KAPI‘OLANI COMMUNITY COLLEGE
COMPREHENSIVE INSTRUCTIONAL PROGRAM REVIEW

2016-2019
Respiratory Care Program - Associate in Science Degree

Mission Statement: Kapi‘olani Community College provides students from Hawai‘i’s diverse communities open access to higher education opportunities in pursuit of academic, career, and lifelong learning goals. The College, guided by shared vision and values, and commitment to engagement, learning, and achievement, offers high quality certificate, associate degree, and transfer programs that prepare students for productive futures.

Respiratory Care Program Mission Statement

The mission of the Respiratory Care Program is to follow the Health Education Unit as well as to serve the needs of the Respiratory community through the program mission by:

1. Providing a respiratory care practitioner program that will meet the respiratory care personnel needs of the State of Hawaii.
2. To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs).
3. Providing advanced practitioner level respiratory care program.
4. Providing a competency-based, success-oriented learning environment that is germane to local and national standards for the practice of respiratory care.
5. Providing students with a relevant curriculum so that they may achieve their career and personal goals.
6. Providing high quality faculty in the classroom, laboratory, and clinical areas.
7. Providing continuing education programs for the respiratory care community

Mission Statement of Health Professional Academic Programs:

Develop and deliver student-centered health career programs that employ industry standards through partnerships with the healthcare community by:

1. Offering credit and non-credit programs to provide competent and qualified personnel to meet the needs of the healthcare industry in Hawai‘i.
2. Providing qualified learning opportunities for maintaining worker competence and career mobility in a rapidly evolving healthcare field, and delivering friendly, courteous, individualized and student-centered instructional and related support services that promote the likelihood of student success.

PART I: Executive Summary of CPR and Response to previous Tactical Plans and ARPD initiatives

The following represents strategic plans and explanations for the Associate in Science degree program for Respiratory Care at KCC. Application of the University of Hawaii, Strategic Plan 2015-2021 is used for Strategic Directions and Outcome Measures. The ASRC strategic plan is written in two parts: Enhancing student success, and using 21st century technology for innovative learning.

Enhancing Student Success

Hawai‘i Graduation Initiative: Focus on Student Success Outcome and Measures:

UHCC and UH Performance Funding Measures

A. Increase annual UH and non-UH 4-year transfer by 6% from 1,196 to 1,798.

Explanation: The Respiratory Care program at KCC (ASRC) has recently renewed its articulation agreement with UHWO to so that graduates of the program can enroll directly into the Bachelor of Applied Science in Respiratory Care (BAS-RC) following their completion of the ASRC program. Curriculum changes were approved in 2016 to allow all the Respiratory Care concentration courses to be taught at KCC. Since 2014, 15 ASRC graduates have enrolled in the BAS-RC program. With changes developing within the Respiratory Care profession, all ASRC programs are strongly encourage to either provide a Bachelor's level program or to articulate with a four-year university that provides relevant Bachelor's degrees for Respiratory Care Practitioners.

Plan: The ASRC program will target 10% of its annual graduating class (2-3 students per year) to enroll at UHWO in the BAS-RC program starting with graduates of the 2017 class. Data for enrollment and graduates of the BAS-RC will be collected for future auditing purposes.

Application of 21st century Technology for Innovative Learning

Hawai'i Innovation Initiative: Productive Futures of Students, Faculty, and Staff

Outcome and Measures:

Enhance workforce development efforts, linking to developing emerging sectors in Hawai'i's economy while simultaneously providing a stable workforce for the traditional employment sectors.

D. Develop local, national, and global community partnerships that advance the college's strategic outcomes

Enrollment: Improve Re-enrollment and Outreach

Outcome and Measures:

Identify and set goals for currently underserved populations through outreach to and access for high school students, GED completers, Native Hawaiians, Pacific Islanders, and working age adults, and sharpen the focus on campus-based re-enrollment strategies.

H. Increase annual enrollment of Pacific Islander students by 3% from 123 to 167.

Modern Teaching and Learning Environments

Outcome and Measures:

Ensure that students and faculty have the learning and teaching environments appropriate for the third decade of the 21st century and the sustainability practices to maintain those environments.

F. Invest in staff and faculty development to improve impact practices and currency in their field.

A. Invest in distance education and information technology to improve learning outcomes, student success, and support services.

Explanation: The ASRC program has received two Perkins Grants in the last two academic years which are:

1. Innovative Technology Based Learning In Respiratory Care
2. Development of Online Program for Respiratory Care

Both grants are multi-year projects that are intended to advance the use of simulation technology, and reach that the ASRC program has in regards to under-served populations on the neighbor islands of Hawaii, and also American territories in the Pacific Basin, i.e., American Samoa through online, distance education. Specifically, the innovative technology base learning will use ventilation simulation and other advanced simulator equipment to provide more advance training for students in the areas of Adult,

pediatric, and neonatal respiratory Care. The development of an online component to the existing accredited ASRC program will allow students at distance to complete the ASRC program and become credentialed practitioners. KCC ASRC program is the only accredited Respiratory Care program in Hawaii, and the Pacific Basin. Online distance education will help to ease the demand for NBRC credentialed practitioners in island communities that do not have an accredited respiratory care program, or are unable to relocate to Honolulu for the extended time necessary to complete the resident ASRC program.

Plan: Continue to request Perkins funding for 3-years to complete the grant projects. Integrate the use of state of the art innovative technology equipment into the existing ASRC curriculum. Also, as a community service provide non-credit seminars and training sessions on the use of mechanical ventilator simulation.

Enroll 15% of the class starting in 2017 into an online, distance component of the ASRC program. Subsequent enrollment of a portion of the annual ASRC cohort will continue following the initial rollout in 2017. Track NBRC credentialing success of students in the online distance education program for data and outcome measures to follow.

Quantitative Measures of ASRC program effectiveness for 2016-2018 Graduates

Data provided as of December 31, 2018, by the NBRC for 2015-2017 ASRC graduates show 100% certification and 100% registration pass rates on national credentialing exams. The most recent annual report (preliminary 2018 data) to the Commission on Accreditation for Respiratory Care (CoARC) for continuing accreditation indicates that the program continues to meet and exceed 3-year average thresholds for: on-time graduation (97%), retention (96%), NBRC exam pass rates (CRT 100%, RRT 100%), and employment following graduation (100%), overall employer satisfaction (95%), and overall graduate satisfaction (100%).

OUTCOME SUMMARY
FOR COARC ACCREDITATION

	2018*	2017	2016	2015	2014	Threshold	**Current Period 3 year average 2017-2015**	**Previous Period 3 year average 2016-2014**
Retention	N/A	100%	100%	88%	100%	70%	**96%**	**96%**
Job Placement	88%	100%	100%	100%	100%	0%	**100%**	**100%**
CRT Credentialing Success	100%	100%	100%	100%	100%	80%	**100%**	**100%**
RRT Credentialing Success	94%	100%	100%	100%	100%	0%	**100%**	**100%**
TMC High Cut Score Pass Rate	100%	100%	100%	100%	N/A	0%	**100%**	**100%**
Overall Employer Satisfaction	N/A	100%	N/A	90%	100%	80%	**95%**	**95%**
Overall Graduate Satisfaction	N/A	100%	N/A	100%	100%	80%	**100%**	**100%**
On-Time Graduation Rate	**81%**	**92%**	**100%**	**100%**	**91%**	**70%**	**97%**	**97%**

*Official complete outcome data for 2018 will be submitted in 3rd quarter of 2019.

Program achievements 2016-2019:

- Received annual, ongoing award recognition for RRT credentialing success (>90% of graduates) by the Committee on Accreditation for Respiratory Care (CoARC).

- Between 88-100% of graduates employed for classes 2016-2018.
- Review and UH Board of Regents approval of an articulation agreement for the Bachelor of Applied Science with a concentration in Respiratory Care degree offered by UH-West Oahu.
- Approval of Perkins Grants for academic years 2016-2019. Grant funding used to develop distance education components for neighbor island students, application of high tech simulation and critical are equipment for classroom instruction, and interdisciplinary clinical skills training.
- Four (4) applicants from Kauai and Maui applied for admission to the ASRC program to be completed via distance education. Two (2) students on Maui enrolled into the distance education components of the ASRC program for AY's 2017 & 2018.

PART II: Program Description

The Respiratory Care Practitioner Program is a physician-directed, nationally accredited, health science specialty, caring for patients with disorders of the cardiovascular and pulmonary systems. Students earn an **Associate in Science Degree** in **Respiratory Care.** The program at Kapi'olani Community College is the only accredited respiratory care program in Hawaii serving students throughout the state. The program prepares students for a career as a **respiratory care practitioner (RCP).** It is also the career pathway to becoming a Registered Respiratory Therapist (RRT) along with other advanced credentials in respiratory care. In addition, the program has an articulation with UHWO for the Bachelor of Applied Science – concentration in Respiratory Care degree program.

History

The Kapiʻolani Community College Inhalation Therapy Program was founded in the fall of 1971 with funding from a 5-year Allied Health Professions Grant. The program, discontinued in 1977, was resumed under the leadership of a professional respiratory therapy educator, as program director, in fall of 1979. The Respiratory Therapy Program, which accommodated new students every other Fall Semester, eventually received full accreditation by the Committee on Allied Health Education and Accreditation (CAHEA) in 1981. In 1990, the Respiratory Care Program and curriculum was redesigned and streamlined to accommodate new students every Fall Semester. The program was reaccredited in 1991 and1996, and 2006. From 2007 to present the program has maintained full, ongoing, programmatic accreditation under the standards of the major accrediting body of the Respiratory Care profession known as the Commission on Accreditation for Respiratory Care. In 2015, the program received a full ten-year accreditation as an entry to practice, Associate in Science degree program in Respiratory Care.

Program Goals (2016-2019)

The Respiratory Care Program aligns its program goals with the Commission on Accreditation for Respiratory Care accreditation standards and the performance measures of the College's Strategic Plan for 2015-2021.

- **Increase annual UH and non-UH 4-year transfer by 6% from 1,196 to 1,798.** – Ongoing data provided from our UHWO campus regarding BAS-RC articulation agreement indicates that an increase of over 10% of ASRC enrollment for AY's 2017-2018 of ASRC graduates are going into the program following graduation from KCC ASRC program. The number of ASRC graduates for 2018 was (16). Of these graduates (3) enrolled into the BAS-RC program for fall 2018.
- **Increase annual enrollment of Pacific Islander students by 3% from 123 to 167.** – At least 10% students enrolled in the ASRC program of Pacific Island nationality in both 1st and 2nd year cohorts.
- **Invest in distance education and information technology to improve learning outcomes, student success, and support services.** – For the fall semester, 2018, one (2) students from Maui are enrolled. One student will be completing the ASRC program from a distance at the end of spring 2019. ASRC courses are currently being revised to fit into the exiting approved curriculum to be

taught through distance educational format. Visits to both Maui College and Kauai Community College show potential for ongoing distance education enrollments from both campuses.

- **Invest in staff and faculty development to improve impact practices and currency in their field.** – All full-time Faculty over the summer attended continuing educational seminars and workshops to improve classroom and laboratory teaching expertise, and program management. A specialized training during fall and spring 2017/2018 include online teaching practices and use of simulation for critical care equipment for mechanical ventilation. Approval for the acquisition of (2) additional mechanical ventilators for lab instruction will occur during 2018-2019 AY. Faculty also participated in development training materials for use of mechanical ventilation with hyperbaric oxygen therapy in collaboration with the Hyperbaric Treatment Center at Kuakini Hospital, summer 2018, and spring 2019.

Quantitative Measures of ASRC program effectiveness for 2017 Graduates

- Data provided as of Oct 1, 2018, by the NBRC for 201 ASRC graduates show 100% certification and 94% registration pass rates on national credentialing exams.
- Annual report (2018 data) to the CoARC for continuing accreditation indicates that the program continues to meet and exceed 3-year average thresholds for: on-time graduation (97%), retention (96%), NBRC exam pass rates (CRT 100%, RRT 100%), and employment following graduation (100%).

Program Student Learning Outcomes (SLOs)

Upon successful completion of the A.S. degree in Respiratory Care the student should be able to:

1. To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs.)
2. Perform technical and clinical skills necessary to function competently as an advanced-level respiratory therapist.
3. Demonstrate professional & ethical behavior skills necessary to function as an advanced-level respiratory therapist.
4. Communicate & interact appropriately & effectively.
5. Incorporate knowledge of multicultural perspectives to meet the needs of diverse populations.

Admission Requirements:

- Applications are accepted from April 1 to May 31 for the Fall Program. All materials (transcripts etc.) must be received by May 31st.
- Submit the application form to the KCC Health Sciences Office.
- Submit transcripts of college work and high school diploma
- Attend a Program Information/Orientation session.
- Complete prerequisite courses prior to Fall entry.
- Attend career shadowing as needed.

Selection to the Program:

- Age 18 or older.
- Overall GPA of 2.0 or higher.
- Selection is based on a factoring system in which points are given in the following categories:
- Prerequisite course grades
- Previous college degrees
- Interview scores
- Reference letters

Applicants are ranked in numerical order by the total of the factors assigned in the selection criteria. Up to 18 applicants will be notified of their admission acceptability and will be asked to:

1. Confirm their intention to enroll in the program.
2. Purchase liability insurance prior to registering.
3. Complete technical standards assessment.
4. Attend the program orientation sessions.

Credentials, licensure and career pathways

- The career pathway begins with successful completion of the two-year Kapi'olani CC program where graduates will earn an Associate in Science Degree in Respiratory Care and are eligible to take the Entry-Level Examination of the National Board for Respiratory Care (NBRC).
- After passing the Entry- Level examination, graduates will be awarded the Certified Respiratory Therapist (CRT) credential. Upon earning the CRT credential, graduates are eligible to write the Advanced-Practitioner Examinations of the NBRC.
- Upon passing the two examinations, the individual will be awarded the Registered Respiratory Therapist (RRT) credential and are eligible to apply for licensing as a Respiratory Therapist with the State of Hawaii Department of Commerce and Consumer Affairs.
- The CRT and RRT credentials are recognized in the United States and several other countries. The CRT credential is required in approximately 49 states (including Hawaii) as part of eligibility for a license to work as an RCP. The RRT is the preferred credential in the Respiratory Care profession. It is also the credential that most hospitals in the state of Hawaii require for employment in Respiratory Care.

As a graduate of the KCC ASRC program, additional advanced credentials can be obtained by graduates through continuing non-credit education and work experience. These credentials include:

- Adult Critical Care Specialist (ACCS)
- Certified Pulmonary Function Technologist (CPFT)
- Registered Pulmonary Function Technologist (RPFT)
- Neonatal Pediatric Specialist (NPS)
- Sleep Disorders Specialist (SDS)
- Registered Polysomnographic Technologist (RGSPT)
- Certified Asthma Educator (AE-C)

There is also an articulation offered via the **Baccalaureate Degree in Applied Science (BAS)** through the Mananawai program with UH West Oahu for KCC students completing the A.S. degree in Respiratory Care to obtain a BAS with a concentration in Respiratory Care degree.

Faculty and Staff

There are four 11 month faculty teaching the program:

- Aaron Koseki, PhD, RRT. – Professor
- Ed Borza, BSRC, RRT – Associate Professor
- Bob Vega, DM, RRT – Program Director and Assistant Faculty
- Assistant Professor, Jun Kim, PhD, RRT – Director of Clinical Education and Assistant Professor.

Resources, including Student Support Services

The Health Science and Emergency Medical Service programs are located in the Kaulia Building. The Respiratory Care Program has two classrooms dedicated to the program, each serving the first and second year cohorts. One classroom provides a lecture/laboratory space with practice equipment prior to clinical placements. Through Perkins grants the program was awarded funds to successfully maintain industry standard level equipment. The second classroom serves as a multi-purpose space for student access to

computer for research purposes.

The Respiratory Care program is supported by two full-time counselors imbedded in the Health Science and Emergency Medical Service Departments providing student support for all of the programs.

The Health Science Department has two supports with one Secretary II and one part-time Office Clerk. The Secretary II position is located in the main front office of the department and provides fiscal, clerical, and other support services to the department faculty and general public. This position is Civil Service position and part of the Hawai‘i Government Employees Association organization, Unit 03. The half- time office clerk position supports the secretary in working with faculty and general public.

Upgrades of the décor, furnishings, and equipment of the two classroom/labs have been funded from money raised via grants and the Department of Labor TAACCCT Grant, in September of 2015. In addition, the program was awarded two Perkins Grants which are detailed below.

Perkins Grants

Perkins Grant Proposals were submitted and approved in 2015, 2016, 2017, and 2018 to purchase the needed supplies and equipment as well as the need to hire an instructor for implementation and instruction of the new simulation and critical care equipment, along with development of non-traditional methods of education (distance). In addition, with the continual advancement of critical care, and changes in basic competency standards for RRT practitioners, a neonatal/pediatric ventilator is essential for upgrades for both lab practice and classroom demonstration.

Innovative Technology Based Learning in Respiratory Care: $139,688 award:

The award period for the project is from July 1, 2015 to June 30, 2016 and the award number for the project is: KAP2015/16(1)-Tl-01 and should be referenced on all future correspondence and reports. These funds were expended and good received by June 30, 2016. A completion report was submitted in October, 2016.

Summary:

Specifically, for the purpose of this proposal, the use of simulation equipment integrated with high-tech medical devices will allow for the hands-on technical training that strengthens applied learning, critical thinking, and decision making, Outcomes that are based on both simulation training and actual direct patient care are essential to assuring a high quality outcome-based program such as Respiratory Care. Also, simulation training is encouraged as a means to meeting timely program objectives that cannot be accomplished solely with just direct patient care contact in the clinical setting. Finally, the addition of new RT simulation equipment and software will enhance the collaborative learning opportunities that can be pursued among other health professions and Health Science departments at KCC.

Development of Online Program for Respiratory Care: $113,242 award

The award period for the project is from July 1, 2016 to June 30, 2017 and the award number for the project is: KAP2016/l 7(1)-TI-01 and should be referenced on all future correspondence and reports. These funds were expended and good received by June 30, 2017. A completion was submitted October, 2017.

Summary:

The field of Respiratory Care has adopted internet based and online courses. The development of online/distance courses allows the field to provide educational opportunities for students that desire to either start a career in Respiratory Care, or expand their existing career through advanced degrees and credentialing. The Commission on Accreditation for Respiratory Care (CoaRC) allows any accredited Associate degree program to provide 25% of its curriculum via online and other distance education modalities. Additional approval of more of the ASRC curriculum to be provide via distance education requires an approval of a substantive change request by CoARC. Of the 400+ CoARC accredited programs in Respiratory Care in the US, only one is fully accredited to provide a fully online program. However, local hospitals in Hawaii have policies in place that do not allow students to practice in their facilities if they are enrolled in fully online programs that do not provide clinical instruction/coordination. This project supports

neighbor island students in obtaining their required education for professional credentialing in Respiratory Care utilizing distance education modalities and technology. CoARC is fully supportive of KCC adding distance education to its program.

Improve and Maintain 3Pl and 4Pl Skills Attainment and Student Placement in Laboratory Settings: $136,731 award

The award period for the project was from July 1, 2017 to June 30, 2018 and the award number for the project is: KAP2017/18(1)-TI-02 and should be referenced on all future correspondence and reports. These funds must be expended and good received by June 30, 2018. A completion report was submitted by October, 2018.

Summary:

The ASRC program received funding for training and certification for the ASRC program faculty for developing skill and expertise in using simulation equipment and continued development of distance education. In addition, the project provided an integration of simulation equipment procedures, and clinical simulations into existing ASRC curriculum for both the live classroom and distance education component. Also, training of faculty through ongoing professional development educational opportunities for the use of simulation equipment for continuing education offerings for local practitioners of Respiratory Care. Finally, the project addressed the continuing Perkins measure 5P1 Nontraditional Participation by continuing to explore and develop a distance program for Neighbor Island students who currently are unable to financially move to Oahu and participate in the classroom based program. The potential impact of non-traditional student enrollment is that the students will set a benchmark for 1P1-4P1.

On Campus Clinic To Improve And Maintain Core Perkins Indicators Across Six Healthcare Programs. Awarded $288,216

The award period for the project is from July 1, 2018 to June 30, 2019 and the award number for the project is: KAP2018/19(1)-T1-01 and should be referenced on all future correspondence and reports. These funds must be expended and goods received by June 30, 2019. A completion report is due on October 10, 2019.

Summary:

This project will expand the on-campus clinical learning experience developed by the OTA program to three days a week for the fall and spring semesters. This will provide the necessary time to develop an interdisciplinary patient care team learning environment for the six participating healthcare programs: OTA, PTA, RESP, MEDA, PN, and CHW. Implementing interdisciplinary education (IPE) is a strategy to address siloed program learning, student engagement and retention while at the same time addressing unmet healthcare service needs. Consultants from different professional backgrounds and students from different healthcare programs will learn together. The clinic is equipped to simulate the outpatient clinic environment. This clinic will provide therapeutic activity spaces, and develop assistive technology opportunities for students to experience working as part of an inter-professional team addressing diverse diagnostic and therapeutic processes. The clinic will also provide free quality health care to clients living in the community. Students will have the opportunity to select and carry out evaluations, establish short-term goals, formulate and adjust intervention plans, provide treatment, and document outcomes. In addition, they will re-evaluate and make discharge recommendations. Students will also observe diverse scopes of practices while working as part of a team in preparation for the clinical experiences in hospitals and other clinical settings

Community Connections

Laboratory and Clinical Internship

Students earning an Associate in Science degree are required to complete six courses with skill laboratory classes. The six courses are part of the 1320 hours required in clinical experience. This internship experience allows the students to apply the knowledge and skills learned in the laboratory to real life clinical settings set with a workforce environment. The Internships take place at the clinical facilities listed below in the program advisory board chart.

RC Program Advisory Committee Members 2019		
Committee Member	Facility	PAC Role
Aaron Koseki	FAC	KCC faculty
Abigail Kopf	STRAUB	Clinical Faculty
Arsenio Cachero	WAHIAWA	Clinical Faculty
Bob Vega	Program Director	KCC faculty
Brad Bransford	QMC	Manager
Brian Oka	COMMUNITY DME	Graduate
Bruce Alcaraz	STRAUB	Manager
Carol Yoshimura	SLEEP	Graduate
Christine Fukui, MD	Physician	Physician
Clarence Rodrigues	KAISER	Co-Chair
Danny Rausch	KAP	Clinical Instructor
David Chock	QMC	Clinical Faculty
Denise Wheatley	CASTLE	Clinical faculty
Diane Brenessel	QMC	Clinical Faculty
Dwight Watanabe	PALI MOMI	Clinical Faculty
Ed Borza	FAC	KCC faculty
Ehab Daoud, MD	Medical Director	Medical Director
Gary Wong	CCOH	Manager
Hajime Shimizu	KAP	Clinical Faculty
Huy Lam	PALI MOMI	Manager
Jo Ann Ikehara	PALI MOMI	Graduate
Jun Luga	KUAKINI	Graduate
Jung Kim	FAC	KCC faculty
Karen Boyer	KCC	KCC admin
Newton Wong	COMMUNITY DME	Public
Nhi Liu	QMC	Clinical Faculty
Ray Florentin	TRIPLER	Manager
Ric Custodio, MD	Physician	Physician
Rowena Acain	WAHIAWA	Clinical Faculty

Ryan Bellomy	KAP	Co-Chair
Sheila Kitamura	Dept Chair	KCC administration
Tammy Martin	CASTLE	Manager
Val Chang	COPD Assoc.	Public
Wendell Inouye	KULAMA MALAMA	Manager
Lynn Reinert	Kona Comm. Hospital	Depart. Manager
Darrel Mosher	Hilo Medical Center	Depart. Manager
Janet Crosier	North Hawaii Comm. Hospital	Depart. Manager
Eric Madamba	Kaiser Hospital Maui	Dept. Manager
Leeann Majewski	Wilcox Hospital, Kauai	Dept. Manager

Articulation Agreements

The career educational ladder offered via the Baccalaureate Degree in Applied Science with a concentration in Respiratory Care with UH West Oahu for KCC is based on an articulation agreement for students completing the KCC ASRC degree in Respiratory Care.

ASSOCIATE IN SCIENCE CURRICULUM, RESPIRATORY CARE (95 CREDITS)											
Course	Title	1-7 = Semester Schedule, starting Fall and ending in Summer P = Pre-program									
		Cr	P	P	1	2	3	4	5	6	7
General Education Requirements (15 credits) pre-program											
ENG 100 or ESL 100	Composition I Composition I	3	P								
MATH 100 or higher-level mathematics	Survey of Mathematics	3	P								
MICR 130	General Microbiology	3	P								
KCC AS/AH	AS Humanities Elective (100 level or higher)	3	P								
PSY 100	Survey of Psychology	3	P								
Other Pre-Program Courses (14 credits)											
CHEM 100 or higher-level chemistry course	Chemistry and Man	3		P							
HLTH 125	Survey of Medical Terminology	1		P							
MICR 140	General Microbiology Laboratory	2		P							
ZOOL 141	Human Anatomy and Physiology I	3		P							
ZOOL 141L	Human Anatomy and Physiology Laboratory I	1		P							
ZOOL 142	Human Anatomy and Physiology II	3		P							
ZOOL 142L	Human Anatomy and Physiology Laboratory II	1		P							

Respiratory Care Courses (66 credits)											
RESP 100	Respiratory Care Profession	1			•						
RESP 101	Sciences for Respiratory Care	3			•						
RESP 200	Cardiopulmonary Pathophysiology	3				•					
RESP 201	Cardiopulmonary Anatomy and Physiology	3				•					
RESP 202	Clinical Practice I	5				•					
RESP 203	Respiratory Care Techniques I	3				•					
RESP 211	Introduction to Mechanical Ventilation	2					•				
RESP 212	Clinical Practice II	5					•				
RESP 213	Respiratory Care Techniques II	3					•				
RESP 218	Cardiopulmonary Pharmacology	3					•				
RESP 222	Clinical Practice III	5						•			
RESP 229	Advanced Cardiac Life Support	2						•			
RESP 300	Case and Disease Management in Cardiopulmonary Care	3							•		
RESP 301	Neonatal/Pediatric Respiratory Care	3							•		
RESP 302	Clinical Practice IV	4							•		
RESP 312	Clinical Practice V	4								•	
RESP 313	Current Concepts in Cardiopulmonary Care	3								•	
RESP 316	Cardiopulmonary Diagnostics	3								•	
RESP 320	Respiratory Care Seminar I	4								•	
RESP 322	Clinical Practice VI	4									•
TOTAL		95									
The issuance of an AS degree requires that the student must earn a GPR of 2.0 or higher for all courses applicable toward the degree. Clinical Practice will be in affiliated community hospitals. A grade of "C" or higher must be maintained in all Respiratory Care courses in order for the student to continue in the Respiratory Care program. AS electives are listed on the "Degree and Certificate Programs" section.											

Bachelors of Applied Science – Respiratory Care
Link to Program info: https://westoahu.hawaii.edu/academics/degrees/applied-science/respiratory-care/

UH West O'ahu's Bachelor of Applied Science degree, with a concentration in Respiratory Care, is designed to supplement the technical training that a student receives in an accredited associate degree Respiratory Therapy program. Students develop job skills that are needed to excel in the industry, such as critical thinking and communication skills. The program also exposes students to the historical, cultural, and social context of the profession. In addition, courses in research and contemporary health care issues expand the depth in the students' applied health sciences knowledge base. UH West O'ahu courses are delivered both in-class and through distance learning instruction.

ASRC Program Accreditation

- The Commission on Accreditation for Respiratory Care (CoARC)] 1248 Harwood Road, Bedford, TX 76021-4244 Phone: (817) 283-2835.
- The Associate in Science in Respiratory Care at KCC received its 10-year continuing accreditation certificate from CoARC on November 21, 2015. The program accreditation is valid through November 30, 2025. The program will be notified 2-years in advance to prepare for the next upcoming continuing accreditation self-study and site visit to occur in 2025.
- The ASRC program maintains a high standard of achieving CoARC outcome measure success as evidenced by receiving the annual CoARC award for assuring that at least 90% of the graduates obtain the RRT credential from the National Board for Respiratory Care (NBRC) within 3-6 months

following graduation. This award has been given to the KCC ASRC program for the consecutive years of 2012 - 2018.

PART III: Curriculum Revision and Review

Program curriculum is reviewed every five-years and revised on a similar schedule. The Respiratory Care Program incorporates upper division (300 level) in the final year of the program. Students may attend UHWO for elective courses in the pursuit of the BAS-RC. See the approved Course Grid below:
Listing of courses reviewed during the previous three years. A minimum goal of 20% of existing courses is to be reviewed each year.

Assessed in 2015/2016	PLSO 1	RESP: 302
Assessed in 2016/2017	PLSO 1	RESP: 100
Assessed in 2013/2014	PSLO 1, 2, 3, 4, 5	RESP 200, 201, 202, 203, 211, 212, 213, 218
Assessed in 2014/2015	PLSO 3,4 and 5	RESP: 302
Assessed in 2015/2016	PLSO 1, 2, 3, 4 and 5	RESP: 100, 202, 213, 222, 229, 301, 302, 312,
To be assessed in 2019/2020	PLSO 1, 2, 3, 4 and 5	RESP: 101, 201, 202, 203, 212, 213, 300, 302, 313, 316, 320, 322,

The ASRC program underwent its 10-year continuing Program Accreditation Self Study and Site Visit during the Fall Semester, 2015. In preparation for the re-accreditation all Core Respiratory Care courses were assessed for appropriate curriculum content, program outcomes, and end of course student satisfaction. All courses have met satisfactory assessment. All courses within the ASRC core curriculum were reviewed prior to the November 2015 continuing accreditation site visit.

Courses Assessed: September 2015

Program SLO	Courses	Notes
Assimilate and apply relevant knowledge necessary to function competently as an advanced-level therapist.	All courses RESP 100, 101, 200, 201, 202, 203, 212, 218, 213, 211, 229, 222, 301, 302, 312, 316, 320, 322	Capstone courses are the final arbiter; RESP 320, 322. Final proof comes from results on National Board exams
Perform technical and clinical skills necessary to function competently as an advanced- level therapist.	All clinical courses RESP 202, 212, 222, 302, 312, 322	RESP 322 is the capstone clinical course
Demonstrate professional behavior skills necessary to function competently as an advanced-level therapist.	RESP 100, 202, 212, 222, 302, 302, 312, 320, 322	Clinical instructors and preceptors evaluate affective behavior daily, during Midterms and Finals in clinical courses offered each semester.
Communicate and interact appropriately and effectively	RESP 100, 101, 201, 202, 212, 222, 301, 302, 312, 322	Written and verbal communication is assessed in all these courses. All clinical courses require the student to communicate in written form (charting in the patient's electronic medical record) as well as verbally with other health care personnel.

Incorporate knowledge of multicultural perspectives to meet the needs of diverse populations.	All clinical courses RESP 202, 212, 222, 302, 312, 322	This is assessed in each clinical course in daily preceptor evaluations, Mid-term and Final instructor evaluations every semester.

PART IV: Survey Results (also see external review in Part VI.)

- Self-assessment instruments are secured assessment exams provided by the accrediting and credentialing body for the profession to assist students in passing the national credential exams.
- Clinical evaluations by program faculty and clinical instructors assure clinical, psychomotor, ethical, communication, and multicultural competence. Final assessment is done 6 months to 1 year post-graduation per our accrediting standards.
- Employer surveys and graduate surveys show true outcome assessment of the education provided in the program provided by the primary stakeholders of the program.
- Employer Satisfaction Survey: Outcome 100% indicated graduates were rated above the benchmark, 2017.
- The program has been a recipient of a recognition award from the CoARC for distinguished success in credentialing of our graduates. The program has a 3-year average of 100% of graduates earning the RRT credential and is among the top 5% of programs in the nation.
- NBRC CRT Credentialing Exam: Outcome 100% pass rate 2015-2017. RRT Credentialing Exam: Outcome 100% pass rate for 2015-2017.
- Graduate and Employer surveys: Outcome 100% Employers indicated satisfaction with professional behavior for 2015-2017, 100% of graduates indicated same for the same period.
- Graduate and Employer surveys: Outcome 100% of Employers and graduates indicate satisfaction with communication skills for 2015-2017.
- Graduate and Employer surveys: Outcome All respondents (100%) on both surveys indicate satisfaction with multicultural knowledge.

Part V: Quantitative Indicators for Program Review

University of Hawaii 3 years of ARPD Report
Link to ARPD:_
https://www.hawaii.edu/offices/cc/arpd/instructional.php?action=analysis&college=KAP&year=2017&program=82

Overall Program Health: **Healthy**

Workforce Alignment: Classification of Instructional Programs (CIP) -to- Standard Occupational Classification (SOC)
Respiratory Care Practitioner (and Technicians)
CIP Code = **51.0908**
29-1126 - Respiratory Therapists only

Demand Indicators		Program Year			Demand Health
		15-16	16-17	17-18	
1.	New & Replacement Positions (State)	31	29	33	Healthy
*2.	New & Replacement Positions (County Prorated)	29	27	30	
3.	Number of Majors	32	31	33	
3a.	Number of Majors Native Hawaiian	6	3	5	

3b.	Fall Full-Time	48%	45%	50%	
3c.	Fall Part-Time	52%	55%	50%	
3d.	Fall Part-Time who are Full-Time in System	3%	0%	0%	
3e.	Spring Full-Time	63%	60%	94%	
3f.	Spring Part-Time	37%	40%	6%	
3g.	Spring Part-Time who are Full-Time in System	0%	0%	0%	
4.	SSH Program Majors in Program Classes	935	887	1,040	
5.	SSH Non-Majors in Program Classes	55	44	0	
6.	SSH in All Program Classes	990	931	1,040	
7.	FTE Enrollment in Program Classes	33	31	35	
8.	Total Number of Classes Taught	26	27	29	

Efficiency Indicators		Program Year			Efficiency Health
		15-16	16-17	17-18	
9.	Average Class Size	12	10	11	Healthy
*10.	Fill Rate	90.4%	83.8%	86.6%	
11.	FTE BOR Appointed Faculty	4	4	4	
*12.	Majors to FTE BOR Appointed Faculty	8	7	8	
13.	Majors to Analytic FTE Faculty	11	8	8	
13a.	Analytic FTE Faculty	3	4	4	
14.	Overall Program Budget Allocation				
14a.	General Funded Budget Allocation				
14b.	Special/Federal Budget Allocation				
14c.	Tuition and Fees				
15.	Cost per SSH				
16.	Number of Low-Enrolled (<10) Classes	12	15	15	

Effectiveness Indicators		Program Year			Effectiveness Health
		15-16	16-17	17-18	
17.	Successful Completion (Equivalent C or Higher)	96%	95%	95%	Cautionary
18.	Withdrawals (Grade = W)	8	5	12	
*19.	Persistence Fall to Spring	91%	94%	94%	
19a.	Persistence Fall to Fall	94%	83%	74%	
*20.	Unduplicated Degrees/Certificates Awarded	1	15	13	
20a.	Degrees Awarded	1	15	13	
20b.	Certificates of Achievement Awarded	0	0	0	
20c.	Advanced Professional Certificates Awarded	0	0	0	
20d.	Other Certificates Awarded	0	0	0	
21.	External Licensing Exams Passed				
22.	Transfers to UH 4-yr	6	5	3	
22a.	Transfers with credential from program	5	5	3	

22b.	Transfers without credential from program	1	0	0	

Distance Indicators		Program Year		
		15-16	16-17	17-18
23.	Number of Distance Education Classes Taught	0	0	0
24.	Enrollments Distance Education Classes	n/a	n/a	n/a
25.	Fill Rate	n/a	n/a	n/a
26.	Successful Completion (Equivalent C or Higher)	n/a	n/a	n/a
27.	Withdrawals (Grade = W)	n/a	n/a	n/a
28.	Persistence (Fall to Spring Not Limited to Distance Education)	n/a	n/a	n/a

Perkins Indicators (2016 - 2017)		Goal	Actual	Met
29.	1P1 Technical Skills Attainment	92.92	92.86	Not Met
30.	2P1 Completion	51.51	92.86	Met
31.	3P1 Student Retention or Transfer	81.81	96	Met
32.	4P1 Student Placement	64.51	0	Not Met
33.	5P1 Nontraditional Participation	23	79.17	Met
34.	5P2 Nontraditional Completion	22.22	78.57	Met

Performance Indicators		Program Year		
		15-16	16-17	17-18
35.	Number of Degrees and Certificates	1	15	13
36.	Number of Degrees and Certificates Native Hawaiian	1	5	1
37.	Number of Degrees and Certificates STEM	0	0	0
38.	Number of Pell Recipients[1]	0	4	5
39.	Number of Transfers to UH 4-yr	6	5	3

PART VI: Analysis of the Program

Alignment with mission

The mission of the Respiratory Care Program is to follow the Health Education Unit as well as to serve the needs of the Respiratory community through the program mission by:

- Providing a respiratory care practitioner program that will meet the respiratory care personnel needs of the State of Hawaii. **Aligned with PSLO 1-5.**
- To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs). **Aligned with PSLO 1-5.**
- Providing advanced practitioner level respiratory care program. **Aligned with PLSO 1-5.**
- Providing a competency-based, success-oriented learning environment that is germane to local and

national standards for the practice of respiratory care. **Aligned with PLSO 1-5.**

- Providing students with a relevant curriculum so that they may achieve their career and personal goals. Through the CoARC accreditation process all courses are reviewed as well as an annual review of selected courses. CoARC found that all courses were satisfactory assessment based on review in 2015.
- Providing high quality faculty in the classroom, laboratory, and clinical areas. Through the CoARC accreditation process the classrooms, laboratory and clinical areas are reviewed. CoARC found that all program facilities meet the expected standards for an accredited program.
- Providing continuing education programs for the respiratory care community through the following strategies:
- Organize and provide comprehensive review classes for the CRT/RRT exams. Community members pay a fee for this
- Organize and provide review classes for specialty credentials in Respiratory care e.g., NPS, ACCS.
- Organize and provide seminars and conferences on respiratory care topics collaborating with the Hawaii Society for Respiratory Care
- Act in a consultative role in providing subject matter expertise to neighbor island departments for respiratory care diagnostic and treatment modalities.

Current Analysis

The program remained healthy overall during the 2015-2018 ARPD report periods for all program quantitative indicators.

Demand Indicators:

- For 2017-2018 the data shows that the program remains: "Healthy" and is meeting the state job placement needs.
- The State of Hawaii Industry Sector data indicates that there were 347 posted job postings in 2019 with the following employers hiring the majority of the therapists: Rotech Healthcare Inc., Apria Healthcare LLC, Hawai'i Pacific Health, Club Staffing, Inc., Queens Health System, and Kaiser Permanente and Med Travelers. It should be noted that the posted jobs were unique job advertisements and not actual positions. https://uhcc.hawaii.edu/workforce/job_posting.php?soc=29-1126. Also, the classification of Respiratory Therapy Technicians and Respiratory Therapists is used to determine job postings. However, the KCC ASRC program trains graduates to be Respiratory Therapists not Technicians, therefore data related to job growth, salaries, etc., should not be considered in this report.
- Occupation growth data shows that the hiring of Respiratory Therapists continues to grow with 347 additional jobs postings in 2019. During 2017-2019 the growth rate of Respiratory Care related jobs continued to grow at approximately 6%, with anticipated steady growth between 2017 and 2027 of 24%. https://uhcc.hawaii.edu/workforce/occupation_profile.php?soc=29-1126,
- Hawai'i's sector growth data trend follows the national benchmarks for the profession which also grew during 2017 and 2019 at about 5%. The sector data is consistent with trend data from the US department of Labor (careerone stop: for years 2012- 2020 shows an overall national job outlook projection for Respiratory Therapists annual job growth rate to be above average (15-21%) for the years 2012-2020.

Efficiency and Effectiveness Indicators:

- The program efficiency indicator shows that the program to be "Healthy"
- The program effectiveness indicator shows the program to be "Cautionary." It should be noted that the data for the ARPD for line item #18 is not accurate as the actual attrition rate for the program based on accreditation reports is between 5-6% overall for the years of 2015-2018. Actual program retention and on time graduation rates were between 96-97% for the same time period of 2015-2018.
- The program continues to demonstrate high quality outcomes based on reported program

accreditation outcome measures for: graduation on time (>97%), low attrition (>10%, high retention (>90%), job placement (>95%), and high pass rates on national credentialing exams (>97%).

Distance Indicators:

- The development and implementation of online, distance education components to the existing curriculum is currently in place utilizing a multi-year Perkins grant.
- First time enrollees of fully online courses began in fall 2017. Line item #23 is "0" on this APRD and is not accurate since at least one student has been taking online/hybrid courses since fall 2017.

Perkins Core Indicators:

- Of the five core indicator goals, four were met showing that the program is functioning to meet the labor force demand as well as train students to become skilled practitioners.
- Indicator 1P1 was not met by a very slim margin of 0.06. And indicator 4P1 showed a value of "0" which is inaccurate since the placement of graduates in the local job market exceeds 95% for 2015-2018 based on data received obtained from local employers of graduates for accreditation report purposes.

PART VII: Tactical Action Plan

The Respiratory Care Practitioner program action plans are guided by the college's 2015-2021 Strategic Plan Directions and the programs three year comprehensive program review (2016-2019).

1. For 2017-2019, the program will maintain the program skill attainment rate for1P1 and to better prepare students for clinical placements 4P1, through participation in the OTA program on campus clinical experience and simulation scenarios which are to be part of the curriculum.
2. While the program has met its goal of "placement" for Perkins Indicator 4P1, the program will strive to be more effective and realize an increase of 5% cumulative over three years. Use of sophisticated simulation equipment, training, and clinical simulation experience will enhance graduate preparedness to assume full time positions in acute care within local Hawaii hospitals. In addition the use of new simulation equipment will allow Program faculty to maintain ongoing training to meet this objective through their annual continuing education programs.
3. The AS degree in Respiratory Care at KCC is the only accredited Respiratory Care Program in the state of Hawai‘i. There continues to be a perceived need to offer the program for neighbor island students. Current program accreditation standards will allow for up to (24) semester credits of didactic coursework to be taught through distance education without a need to seek a substantive change approval for the program. Based on the above data, the faculty will continue development of distance education coursework within the ASRC program at KCC will benefit neighbor island students by:
    - Providing distance education options for the ASRC program at KCC to address Perkins core indicators, 5P1, and 5P2.
    - Reducing expense in travel and living accommodations needed for relocation to Oahu to complete the ASRC program.
    - Increase flexibility in scheduling coursework with other personal and professional responsibilities.
    - Addresses Perkins Core Indicators 1P1, 2P1 and 4P1 student placement as part of the College benchmarks
    - Distance educational options can also benefit other student groups in the south Pacific such as those in American Samoa which KCC does have an articulation agreement in place.
    - Invite new members to the Advisory Board to expand financial support to the program and to be informed of current job openings.

PART VIII: Resource and Budget Implications

CoARC Resources Assessment Matrix for Annual Accreditation Report, 2017

#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENT SYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES	ACTION PLAN AND FOLLOW-UP
1	PERSONNEL RESOURCES	To ensure the program has sufficient number of effective laboratory, classroom, and clinical instructors. (2.06/2.10/2.11/2.13)	Student resource surveys Personnel resource surveys	05/2017 05/2017	Students 28/28 indicated above cut score on effectiveness. All respondents indicated satisfaction with teaching effectiveness above the cut score. Personnel 11/11 indicated the same. For Faculty numbers: All except one indicated numbers above the cut score (<3) in all 3 areas. N/A	Program presently is fully staff with qualified faculty and lecturers. We have worked with the University/College Administration to negotiate paid preceptor positions to augment the faculty providing clinical instruction and will be ongoing at our primary clinical facilities used for 200 level clinical courses, and specialty clinical rotations, i.e., neonatal.
2	FACILITIES	To provide adequate classroom, laboratory and accommodations to ensure effective instruction. (2.01)	Student resource surveys Personnel resource surveys	05/2017 05/2017	Students (28/28) rated facilities above the cut score of 3 or greater. The college has expanded its simulation suite and equipment on campus, and time and simulation instruction is readily available to RC students as needed for both lab and clinical simulation exercises. Additional use of simulation for advanced mechanical	The department continues working with University/College to develop and update long-term redesign of the building and facilities to incorporate shared lab and clinical simulation facilities. In addition, we are collaborating with EMS and Nursing faculty to share the use of new simulation equipment and lab 2) N/A

					ventilation will be available through Perkins grants for the 2017 school year. Personnel (11/11) rated the facilities above the cut score.	

#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENT SYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES	ACTION PLAN AND FOLLOW-UP
3	LABORATORY RESOURCES	To provide students with the equipment and exercises that will adequately prepare them for clinical practice. (2.01/4.08)	Student resource surveys Personnel resource surveys	05/2017 05/2017	Students: (28/28) scored the amount of lab equipment at or above the cut score of 3 or greater. We are able to maintain existing critical care equipment over the last couple year as well as manikins, test lungs and other vital equipment. New simulation equipment and classroom space acquired for use within all the Health Science programs. Personnel (11/11) were above cut score for equipment and supplies. 3)	Continue to, review, replace and upgrade clinical lab equipment on an annual basis RC program mangers (PD, DCE) are working collaboratively with the manager of the Simulation lab to provide ongoing simulation access for clinical simulation and laboratory activities throughout the academic year for both 1st and 2nd year RC students
4	ACADEMIC SUPPORT RESOURCES	To support student needs for supplemental reading, electronic and print reference materials, and research and computer resources. (2.01/2.15/5.11)	Student resource surveys Personnel resource surveys	05/2017 05/2017	Students (28/28) rated this above the cut score. The college continues to move forward with having more non-printed resources available for students through digital media, computer and web-based resources.	We make ongoing efforts to improve electronic resources and software at the expense of traditional books. This trend will continue, however, all textbooks are available in the program's in-house library along with other resources. Computers and

					Personnel (11/11) rated above the cut score. Clinical faculty note that access to academic resources in the clinical setting is available via web based sources, and medical libraries. Various RC	various software are available for student and faculty use within the classrooms and lab space. Safety and

#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENT SYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES	ACTION PLAN AND FOLLOW-UP
					Departments do make their resources available for student used during clinical rotations.	Security issues limit lab use to business hours, however, some weekend access can be scheduled as needed. 2)
5	CLINICAL RESOURCES	To provide a sufficient variety of tasks and procedures for instruction to allow for student mastery of the program's required clinical competencies. (2.13/3.12/4.08/4.09)	Student resource surveys Personnel resource surveys	05/2017 05/2017	All students (28/28) rated clinical resources above the cut score. Personnel (11/11) rated clinical resources above the cut score	All students train at our 2 largest civilian hospitals for the first 2 semesters of clinical training. We continue to utilize paid clinical faculty and maintain 4:1 student: instructor ratios. Additional clinical instructor assistance is provided in each clinical affiliate through voluntary preceptors assigned by affiliate department managers. Clinical rotations are spread between all active clinical affiliates so that no sites have more than 1-2 students per rotation. Also, no more than 12 students are assigned to clinical shifts on a day to day basis. Clinical rotations also include
#	RESOURCE	PURPOSE (S) (Standard)	MEASUREMENT SYSTEM	DATE (S) OF MEASUREMENT (mm/yyyy)	RESULTS AND ANALYSES	ACTION PLAN AND FOLLOW-UP

						Specialty areas such as: neonatal/pediatrics, pulmonary function, sleep, and home care rotations
6	FINANCIAL RESOURCES	To provide adequate fiscal support for the retention of personnel and the acquisition and maintenance of equipment and supplies. (2.01)	Budget review Personnel resource surveys	05/20176 05/2017	all students 28/28 rated above the cut score Personnel (11/11) rated above the cut score. The college utilizes a state university system that requires considerable time and resources by the program managers to submit and receive approval for human operational resources. Grant funding is used to provide additional resources for new project such as simulation equipment and replacement ventilators.	N/A Working with the university system for annual and strategic planning and budgeting continues to be part of the ongoing process necessary to assure that both essential equipment, supplies, and personnel are available for program operations. In addition successful grant writing is used to obtain needed equipment for projects and replacement equipment such as mechanical ventilators
7	PROGRAM SATELLITES ONLY	To ensure that resources, services, and faculty at the satellite campus (es) are adequate and equivalent to those on the main campus. (1.05/2.14)	Student resource surveys Personnel resource surveys	/ /	N/A N/A	1) NA 2) NA