3%	76.5%	54.2%	51.3%
Night	0.0%	0.0%	0.0%	0.0%
Weekend/Unknown	23.7%	23.5%	45.8%	48.7%

Program Participation (4-year Trend)
Respiratory Care
Years: 2009-10 to 2012-13

	2009-10	2010-11	2011-12	2012-13	4 Yr Average
Annual Enrollment	375	440	479	434	432



	2009-10	2010-11	2011-12	2012-13
Students	180	221	175	178
Enrollments/Student	2.08	1.99	2.74	2.44



Enrollment by Time of Day				
Spring Term	2010	2011	2012	2013
Day	56.2%	72.8%	47.4%	64.8%
Night	0.0%	0.0%	0.0%	0.0%
Weekend/Unknown	43.8%	27.2%	52.6%	35.2%

G. Scheduling of Courses is based upon allowing the students maximum clinical time for training. Therefore multiple classes in one day allows for more days for clinical training. Pre-clinical courses are designed to allow time for students to take other non-respiratory classes that require multiple days of the week attendance, hence respiratory care classes are long classes on a single day.

H+I+ J- Not applicable

Section 3 Curriculum

The table below shows the six year review cycle for the Respiratory Care Curriculum. Please note that classes RC 289 through RC 298 were new courses that were added to fulfill the curriculum needs for our students to be successful in the new Advanced Respiratory Care Program. The year shown was the year these classes were approved by the College Curriculum Committee and the Board of Trustees. The cycle will repeat itself every six years.

Respiratory Care
Six Year Course Review Cycle

	Last	year	year	year	year	year 3
Courses	review	fall 14	spring 15	fall 15	spring16	fall 16
170	2009/2010		X			
172	2009/2010		X			
174	2009/2010		X			
176	2009/2010		X			
178	2009/2010		X			
280	2009/2010			X		
282	2009/2010			X		
284	2009/2010			X		
286	2009/2010			X		
288	2009/2010			X		
289	(new)2010				X	
290	(new)2010				X	
291	(new)2010				X	
292	(new)2010				X	
293	(new)2010				X	
294	(new)2010					X
295	(new)2010					X
296	(new)2010					X
297	(new)2010					X
298	(new)2010					X

The Program offers an A.S. Degree and Certificate of Achievement. Included below is documentation from the Respiratory Care Board of California showing that the minimum degree necessary to get a licensure in California is an Associate Degree. The Certificate of Achievement is also awarded to students who complete the listed classes who already have achieved Associate Degrees from other Community Colleges or a Degree from a Four Year institution.



Department of Consumer Affairs
Respiratory Care Board of California

Education Requirements

BUSINESS AND PROFESSIONS CODE SECTION 3740

1(a) Except as otherwise provided in this chapter, all applicants for licensure under this chapter shall have completed an education program for respiratory care that is accredited by the Commission on Accreditation of Allied Health Education Programs and been awarded a minimum of an associate degree from an institution or university accredited by a regional accreditation agency or association recognized by the United States Department of Education.

(f) Satisfactory evidence as to educational qualifications shall take the form of certified transcripts of the applicant's college record mailed directly to the board from the educational institution. However, the board may require an evaluation of educational credentials by an evaluation service approved by the board.

Below is the excerpt from the El Camino College Catalog 2014-2015 (pg. 267) showing courses required and breakdown of the two phases for completion of the program.

RESPIRATORY CARE

A.S. Degree and Certificate of Achievement

Health Sciences and Athletics Division

www.elcamino.edu/academics/healthsciences

The degree and certificate in respiratory care are awarded after successful completion of the advanced registry-level respiratory care program. The program is designed for students planning to become California licensed respiratory care practitioners and registered respiratory care practitioners. Completion of the requirements also allows students to apply for all state and national advanced specialty credentialing examinations. Students will acquire the skills to provide a wide range of high technology and high-touch therapeutic interventions to patients in acute and chronic care settings. Competencies are assessed through the use of classroom, laboratory, and clinical performance evaluations in simulated and actual patient care situations. Program success is determined through examining attrition rates, employment rates and licensure exam pass rates.

Program Prerequisites

Anatomy 30, Computer Information Systems 13, English 1A, Psychology 5, Respiratory Care 172, 174
Total Units: 20

Major Requirements

Respiratory Care 176, 178, 280, 282, 286, 288, 289, 290, 294, 295, 298
Total Units: 48

Certificate of Achievement

To be eligible for the Certificate of Achievement, the student must have an Associate of Science Degree in Respiratory Care from El Camino College. A Certificate of Achievement will be granted upon completion of the following course requirements.

Respiratory Care 284, 291, 292, 293, 296, 297
Total Units: 26

General Information

Students without previous medical training are strongly advised to complete Respiratory Care 170. Students must complete all other non-respiratory coursework required for the Associate of science degree in respiratory care. The program has three phases that require specific courses and sequence.

For more program and admission information, go to www.elcamino.edu/academics/healthsciences/respiratorycare

Preclinical Phase

In the pre-clinical phase of the program the student takes all the non-clinical Respiratory Care courses which may include Respiratory Care 170. The student shall also complete, at a minimum, Respiratory Care 172 and 174, Anatomy 30, Computer Information Systems 13, English 1A and the associate's degree mathematics competency. In addition, due to the rigorous schedule in the clinical phase, it is recommended the student complete all the other general education and science courses required for the Associate of science degree. For example, Psychology, Humanities, as well as Health and Physical Education courses or equivalent. (See academic counselor for specific coursework required for the associate degree in Respiratory Care.)

Admission to the Clinical Phase

Admission to the clinical phase of the program is limited by clinical space and budget considerations. In order to gain admittance to the clinical phase of the program, the student must complete the preclinical phase with a minimum grade of C in all courses. The student must also submit a program application and completed physical exam form with the required lab tests and readiness for clinical duties certified by an appropriate health care professional. Students may submit completed applications and physical exam forms when all the required preclinical coursework is completed. Applications are accepted by the program director up to the last day of the spring semester and students are assigned seats in the next clinical class based on verification of all required coursework, available space, qualifications, and academic merit. A new clinical class starts in the summer semester each year.

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.

Below is page 268 from the catalog showing that from starting with no prior college experience completion of the courses takes at least two and a half years.

Program Costs

In addition to tuition fees charged by the college, it is estimated that the cost of books, lab costs, stethoscopes and miscellaneous supplies is approximately \$3,500 over a two-year period. Financial assistance is available to students who meet the eligibility requirements.

Admission Requirements and Length of Program

For the high school graduate with a C average or better in science and math, the program will take at least 2 1/2 years to complete, including all prerequisites. A student is formally accepted into the clinical phase of the program after satisfactory completion of prerequisites, general education courses, and introductory respiratory care science courses.

Procedure for Admission

The student should apply for a reservation to register at El Camino College. An appointment with a Health Science counselor should be made so that the matriculation process can be completed. Students wishing to take advanced college work after graduation may choose a specific general education track. All respiratory care science and clinical courses must be taken and completed with at least a C or better.

For more program and admission information, go to www.elcamino.edu/academics/healthsciences/respiratorycare.

There are no Respiratory Care specific distance education courses.

There have been no course deletions or inactivations since 2010 when the program expanded by ten courses to meet curriculum demands of becoming an Advanced Program.

There are no articulation concerns since this is a vocational education program and the program courses are not transferable.

Listed below are the pass rates reported by the National Board of Respiratory Care. The National Board for Respiratory Care, Inc. (NBRC) is a voluntary health certifying board which was created in 1960 to evaluate the professional competence of respiratory therapists.

Please note that the class of 2014 only graduated four and half months ago in May 2014 so not all graduates have taken their licensure exams yet. Three of the class of 2012 did not take the exam yet. The program has tried to contact them but have been unable to reach them. The accreditation standard for pass rate is 80% of the graduating class within twelve months of graduation, so the Program has met that accreditation standard for 2012 (fifteen grads/twelve passed=80%.)

Certificate Information from the NBRC Annual Summary for 2012-2014

	GRADUATION YEAR	CRT	RRT
17 Grads total 2014	2014	9	2
This was a grad from the class of 2012. There was no class of 2013	2013	1	1
15 grads total	2012	12	8

Prior to January 1st 2015, becoming a Licensed Practicing RCP in California required passing the CRT exam. The law in California has changed and as of January 1st 2015 all new graduates will be required to pass the RRT exam to practice in California. Any graduates prior to 2015 will be grandfathered in to keep their license on January 1st 2015, but must pass the RRT within three years post-graduation to be allowed to maintain their current license. The Program is waiting for CoARC to give a definitive methodology to evaluate Graduate Success on these exams due to the above mentioned change in the California Law.

Therefore, it is recommended that the Program continue to monitor success of the graduates in passing the licensure exams and continue encouraging graduates to complete their licensure exams before twelve months post graduations.

Section 4 Assessment and Student Learning Outcomes

SLO/PLO/ILO Grid

HEALTH SCIENCES AND ATHLETICS Institutional (ILO), Program (PLO), and Course (SLO) Alignment							
Program: Respiratory Care		Number of Courses: 20	Date Updated: 08.20.2014	Submitted by: R. Serr, ext. 3811			
ILOs	1. Critical Thinking <i>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.</i>	2. Communication <i>Students effectively communicate with and respond to varied audiences in written, spoken or signed, and artistic forms.</i>	3. Community and Personal Development <i>Students are productive and engaged members of society, demonstrating personal responsibility, and community and social awareness through their engagement in campus programs and services.</i>	4. Information Literacy <i>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.</i>			
	SLO-PLO-ILO ALIGNMENT NOTES: <i>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.</i> <i>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.</i>						
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			

Fall 14 Completed RESP-CARE Alignment-Grid.docx

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08.20.2014

\\All 14 Completed_RESP-CARE_Alignment-Grid.docx

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08.20.2014

FACILITATORS: DUE DATE TO SLO COORDINATORS IS FRIDAY, 08.20.2014					COURSE to ILO Alignment *FOR OFFICE USE ONLY*			
SLOs					SLO to PLO Alignment (Mark with an X)			
					P1	P2	P3	P4
RC 170 Introduction to Respiratory Care Sciences and the Profession: SLO #1 Appropriate and Competent FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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
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 FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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
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 *FOR OFFICE USE ONLY*			
	P1	P2	P3	P4	1	2	3	4
RC 174 Introduction to Respiratory Care Equipment and Patient Care Procedures: SLO #1 Appropriate and Competent FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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 FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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 *FOR OFFICE USE ONLY*			
	P1	P2	P3	P4	1	2	3	4
RC 178 Respiratory Care of the Critically Ill Patient I: SLO #1 Appropriate and Competent FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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 FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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 FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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							

FACILITATORS: DUE DATE TO SLO COORDINATOR					SLO to PLO Alignment (Mark with an X)				COURSE to ILO Alignment *FOR OFFICE USE ONLY*			
SLOs					P1	P2	P3	P4	1	2	3	4
RC 284 Respiratory Care of the Critically Ill Patient III: SLO #1 Appropriate and Competent FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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 FIO2 Management Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 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 Explain 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							

FACILITATORS: DUE DATE TO SLO COORDINATOR					SLO to PLO Alignment (Mark with an X)				COURSE to ILO Alignment *FOR OFFICE USE ONLY*			
SLOs					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							

FACILITATORS: DUE DATE TO SLO COORDINATORS IS 11/1/2021									
SLOs	SLO to PLO Alignment (Mark with an X)				COURSE to ILO Alignment *FOR OFFICE USE ONLY*				
	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					
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		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 until 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 Monitoring 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					
RC 293 Cardiac Monitoring 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		X		X		
RC 293 Cardiac Monitoring 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								

FACILITATORS: DUE DATE TO SLO COORDINATORS IS 11/1/2021									
SLOs	SLO to PLO Alignment (Mark with an X)				COURSE to ILO Alignment *FOR OFFICE USE ONLY*				
	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 *FOR OFFICE USE ONLY*			
	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							

COURSE SLO ASSESSMENT 4-YEAR TIMELINE REPORT (ECC)

HEALTH SCIENCES AND ATHLETICS DIVISION - RESPIRATORY CARE

Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
2013-14 (Spring 2014)	ECC: RC 172	Fund CPR Physolgy/Phrmclgy RC	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2013-14 (Spring 2014)	ECC: RC 280	Resp Care Crit-III Patient II	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2013-14 (Spring 2014)	ECC: RC 282	Fund Perinatal/Pediatric RC	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2013-14 (Spring 2014)	ECC: RC 286	Fund Pulmonary Rehab/Home RC	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2013-14 (Spring 2014)	ECC: RC 290	Adv Specialty Resp 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.
2013-14 (Spring 2014)	ECC: RC 291	Adv Spclty Vent/Oxgn Dlvry Dev	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.
2013-14 (Spring 2014)	ECC: RC 292	Adv Clinic App/Interp Bld 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.
2013-14 (Spring 2014)	ECC: RC 293	Cardiac Monitng Adv Resp 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.
2013-14 (Summer 2014)	ECC: RC 176	Intro Resp Care Non-Crit III	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2013-14 (Summer 2014)	ECC: RC 284	Resp Care Crit-III Patient III	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.

Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
2013-14 (Summer 2014)	ECC: RC 294	Pulmny Tstng in Adv Resp 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.
2013-14 (Summer 2014)	ECC: RC 295	Phrmclgy in Advanced Resp 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.
2014-15 (Fall 2014)	ECC: RC 170	Intro Resp Care Science/Profsn	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2014-15 (Fall 2014)	ECC: RC 174	Intro Resp Care Equip/Procdres	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2014-15 (Fall 2014)	ECC: RC 178	Resp Care Crit-III Patient I	SLO #1 Appropriate and Competent FIO2 Management	Given an in-class patient care scenario during an oral examination based on assigned reading, demonstrate appropriate and competent FIO2 management using guidelines set in clinical competencies section of the Data Arc system for clinical practice.
2014-15 (Fall 2014)	ECC: RC 288	Fund 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.
2014-15 (Fall 2014)	ECC: RC 289	Adv Resp Thrpy Asmtic 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.
2014-15 (Fall 2014)	ECC: RC 296	Physical Exam in Adv Resp 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.
2014-15 (Fall 2014)	ECC: RC 297	Perinatal/Ped in Adv Resp 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.
2014-15 (Fall 2014)	ECC: 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.
2014-15 (Spring 2015)	ECC: RC 172	Fund GPR Physolgy/Phrmclgy RC	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,

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Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
2014-15 (Spring 2015)	ECC: RC 280	Resp Care Crit-III Patient II	SLO #2 Explain Ventilator & Life Support Procedures	pulmonary rehabilitation, life support procedures, bronchial hygiene and oxygen therapy.
2014-15 (Spring 2015)	ECC: RC 282	Fund Perinatal/Pediatric RC	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.
2014-15 (Spring 2015)	ECC: RC 286	Fund Pulmonary Rehab/Home RC	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.
2014-15 (Spring 2015)	ECC: RC 290	Adv Specialty Resp 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
2014-15 (Spring 2015)	ECC: RC 291	Adv Spclty Vent/Oxgn Dlvry Dev	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.
2014-15 (Spring 2015)	ECC: RC 292	Adv Clinic App/Interp Bld 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.
2014-15 (Spring 2015)	ECC: RC 293	Cardiac Monitng Adv Resp 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.
2014-15 (Summer 2015)	ECC: RC 176	Intro Resp Care Non-Crit III	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.
2014-15 (Summer 2015)	ECC: RC 284	Resp Care Crit-III 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.
2014-15 (Summer 2015)	ECC: RC 294	Pulmny Tstng in Adv Resp 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 .
2014-15 (Summer 2015)	ECC: RC 295	Phrmclgy in Advanced	SLO #2 Demonstrate Cognitive	Students who stay in the course till the end of semester will take a

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Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
		Resp Care	Knowledge of Advanced Pharmacology in RC	comprehensive final multiple choice examination on conducting, using and interpreting Advanced PFT in RC and 80% will obtain a grade of 70% or better.
2015-16 (Fall 2015)	ECC: RC 170	Intro Resp Care Science/Profsn	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.
2015-16 (Fall 2015)	ECC: RC 174	Intro Resp Care Equip/Procdres	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.
2015-16 (Fall 2015)	ECC: RC 178	Resp Care Crit-III 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.
2015-16 (Fall 2015)	ECC: RC 288	Fund Pulmonary Function Testng	SLO #2 Explain RC PFT Administration	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.
2015-16 (Fall 2015)	ECC: RC 289	Adv Resp Thrpy Asmtic 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.
2015-16 (Fall 2015)	ECC: RC 296	Physical Exam in Adv Resp 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.
2015-16 (Fall 2015)	ECC: RC 297	Perinatal/Ped in Adv Resp 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.
2015-16 (Fall 2015)	ECC: 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 terrorist-based emergencies requiring respiratory care and coordination of resources.
2015-16 (Spring 2016)	ECC: RC 172	Fund CPR Physiolgy/Phrmclgy RC	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.
2015-16 (Spring 2016)	ECC: RC 280	Resp Care Crit-III 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.
2015-16 (Spring 2016)	ECC: RC 282	Fund Perinatal/Pediatric RC	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.

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Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
2015-16 (Spring 2016)	ECC: RC 286	Fund Pulmonary Rehab/Home RC	SLO #3 Comprehensive Final Exam on Pulmonary Rehabilitation & Home Respiratory Care	a grade of 70% or better. 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.
2015-16 (Spring 2016)	ECC: RC 290	Adv Specialty Resp 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.
2015-16 (Spring 2016)	ECC: RC 291	Adv Spclty Vent/Oxgn Dlvry Dev	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.
2015-16 (Spring 2016)	ECC: RC 292	Adv Clinic App/Interp Bld Gases	SLO #3 Demonstrate Cognitive Knowledge of Arterial Blood Gases Analysis and Interpretation	Students who stay in the course till 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.
2015-16 (Spring 2016)	ECC: RC 293	Cardiac Monitng Adv Resp 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.
2015-16 (Summer 2016)	ECC: RC 176	Intro Resp Care Non-Crit III	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.
2015-16 (Summer 2016)	ECC: RC 284	Resp Care Crit-III 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.
2015-16 (Summer 2016)	ECC: RC 294	Pulmny Testng in Adv Resp 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.
2015-16 (Summer 2016)	ECC: RC 295	Phrmclgy in Advanced Resp 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.
2016-17 (Fall 2016)	ECC: RC 170	Intro Resp Care Science/Profsn	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.
2016-17 (Fall 2016)	ECC: RC 174	Intro Resp Care Equip/Procdres	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.
2016-17 (Fall 2016)	ECC: RC 178	Resp Care Crit-III 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.
2016-17 (Fall 2016)	ECC: RC 288	Fund Pulmonary Function	SLO #3 Comprehensive Final	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.

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Course SLO Assessment Cycle	Course ID	Course Name	Course SLO Title	Course SLO Statement
		Testing	Exam on Pulmonary Function Testing	comprehensive final multiple choice examination on Pulmonary Function Testing and 80% will obtain a grade of 70% or better.
2016-17 (Fall 2016)	ECC: RC 289	Adv Resp Thrpy Asmtic 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.
2016-17 (Fall 2016)	ECC: RC 296	Physical Exam in Adv Resp 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.
2016-17 (Fall 2016)	ECC: RC 297	Perinatal/Ped in Adv Resp 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.
2016-17 (Fall 2016)	ECC: 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.
2017-18 (Fall 2017)	ECC: RC 289	Adv Resp Thrpy Asmtic 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.

Since 2013, thirty SLO's were added to our curriculum assessment due to ten new courses. Thus percent of total SLO's completed to date is 23% (14 completed /60 scheduled to be completed by 2016). The Program has completed all SLO's scheduled to be completed to date.

SLO's in the clinical phase classes have begun and were reviewed in the regularly scheduled monthly faculty meetings during each semester. These completed SLO's in clinical phase classes revealed that students did report that during their preparation for the examination, newer technologies were mentioned in their researches that were not available in the RC Lab to help them prepare. Students are assessed with oral examinations that include branching logic to help them assess basic patient problems and make appropriate decision concerning patient care. Students have been able to pass these basic laboratory examinations, but post-graduation, when taking more advanced simulations to receive national credentials post-graduation, scores have seriously declined. The class of 2012 reported that they were having difficulties with the clinical simulation portion of their Registered Respiratory Therapist Exam. They reported that they did not have enough experience with the branching logic required to be successful. The NBRC reported that 36%(see section 9 for total stats) were able to pass this portion of the exam 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%(see section 9 for total stats) on the first attempt, this supported the information from the surveys. Addressing this identified need, 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 to assist in preparing students to pass these advanced patient care simulations.

PLO's are not scheduled to begin being assessed until spring of 2016.

Analysis of the ACCJC SLO Rubric shows the program has achieved sustainable continuous quality improvement with SLO's.

Here is the completed Rubric:

ACCJC SLO RUBRIC PROGRAM WORKSHEET

Instructions: Please use this worksheet to determine the level at which your program is operating on the ACCJC SLO Rubric. After filling out and reviewing this worksheet, determine the level that best describes your program.

AWARENESS

Which of the items below occur in your department? Check all that apply.

- X There is preliminary, investigative dialogue about student learning outcomes.
- X There is recognition of existing practices such as course objectives and how they relate to student learning outcomes.
- X There is exploration of models, definitions, and issues taking place by a few people.
- ☐ Pilot projects and efforts may be in progress.
- X The college has discussed whether to define student learning outcomes at the level of some courses or programs or degrees; where to begin.

Six years ago the Respiratory Care Program needed to upgrade our curriculum to become an Advanced Respiratory Care Program, which was to be the new entry level of education to become a Respiratory Care Practitioner. The Health Science and Athletic Division was discussing development of SLO's division wide

DEVELOPMENTAL

Which of the items below occur in your department? Check all that apply

- X Program has established an institutional framework for definition of student learning outcomes.
- X Program has established authentic assessment strategies for assessing student learning outcomes as appropriate to intended course and program.
- X Existing structures are supporting strategies for student learning outcomes definition and assessment.
- X Program faculty members have accepted responsibility for student learning outcomes implementation.
- X Appropriate resources are being allocated to support student learning outcomes and assessment.
- X Faculty and staff are fully engaged in student learning outcomes development.

New courses were developed and approved using the curriculum process here on campus. The Program Faculty agreed upon student learning outcomes that would accurately reflect our progress as a program within our program learning outcomes. These student learning outcomes were then formalized and submitted the Health Science and Athletic Division and were reviewed and approved by the SLO committee established to serve the entire campus.

PROFICIENCY

Which of the items below occur in your department? Check all that apply.

X Student learning outcomes and authentic assessment are in place for courses and programs.

X There is widespread dialogue about the results of assessment and identification of gaps.

X Decision-making includes dialogue on the results of assessment and is purposefully directed toward aligning practices to support and improve student learning.

X Appropriate resources continue to be allocated and fine-tuned.

X Faculty members provide clear goals and purposes of courses and programs to enrolled students.

SLO's in place and assessments charted on TracDat. Regularly scheduled faculty meetings are held monthly during each semester and have been held to discuss changes in curriculum based on results. As a result of SLO #1 and analysis and action plan, the Human Patient Simulator will become more integral part of classes to assist in student learning.

SUSTAINABLE CONTINUOUS QUALITY IMPROVEMENT

Which of the items below occur in your department? Check all that apply.

X Student learning outcomes and assessment are ongoing, systematic, and used for continuous quality improvement.

X Dialogue about student learning is ongoing, pervasive, and robust.

X Student learning improvement is a visible priority in the program.

Provide examples or reason or your choices.

The change in integration of Human Patient Simulator demonstrates that student learning outcomes are a visible priority as well as ongoing process in the program

Section 5 Analysis of Student Feedback

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.

The Program surveys the students in the clinical phase of the program to assess their preparedness to succeed during the clinical phase of the program.

According to CoARC standards, graduates and employers are surveyed to assess the graduates' viability as successful candidates for employment post-graduation. This cohort helps the program assess overall success in preparing graduates for employment and any areas that may need attention in the future.

Results of the CoARC Employer Survey had the employers rate our graduates overall above average with two comments. One comment was "graduates show a solid base [of knowledge]" and the other comment was "graduates not rated as excellent because as graduates lack experience and need to develop, but still above average."

CoARC graduate surveys rated the program as above average to excellent. No comments were given and based on the Likert scale results, time management at the clinical setting and development of written skills for clinical settings received threes on the Likert Scale consistently, so the action to correct will be addressed in appropriate clinical classes.

CoARC resources assessment results will be addressed in section 6, the facilities and technology section.

Here are samples of the CoARC surveys.

CoARC COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE

EMPLOYER SURVEY

Sponsoring Institution/Consortium Name: _____

CoARC Base Program ID#: _____

CoARC PSG add-on, Satellite Option, or Scheduling Option Program ID# (if applicable): _____

NOTE: Completion of this survey is required as part of outcomes assessment by the program's accreditation body (CoARC).

The purpose of this survey is to help faculty evaluate the Program's success in preparing graduates to function as competent respiratory therapists. Compiled data from all returned surveys will be used to evaluate program quality, data from individual surveys will be held in strict confidence. The CoARC requests that this survey be completed by the graduate's immediate supervisor.

BACKGROUND INFORMATION:

Name of Graduate: _____

Length of employment at time of evaluation: _____ years and _____ months

Name (while enrolled in the Program, if different than above): _____

Eligibility/Credential Status (check all that apply):

☐ CRT eligible ☐ CRT ☐ CPFT ☐ RPFT ☐ CRT-SDS ☐ RRT-SDS

☐ RRT eligible ☐ RRT ☐ NPS ☐ RPSGT ☐ Other _____

INSTRUCTIONS: Consider each item separately and rate it independently of all others. Check the rating that indicates the extent to which you agree with each statement. Please do not skip any rating.

5 = Strongly Agree 4 = Generally Agree 3 = Neutral (acceptable) 2 = Generally Disagree 1 = Strongly Disagree

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

I. KNOWLEDGE BASE (Cognitive Domain)

THE GRADUATE:

A. Has a solid professional knowledge base. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

B. Has a solid general medical knowledge base. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

C. Accurately interprets pertinent clinical information from medical records and physical findings. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

D. Recommends appropriate therapeutic interventions based on physiological data and patient assessment information. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

E. Makes sound clinical judgments. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Comments: _____

II. CLINICAL PROFICIENCY (Psychomotor Domain)

THE GRADUATE:

A. Is proficient in the clinical skills required on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

CoARC COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE

B. Can efficiently perform an overall patient assessment. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

C. Competently performs the therapeutic procedures and modalities required on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

D. Competently performs the diagnostic procedures required on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Comments: _____

III. BEHAVIORAL SKILLS (Affective Domain)

THE GRADUATE:

A. Has effective oral communication skills. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

B. Has effective written communication skills. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

C. Behaves in an ethical and professional manner. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

D. Functions effectively as a member of the healthcare team. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

E. Accepts supervision and works effectively with supervisory personnel. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

F. Is self-directed and responsible for his/her own actions. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

G. Arrives to work prepared and on time. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

H. Contributes to a positive environment in the department. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

I. Displays respect for beliefs and values of all persons regardless of cultural background, religion, age or lifestyle. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Comments: _____

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

IV. OVERALL RATING OF THE GRADUATE: 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Additional Comments: _____

Rater Name: _____ Date: _____

Title: _____

Phone Number: (____) - ____ - ____

Email: _____@_____

Thank you!

CoARC COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE

GRADUATE SURVEY

Sponsoring Institution/Consortium Name: _____

CoARC Base Program ID#: _____

CoARC PSG add-on, Satellite Option, or Scheduling Option ID# (if applicable): _____

NOTE: Completion of this survey is required as part of outcomes assessment by the program's accreditation body (CoARC).

The purpose of this survey is to help faculty evaluate the Program's success in preparing graduates to function as competent respiratory therapists. Compiled data from all returned surveys will be used to evaluate program quality, data from individual surveys will be held in strict confidence.

BACKGROUND INFORMATION:

Job Title: _____ Current Annual Salary (optional) _____

Length of employment at time of evaluation: _____ years and _____ months

Name (while enrolled in the Program): _____

Eligibility/Credential Status (check all that apply):

☐ CRT eligible ☐ CRT ☐ CPFT ☐ RPFT ☐ CRT-SDS ☐ RRT-SDS

☐ RRT eligible ☐ RRT ☐ NPS ☐ RPSGT ☐ Other _____

INSTRUCTIONS: Consider each item separately and rate it independently of all others. Check the rating that indicates the extent to which you agree with each statement. Please do not skip any rating.

5 = Strongly Agree 4 = Generally Agree 3 = Neutral (acceptable) 2 = Generally Disagree 1 = Strongly Disagree

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

I. KNOWLEDGE BASE (Cognitive Domain)

THE PROGRAM:

A. Taught me the professional knowledge base required to function effectively on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

B. Taught me the general medical knowledge base required to function effectively on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

C. Taught me to interpret pertinent clinical information from medical records and physical findings. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

D. Prepared me to recommend appropriate therapeutic interventions based on physiological data and physical findings. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

E. Trained me to make sound clinical judgments. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Comments: _____

II. CLINICAL PROFICIENCY (Psychomotor Domain)

THE PROGRAM:

A. Helped me become proficient in the clinical skills required on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

B. Taught me to perform patient assessment accurately and efficiently. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

CoARC COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE

C. Taught me to perform the therapeutic procedures and modalities required on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

D. Taught me to perform the diagnostic procedures required on the job. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Comments: _____

III. BEHAVIORAL SKILLS (Affective Domain)

THE PROGRAM:

A. Helped me develop effective oral communication skills. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

B. Helped me develop effective written communication skills. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

C. Encouraged me to conduct myself in an ethical and professional manner. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

D. Taught me how to manage my time effectively in the clinical setting. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

E. Taught me to respect the beliefs and values of all persons, regardless of cultural background, religion, age or lifestyle. 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

F. Strongly encouraged me to apply for and pass my:
NBRC Certification Exam (CRT) 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐
NBRC Registry Exams (RRT) 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐
Sleep Specialty Credential (for grads of PSG add-ons only) 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Comments: _____

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

IV. OVERALL RATING OF THE PROGRAM: 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐

Additional Comments: _____

Rater Name: _____ Date: _____

Phone Number: (____) - ____ - ____

Email: _____@_____

Thank You!

CoARC COMMISSION ON ACCREDITATION FOR RESPIRATORY CARE

STUDENT PROGRAM RESOURCE SURVEY

Sponsoring Institution/Consortium Name: St. Louis Community College

CoARC Base Program ID#: 0000

CoARC PSG add-on, Satellite Option, or Scheduling Option Program ID# (if applicable): 0000

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.

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 NA.

5 = Strongly Agree 4 = Generally Agree 3 = Neutral (neither agree nor disagree) 2 = Generally Disagree 1 = Strongly Disagree
NA = Not Applicable

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

I. PERSONNEL RESOURCES

A. FACULTY TEACH EFFECTIVELY:

1. In the classroom 5 4 3 2 1 NA

2. In the laboratory 5 4 3 2 1 NA

3. In the clinical area 5 4 3 2 1 NA

B. FACULTY NUMBER IS ADEQUATE:

1. In the classroom 5 4 3 2 1 NA

2. In the laboratory 5 4 3 2 1 NA

3. In the clinical area 5 4 3 2 1 NA

Comments: _____

II. FACILITIES

1. CLASSROOMS

a. have adequate lighting 5 4 3 2 1 NA

b. have adequate ventilation 5 4 3 2 1 NA

c. have adequate seating 5 4 3 2 1 NA

d. have appropriate equipment to support effective instruction 5 4 3 2 1 NA

2. LABORATORY

a. has adequate lighting 5 4 3 2 1 NA

b. has adequate ventilation 5 4 3 2 1 NA

c. has adequate seating 5 4 3 2 1 NA

Comments: _____

III. LABORATORY EQUIPMENT

1. The amount of equipment is sufficient for student

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 NA.

5 = Strongly Agree 4 = Generally Agree 3 = Neutral (neither agree nor disagree) 2 = Generally Disagree 1 = Strongly Disagree
NA = Not Applicable

performance of required laboratory exercises 5 4 3 2 1 NA

2. The variety of equipment is sufficient for student performance of required laboratory exercises 5 4 3 2 1 NA

3. Supplies are sufficient for student performance of required laboratory exercises 5 4 3 2 1 NA

Comments: _____

IV. LEARNING RESOURCES

1. Library resources are adequate to support the curriculum 5 4 3 2 1 NA

2. Computer resources are adequate to support the curriculum 5 4 3 2 1 NA

3. Learning resources are available outside regular classroom hours 5 4 3 2 1 NA

Comments: _____

V. INSTRUCTIONAL SUPPORT RESOURCES

1. Textbook resources are available when needed 5 4 3 2 1 NA

2. Institutional student instructional support services are equally accessible to all students 5 4 3 2 1 NA

3. Computer lab resources provide adequate instructional support 5 4 3 2 1 NA

Comments: _____

VI. CLINICAL RESOURCES

1. The clinical facilities offer an adequate number of procedures for the student to meet clinical objectives 5 4 3 2 1 NA

2. The clinical facilities offer an adequate variety of procedures for the student to meet clinical objectives 5 4 3 2 1 NA

3. The clinical facilities provide adequate exposure to current equipment 5 4 3 2 1 NA

4. The clinical instructor to student ratio is adequate 5 4 3 2 1 NA

Comments: _____

VII. MEDICAL DIRECTOR/PHYSICIAN INTERACTION

1. Physician/instructor interaction is sufficient to facilitate development of effective communication skills between physicians and students 5 4 3 2 1 NA

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 NA.

5 = Strongly Agree 4 = Generally Agree 3 = Neutral (neither agree nor disagree) 2 = Generally Disagree 1 = Strongly Disagree
NA = Not Applicable

1. Physician contact is sufficient to provide the student with a physician perspective of patient care 5 4 3 2 1 NA

2. Clinical student exposure to physicians in the program is adequate 5 4 3 2 1 NA

3. Medical Director and student interaction contributes to the development of effective communication skills between physicians and students 5 4 3 2 1 NA

Comments: _____

VIII. ADDITIONAL COMMENTS

Additional Comments: _____

How long have you been a student in the program? _____ years _____ months

5 = Very Good 4 = Good 3 = Adequate 2 = Somewhat Adequate 1 = Inadequate

OVERALL RESOURCE RATING: 5 4 3 2 1

Date: _____

Thank You!

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 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. 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.

Secondly, the class of 2012 reported that they were having difficulties with the clinical simulation portion of their Registered Respiratory Therapist Exam. They reported that they did not have enough experience with the branching logic required to be successful. The NBRC reported that 36%(see section 9 for total stats) were able to pass this portion of the exam 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%(see section 9 for total stats) on the first attempt, this supported the information from the surveys. Addressing this identified need, 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.

Listed below are the specific costs.



DecisionSim™ Institutional License

DecisionSim is a cloud-based simulation platform designed to help enhance and assess decision making skills. It is delivered via a hosted (SaaS) model and is priced annually based on the type and quantity of licenses.

License Type	Annual License Price
Author License	US\$1,100 per author per year
Learner License	US\$75 per learner per year

All licenses include hosting of the application, product support, maintenance, enhancements and access to web services and documentation during the license period.

Author License

The Author License allows DecisionSim simulations to be created, edited, reviewed and published. There is no limit to the number of simulations you can create and you can include multimedia assets such as video.

An Author license includes full administrative control with access to cases, user accounts, groups, assignments and custom institutional settings.

The Author license also includes 2 hours of web-based training that covers topics such as effective simulation development in addition to the use of the authoring and administrative tools.

Learner License

The Learner License allows learners access to the DecisionSim simulations authored for them. There is no limit to the number of times they use the simulations. Each learner has his or her own account so that activity data, such as scores and progress, are maintained and reported on a per learner basis.

LMS Integration

Decision Simulation provides access via web services for single sign-on integration with your LMS. The LMS integration is typically completed by the client with support from Decision Simulation. If needed, Decision Simulation can provide an estimate to develop the integration.

Additional Services

In addition to the training that is included with the license purchase, Decision Simulation offers onsite workshops. These workshops can be effective in helping to jump start authors with their projects as well as to teach advanced simulation techniques and methods for integrating DecisionSim simulations into a performance improvement project.

For more information, please visit www.DecisionSimulation.com, call us at 1.484.899.0SIM or email us at Sales@DecisionSimulation.com.

Recommendation #1. The Program will be requesting the authoring license fee and the learner license fee and any other fees to be covered in this request.

Section 6- Facilities and Equipment

The Program occupies one classroom and a connected lab. The classroom has seating for forty students. There are twelve computers for student use, eight in classroom and four in lab area. Also, there is Wi-fi capability throughout all areas of the classroom and lab with electrical outlets available in all areas of classroom and lab. The classroom is fitted with state of the art teaching console which includes LED projector, computer, and laptop connections.

The lab facilities include three patient bays which simulate an ICU bed area, two of which simulate an adult ICU and one that simulates a neonatal ICU area. The program has four ventilators, three of which are state of the art and placed in the ICU bed areas. There is actual equipment used at our clinical facilities to help prepare the students to be successful as they train at our clinical facilities. There is a Human Patient Simulator in one ICU bay that can simulate many of the emergency situations that the students will encounter at the clinical sites.

CoARC Surveys were distributed to our thirty five clinical students in May 2014 as well as five 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 Laboratory Equipment and Supplies questions.

The Facilities section revealed that 5/5 of the personnel surveys rate the facilities at 3 or above on the Likert scale for all domains in this section. That would be 100% meeting the cut score, none falling below the cut score, placing the program above the 70% threshold for facilities adequacy.

Also, 35/35 clinical students surveyed rated the rate the Facilities at 3 or above on the Likert scale for all domains in this section. That would be 100% meeting the cut score, or none below the cut score, placing the program above the 70% threshold for facilities adequacy.

The Laboratory Equipment and Supplies section revealed that 5/5 of the personnel surveys rate the facilities at 3 or above on the Likert scale for all domains in this section. That would be 100% meeting the cut score, none falling below the cut score, placing the program above the 70% threshold for laboratory equipment and supplies adequacy.

Also, 34/35 clinical students surveyed rated the rate the Laboratory Equipment and Supplies at 3 or above on the Likert scale for all domains in this section. That would be 97% meeting the cut score, or only 3% below the cut score, placing the program above the 70% threshold for laboratory equipment and supplies adequacy.

Therefore, our facilities and laboratory equipment are well above adequate at this time. It should be noted that the two main ventilators used for all ICU training are state of the art at this time and used in all of our clinical facilities.

Recommendation #2 As the clinical sites change to future ventilators, the program will need to also upgrade our ventilators. The program is unable, at this time, to project future costs, but rather than buying new machines, leasing or renting maybe the most economical way to continually keep our students training on the most up to date machinery.

Section 7 Technology and Software

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.

The Program surveys the students in the clinical phase of the program to assess their preparedness to succeed during the clinical phase of the program.

The survey also revealed that the present technology in the lab is presently more than adequate for training. But as educational demand for greater educational experience grows to meet demands of labor market, newer technologies such as two pediatric human patient simulators and a second adult human patient simulator allowing each student more time (one simulator for twenty students versus two simulators servicing the same twenty students) to prepare and practice in more varied areas of respiratory care.

Recommendation #3 Obtain two pediatric human patient simulators and another adult human patient simulator.

Section 8 Staffing

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.

CoARC Surveys were distributed to our thirty five clinical students in May 2014 as well as five 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 5/5 of the personnel surveys rate the staffing at 3 or above on the Likert scale for all domains in this section. That would be 100% meeting the cut score, none falling below the cut score, placing the program above the 70% threshold for staffing adequacy.

Also, 34/35 clinical students surveyed rated the rate the Staffing at 3 or above on the Likert scale for all domains in this section. That would be 97% meeting the cut score, or only 3% below the cut score placing the program above the 70% threshold for Staffing adequacy.

Therefore, our Staffing is well above adequate at this time. The program will continue to monitor and assess program needs.

Section 9 Direction and Vision

The most relevant change to Respiratory Care in California was reported in the American Association for Respiratory Care news. The AARC is the only professional organization supporting Respiratory Care in the United States. In addition to attempting to help lobby for beneficial legislation nationally and locally, the AARC is trying to promote the profession as a whole to increase interest and membership.

Excerpt from AARC. Org News

July 24, 2014

Legislation regarding the respiratory care profession passed the final hurdle yesterday when California Governor Jerry Brown signed into law a bill that will make **the RRT credential mandatory for respiratory therapists practicing in the state....**

...The new law will go into effect on Jan. 1, 2015. Respiratory therapists, from any state, who earned the CRT prior to Jan. 1, 2015 and whose credential is still valid, will be “grandfathered” in and thus will be able to continue to practice or acquire a license in California without earning the RRT.

The RRT credential becoming mandatory means that all of our graduates must be able to pass this exam in order to practice to gain licensure in California. Also, the sooner they can pass the sooner they can receive their license the sooner they can seek employment, making passing on the first attempt vital. As previously mentioned, this exam has two parts. The first is a written respiratory test portion. The present pass rate is 81% on first attempt. The national pass rate is 67% placing the program at 122% of the national average. The program will continue to monitor results in this portion and make adjustments as indicated in curriculum and teaching styles.

EL CAMINO COMMUNITY COLLEGE - 200584 Date Range: 01/01/2013 through 08/31/2014 Written Registry Examination School Score Report				
Between 1/01/2013 and 8/31/2014				
All Candidate Summary		Program Pass %	National Pass %	% of National
Total	14	85.71%	53.38%	160.57 %
Passing	12			
Failing	2			
New Candidate Summary		Program Pass %	National Pass %	% of National
Total	11	81.82%	67.05%	122.03 %
Passing	9			
Failing	2			
Repeat Candidate Summary		Program Pass %	National Pass %	% of National
Total	3	100%	32.69%	305.90 %
Passing	3			
Failing	0			

The second portion of the exam is the clinical simulation examination. The reported program pass rate is 36% on first attempt.

EL CAMINO COMMUNITY COLLEGE - 200584 Date Range: 01/01/2013 through 08/31/2014 Registered Respiratory Therapist - Clinical Simulation Examination				
Between 1/01/2013 and 8/31/2014				
All Candidate Summary		Program Pass %	National Pass %	% of National
Total	25	<u>40%</u>	57.35%	69.75 %
Passing	10			
Failing	15			
New Candidate Summary		Program Pass %	National Pass %	% of National
Total	11	<u>36.36%</u>	61.13%	59.48 %
Passing	4			
Failing	7			
Repeat Candidate Summary		Program Pass %	National Pass %	% of National
Total	14	<u>42.86%</u>	51.21%	83.69 %
Passing	6			
Failing	8			

As reported in section 5, we plan to use a branching logic simulation program to help the graduates prepare and succeed at a rate comparable to the written exam scores. As seen in the statistics of the national average, raising the clinical simulation scores will place us well above the national average and making graduates more desirable on the job market.

Also, on October 2, 2014 SB 850 was signed allowing two pilot programs at the community college level to award baccalaureate degrees in certain allied health fields, including respiratory care. There is no predicting the ramifications at this time for the Program, but the Program will continue to monitor the progress of these pilot programs.

Section 10 Recommendations

Recommendations	Cost	Strategic Initiatives	Above sections
#1. Decision simulations	\$1100 per year	A, C,E, F	5
#2 Ventilator rental budget	\$5000 per year	A, C, E, F	6
#3 Simulators(3)	\$130,000	A,C, E, F	7

CAREER AND TECHNICAL EDUCATION – SUPPLEMENTAL QUESTIONS

1. How strong is the occupational demand for the program?

US World News and Money (<http://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs?page=4>) ranks Respiratory Care as the #32 in the top 100 jobs in the U.S. That's higher than a speech-language pathologist, financial manager, or even a lawyer.

2. How has the demand changed in the past 5 years and what is the outlook for the next 5 years?

There were more than 14,000 licensed respiratory care practitioners in the state of California according to The California Health Care Almanac in 2012. There were only 9000 in 2001, which translates into a 64.4% growth in eleven years.

The Bureau of Labor Statistics website (<http://www.bls.gov/ooh/healthcare/respiratory-therapists.htm#tab-6>) reveals that employment of respiratory therapists is projected to grow 19 percent from 2012 to 2022 nationwide, faster than the average for all occupations. Growth in the middle-aged and elderly population will lead to an increased incidence of respiratory conditions such as emphysema, chronic bronchitis, pneumonia, and other disorders that can permanently damage the lungs or restrict lung function. These factors will in turn lead to an increased demand for respiratory therapy services and treatments, mostly in hospitals and nursing homes. In addition, advances in preventing and detecting disease, improved medications, and more sophisticated treatments will increase the demand for respiratory therapists. Other conditions affecting the general population, such as smoking, air pollution, and respiratory emergencies, will continue to create demand for respiratory therapists.

3. What is the district's need for the program?



A Review of California's Health Care Workforce Shortages and Strategies to Address These Shortages

Executive Summary

Statewide shortages of health care providers currently exist in several major health professions.

Additionally, health care workforce needs are projected to increase dramatically due to population aging, growth, and diversity. This existing shortage will only intensify as about 4.7 million more Californians will be eligible for health insurance, starting in 2014, as a result of federal health care reform legislation.¹ Inability to meet health care workforce needs will have serious adverse consequences on health access, quality, and cost....

According to research conducted by the Public Health Institute and the School of Public Health at the University of California, Berkeley, California's emerging populations are underrepresented in all health professions and in the health professions pipeline. In general, as the level of education increases and as admission spots become more competitive, racial and ethnic diversity decreases.

Lack of diversity impacts access to health care. A report by the Institute of Medicine links poor health outcomes for minorities to the shortage of minority health care providers. One reason for this is that persons of color are less likely than whites to receive needed services, including clinically necessary procedures, due to cultural or linguistic barriers between the health care provider and the patient. Additionally, evidence suggests that a workforce able to serve culturally and linguistically diverse individuals increases the number of initial visits, results in higher utilization of care, enhances high-quality encounters, lowers medical errors, and reduces emergency room admissions.³⁶

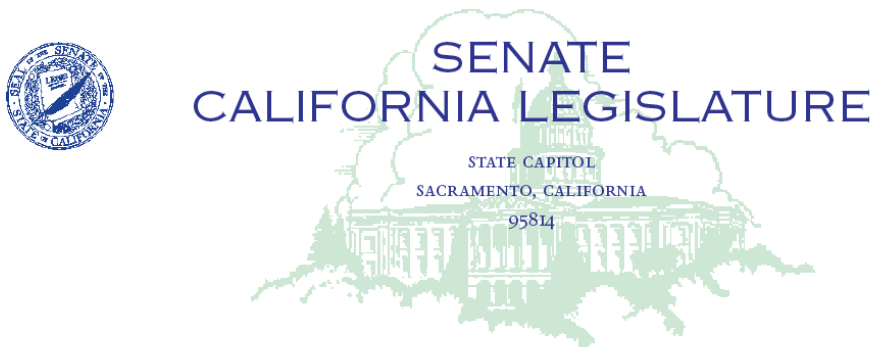
Furthermore, the Sullivan Commission finds that the lack of a diverse workforce results in a "loss of productivity, higher absenteeism, and greater employee health care costs . . . resulting in millions of dollars lost to companies as the result of chronic conditions left untreated."

³⁶

Joint Center for Political and Economic Studies, Health Policy Institute, The Sullivan Alliance to Transform America's Health Professions, "Increasing and Diversifying America's Health Professions: An Opportunity to Remedy a Health System in Crisis," November 2008.

El Camino College demographics show that El Camino College is approximately 84 % minorities. The Respiratory Care Program has an enrollment that reflects that same percentage. Therefore, the program is vital to help dealing with the lack of diversity statewide as well as district wide in healthcare workers.

4. What is the state's need for the program?



A Review of California's Health Care Workforce Shortages and Strategies to Address These Shortages

Executive Summary

Statewide shortages of health care providers currently exist in several major health professions.

Additionally, health care workforce needs are projected to increase dramatically due to population aging, growth, and diversity. This existing shortage will only intensify as about 4.7 million more Californians will be eligible for health insurance, starting in 2014; as a result of federal health care reform legislation.¹ Inability to meet health care workforce needs will have serious adverse consequences on health access, quality, and cost....

Allied Health. Allied health professions distinct from medicine, dentistry, and nursing include clinical laboratory scientist, radiological technologist, pharmacy technician, and respiratory therapist, among others.

Allied health professionals comprised 605,000 workers in 2010 and are projected to increase to 988,000 in 2030. This represents a faster growth rate (63 percent) than other workers in the health sector (60 percent).¹⁹ Researchers, however, project that the state's universities and community colleges will only be able to meet between 63 and 79 percent of future demand.²⁰

A January 2009 study commissioned by The California Wellness Foundation found that 76 percent of clinics report a staffing shortage of allied health workers.²¹ Similarly, a December 2007 survey conducted by the California Hospital Association found that vacancies in selected allied health occupations (clinical laboratory and medical imaging professionals) have a significant impact on hospital efficiencies and access to care.

A review of the literature²² and data²³ indicates that at least the following allied health professionals face current shortages and have high growth rates:

- Clinical Laboratory Scientist / Medical Laboratory Technician
- Medical Imaging (Radiologic Technician, Sonographer, MRI Technician)
- Occupational Therapist Assistant
- Pharmacy Technician
- Psychiatric Technician
- Respiratory Therapist

Results from a more recent California Hospital Association survey, conducted from January through May of 2010, came to similar conclusions.²⁴ According to that study, allied health vacancies in the following occupations had negative impacts on hospital efficiency and access to care:

- Pharmacist
- Physical Therapist
- Respiratory Therapist
- Clinical Laboratory Scientist
- Nuclear Medicine Technologist
- Medical Imaging (including Ultrasound, MRI, CT, and Radiological Technologists)
- Pharmacy Technician

¹⁹ Brad Kemp, "Help Wanted: Will Californians Miss Out on a Billion-Dollar Growth Industry?" Fenton

Communications.

²⁰ Ibid.

²¹ Goodwin Simon Victoria Research, "Key Findings — California Non-Profit Health Clinic Survey," Fenton Communications, January 2009.

²² Rebecca Hargreaves et al, "Closing the Health Workforce Gap in California: The Education Imperative," for

The Campaign for College Opportunity, September 2007. Timothy Bates and Susan Chapman, "Tracking the Supply of Health Professions Education Programs in California," University of California, San Francisco, The Center for the Health Professions, April 2007.

²³ Data from the Employment Development Department's Labor Market Information Division.

²⁴ California Hospital Association. *Critical Roles: California's Allied Health Workforce*. California Hospital Association Allied Health Workforce Survey: Report of Key Findings. February 2011.

5. How does the program address needs that are not met by similar programs in the region?

The Respiratory Care Program has clinical affiliation agreements with local medical centers within the ECC college district. Equipment, bedside techniques, and didactic information are tapered to fit the needs of the District medical centers.

6. Are the students satisfied with their preparation for employment?

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.

CoARC graduate surveys rated the program as above average to excellent. No comments were given and based on the Likert scale results, time management at the clinical setting and development of written skills for clinical settings received threes on the Likert Scale consistently, so the action to correct will be addressed in appropriate clinical classes.

7. Are the employers in the field satisfied with the level of preparation of our graduates?

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.

Results of the CoARC Employer Survey had the employers rate our graduates overall above average with two comments. One comment was “graduates show a solid base [of knowledge]” and the other comment was “graduates not rated as excellent because as graduates lack experience and need to develop, but still above average.”

8. What are the completion, success, and employment rates for the students?

ECC Demographic Statistics show that the Program graduates nearly 100% of all students who started the clinical phase of the program. Furthermore, more than 90% of all graduates who applied for a license to practice in California were able to pass the licensing exam and obtain their license.

9. What is the role of the advisory committee and what impact does it have on the program?

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.

10. If there is a licensure exam for students to work in their field of study, please list the exam and the pass rate. If there are multiple licensure exams in the program, include them all.

Listed below are the pass rates reported by the National Board of Respiratory Care. The National Board for Respiratory Care, Inc. (NBRC) is a voluntary health certifying board which was created in 1960 to evaluate the professional competence of respiratory therapists.

Please note that the class of 2014 only graduated four and half months ago in May 2014 so not all graduates have taken their licensure exams yet. Three of the class of 2012 did not take the exam yet. The program has tried to contact them but have been unable to reach them. The accreditation standard for pass rate is 80% of the graduating class within twelve months of graduation, so the Program has met that accreditation standard for 2012 (fifteen grads/twelve passed=80%.)

Certificate Information from the NBRC Annual Summary for 2012-2014

	GRADUATION YEAR	CRT	RRT
17 Grads total 2014	2014	9	2
This was a grad from the class of 2012. There was no class of 2013	2013	1	1
15 grads total	2012	12	8