

## Respiratory Care Therapist++

### Associate in Applied Science

Minimum of 68 credit hours

Studying to become a Respiratory Care Therapist gives you the opportunity to work under the supervision of a physician to deliver direct patient care in hospitals, nursing homes, skilled nursing facilities, laboratories, doctors' offices and homes. An associate degree in the Respiratory Care Therapist program will lead you directly into the job market. This program is offered through a contractual arrangement between Oklahoma City Community College and Francis Tuttle Technology Center. You must first apply for admission to the program through Francis Tuttle Technology Center. After graduation, you will need to apply for state licensure in Oklahoma as a Registered Respiratory Care Therapist through the State Board of Medical Examiners.

### Course Sequence

Course ID	Course Name	Credits	Type	Min Gd
<b>Suggested Summer Semester</b>				
ENGL 1113	English Composition I	3	Gen Ed	
BIO 1314	Human Anatomy and Physiology I	4	Support	
<b>Suggested Freshman 1st Semester</b>				
CHEM 1103	Chemistry Around Us	3	Gen Ed	
SCL 1001	Success in College and Life	1	Life Skills	
HIST 1483	U.S. History to 1877	OR	Gen Ed	
HIST 1493	U.S. History 1877 to Present	3	Gen Ed	
BIO 1414	Human Anatomy and Physiology II	4	Support	
OSRHE1	Osrhe Approved General Education Communications Or English Course	3	Gen Ed	
<b>Suggested Freshman 2nd Semester</b>				
MATH 1483	Functions and Modeling*	OR	Support	
MATH 1503	Contemporary Mathematics	3	Support	
PSY 2233	Ethics in Health and Human Services	3	Gen Ed	
SOC 2143	Race and Ethnicity in the U.S.	3	Gen Ed	
POLSC 1113	American Federal Government	3	Gen Ed	
RC 1132	Introduction to Respiratory Care	2	Major	
RC 1343	Cardiopulmonary Anatomy and Physiology	3	Support	
<b>Suggested Sophomore Summer Semester</b>				
RC 2114	Basic Respiratory Therapy Procedures	4	Major	
RC 2222	Respiratory Therapy Pathology and Pharmacology	2	Major	
<b>Suggested Sophomore 1st Semester</b>				
RC 2314	Advanced Respiratory Therapy Procedures	4	Major	
RC 2322	Diagnostics and Outpatient Services	2	Major	
RC 2352	Pediatric and Neonatal Respiratory Care	2	Major	
RC 2364	Clinical Application of Respiratory Therapeutics I	4	Major	
<b>Suggested Sophomore 2nd Semester</b>				
RC 2124	Critical Care Respiratory Therapy	4	Major	
RC 2524	Respiratory Care Advanced Practice	4	Major	
RC 2534	Clinical Application of Respiratory Therapeutics II	4	Major	

### Course Grouping

Major Courses: (32 credit hours) RC 1132, RC 2114, RC 2124, RC 2222, RC 2314, RC 2322, RC 2352, RC 2364, RC 2524, RC 2534

General Education Courses: (21 credit hours) Political Science: POLSC 1113; English: ENGL 1113; \*\*Any Oklahoma State Regents for Higher Education approved general education three credit hour English or communications course; Psychology: PSY 2233; History: HIST 1483 or HIST 1493; SOC 2143; CHEM 1103

Life Skills Courses: (1 credit hour) Life Skills: SCL 1001

Support Courses: (14 credit hours) Biological Sciences: BIO 1314, BIO 1414; Mathematics: MATH 1483 or MATH 1503; Respiratory Care: RC 1343

\*\*To be chosen from ENGL 1213, ENGL 1233, COM 1123 or COM 2213.

### Program Notes

Notes: This Technical and Occupational program is designed to prepare students to enter the job force following completion. See Technical and Occupational Programs in the general information section of the catalog.

++Special admission procedures required.

Degree Program Course Descriptions

**BIO 1314 - Human Anatomy and Physiology I**

*Prerequisites: ENGL 0203 or adequate placement score or by meeting determined placement measures; MATH 0103 or adequate math placement. An adequate biology placement test score or BIO 0123 or a college-level biological science class.*

4 Credits Through a systematic study of the structure and function of the human body, its cells, tissues, organs and systems, the student will identify and describe basic anatomical structures and fundamental physiological processes that occur in health and disease for the major body systems. Laboratory work which requires dissection is an integral and required part of the course.

**BIO 1414 - Human Anatomy and Physiology II**

*Prerequisites: BIO 1314 with a grade of "C" or higher*

4 Credits With Human Anatomy & Physiology I as a foundation, the student will advance his or her study of the structure and function of the human body and will identify and describe more detailed anatomical structures and more comprehensive physiological processes that occur in health through a systematic survey of the major body systems. Laboratory work which requires dissection is an integral and required part of the course.

**CHEM 1103 - Chemistry Around Us**

*Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures; MATH 0203 or adequate math placement.*

3 Credits A course designed for students having no previous training in chemistry or for whom the study of chemistry will terminate with this experience. Upon completion of this course, the student will be able to discuss such fundamental concepts of chemistry as atomic structure and the periodic table, chemical bonding, nuclear energy, chemical elements and compounds, and the significance of carbon and some other elements to life itself.

**ENGL 1113 - English Composition I**

*Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures*

3 Credits The student will write well-developed compositions which demonstrate the principles of unity, coherence, and organization and which contain specific details and vivid language. The students will locate library material and incorporate researched materials into compositions.

**HIST 1483 - U.S. History to 1877**

*Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures*

3 Credits After analyzing events in American history from 1400 to 1877 in such areas as revolution, geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.

**HIST 1493 - U.S. History 1877 to Present**

*Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures*

3 Credits After analyzing events in American history from 1877 to the present in such areas as geographic and social mobility, political reform, government precedents and war, students will be able to identify patterns of present day mobility, describe governmental operations in their society and help resolve conflict in society based on the student's search for change, precedents, and conflict in the American past. A general education requirement.

**MATH 1483 - Functions and Modeling\***

*Prerequisites: MATH 0313 or adequate math placement; ENGL 0203, adequate placement score, or by meeting determined placement measures*

3 Credits The student will demonstrate: an understanding of the general concepts of relation and function and specifically of polynomial, rational, exponential and logarithmic functions; the ability to solve systems of equations by utilizing matrices and determinants; and, the ability to solve practical problems using algebraic and digital techniques. \*Pending OSRHE approval

**MATH 1503 - Contemporary Mathematics**

*Prerequisites: MATH 0313 or adequate math placement. Pre or Co-requisite ENGL 1113 or ENGL 1103*

3 Credits A study of the mathematics needed for critical evaluation of quantitative information and arguments (including logic, critical appraisal of graphs and tables); use of simple mathematical models, and an introduction to elementary statistics. This course satisfies the computer proficiency requirement.

**OSRHE1 - Osrhe Approved General Education Communications Or English Course**

3 Credits OSRHE approved General Education Communications or English course

**POLSC 1113 - American Federal Government**

*Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures*

3 Credits A study of the principles, structure, processes and functions of the United States federal government.

**PSY 2233 - Ethics in Health and Human Services**

*Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures*

3 Credits Students will contrast ethical systems with religion, law, and justice; define ethical principles, and discuss ethical issues and professional conduct in health and human services. Students will apply ethical principles and decision-making models to analyze case studies.

**RC 1132 - Introduction to Respiratory Care**

*Prerequisites: ENGL 0106 or adequate placement score*

2 Credits This is a course designed as an introduction to the occupation of respiratory care. The course focus is the profession of respiratory care and the operation of respiratory care departments and health care organizations. Theory covered in the course includes the operation of respiratory care departments, staff positions and their responsibility, regulations and policy that affect the practice of respiratory care. Professional communication, patient education and safe behavior in the healthcare environment are also included in this course.

**RC 1343 - Cardiopulmonary Anatomy and Physiology**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: BIO 1314, BIO 1414*

3 Credits This course is an in-depth study of the structure and function of the respiratory and cardiac systems intended for individuals interested in a career in Respiratory Care. It will include study of the processes involved in the transport of oxygen and carbon dioxide between the lung and tissue to include ventilation, diffusion and gas transport. Students will learn about clinical assessment tests and calculations utilized to assess lung and cardiac function, including normal values and interpretation of abnormal results. This

course is a foundation for learning how to assess normal function and efficiency of the cardiopulmonary systems as well as the understanding of disease processes.

## **RC 2114 - Basic Respiratory Therapy Procedures**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: Admission to program; RC 1133; MATH 1503 or MATH 1483; and ENGL 1113*

4 Credits This course is designed for the beginning Respiratory Care Practitioner student. The course focus will be the theory and performance of basic respiratory care therapeutics. Included in this course are laboratory demonstrations and practice to prepare the student to be proficient in application of theory, performance of basic respiratory care skills and troubleshooting. The student will be required to satisfactorily perform skill evaluations in a laboratory setting. The skills and theory covered include: basic physical assessment with vital signs, bulk oxygen systems, cylinders, regulators, flow-meters, blenders, compressors, concentrators, breathing techniques, sustained maximal inspiration, oxygen therapy, oxygen therapy equipment and analyzation, postural drainage, percussive therapies, positive expiratory therapies, basic pharmacology, blood gas sampling and analysis, aerosol medication therapies, electrocardiograms and manual resuscitators.

## **RC 2124 - Critical Care Respiratory Therapy**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: RC 2314 Advanced Respiratory Therapy Procedures*

4 Credits This course prepares the student for management of the Critical Care Pulmonary Patient. Emphasis is placed on developing patient care plans for overall management of the critically ill patient, application of advanced ventilation modes, techniques for liberation from the ventilator, interpretation of ventilator waveforms, hemodynamic monitoring methods and management, evaluation of fluid balance and electrolytes. The student will demonstrate proficiency in treating respiratory emergencies, and practice a variety of advanced patient assessments including modification of treatment plans and/or assisting the physician. Students will demonstrate proficiency with laboratory skills and clinical patient scenario simulation.

## **RC 2222 - Respiratory Therapy Pathology and Pharmacology**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: RC 1342 Cardiopulmonary Anatomy and Physiology*

2 Credits This course is a study of diseases common to patients requiring respiratory therapy and/or intensive care. Study of each disease will include: epidemiology, etiology, pathophysiology, signs and symptoms, diagnosis, treatment and prognosis. In conjunction with the study of diseases will be the study of pharmacologic agents typically administered by respiratory therapists as well as medications that are critically important to the overall patient care plan. Study of pharmacological agents will include basic principles of pharmacology and drug administration safety along with specific information about the most important and commonly used respiratory related drugs. Upon completion of this course the student will be able to identify a disease process from key patient information and formulate an appropriate treatment plan including pharmacological agents.

## **RC 2314 - Advanced Respiratory Therapy Procedures**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: RC 2114 Basic Respiratory Therapy Procedures*

4 Credits This course is designed for the Respiratory Care Practitioner student that has successfully completed the Basic Respiratory Therapy Procedures course. The course focus will be the theory and performance of advanced respiratory care therapeutics to prepare the student for initial adult critical care practice. The student will be required to satisfactorily perform skill evaluations and troubleshooting in a laboratory setting. The skills and theory covered include: blood gas evaluation, positive airway pressure therapies, airway management techniques, oral and nasal airways, intubation, extubation, suctioning, tracheostomy care, tracheal tube management, specialty emergency airways, basic ventilator function and application, bi-level positive airway pressure and non-invasive positive airway pressure therapies, initiation of continuous ventilator life support devices, continuous ventilator patient management techniques and weaning from life support devices.

## **RC 2322 - Diagnostics and Outpatient Services**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: RC 1342 Cardiopulmonary Anatomy and Physiology*

2 Credits The course focus is cardiovascular and pulmonary diagnostic testing, homecare, discharge planning and pulmonary rehabilitation. Included in the course are laboratory demonstrations and practice as it relates to pulmonary functions testing, assisting with bronchoscopy and oxygen therapy in the home setting. The student

will be required to satisfactorily perform skill evaluations in the laboratory setting for pulmonary function testing. In addition, theory covered in the course includes: diagnostic testing for the cardiac patient, diagnostic testing for sleep apnea, electroencephalogram (EEG), exercise testing, pulmonary rehabilitation, homecare and discharge planning.

## **RC 2352 - Pediatric and Neonatal Respiratory Care**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: RC 2114 Basic Respiratory Therapy Procedures*

2 Credits This course is designed to discuss the various aspects of respiratory care which are unique to the neonatal and pediatric patient. This includes development of the fetus, evaluation and stabilization of high-risk newborns, pediatric respiratory therapeutics, advanced life support, the study of pediatric diseases with cardiopulmonary implications and appropriate therapeutic interventions. Mechanical ventilation of the newborn, specialty gas administration, high frequency ventilation, and extracorporeal membrane oxygenation (ECMO) are also covered. Students will complete the Neonatal Resuscitation Program and participate in laboratory practice and evaluations utilizing human patient simulators.

## **RC 2364 - Clinical Application of Respiratory Therapeutics I**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: RC 1133; admission to program; Co-requisite: RC 2114*

4 Credits This course is designed for the beginning Respiratory Care Practitioner student. The course focus is clinical observation, assistance and performance of Respiratory Therapeutics which were taught in the Basic Respiratory Therapy Procedures and Advanced Respiratory Therapy Procedures courses and Labs. The student will demonstrate clinical proficiency of the following respiratory therapeutics: physical assessment, oxygen therapy, aerosol medication administration, chest physiotherapy techniques, isolation techniques, tracheal suctioning, tracheal airway care, arterial blood gas sampling, positive pressure therapies, pulse oximetry, noninvasive ventilation techniques, basic life support systems, and continuous ventilation of the adult patient. The student will be supervised in the affiliate Respiratory Care Departments by the adjunct faculty and program faculty.

## **RC 2524 - Respiratory Care Advanced Practice**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. RC 2314 Advanced Respiratory Therapy Care Procedures*

4 Credits This is the final respiratory theory class for respiratory care students approaching graduation. It is intended to allow practice and demonstration of integration of acquired skills and knowledge at the advanced practitioner level. Students will utilize current standards of evidence based medicine to manage patients in complex patient care scenarios. This will reinforce the skills of appropriate, thorough patient assessment followed by the use of protocols to formulate an effective patient care plan and analyze patient response. Students will also participate in a structured self- assessment and review plan in preparation for their credentialing examinations. This will include theory review, quizzes and multiple practice examinations.

### **RC 2534 - Clinical Application of Respiratory Therapeutics II**

*Prerequisites: Read/Writing competency satisfied by prerequisite course. Prerequisite: RC 2364 Clinical Application of Respiratory Therapeutics I*

4 Credits This course is designed for the Respiratory Care Practitioner student. The course focus is clinical observation, assistance and performance of Respiratory Therapeutics which were taught in Diagnostics & Out-Patient Services, Pediatric & Neonatal Respiratory Care, and the Critical Care Respiratory Therapy courses and Labs. The student will demonstrate clinical proficiency of the following respiratory therapeutics: physical assessment, simple spirometry, oxygen therapy, aerosol medication administration, tracheal suctioning, tracheal airway care, tracheal extubation, blood gas sampling, ventilatory assessment, noninvasive ventilation techniques, ventilation of the ped- neonate patient and continuous ventilation of the adult patient. The student will be supervised in the affiliate Respiratory Care Departments by the adjunct faculty and program faculty.

### **SCL 1001 - Success in College and Life**

*Prerequisites: ENGL 0106 or adequate reading/writing assessment scores*

1 Credit Students will learn best practices for academic, career, and personal success. Students will discover their individual strengths, interests, and values to create a personalized plan; select and utilize resources that are applicable to their growth and success; and engage as active and responsible members of the academic community. This course should be taken during a student's first semester of college work at Oklahoma City Community College

and is a required course in degree plans to satisfy the Life Skills requirement.

### **SOC 2143 - Race and Ethnicity in the U.S.**

*Prerequisites: ENGL 0203, adequate placement score, or by meeting determined placement measures*

3 Credits This course examines sociological theories of contact between minority and majority groups in a multicultural society, including topics such as prejudice, discrimination, acculturation, and pluralism.