Respiratory Care

KU offers a 4-year bachelor's degree program in respiratory care. Students enter after 2 years of prerequisites taken from KU's Lawrence campus or any regionally accredited 2- or 4-year college or university. The advanced curriculum and location at an academic medical center means students receive extensive experience in advanced respiratory therapy techniques.

For working professionals having graduated from a COARC-approved advanced practice level program, KU offers a flexible online baccalaureate degree-completion program in respiratory care. Students must already have the RRT credential and must take any missing prerequisite courses in addition to the online respiratory care courses to meet the credit-hour requirements for a 4-year degree.

Located at the region's premier academic health center, the Department of Respiratory Care Education is a part of the School of Health Professions (http://healthprofessions.kumc.edu) on the Medical Center campus of the University of Kansas. KU Medical Center (http://www.kumc.edu) is located in the heart of the Kansas City metropolitan area at 39th and Rainbow Boulevard – about 40 minutes away from the main KU campus (http://www.ku.edu) in Lawrence, Kansas.

Advising and FAQ

For information about respiratory care at KU, please visit the department's website (http://respiratorycare.kumc.edu). Students interested in entering this field should contact an advisor as early as possible in their collegiate careers to ensure prerequisite course work will be completed on schedule. Advising and campus visits are available Monday-Friday by appointment. Please email respiratory@kumc.edu for information. For advising on the KU Lawrence campus, please see the KU Undergraduate Advising Center (http://advising.ku.edu) website or visit Strong Hall, Room 132.

Courses

RESP 303. Introduction to Respiratory Care Procedures. 5 Hours.
An introductory course designed to acquaint the student with the fundamental theory, procedures, and equipment used in respiratory therapy. Emphasis is placed on understanding application of equipment and procedures to the patient, and the respiratory therapy treatment of patients requiring non-continuous ventilatory assistance. This course introduces such topics as cardiopulmonary resuscitation, bronchopulmonary hygiene, airway care, oxygen therapy, and cleaning and sterilization of equipment. Prerequisite: Concurrent enrollment in RESP 318 and RESP 325. LEC.

RESP 310. Clinical Pharmacology I. 1 Hour.
The student will learn about adrenergic and parasympatholytic bronchodilators, corticosteroids, mucus-controlling drugs, surfactant agents, antitussives, and the anti-infective drugs used for the treatment of respiratory disorder. LEC.

RESP 311. Clinical Pharmacology II. 1 Hour.
Content of this course includes neuromuscular blocking agents, cardiac agents, diuretics, anti-hypertensives, and central nervous system drugs. LEC.

RESP 318. Pulmonary Pathology. 3 Hours.
A course consisting of lecture and group discussion designed to introduce the student to pulmonary pathology. Special emphasis is placed on the etiology, pathophysiology, and treatment of pulmonary diseases. This course includes such topics as signs and symptoms of lung disease, chronic obstructive pulmonary diseases, pleural and mycotic diseases. Prerequisite: Corequisite: RESP 303, RESP 325, RESP 330, or permission of instructor. LEC.

RESP 325. Clinical Process. 2 Hours.
This course serves to introduce the beginning respiratory therapy student to the clinical environment. The student spends sixteen hours per week participating in either a clinically-oriented workshop or performing the fundamentals of respiratory therapy in the clinical setting. Typically meets Monday-Wednesday/Friday. FLD.

RESP 330. Cardiopulmonary Physiology. 4 Hours.
Designed to introduce the student to the basics of physiology of the cardiovascular and pulmonary systems. This course contains such topics as regulation of respiration and pH homeostasis, ventilation and perfusion relationships, and hemodynamics of the cardiovascular system. LEC.

RESP 340. Mechanical Ventilators. 5 Hours.
This course contains such topics as arterial puncture, classification of mechanical ventilators and adjunct devices, and their application to the patient. Four hours of lecture/discussion and a 3 hour weekly laboratory acquainting the student with the rationale for continuous mechanical ventilation and the basic operation of adult, pediatric and neonatal mechanical ventilators. Emphasis is placed on the selection of appropriate equipment and assessment of its effect on the patient. Prerequisite: RESP 303, RESP 318, RESP 325 and RESP 330. LEC.

RESP 345. Adult Critical Care. 3 Hours.
This course introduces the student to the different types of traumatic injuries in the critically ill adult patient. Topics such as the shock syndrome, multi-organ traumas including chest, head, spinal cord and thermal injuries will be discussed. Discussion of cardiac life support, fluid resuscitation, monitoring and ventilatory management are integrated into each topic. Prerequisite: Completion of RESP 303, RESP 310, RESP 318 and RESP 330 or their equivalent. LEC.

RESP 350. Clinical Application I. 1 Hour.
This course provides the intermediate respiratory therapy student with opportunities to practice basic respiratory therapy procedures. Emphasis placed on performance of respiratory therapy procedures and application of equipment. This course emphasizes such topics as oxygen therapy, aerosol therapy, incentive spirometry, patient assessment, and IPPB therapy. The student will assume limited patient care responsibilities. Prerequisite: RESP 303, RESP 310, RESP 318, RESP 325, and RESP 330 or their equivalent. FLD.

RESP 355. Clinical Application II. 1 Hour.
This course provides the respiratory therapy student with an introduction to the critical care setting. The student will begin to apply the procedures and equipment most often utilized in the intensive care areas. Emphasis is placed on continuous mechanical ventilation, artificial airways, airway care, and bedside pulmonary function testing. The student will assume limited patient care responsibility in the critical care areas. Prerequisite: RESP 303, RESP 310, RESP 318, RESP 325 and RESP 330 or their equivalent. FLD.

RESP 375. Clinical Application III. 2 Hours.
This course provides the advanced respiratory therapy student with opportunities to refine procedural and evaluative skills in the critical care areas. The student will spend a minimum of twenty-four hours per week in the clinical setting. Emphasis is placed upon the students ability to evaluate the patients' clinical situation and recommend appropriate therapy modalities to the clinical supervisor. During this course the student will assume wider-ranging patient care responsibilities. Prerequisite: RESP 340, RESP 345, RESP 350, RESP 355, RESP 395 or their equivalent. FLD.
RESP 390. Pulmonary Function. 2 Hours.
Lecture and laboratory introducing the student to basic pulmonary function procedures. This course allows the student to practice pulmonary function tests and interpret the results. Lecture and laboratory topics include such topics as the measurement of lung volumes and capacities, body plethysmography, blood gas analysis, and flow volume loops. Prerequisite: RESP 318, RESP 325, and RESP 330. LEC.

RESP 395. Pediatric Critical Care. 1 Hour.
Study of common neonatal and pediatric disorders/diseases for the beginning respiratory care student. Lectures on basic fetal lung development, assessment of both the pediatric and neonatal patient and disorders/diseases such as respiratory distress syndrome, bronchopulmonary dysplasia, bronchiolitis, epiglottis and croup, and other commonly seen problems. Prerequisite: RESP 303, RESP 310, RESP 318 and RESP 330 or their equivalent. LEC.

RESP 399. Generalist Practice. 3 Hours.
This course is designed to allow students the opportunity to improve and perfect skills acquired in the junior year clinical courses. Emphasis will be given to refining the students’ abilities to assess patient status and administer appropriate therapy modalities. This course may also be used to assess respiratory therapy knowledge and skills of students transferring from other programs. Prerequisite: Permission of instructor. FLD.

RESP 400. Advanced Critical Care. 4 Hours.
Concepts of the diseases and disorders that effect the critically ill adult are explored. Emphasis is placed on understanding common illnesses such as cardiac dysrhythmias, acute coronary syndrome, trauma of the chest and head, organ failure and toxin exposure as well as the other medical challenges of the critically ill patient. LEC.

RESP 401. Neonatal Respiratory Care. 4 Hours.
This course is designed to provide the student with an introductory knowledge of fetal and newborn cardiorespiratory anatomy, physiology, development, pathophysiology, and care. Prerequisite: Senior year standing or permission of instructor. LEC.

RESP 402. Chronic Respiratory Disease Management: The Evolving Role of the Respiratory Therapist. 3 Hours.
This course is an introduction to the evolving role of respiratory therapists in health care, especially in the area of chronic disease management. The students will explore various trends that are contributing to the role respiratory therapy may play in patient care. Topics covered in this course include COPD and asthma management, pulmonary rehabilitation, cardiopulmonary exercise testing, home care, elderly care, nutritional care of the pulmonary patient, and communication skills necessary for patient education. Students in this course will gain an understanding of how they can contribute to an inter-professional team in order to provide safe and effective patient care. Presentation of topics in this course may include lecture, group work/discussion, audiovisual, computer and other multimedia aids. LEC.

RESP 403. Physical Science for Health Professions. 3 Hours.
This course is an introduction to the fundamental concepts and principles of physics, chemistry, and the earth sciences. Topics include forces, energy, electricity, magnetism, modern physics, and chemical bonding. This course will provide respiratory therapists and students an applicable level of knowledge that aids in their understanding of therapies and equipment used in every day clinical practice. The course includes presentation of material using audiovisual, computer and other multimedia aids. LEC.

RESP 405. Health Care Management, Ethics and Law. 3 Hours.
This course provides an overview of fundamental concepts in healthcare management, law, and ethics. Students will learn the skills and knowledge necessary to be successful in management leadership, management design, and managing diversity. Ethical concerns relevant to the healthcare manager will be addressed. Current and historical controversies in healthcare will be discussed. Upon completion of this course, students will have the knowledge to understand laws, ethics, and management principles of the complex healthcare landscape. LEC.

RESP 425. Advanced Critical Care Procedures. 2 Hours.
This course is the capstone of the critical care experience and concentrates on advanced practice and assessment skills in the critical care setting. Emphasis is placed on quantitative assessment and monitoring procedures, advanced ventilator management and interpretation of data. This course requires access to the medical information of an intensive care patient. Prerequisite: RESP 375 or equivalent. LEC.

RESP 490. Special Studies or Projects. 1-9 Hours.
This course involves individual study, research or projects in the field of respiratory care under instructor guidance. Written reports and periodic conferences are required. Content and unit credit will be determined by student-instructor conferences and/or departmental conferences. This course may be repeated for a maximum of nine credits. Prerequisite: Admission to the respiratory care program and consent of instructor. LEC.

RESP 661. Management Principles in Health Care. 3 Hours.
An introduction to basic principles of management and their application in the current health care environment. Course content includes management theory, scope of management, quality issues, budgeting, personnel issues, evaluation and application of management concepts. Cross listed with HEIM 661 and CLS 661. Prerequisite: Senior year standing or permission of the instructor. LEC.

RESP 662. Education Principles in Health Care. 2 Hours.
An introduction to basic principles of education and their application in the current health care environment. Information on course content includes: Course design, inservice education and patient education. The focus is on educational needs, instructional media and course quality improvement. LEC.

RESP 663. Scientific Investigation Part I. 1 Hour.
This course is designed to provide the participant with an introduction to research skills culminating in a group Proposal of a bench study or chart review. The Proposal will consist of three sections: Introduction, Review of the Literature and Methods. The three sections will be developed through a series of progress reports with the aid of a faculty advisor. Students will work in groups to develop a research question about their daily practice that can only be answered by conducting research. This course will include discussions of the types of research data and the structure of a research manuscript. Students will have opportunities to read, interpret and analyze research reports and practice in writing critical evaluations of the literature as it applies to their research question. Prerequisite: Statistics LEC.

RESP 664. Scientific Investigation Part II. 1 Hour.
This course is designed to teach the student how to read, interpret and analyze research reports. Prerequisite: Senior year standing and a course in statistics. LEC.

RESP 665. Scientific Investigation Part III. 1 Hour.
Each study group will write the Discussion and Conclusion sections of their paper and share their findings in a poster presentation. The final version of each group's study manuscript must be submitted to course instructor prior to graduation. The quality of the manuscript will be appropriate for submission to the journal of Respiratory Care. Prerequisite: RESP 663, 664. LEC.
RESP 667. Registry Review. 2 Hours.
This course involves individual student under instructor guidance. A series of practice exams are taken and discussed including a secured practice registry exam and clinical simulation exam. Prerequisite: Admission to the respiratory care program and consent of instructor. LEC.

RESP 668. Research in Health Care. 3 Hours.
Online version combines the on-campus series of courses: RESP 663, RESP 664 and RESP 665, for the individual student. The first half of the semester will produce a study proposal for a chart review that will require a faculty-assisted search of our database of de-identified patient information. The second half of semester will be analyzing results of search and with the aid of a faculty advisor, writing a quality manuscript suitable for submission to Respiratory Care that will be submitted to course instructor, at the very least. Prerequisite: Statistics. LEC.

RESP 670. Clinical Specialty Practicum. 10 Hours.
Provides the student with a capstone experience in the activities and responsibilities related to clinical processes in one of the specific advanced practice specialties: critical care, neonatal, pediatrics, pulmonary rehabilitation, pulmonary function, sleep, hyperbaric oxygen, management or education. Prerequisite: Permission of the instructor. FLD.

RESP 671. Clinical Specialty Projects I. 6 Hours.
Designed to give the student the opportunity to develop clinically-related projects in the areas of quality improvement, health care organizational structures and current processes in patient management. Prerequisite: Permission of the instructor. FLD.

RESP 672. Clinical Specialty Projects II. 6 Hours.
Designed to have the student demonstrate competency related to clinical processes in one of the specific advanced practice specialties: critical care, neonatal, pediatrics, pulmonary rehabilitation, pulmonary function, sleep, hyperbaric oxygen, management or education. Prerequisite: Permission of the instructor. FLD.