

PROGRAM REVIEW

**For Occupational Programs
Implemented Under the Provisions of Series 37 of the
West Virginia Council for Community and Technical College Education**

Institution: Southern West Virginia Community and Technical College
Program: Respiratory Care Technology, Associate in Applied Science

March 2017

PROGRAM REVIEW
Southern West Virginia Community and Technical College
Programs With Specialized Accreditation

Summary of Findings
2016-2017

Program Name: Respiratory Care Technology, Associate in Applied Science
Hours Required for Graduation: 60

I. Synopses of significant findings, including findings of external reviewer(s)

A. Adequacy

1. The program quality is continuously monitored using several methods of evaluation.
2. The program has highly qualified faculty.
3. The program has established goals and objectives.
4. The entrance abilities for the students are within community college standards.
5. Students rate program quality at or above the minimal acceptable standards set forth by the Committee on Accreditation for Respiratory Care program.
6. A positive outlook for employment possibilities for graduates.
7. Strong enrollment numbers within the program.
8. The program is accredited.

Conclusion: The program meets minimum adequacy requirements.

B. Viability

1. The program continues to attract students in the underserved area of Southern West Virginia and eastern Kentucky.
2. Enrollment trends remain strong and grow with each cycle.
3. Employment opportunities support the need for programs.

Conclusion: The program meets minimum viability requirements.

C. Necessity

1. The program meets a documented need for program graduates in the State and region.
2. The graduates find successful gainful employment.
3. The program has an advisory committee that meets annually.

Conclusion: The program meets minimum necessity requirements.

D. Consistency with Mission

1. The program supports the mission and vision of the institution.
2. The program and core courses support the compact.

Conclusion: The program is consistent with the mission of the college.

II. Plans for Program Improvement, Including Timeline

The program will expand admissions by expanding the program to the Wyoming Campus of Southern West Virginia Community and Technical College. The expansion will be implemented in the fall semester of 2017. This expansion meets the industry need for southern West Virginia and eastern Kentucky.

III. Identification of Weaknesses or Deficiencies from the Previous Review and the Status of Improvements Implemented or Accomplished

The program was reviewed in 2011-2012. The program has many strengths and identified weak areas for improvement. One weakness identified at that time was a lack of laboratory space within the program itself. Since then the college added a Respiratory Care Technology laboratory on the Williamson Campus. A strength of the Respiratory Care program is that program graduating classes continue to perform consistently above CoARC's threshold of accreditation standards and have never fallen into a category of unsatisfactory results.

IV. Five Year Trend Data on Graduates and Majors Enrolled

The program continues to attract students in the underserved areas of Southern West Virginia and Eastern Kentucky. The location of the Respiratory Care Technology program on the Williamson Campus of Southern helps to attract a wide array of student population that serves all the area's needs. Recent trends in enrollment for Allied Health programs remain strong and are encouraging for future opportunity in the health care setting. Respiratory Therapy is no exception to that opportunity. Upon initial evaluation for the RCT program the advisory council concluded that over 50% of the population of Respiratory Therapists in Southern's serving area would reach retirement age within the next ten years. That evaluation was conducted over five years ago and today has been surpassed. The turnover rate for Respiratory Therapists has reached all-time highs in the Southern West Virginia area due to illness and aging populations of the current health care providers. This need to replace aging staff has created vast opportunities of employment throughout the region and continues to show signs of opportunity over the next 10-15 years. Government statistics show that the field of Respiratory Care will increase in need by 19% over the next 10 years. Past studies have shown that increased occupational lung injuries and high incidence of smoking rates in the area have proven that Southern West Virginia and eastern Kentucky continue to be at high risk for pulmonary impaired patients, therefore require a higher amount of Respiratory trained staff among their healthcare provider list. This need for qualified

and trained staff support the continued need for the Respiratory Care Technology program at Southern. Geography has been a barrier for this industry for many years. Until the program's initiation in 2007 students would have to drive over 150 miles a day to obtain an education in Respiratory Care. Many would leave this area and choose to stay in the higher populated cities of Charleston and Huntington rather than staying close to home. For that reason many hospitals in the underserved rural areas of Logan and Williamson were not able to compete with bigger hospitals for staff and had trouble locating qualified Respiratory Therapists for their facilities. The Respiratory Care Technology program has been able to successfully meet the needs of the communities in the rural areas by training local students and allowing them to work close to home. Currently the program has seen a very low attrition rate which has been consistently maintained at an average of 23% over the past four years and has had a job placement rate of 93% over the past four years. Many students continue to work in their home areas after completion of this program. Students and employers are asked to survey the program after the graduates have been in their facility at least six months.

V. Summary of Assessment Model and How Results Are Used for Program Improvement

Students enrolled in associate degree programs are expected to participate in institutional, program, course and/or services assessment activities. This participation will most often be in the form of tests to determine the degree of student academic achievement within the basic skills, the general education core curriculum, or the academic major. Minimum standard goals have been identified and the faculty work to ensure the goals of the Respiratory Care Program are achieved upon completion of the two year program. The goals include preparing students to function and interact as Respiratory Therapists, as well as gain successful employment in their chosen field. These programmatic goals cover the three learning domains encountered during the education of the Respiratory Therapy student. These domains include the cognitive, psychomotor, and affective learning domains.

VI. Data on Student Placement

Currently the program has seen a very low attrition rate which has been consistently maintained at an average of 22% over the past four years and has had a job placement rate of 93% over the past four years. Many students continue to work in their home areas after completion of this program. Students and employers are asked to survey the program after the graduates have been in their facility at least six months.

VII. Final Recommendation Approved by the Governing Board

See the attached resolution for Board of Governors final recommendation and signatures.

PROGRAM REVIEW
Southern West Virginia Community and Technical College
Programs With Specialized Accreditation
2016-2017

Program Name: **Respiratory Care Technology, Associate in Applied Science**
Date of Last Review: **2011-2012**

I. Program Description

The Respiratory Care Technology Program, is a two-year Associate in Applied Science degree program designed to provide highly trained respiratory care technicians for the local and regional healthcare workforce.

The Respiratory Care Technology Program of Southern West Virginia Community and Technical College is designed to meet the growing needs of the healthcare industry focusing on Respiratory Therapy. Respiratory Therapists work in all types of healthcare settings to evaluate, treat, and care for patients with breathing or other cardiopulmonary disorders. Practicing under the direction of a physician they will assume primary responsibility for all respiratory care therapeutic treatments and diagnostic procedures. The graduate of the Respiratory Care Technology program will be eligible to sit for the Certified Respiratory Therapist Exam and the Registered Respiratory Therapist exam offered by the National Board of Respiratory Therapy providing all eligibility requirements are met.

Students who complete the 60 credit hours required will receive an Associate in Applied Science degree. The minimum of an Associate degree is required by the National Board of Respiratory Care to be eligible for admission to the examination process. Minimum standard goals have been identified and the faculty work to ensure the goals of the Respiratory Program are achieved upon completion of the two year program. The goals include preparing the students to function and interact as Respiratory Therapists, as well as, gain successful employment in their chosen field. These programmatic goals cover the three learning domains encountered during the education of the Respiratory Therapy student. These domains include the cognitive, psychomotor, and affective learning domains.

II. Specialized Accreditation Information

Official accreditation by the Commission on Accreditation of Respiratory Care programs (CoARC) is a requirement of the National Board of Respiratory Care (NBRC) who administers the National Certification and Registry credentialing exam. Each state requires the Respiratory Therapist to be licensed by the NBRC before allowing the Respiratory Therapist to hold a state license. The Respiratory Care Technology Program at Southern WV Community and Technical College now holds and maintains the accreditation status of Continuing Accreditation awarded by the

COARC initially in July of 2011. Continuing Accreditation is conferred when an establishment, currently accredited program demonstrates continued compliance with CoARC standards following submission of a continuing self-study report and completion of an on-site visits. The Respiratory Program completed a self-study and the status of “Continuing Accreditation” was reaffirmed. The program is not required to complete another self-study or site visit until the year 2020. According to CoARC Policy the Respiratory Care Technology Program is approved a maximum annual enrollment of 20 students per calendar year or less. The Respiratory program at Southern adheres to CoARC policy for admission capacity.

III. Program Statement on Adequacy, Viability, Necessity, and Consistency with College Mission

A. Adequacy

The overall program quality is continuously monitored using several methods of evaluation. Student resource surveys are conducted annually which measure the student’s perception of the ability, needs, and outcomes of the Respiratory Care Technology Program. The laboratory space, classroom, and research capacities are among the evaluation process. Respiratory students have continually rated the program quality at or above the minimum acceptable standards set forth by the Committee on Accreditation for Respiratory Care programs. The program facilities and educational outcomes are measured using a standard 5-point Likert scale.

The program has also completed a process of accreditation awarded by the State of West Virginia Board of Respiratory Care (WVBORC). This process is only approved on an initial basis and is reviewed as deemed necessary by the West Virginia Board of Respiratory Care (WVBORC). The WVBORC found the Respiratory Care Technology Program to be in full compliance of the minimum standards set forth by the COARC and WVBORC for educating Respiratory Therapy students in the state of WV.

1. Curriculum

The curriculum has been designed to first provide a knowledge base through support courses and introductory respiratory care theory so the student will be able to successfully complete more complex courses of study. The more complex succession of courses moves into the psychomotor stage of learning where the student actually begins the practice phase of their education in the skills laboratory. Integrating the course work from the beginning of the first semester, the student is introduced into the clinical setting where they can begin the affective phase of learning. The student is able to apply what they have learned and practice to see the whole picture come together in an actual patient situation. After successful completion of the program the students should be able to meet the minimum expectations of the program goals. For a listing of the Respiratory Care Program curriculum see Appendix I.

2. Faculty

Southern currently employs two full time faculty who carry teaching loads in the Respiratory Care Technology program. The program has a full time program coordinator and full time clinical instructor. Several highly trained Respiratory Therapists within the community work as Adjunct Faculty when the need arises for extra help in didactic or clinical portions of the program. Faculty receives an annual evaluation of performance in all aspects of their teaching requirements. This process ensures that the faculty member is providing the knowledge base that is required to allow the students the opportunity to meet the minimum expected goals of the Respiratory Care Technology (RCT) program. Students are evaluated using the standards of cognitive, affective, and psychomotor learning domains by evaluation of knowledge through oral, written, and hands on assessment in the classroom, laboratory, and clinical setting. For a list of program faculty and their individual qualifications see Appendix II.

3. Students

Respiratory Care Technology students go through a rigorous process of admission standards. Applicants must be eligible for college level English and Math and must have completed the ACT exam. Successful applicants typically score a subject total cumulative of 70 or greater on the ACT exam and will have at least a 2.0 cumulative GPA.

Students accepted into the Respiratory Care Technology program have varying degrees of ability. Even though students meet the above entrance requirements, students' abilities vary based on their individual backgrounds in science, biology, chemistry, math, and other areas. The average ACT composite score for students accepting positions in the Respiratory Care Technology program for last five years is 18.98. Also, a student's dedication and effort while in the Respiratory Care Technology program plays an important part in their success.

4. Resources

a. Financial

The Respiratory Care Technology department receives an annual budget from the college to operate the program. The budget has been sufficient to provide updated computer technology, software simulation programs, audio/visuals or new equipment, as well as purchase disposable laboratory supplies, oxygen tanks, and required faculty travel for accreditation purposes. Library sources continue to improve and currently meet requirements of the COARC.

b. Facilities

Adjunct clinical instructors are also provided to our department per the requirement of several clinical facilities. The Respiratory Care Program presently utilizes seven facilities to provide clinical experiences for Respiratory students. Students receive excellent training and on-site supervision from personnel working for these affiliates and Southern Respiratory Care faculty. The facilities in West Virginia and Kentucky include: Charleston Area Medical Center, Logan Regional Medical Center, Saint Francis Hospital, Thomas Memorial Hospital, Williamson Appalachian Regional Hospital, Williamson Memorial Hospital, Pikeville Medical Center.

5. Graduate and Employer Satisfaction

The graduation percentage from 2014 thorough 2016 is 78%. For specific data related to program applicants, enrollments, and graduates refer to Appendix III.

6. Assessment Information

In an effort to provide more effective educational services for students and faculty, Southern West Virginia Community and Technical College's assessment program helps identify a student's academic strengths and weaknesses. Accurate assessment is essential to the process of appropriate course placement for entering students. Entrance assessment provides information to assist in assessing present level of competencies, placing students in appropriate courses and developing instructional programs to meet the needs of entering students.

Students enrolled in associate degree programs are expected to participate in institutional, program, course and/or services assessment activities. This participation will most often be in the form of tests to determine the degree of student academic achievement within the basic skills, the general education core curriculum, or the academic major. As part of the academic calendar, a testing day is established during which students will be required to participate in assessment activities.

Assessment activities include entrance assessment for course placement as described in the section labeled "entrance abilities." Final evaluation occurs when the students take the appropriate national certification exam each year. Assessment Results are listed in Appendix IV.

7. Previous Program Reviews

The Respiratory Care Technology Program completed a Program Review for 2011-2012. The program was continued with no corrective action.

8. Advisory Committees

The Respiratory Care Technology program has an official Advisory Committee who meets at least once per year to discuss and review the overall quality, performance, and outcomes of the program. The program goals are reviewed annually to ensure the program remains in line with the foundation of the programs existence. The RCT program maintains a successful attendance and interest of committee members throughout the existence of the program.

9. Strengths/Weaknesses

The Respiratory Care Technology program has many strengths and has identified weak areas for improvement. One strong point of the RCT program is that the previous graduating classes have performed consistently above COARC’s threshold of accreditation standards and have never fallen into a category of unsatisfactory results. One weakness identified is the lack of laboratory space within the program itself. Current labs schedules are divided so each student has an opportunity to master each competency without impair.

B. Viability

The program continues to attract students in the underserved area of southern West Virginia and eastern Kentucky. The location of the Respiratory Care Technology program on the Williamson campus of Southern helps to attract a wide array of student population that serves all the area’s needs. Recent trends in enrollment for Allied Health programs remain strong and are encouraging for future opportunity in the health care setting. Respiratory Therapy is no exception to that opportunity. The past three admission cycles have continued to grow with each cycle and opportunities of employment have continued to support the need for more therapists in the area.

FALL	APPLICANTS	ENROLLED	GRADUATES
2014	154	17	15
2016	162	20	14
TOTAL	316	37	29

The graduation percentage from 2014 thorough 2016 is 78%. For specific data related to program applicants, enrollments, and graduates refer to Appendix III.

C. Necessity

Upon initial evaluation for the RCT program the advisory council concluded that over 50% of the population of Respiratory Therapist’s in Southern’s serving area would reach retirement age within the next ten years. That evaluation was conducted over five years ago and today has been surpassed. The turnover rate for Respiratory Therapists has reached all-time highs in the

Southern WV area due to illness and aging populations of the current health care providers. This need to replace aging staff has created vast opportunities of employment throughout the region and continues to show signs of opportunity over the next 10-15 years.

Government statistics show that the field of Respiratory Care will increase in need by 19% over the next 10 years. Past studies have shown that increased occupational lung injuries and high incidence of smoking rates in the area have proven that Southern West Virginia and eastern Kentucky continue to be at high risk for pulmonary impaired patients, therefore require a higher amount of Respiratory trained staff among their healthcare provider list. This need for qualified and trained staff support the continued need for the Respiratory Care Technology program at Southern.

Geography has been a barrier for this industry for many years. Until the program's initiation in 2007 students would have to drive over 150 miles a day to obtain an education in Respiratory Care. Many would leave this area and choose to stay in the higher populated cities of Charleston and Huntington rather than staying close to home. For that reason many hospitals in the underserved rural areas of Logan and Williamson were not able to compete with bigger hospitals for staff and had trouble locating qualified Respiratory Therapists for their facilities. The Respiratory Care Technology program has been able to successfully meet the needs of the communities in the rural areas by training local students and allowing them to work close to home.

Currently the program has seen a very low attrition rate which has been consistently maintained at an average of 23% over the past four years and has had a job placement rate of 93% over the past four years. Many students continue to work in their home areas after completion of this program. Students and employers are asked to survey the program after the graduates have been in their facility at least six months.

D. Consistency with Mission

The Respiratory Care Technology program continues to work with other programs throughout the college to provide a quality education to the students served. Like many other programs offered in Allied Health, the Respiratory Care Technology program allows the student to take flexible class scheduling opportunities for many of the support courses required even before acceptance into the actual program itself. The support courses are a general mix of education requirements set forth by the mission of the college.

The curriculum supports an array of educational opportunity including critical thinking, oral and written communications, mathematical skills, information technology, science, and cultural, artistic and global perspectives. This array of educational opportunity helps to achieve a well-rounded education for any student who seeks the Associate of Applied Science degree in Respiratory

Care Technology. The ability to provide the essential skills required of the Southern RCT student support the overall mission of a quality education while promoting lifelong learning.

Discontinuance of the program would have a negative impact on the entire community served by Southern. Students would again find themselves leaving the area to gain an education in Respiratory Therapy. The mission of Southern includes providing accessible educational opportunities to students and without the RCT program many would not have the accessibility to gain the education they so deserve. The healthcare industry would suffer from the lack quality trained individuals to work in their facilities due to a historical deficit of Respiratory Therapists willing to relocate into Southern's area of service.

IV. Recommendation

It is recommended that the Respiratory Care Technology program at Southern West Virginia Community and Technical College continue at the current level of activity without corrective action.

Appendix I Curriculum

Course	Course Title	Credit Hours
	General Education Courses	
AH 200	Health Care Ethics and Law	1
BS 124	Human Anatomy and Physiology I	4
BS 125	Human Anatomy and Physiology II	4
AH 203	Communication Skills for the Health Care Profession	1
CS 103	Introduction to Applications	1
EN 101	English Composition I	3
PY 218	Life Span Developmental Psychology	3
	Major Courses	
RC 101	Assessment of the Cardiopulmonary Patient	4
RC 102	Respiratory Skills I	4
RC 103	Respiratory Sciences	3
RC 104	Respiratory Skills II	4
RC 106	Cardiopulmonary Pathology	2
RC 110	Cardiopulmonary Pharmacology	3
RC 120	Clinical Rotation I	1
RC 121	Clinical Rotation II	1
RC 122	Clinical Rotation III	1
RC 220	Clinical Rotation IV	2
RC 221	Clinical Rotation V	1
RC 201	Cardiopulmonary Diagnostics	3
RC 210	Mechanical Ventilation	4
RC 211	Mechanical Ventilation II	4
RC 230	Neonatal and Pediatric Therapy	3
RC 232	Respiratory Care Profession	3
Total Credit Hours Required for Graduation		60

**Respiratory Care Technology, Associate in Applied Science
60 Semester Hours**

First Year-First Semester Credit Hours

Dept.	Course No.	Title	
RC	101	Assess the Cardiopulmonary Patient	4
RC	102	Respiratory Skills I	4
RC	110	Cardiopulmonary Pharmacology	3
RC	120	Clinical Rotation I	1
BS	124	Anatomy and Physiology I	<u>4</u>
Total Semester Hours			<u>16</u>

First Year-Second Semester

Dept.	Course No.	Title	Credit Hours
BS	125	Anatomy and Physiology II	4
RC	104	Respiratory Skills II	4
RC	106	Cardiopulmonary Pathology	2
RC	121	Clinical Rotation II	1
RC	103	Respiratory Sciences	3
EN	101	English Composition I	3
CS	103	Introduction to Applications	<u>1</u>
Total Semester Hours			<u>18</u>

First Year-Summer Term

Dept.	Course No.	Title	Credit Hours
RC	122	Clinical Rotation III	<u>1</u>
Total Semester Hours			<u>1</u>

Second Year-First Semester Credit Hours

Dept.	Course No.	Title	
AH	203	Communication for the HC Provider	1
PY	218	Life Span Psychology	3
RC	201	Cardiopulmonary Diagnostics	3
RC	210	Mechanical Ventilation I	4
RC	220	Clinical Rotation IV	<u>2</u>
Total Semester Hours			<u>13</u>

Second Year-Second Semester Credit Hours

Dept.	Course No.	Title	
RC	211	Mechanical Ventilation II	4
RC	230	Neonatal and Pediatric Therapy	3
RC	232	Respiratory Care Profession	3
AH	200	Health Care Ethics and Law	1
RC	221	Clinical Rotation V	<u>1</u>
Total Semester Hours			<u>12</u>

Total Program Hours: 60

Appendix II Faculty Data

FACULTY DATA SHEET

(No more than **TWO** pages per faculty member)

Name Steven Hall Rank Coordinator/Assoc. Professor

Check one: Full-time X Part-time _____ Adjunct _____

Highest Degree Earned: MBA
 Date Degree Received: December 2008
 Conferred by: West Virginia University
 Area of Specialization: Business Administration

Professional registration/licensure: 14
 Years of employment at present institution: 5
 Years of employment in higher education: 10
 Years of related experience outside higher education: 20
 Non-teaching experience: 10

To determine compatibility of credentials with assignment:

- (a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught). For each course include year and semester taught, course number, course title and enrollment.

<u>Year/Semester</u>	<u>Course Number & Title</u>	<u>Enrollment</u>
Spring 2017	RC 102, RC 121	15
Fall 2016	RC 110, RC 121	18
Spring 2016	RC 211, RC 221	15
Fall 2015	RC 210, RC 220	15

- (b). If degree is not in area of current assignment, explain.
 Faculty must hold a valid state license, valid NBRC RRT certification, and hold a minimum of a baccalaureate or higher. Graduate Degree is not available in the field of Respiratory Therapy.
- (c). Identify your professional development activities during the past five years.
 WVSRC Winter and Fall Conference yearly, AARC Summer Forum July, 2007 and 2010

FACULTY DATA SHEET

(No more than **TWO** pages per faculty member)

Name Stephanie Daniel Rank Instructor

Check one: Full-time X Part-time _____ Adjunct _____

Highest Degree Earned: BA

Date Degree Received: August 2008

Conferred by: Marshall University

Area of Specialization: Regents BA

Professional registration/licensure: 23

Years of employment at present institution: 10

Years of employment in higher education: 10

Years of related experience outside higher education: 23

Non-teaching experience: 17

To determine compatibility of credentials with assignment:

- (a) List courses you taught this year and those you taught last year: (If you participated in team-taught course, indicate each of them and what percent of courses you taught). For each course include year and semester taught, course number, course title and enrollment.

<u>Year/Semester</u>	<u>Course Number & Title</u>	<u>Enrollment</u>
Spring 2017	RC 104, RC 120	15
Fall 2016	RC 102, RC 121	18
Spring 2016	RC 230, RC 221	15
Fall 2016	RC 201, RC 220	15

- (b). If degree is not in area of current assignment, explain.
Faculty must hold a valid state license, valid NBRC RRT certification, and hold a minimum of a baccalaureate or higher.
- (c). Identify your professional development activities during the past five years.
WVSRC Winter and Fall Conference yearly, AARC Summer Forum July, 2007 and 2010

Appendix III
Program Enrollment and Graduates

Fall 2016

Applicants	162
Enrolled	20
Graduates	14

Fall 2014

Applicants	154
Enrolled	17
Graduates	15

Percentage Passage Rates

Year	Number of Students taking exam	Number of students passing exam	Percentage of students passing exam
2016	15	14	93%
2014	14	13	93%

Appendix IV
Assessment Information

The RCT program students have not participated in a formal college wide assessment process as the plan has been under development with the College Assessment Committee. However, students did participate in the Assessment Showcase held in 2016. Students demonstrated learned competencies throughout the display and worked in an integrated environment with other disciplines throughout the college.